Open innovation and transformative leadership in small and medium-sized enterprises in Kenya

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A research report submitted to the Wits Business School in the University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies

Johannesburg, 2025

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Abstract

Open innovation, as presented by Henry Chesbrough in 2003, has been extensively explored in the context of large corporations in industrialized economies. Studies that have been done focusing on the adoption of open innovation in small and medium enterprises have mainly focused on SMEs in developed economies. In order to further explore this practice under different geographical and firm conditions, this research is dedicated to examining the drivers, benefits, and challenges of open innovation adoption by SMEs in developing economies, with a major focus on Africa and specifically Kenya. The study focuses on 10 small and medium enterprises from three industrial sectors, namely manufacturing, retail and ICT. Of these 10, five SMEs will be selected from the ICT sector, three from manufacturing, and two from retail. Admitting that a favorable internal environment is necessary and important in enabling productivity and innovation in an organization, this study seeks to analyze the significance of transformational leadership in driving open innovation. Specifically, it explores how transformational leadership influences employee engagement, productivity and its subsequent impact on open innovation adoption in SMEs.

A qualitative methodology was employed, utilizing semi-structured interviews which on one hand interacted with leaders and the other with employees using a sample of 10 Kenyan SMEs. Thematic analysis of the collected data revealed significant insights into the interplay between leadership style, employee engagement, and innovation adoption. Findings highlight the pivotal role of transformational leadership in fostering an environment favorable to open innovation which comes by cultivating trust, motivation, and cooperation between employees. These results contribute to the growing body of knowledge on open innovation and offer practical implications for SMEs in developing economies aiming to enhance their innovative capability.

DECLARATION

I, Ruth Wanja Kinuthia, declare that this dissertation is my own unaided work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Innovation Studies at the Wits Business School in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other University.

Signature: RWK

On this ……2nd…… day of …January……2025 ……

Ruth Wanja Kinuthia

Name

DEDICATION

This report is dedicated to my family.

ACKNOWLEDGEMENTS

I would like to thank my family for standing with me and supporting me throughout the few years I dedidacted to my school work, which saw me to this end. I thank my husband for his unwavering support which motivated me to push through to the end.

Secondly, special thanks to my supervisor Prof. Diran Soumonni for his support and guidance, and particulary when I had to work through a tight deadline.

I would also like to thank my classmate and syndicate member Beate Weisner who was my go to person when I needed guidance and motivation.

Lastly, I would like to thank all the SMEs owners and employees who agreed take part in the research by generously giving all the information and data that was needed for this research.

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1. INTRODUCTION

1.1. Purpose of the Study

Open innovation refers to a concept that has been widely acknowledged as an essential element in enhancing organizational performance and profitability. Despite the fact that over the years, multiple studies have examined the notion of open innovation and its effect on businesses, most of this research has focused on large multinational corporates and high-tech organizations, analyzing their innovation strategies and practices. While these studies provide valuable insights on open innovation, they often fall short of addressing the unique context and needs of small and medium-sized enterprises (SMEs).

SMEs are distinct in several ways and differ with their counterparts in large corporations, particularly in terms of resource and technology accessibility. SMEs often operate with limited financial and human capital, and their main strategic decisions are frequently shaped by the entrepreneurial vision of a single leader or a small team. These unique characteristics render the findings and recommendations from studies on multinationals and high-tech firms less applicable to SMEs.

The significance of SMEs in any given economy is often times ambiguously expressed. In one narrative, they are widely said to be the engines of economic growth and development, playing a vital role in both developed and developing economies. SMEs contribute substantially to an economy's gross domestic product (GDP) and are said to be the key drivers of employment creation, addressing challenges of unemployment that many developing nations grapple with (Usman et al., 2018). However, despite their state importance, SMEs face numerous and unique obstacles and challenges that impede their viability, growth and sustainability, such as limited access to capital, shortage of skilled labor, and inadequate technological infrastructure.

Open innovation, which is depicted by the strategic use of internally and externally available ideas and resources to accelerate innovation, offers a potential pathway for SMEs to overcome these barriers. By engaging in open innovation practices, SMEs are able to enhance their competitiveness, access new markets, and create innovative products and services. Nevertheless, the successful adoption of open innovation requires a supportive internal

environment, including a supportive leadership structure and the presence of absorptive capacity—the organization's capacity to identify, integrate, and utilize external knowledge effectively.

Focusing on the important role that SMEs assume in the global economy as well as the potential of open innovation to address their challenges, this research study's objective is to bridge the research gap by looking at SMEs and their adoption of open innovation in developing economies. Specifically, the purpose of this study is:

1. To analyze the drivers, benefits, and challenges faced by SMEs in implementing open innovation.
2. To examine the role of transformational leadership in enabling open innovation within SMEs.

By investigating these aspects, the study seeks to provide actionable insights that can guide SMEs in leveraging open innovation as a strategy for growth and sustainability. Furthermore, the results of this study will enhance the understanding of and contribute to the broader body of knowledge on open innovation, offering practical recommendations tailored to the unique context of SMEs in developing economies, a less studied context.

1.2. Context of the study

Since its introduction by Chesbrough (2003), the open innovation concept has gained significant academic and practical attention which has prompted many organizations to embrace this approach in a bid to improve their innovation processes. Before the rise of open innovation, organizations primarily relied on their in-house departments that focus on research and development (R&D) to develop and create new products, processes, and technologies that provided them with a competitive advantage. This traditional "closed innovation" approach was characterized by strict organizational boundaries, which limited the flow of knowledge and resources to those developed internally.

Conversely, the open innovation model proposed by Chesbrough (2003) advocates for the openness of organizational boundaries, which allows the sharing of insights, expertise, and

technologies between firms and the external economic environment. This model has been proven to encourage organizations leverage innovation sources available externally—such as consumers, suppliers, institutions of higher education, and startups—while also creating pathways to commercialize their internal technologies through partnerships or licensing agreements with other entities. This shift in perspective has redefined how organizations view and manage innovation, emphasizing collaboration and shared value creation as key drivers of competitiveness.

Despite the extensive research on open innovation, many related research has primarily concentrated on large corporations and high-tech industries, which led to overlooking the innovative potential of small and medium-sized enterprises (SMEs) to utilize this approach. SMEs, often and uniquely characterized by their agility and adaptability, are inherently innovative and increasingly adopt open innovation practices to overcome resource constraints and market challenges. However, scholarly attention to open innovation within the SME context has lagged behind. As stated by Usman et al (2018), studies on open innovation in SMEs only began to gain traction in 2009, even though the concept was introduced six years earlier. In this case, studies found that SMEs experiences a chicken and egg situation whereby they need skills and knowledge to manage open innovation well even though they need the open innovation in order to access the resources they do not have within their borders (Usman et al, 2018).

It is therefore crucial to explore subsequent literature and carry out further investigations, due to the fact that SMEs operate under unique conditions that differ significantly from those of large corporations. Due to the minimal access to financial, human, and technological resources in SMEs, open innovation emerges as a valuable strategy in fostering their growth and resilience. Further research into open innovation in SMEs can uncover the specific drivers, practices, and challenges faced by these organizations, providing a more inclusive understanding of the concept's application across different organizational contexts. Small and medium enterprises, unlike the large corporations which are rigid on their business models, tend to have a great context for implementing open innovation, due to their flexibility as they can change their organizational strategies and structure in response to changes in the market and industry (Usman et al. 2018).

Adoption of open innovation allows SMEs to act on their challenges, by forming collaborations and by the use of inflow and outflow of knowledge which fastens innovation and eventually leads to growth.

The internal organizational environment can support or act as an obstacle to the adoption of open innovation. Factors, such as the quality of skill available, can determine the absorptive capacity of new technology, the employee's motivation to innovation and creativity determine whether employees will be in support of the new technologies. Leadership style determines the environment of the organization and its ability to support the innovation strategy designed by the organization's leaders (Singh et al 2021).

For those studies that do exist on open innovation in small and medium-sized enterprise (SME), most frequently focus on advanced economic regions such as Europe and Asia (Hossain 2015). Additionally, significant attention has been devoted to SMEs operating in innovation hubs like Silicon Valley, where advanced technological ecosystems and access to resources provide a conducive environment for innovation. However, there is a noticeable lack of research on open innovation adoption in SMEs in African economies, particularly in sub-Saharan Africa, despite their critical role in economic growth and employment creation across the continent.

This study seeks to address this gap by focusing on SMEs in Kenya which is a representative country within sub-Saharan Africa and a developing economy. Kenya is known for its dynamic SME sector, which constitutes a significantly large portion of the country's economic fabric. SMEs in Kenya face unique challenges, including limited access to financial and technological resources, infrastructural constraints, and regulatory bottlenecks. Despite these obstacles, they also demonstrate remarkable resilience and creativity, often relying on resourceful strategies to navigate their complex environments.

1.3. Research Problem Statement

Large corporations and SMEs in developed economies have mastered the art of open innovation, but their counterparts in developing economies are still struggling to innovate sustainably (Vvrgovic 2012). Additionally, Adu-Danso (2023) found that, SMEs in developing economies, face challenges such as constrained financial and human resources that hinder their

innovation capability. SMEs can gain substantial value from open innovation compared to their counterparts in large organizations and is seen as a means to tackling many of the challenges that SMEs experience (Hossain 2015). As a result of labor mobility, extensively available knowledge and the increasingly available venture capital within the economic landscape, it has become necessary that SMEs make use of open innovation (Omar, Mauricio, & Domingo 2023).

Comparatively, a study by OECD/Eurostat (2018) found that only about 5-10% of SMEs in the European market have adopted the use of open innovation. This shows SMEs' inactiveness in the adoption and use of innovation which can be a result of challenges they are exposed to such as managerial, leadership and access to technical skills issues. The complexity of new products and technology necessitates the adoption of open innovation by small and medium enterprises, which allows them to adopt new technologies (Omar, Mauricio, & Domingo 2023).According to Hossain (2015), SMEs need to work on their absorptive capacity, if they are to benefit from open innovation. It is necessary to have methods in place that will allow SMEs to overcome the challenges of open innovation implementation. Many studies focus mainly on the benefits and challenges of open innovation on SMEs, but do not factor in the organizational archetype and the absorptive capacity of organizations.

Organizational management and leadership are among the crucial areas that can enable or deter the adoption of open innovation, as many organizations are still stuck on the not invented here (NIH) syndrome, which is a barrier to adoption of open innovation that is mostly perpetuated by the leadership in the organization (Dufour, 2015). Hence, this study looks at how transformational leadership can support the adoption of open innovation, as well as motivate employees into being creative and innovative in the Kenyan context.

Research question 1: Are SMEs in Kenya embracing the concept of open innovation? If so, in what ways?

Proposition: Kenya has become a hub for innovation due to support by the government of Kenya and private companies that are setting up innovation hubs to support SMEs experiencing challenges in their operations. According to a report by UNDP (2023), these hubs support SMEs

mainly in the acquisition of capital and strategic guidance, by allowing the hubs to offer guidance and capital.

However, despite the establishment of innovation hubs and government initiatives to support SMEs in Kenya, most SMEs are not effectively embracing open innovation. This is due to persistent structural barriers such as limited awareness, inadequate capacity to integrate external ideas, and cultural resistance to collaboration. This study will therefore investigate the drivers, challenges and benefits of open innovation adoption by in the Kenyan SMEs.

Research question 2: How does transformational leadership style promote or hinder the adoption of open innovation in the SMEs?

Proposition: Studies have shown that there is a positive relationship between transformative leadership and the attitude of SMEs in fostering innovation. According to Lee et al. (2017) leaders who are said to be empowering in turn have employees who are more likely to come up with new ideas and new ways of doing things compared to employees with leaders that do not empower them. Hence their conclusion was that transformational leadership is more effective when employee creativity and innovation is required. However, Chukwuemeka (2021) and Martin et al. (2013) suggest that it is not only transformational leadership that motivates innovation, but transactional leadership which is also referred to as dictatorial leadership also motivates innovation in an organization. This study will focus on several Kenyan SMEs to investigate the positive relationship between open innovation and transformational leadership.

Research question 3: How does the adoption of open innovation by SMEs vary in different sectors?

Proposition: According to Chesbrough (2003), some industries such as the entertainment industry cannot thrive without embracing open innovation. However, there are some industries such as weapons manufacturing that have a complex product offering which makes it difficult to adopt open innovation (Chesbrough, 2003). This study proposes, subject to investigation, that different sectors will have varied appetite for open innovation.

1.4. Significance of the study

This study will make a significant contribution to the body of literature firstly, on the adoption of open innovation by SMEs in emerging economies, which is an under searched phenomenon especially in Africa. Secondly, the study will offer practical insights on open innovation adoption to SMEs managers as it looks at the benefits of collaboration and partnerships with external partners to kickstart innovation projects effectively and efficiently. The managers will hence be exposed to the benefits of adopting open innovation and the strategies on how they can use this phenomenon to curb the challenges experienced by SMEs globally.

1.5. Limitations of the study

This study is subject to a few limitations as follows;

- The study's context is around SMEs in Kenya only; hence it will only focus on firms within the Kenyan national boundaries.
- The study focuses on the internal organizational-level variables that impact the adoption of open innovation by SMEs.
- It is subjected to the reflections of a few SME leaders and employees who answer the interview questions.

1.6. Definitions of terms

Innovation - Innovation is the implementation of a new or improved product or process that differs significantly from the previous product brought into the market OECD/Eurostat (2018)

Creativity - Creativity has been defined by Sawyer(2011) as a new mental combination that is expressed to the world

Open Innovation - Chesbrough (2003) defined open innovation as a concept that uses internal and external ideas and bringing together internal and external paths to the market.

Leadership - Leadership has been defined as the process of socially influencing people while gathering their support in achieving a shared goal or vision (Tikas 2017) and (Chemers 1997).

1.7. The structure and outline of the report

Chapter 2 – Literature review.

This chapter looks at the theory of open innovation and transformational leadership, and the conceptual framework that brings the two models together.

Chapter 3 – Methodology Design

The aim of this chapter is to describe the research design and methodology as well as the strategy the study uses to answer the key research questions.

Chapter 4

This chapter presents the results and findings derived from a series of interviews that take place in small and medium-sized enterprises (SMEs) personnel based in Kenya.

Chapter 5

This chapter discusses the results that are presented in Chapter Four of this study.

Chapter 6

The main purpose of this chapter is to summarize the findings and conclusions expected to arise from the literature, as well as the interviews that are carried out in this study.

2. Literature Review

2.1 Introduction

This section will outline the literature on open innovation in small and medium-sized enterprises globally, in developing economies, and particularly in Africa. It will also present a basis for studying the influence that transformational leadership has on the capability of such organizations in their journey of open innovation implementation.

2.2 Theoretical and conceptual understanding of open innovation

The open innovation concept has been in existence since 2003 having been pioneered by Henry Chesbrough who remains the most influential researcher of the concept (Orlova 2019). As confirmed in his book “open Innovation” , Chesbrough’s main audience was the business manager, but over time, the open innovation notion has increased popularity in the innovation management field, which led to the emergence of many conferences, books and articles on the topic, resulting in some governments also embracing the concept of open innovation in their political frameworks (Orlova 2019).

Several researchers over time have developed theoretical frameworks in relation to open innovation. Some of these frameworks include a framework by Wallin (2010), who believes that knowledge is at the core of innovation and that innovation cannot be implemented without the movement of knowledge both from inside the organization as well as outside organizational boundaries. Wallin (2010) believes that product, process and service innovation depend on the collaboration of different people and teams who hold different types of knowledge, acquired from different practices. Figure 1 below illustrates the framework as described above where the author found that for an organization to adopt open innovation, the innovation process steps have to be clearly defined to avoid the innovation process being halted by, for example, organizational politics. Secondly, it is important to identify innovation relevant knowledge that will support the stage at which the organization is applying the open innovation concept and ensuring that the organization has a solid integration mechanism, to allow and enable smooth implementation without disrupting the organizational way of operation. For example, the manager can set up rules on when to engage a consultant when the expertise required is not readily available from within the organization, or when to out-licence an innovation if the

organization is unable to commercialize their product. Creating an effective governance mechanism is another factor in the model where a manager has a set way of governing the process in order to plan for any pitfalls, finally balancing the incentives and controls, ensuring that the benefit of implementing the concept of open innovation outweighs the cost.

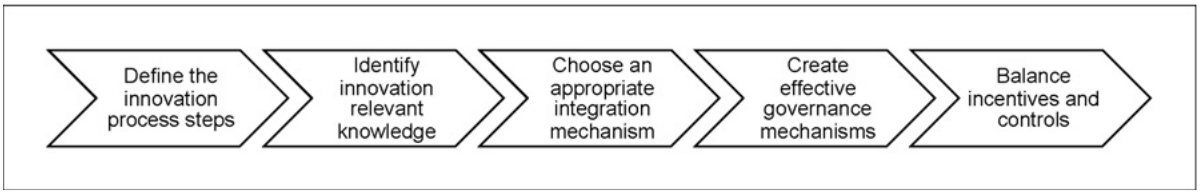

Figure 1: A process model for knowledge integration - Wallin, (2010)

Another framework that extends the open innovation notion is that of open innovation at the national level by Lee (2020), where the framework is meant to guide the government on collaboration with other countries at different levels, namely, the macro level, meso level and micro level.

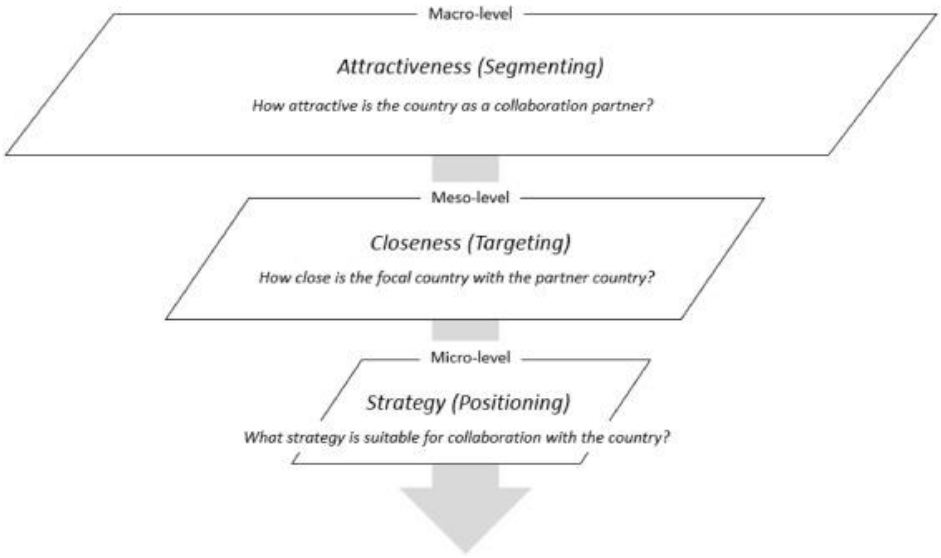

Figure 2: Multi-level framework for open innovation at the national level. Lee (2020)

In support of the model on collaboration at the national level, studies show that well-constructed collaborations between SMEs and large firms and other SMEs can lead to strengthening of their competitive advantage. According to these authors, this is due to the

leveraging of streams of knowledge, including advancements in technology, evolving market demands, and strategic decisions made by competing firms. According to Lee (2010), for instance, SMEs are more likely to have superiorities in the invention of technologies but lack the ability to manufacture and commercialize technologies.

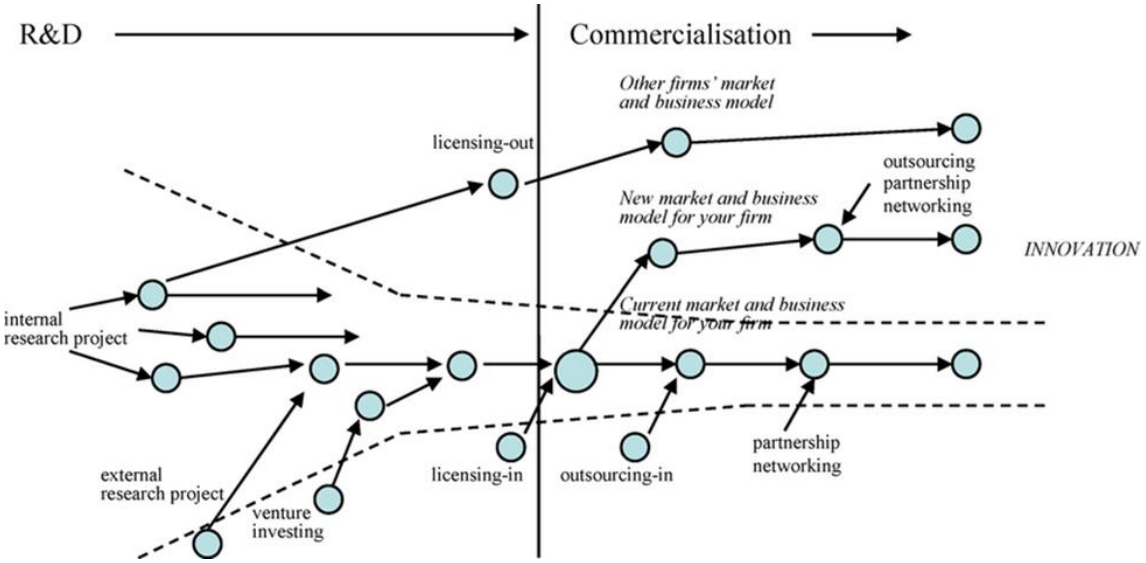

Figure 3: Open innovation model for SMEs - Sungjoo Lee (2010)

Hence, Chesbrough (2003) suggests that it is more common for SMEs to invest in open innovation mainly in the downstream aspect of the value chain such as manufacturing and commercialization, which is highligted by Figure 3 above. This study will therefore use the framework on collaboration at national and organizational level by Lee (2010).

2.3 Conceptual understanding of leadership and innovation

There are several factors that may hinder the innovation capability of an organization. External factors such as policies, competition, technological change, or the availability of human resources may impact how an organization is able to bring forth new technology (Lee 2020). Internally, the organizational culture and leadership may hinder or advance the adoption and innovation appetite of the organization (Dufour 2015). Internally, factors such as the “not invented here” (NIH) syndrome, which refers to a scenario where managers fail to embrace technologies not produced within the organization, may impact the adoption of new knowledge available outside the organization. Secondly, employee commitment or lack of it, which in most cases is determined by the leadership style available in the organization, affects their

productivity which determines their innovative and creativity levels (Dufour 2015). Additionally, according to Wallin (2010), for an organization to nurture innovation and creativity, the leadership hierarchy and management style must distinct from conventional leadership approaches which tends to be transactional and characterized by a command and control management style, which may limit the creativity and innovation levels of the organization's employee.

An early theory that advanced innovation leadership was modeled by Evans (1970), later supported and extended by Fabac (2022), is the path -goal theory which is broadly described as a person's perception of how their individual action (path) or behaviour is directly related to their outcomes (goals). It describes the extent to which the path, in this case, individual behaviour and actions are seen as the motivator or a hindrance to the attainment of goals by the individual, which in most cases are affected by the leadership style in an organization. According to Fabac (2022), the path-goal theory suggests that individuals will be motivated once they think they can manage a given task, as soon as they believe that success will be as a result of their efforts, and when they believe that there will be compensation for their efforts. The leadership behaviour associated with the path-goal theory is supportive, that is, whereby the leader is empathetic to the follower and is in touch with the welfare of the employees. Secondly, leadership, according to this theory is participative, which means a leader will engage the employees in the organizational strategy and decision making. And lastly, the leader is seen to be directive, where the expectations and goals are well outlined for the employee.

The leader member exchange is another innovation leadership theory whose foundation is the vertical dyad linkage (VDL) and which was first modeled by (Dansereau et al. 1975). The theory suggests that there is a distinct rconnection between the leader and his follower which is centered on the vertical exchange. As suggested by Sharifirad (2019), the leader member exchange theory, consists of two groups among the followers. The first is the in-group, which in this case will be closer to the leader, and have access to information and get involved in organizational decision making. The second is the outgroup, which tends to have a limited access to information and may not be involved in decision making. According to Cote (2017), this theory holds that the leader's behavior towards the employee is the main determinant of

the relationship between the two, and hence employees' reaction to innovation. It holds that if a leader motivates, shows trust and loyalty to employees, in return, the employee tends to be more engaged and productive, which gives them the environment to be creative and innovative. It is believed that the relationship between a leader and their followers grows from a basic contractual relationship to a mature one with trust and loyalty between the two parties.

Transformational leadership theory is termed a new leadership paradigm which is crucial in the current competitive business environment (Bass 1990) (Northouse 2007) (Cote 2017). This theory as later extended by Waham (2020) who affirmed that transformational leadership is seen as a possible solution to increasing challenges facing organizations in the current times where competition is high and innovation is necessary for an organization to stay competitive. Transformational leadership theory inspires, energizes and intellectually stimulates the employees when faced by uncertainties (Cote, 2017). It is widely accepted that engaged employees demonstrate strong devotion to the organizational vision and mission, which increases the productivity of the organization, creativity, innovation and its overall competitive advantage (Cote, 2017). According to Cote (2017), companies are now turning to transformational leaders who inspire and empower employees, which in turn builds relationships between the leader and follower, based on trust and engagement. Trust leads to followers who are engaged, empowered, creative and willing to take risks and collaborate on behalf of the organization. According to Waham (2020), transformational leadership is built on four main traits as shown in the diagram below;

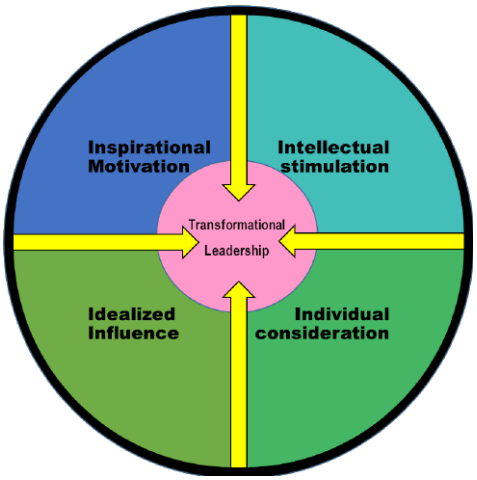

Figure 4:Transformational Leadership model - Sharifirad (2019)

A leader that acknowledges the value of transformational leadership style will enable as well as inspire the followers to align their individual goals with the organizational aims, hence inspirational motivation. By using idealized influence, the leader uses their charisma to mentor and influence the followers to do what they say. A transfomational leader will aim to consider a follower individually which means they will be supported and motivated based on their strengths and weaknesses. Finally and most importantly in this context, a transformational leader will encourage imaginations of the follower and challenge them to think outside the box as well as gather knowledge from beyond the organizational boundaries, which leads to inventive and forward-thinking approaches to problem-solving (Renjith 2015).

This study therefore refers to the transformational leadership theory, which together with the open innovation in the SMEs' theoretical framework by Lee (2020) form the conceptual framework for this study. The study looks at the motivation for adopting open innovation by SMEs, challenges they experience while implementing open innovation and the benefits that these SMEs will experience as a results of collaborations. The study also touches on the impact of transformational leadership in the above factors of open innovation.

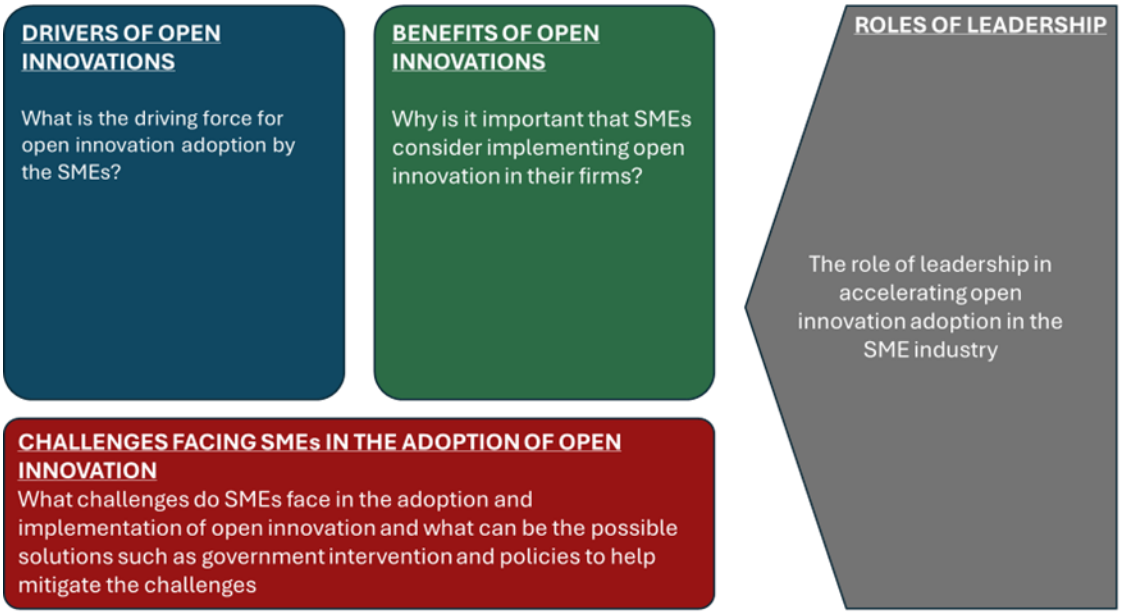

Figure 5: conceptual framework - author's construction

2.4 Open Innovation

Henry Chesbrough, the pioneer of open innovation theory, defined the concept as a paradigm where organizations make use of externally and internally generated ideas and concepts, along with both internal and external routes to market in anticipation of firms advancing their technology (Chesbrough 2003). Later on in 2006 as the concept of open innovation gained familiarity, the definition expanded to the purposive use of external and internal knowledge to hasten internal innovation at the same time increasing technology commercialization. Table 1 below shows different definition refinement overtime.

Table 1: Summary of open innovation definitions

Definition	Definition	Source
Original definition	Open innovation implies that ideas can emanate from within or outside organizational boundries and the company can go to the market from inside or outside the boundaries of the organization.	(Chesbrough, 2003)
2nd definition	Open innovation refers to the deliberate use of internally and externally available knowledge in order to accelerate internal innovation while expanding the market for external use of innovation.	(Chesbrough, 2006)
3rd definition	In the third refinement, open innovation refers to the innovation process that harnesses knowledge flowing across organizational boundaries by use of both financial and non financial mechanisms that align to the individual organization's model so as to guide and influence knowledge sharing.	(Chesbrough, 2017)

In the past, R&D conducted internally was a critical asset for the organization and it determined an organization's competitive position in the market. Large corporations such as IBM and DuPont were the trailblazers due to their capacity to intensely invest in their internal R&D (Chesbrough, 2003). Some of the principles that define the concept of closed innovation are organizations' belief that they should get the greatest talent in their industry working for them. Organizations also believe that they should be the first to commercialize a technology, and if they come up with it first, they can win if they design the most mind-blowing ideas in the industry (Chesbrough, 2014). The diagram below depicts the model of closed innovation.

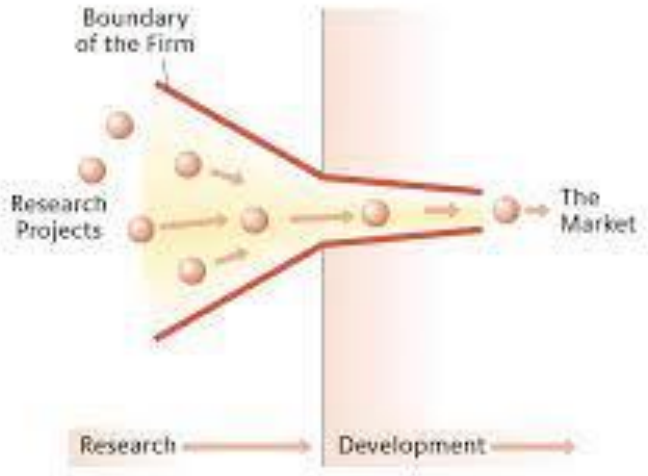

Figure 6: The closed innovation model – (Chesbrough, 2014)

However, as time progressed, closed innovation began fading out and the concept of open innovation was introduced by Chesbrough, in the year 2003. The idea of open innovation as argued by Robin (2019) and Chesbrough (2006) implies that new and productive Ideas are not centralized in the hands of firms and departments, they are freely distributed in the economic landscape.

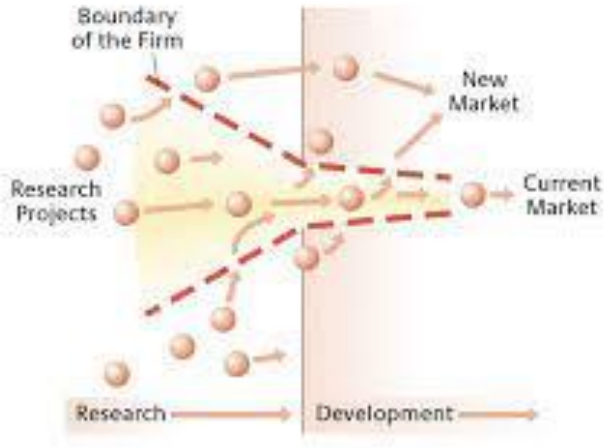

Figure 7: The open innovation model – (Chesbrough 2014)

Since its introduction, the concept of open innovation has gained popularity in the academic fields and the different industry sectors. Some industries such as the nuclear reactor may still be stuck in the closed innovation due to the nature of their businesses, however, in industries such as entertainment, open innovation is critical for the businesses to thrive (Chesbrough, 2003). The table below shows the contrasting principles as suggested by (Chesbrough, 2003)

Table 2: Contrasting principles of open and closed innovation – (Chesbrough, 2003).

	Contrasting principles of open and closed innovation	
	Closed innovation principles	**Open innovation principles**
1	The best human resources in the industry work for us.	Not all the best people in the industry work for our organization, hence we have to acquire and utilize the knowledge held by smart individuals outside our organization.
2	In order to gain from internal R&D, it must be discovered, developed and commercialized by our organization.	In the same way that external knowledge brings enormous value, internally developed technology is required to claim a portion of it.

3	If we make the discovery independently, we will be the first to bring it to market	We do not need to initiate the research in order to profit from it
4	We win if we are the first to bring an innovation into the market.	Building an advanced business model is more valuable than being the first to enter the market.
5	If we generate the highest number of top-quality ideas in the industry, we will succeed.	If we effectively leverage both internal and external ideas, we will achieve success.

Zyang et al (2018) believe that the open innovation concept's growth was accelerated by the increased mobility of skilled labor, which means that companies cannot hold the best talents within their boundaries, rapid technology change, technology complexity and readily available venture capital. Chesbrough (2003) discovered that this concept can lead to innovation implementation efficiency, and at the same time shorten the project lifecycle, this is also supported by Krause (2015), in his findings that open innovation is an important mechanism for small organizations to access technology and knowledge available outside their borders and this leads to positive innovation performance.

According to Chesbrough (2017), the concept of open innovation works - this statement is supported by the fact that organizations attest to the their growth and increased perfomance as a result of open innovation. A survey carried out by researchers discovered that organizations with more external sources of knowledge had higher innovation performance compared to their counterparts who had less of the same (Chesbrough 2017).

As suggested by Lia et al. (2020), open innovation takes the form of three different processes: inbound open innovation (IOI), which is the inward technology transfer, where an organization acquires external knowledge and technology and uses it internally, and outbound open innovation (OOI) which is the outward technology transfer whereby organizations collaborate with different partners in the commercialization of an internally created technology. Coupled

open innovation is the third process which involves co-creation with different organizations in various forms such as alliances and joint ventures.

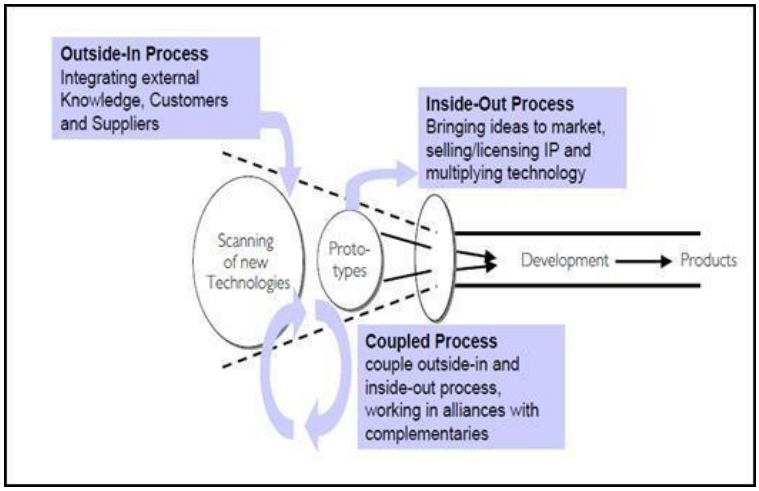

Figure 8: Open innovation archetypes – (Gassman & Enkel 2004)

However, Zyang et al. (2018) believe that open innovation is not a panacea, and that firms need to be aware of the cons, as increased use of external technology can lead to crowding out effects on long term projects. Chesbrough (2017) adds that besides all the benefits that come with open innovation its implementation can slow down the organization's innovation process due to lack of enough capacity to commercialize all the new innovations that are realized through open innovation..

2.5 Open Innovation in advanced economies versus emerging economies

According to a study undertaken by Sağa (2016), there have been conflicting results on the use of open innovation by SMEs, but the descripancies arise from the fact that developed economies have a higher rate of open innovation adoption by SMEs as a result of policies and an ecosystem that are supportive of SMEs in implementing open innovation. Additionally, Alyami (2024), found that SMEs in developed economies have access to financial resources, as well as information on potential collaborators and partners. Similarly, SMEs in developed economies have access to a wider pool of new technologies, new knowledge from universities and research institutions, and the business environment in developed countries consists of strict

legal structures which make enforcement of partnership contracts easier and manageable (Alyami, 2024). Moreover, SMEs in developed economies have greatly championed the creation of jobs, innovation and the generation of new goods and services, which have propelled their respective governments realising their contribution to the economy, and hence prioritising support to the development of the SME sector (Yeboah 2015).

On the contrary, according to Sağa (2016), SMEs in emerging economies face both internal and extenal hindrances, such as their small nature, lack of managerial capacity, low in-house skills, awareness, and minimal access to knowledge available externally, and finally, lack of internal capacity to handle these challenges. Additionally, in Ghana, SMEs are managed by owners with limited education, who face restriction in the access of resources, new technology and market information (Yeboah 2015).

According to Adu-Danso (2023), SMEs in developing economies and specifically in the Kenyan context, face challenges that hinder their innovation. The challenges as outlined in the literature can be classified into those that the firm has control over, such as financial constraints, low adoption of new technology, lack of information and understanding of the market needs, lack of of skilled human resources and insufficient interaction/collaboration with other organizations. On the other hand, some of the external factors that hinder innovations by SMEs are, competition which in most cases is informal, lack of skilled manpower and lack of appropriate policies to support SMEs in their innovation activities.

Alyami (2024) believes that one of the ways in which SMEs in developing countries are able to thrive in the adoption of open innovation is to have support of the government and have policies that offer a good environment to enable the adoption of open innovation. However, Yeboah (2015) argues that the government policies in the African countries are not supportive enough to see SMEs grow beyond the infant stage of the business, where he reports increased death of SMEs, whereby five out of seven SMEs die after their first year of operation. Additionally, Adu-Danso (2023), believes that policies in much of the Global South and particulary in Africa lack context based empirical evidence which leads to one-size-fits all policies that may work in other contexts and fail to work in other different contexts.

In a paper where André (2016) reviews the pros and cons of this concept, it emerges that research studies on the "downside" of open innovation is lacking. In his studies, he identifies a few cons of open innovation that are experienced, especially by the small and medium sized enterprises,where he divides them into three categories; the first is related to organizational challenges, whereby the firm incurs implementation costs, coordination costs and faults in routine work flows, these costs are not mainly financial, but also human resources and time that are used to implement the outsourced technology and innovation. Secondly, Andre (2016) looks at the knowledge management cons where strong dependence on external knowledge by the organization is experienced, leading to losing control of key knowledge, flexibility and strategic power. The third category falls under legal considerations, where factors such as legal literacy and intellectual property processes are lacking especially in the SME world. This therefore is an area of study that needs more research.

2.6 Open Innovation in Small Medium Enterprises

Organizations are termed "small" if they are made up of 1-50 employees and "medium" if they have about 50-200 employees (Krause, 2015). Formal SMEs differ from the informal small businesses in the context of management, the reason for its operations and also their growth strategy. In most cases, informal small businesses are owned by individuals who do not aspire for growth beyond a certain level. An example would be a pensioner setting up a small business for the purpose of basic income and having them engaged.

In Kenya, SMEs constitute 98% of the businesses in the country, create 30% of available jobs and contribute 3% to the country's GDP (Wakiaga 2019). The SMEs in Kenya have an enormous potential that can turn around the country's economy especially by participating in the manufacturing sector, but it remains largely untapped

SMEs are said to be the source of economic growth in a given economy and major source of noble innovations (Usman, 2016). As a result, the government of Kenya has over the recent years been supportive of SMEs by setting up policies and an environment meant to enable their growth. Below are some of the organizations that are at the forefront in supporting SMEs;

Table 3: Organizations supporting SMEs in Kenya

Organization	Purpose
The MSME Alliance of Kenya	It is the umbrella body for SMEs in kenya meant to be the voice of SMEs in policy influence during government and other stakeholders engagements. https://msmeallianceofkenya.or.ke/about/
The association of startups and SMEs enablers in Kenya (ASSEK)	Brings together and supports the development and growth of SMEs by creating an ecosystem where the SMEs can collaborate and learn from each other. https://assek.ke/#
Kenya Association of Manufacturers	Acts as the voice of SMEs in the manufacturing industy, by advocating for a favorable environment and also offers strategic leadership to the SMEs in the manufacturing industry. https://kam.co.ke/about-kam/
Innovation hubs	There are several innovation hubs in Kenya that besides offering co-working spaces, also offer strategic leadership and guidance to the SMEs. A good example is the Nairobi garage https://nairobigarage.com/

The research focusing on open innovation has mainly been centered on high-tech companies and large corporates (Singh et al., 2021). There has been a couple of studies focusing on collaboration and open innovation between small firms and large corporates, however much of these studies provides the large corporates point of view, according to Muhammad Usman (2016) it is necessary to analyze the collaboration from both SME and large corporates' point of

view so as to craft a productive collaboration which can only be successful if their goals and processes are aligned. Compared to large corporates, SMEs are more inclined to gain advantages from open innovation and they can easily implement this model due to the flexibility of their business model and strategies (Hossain 2015). Krause (2015) found that SMEs are implementing open innovations to increase their competitive advantage by reducing the cost of operation while reducing the duration required to commercialize.

Small and medium enterprises tend to benefit from collaboration with larger companies as they are able to overcome their newness and smallness liabilities. As explained by María Isabel Rodríguez-Ferradas (2019), the challenge of newness makes it difficult for the SME to penetrate the market, while the smallness liability factor makes it challenging to access some resources such as financial and human resources. Conversely, large firms are also able to gain from open innovation collaboration as they access new and specialized innovations from the small and medium-sized enterprises (Weiblen and Chesbrough 2015). Another way that SMEs are adopting the concept of open innovation is by collaborating with their suppliers and customers to add external knowledge into the existing internal knowledge base (Krause 2015).

2.7 Drivers of open innovation adoption by SMEs

There are three major classifications of drivers of open innovation: the first relate to the challenges in the business environment. Stephen (2019) found that some of the challenges that push SMEs to consider collaboration are cost of operation, which pushes the SMEs to partner so as to ensure cost efficiency. Secondly, a lack of operational capacity can lead to an SME collaborationg with a partner with the capacity that they do not have. The ever changing market is another challenge that drives SMEs towards collaborating with partners. According to Chesbrough (2003), factors in the external environmental such as knowledge workers mobility, readily available venture capital, product knowledge and reduced product lifecycle are seen to push SMEs to collaborate and gather knowledge and expertise beyond its bounderies. Small and medium enterprises engage in open innovation through collaboration with venture capitalists, where they access financial as well as support in the form of guidance through the turbulence of starting and running small businesses (Chesbrough 2003). In most cases SMEs

adopt the inbound open innovation process due to the constraints of access to resources, it is through the IOI that they get access to knowledge bases, management experience and other necessary resources that may not be readily available internally (Lia et al. 2020). Secondly, based on earlier research done by Chesbrough & Crowthers (2006), the potential benefits and growth facilitated by open innovation leads to SMEs tapping into the opportunity for growth, with some of the benefits including the gathering of new knowledge that is avaible outside the organization's boundaries, cost efficiency, dealing with capacity deficit and managing the continously changing market. Additionally, Sağa (2016) found that small companies are adopting open innovation in order to hasten their innovation process, meet the needs of their customers sooner, being sustainably competitive while minimizing the expenses and uncertainties associated with innovation

2.8 Benefits of open innovation

The adoption of open innovation, particularly in the small and medium enterprise (SME) sector, offers a range of advantages that surpass the outcomes firms would achieve through independent operations. The major benefit that a firm achieves is access to external knowledge, where the SMEs leverage on the expertise, insights, and technological advancements that are developed beyond their organizational boundaries, thereby enhancing their innovation capabilities and competitiveness (Alyami 2024). Moreover, through open innovation, adopting firms are able to tap into capabilities that may not be available internally. By collaborating with external partners, SMEs can access complementary skills, technologies, and resources that are crucial for their growth and operational excellence (Oduro, 2019).

Additionally, through collaboration, firms get access to an expanded market share and a broader customer base. Partnerships and collaborations more often expose firms to new markets and customer segments, allowing them to tap into more markets increasing their reach and influence (Oduro, 2019). Another notable benefit that SMEs accrue as a result of collaboration is the accelerated pace of innovation. Through varied engagements with external partners, SMEs are able to shorten their product development cycles, which increases the speed of bringing innovations to market, and staying ahead of competitors in rapidly evolving industries (Sağa,

2016; Oduro, 2019). These benefits collectively underscore the groundbreaking impact of open innovation for SMEs, enhancing their resilience and adaptability in a dynamic business environment.

Table 4: Benefits of open innovation

Benefit	Reference
Access to external knowledge	(Alyami 2024)
Tap on capabilities that the organization may be lacking	(Oduro 2019)
Increase market share/ higher customer base	(Oduro 2019)
Fasten innovation process	(Sağa 2016), (Oduro 2019)

2.9 Challenges of open innovation

While open innovation presents significant benefits to small and medium-sized enterprises (SMEs), its adoption is often hindered by various challenges stemming from the unique characteristics and constraints of these firms. According to Oduro (2019), these challenges can be broadly categorized into major barriers, including knowledge, collaboration, organizational, financial, and strategic barriers. Knowledge barriers arise due to limited access to the latest technological advancements, research findings, or skills essential for effective collaboration. Collaboration barriers reflect difficulties in establishing and maintaining partnerships, as SMEs may lack credibility or struggle with building trust with external partners. Organizational barriers often involve structural limitations, insufficient innovation culture, or bureaucratic constraints that stifle collaboration and adaptability. Financial and strategic barriers refer to the limited resources available to SMEs, including capital and investment in innovation, and misalignment between business strategies and open innovation goals.

Additionally, external factors further complicate the adoption of open innovation. Adu-Danso (2023) notes that infrastructure deficiencies and restrictive policies imposed by governments can pose significant obstacles. For example, inadequate technological infrastructure, limited

access to broadband networks, or inconsistent regulatory frameworks can inhibit the ability of SMEs to engage in meaningful collaborations. Government policies and national innovation systems may either support or hinder SMEs' efforts, depending on how well they align with their needs and constraints. As a result, overcoming these challenges requires a multi-faceted approach, including supportive policies, strategic investments, and capacity-building initiatives tailored to address the unique needs of SMEs in the open innovation landscape.

The diagram below highlights the challenges that these organizations experience in their effort to adopt open innovation.

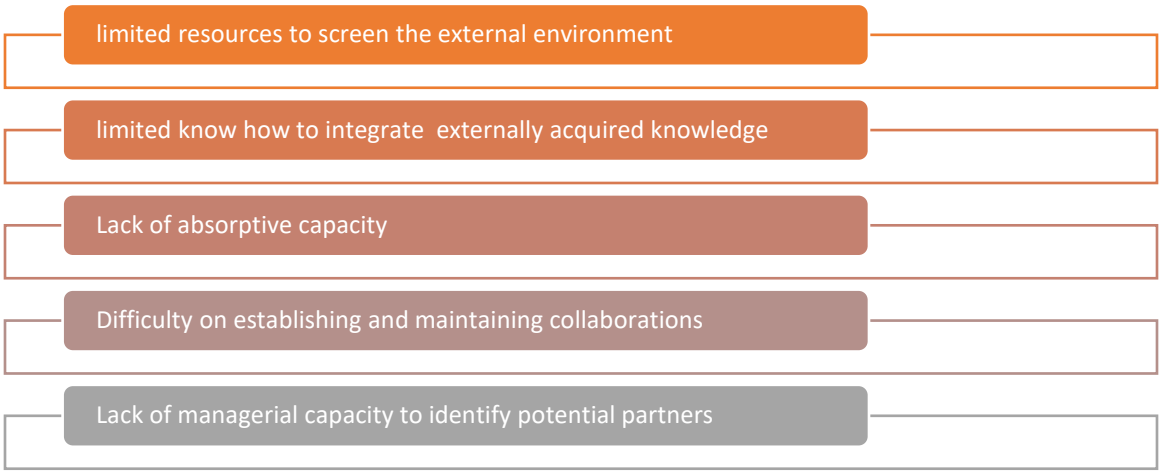

Figure 9: Challenges of open innovation adoption in SMEs -

2.10 Leadership, Innovation and Creation

Srisathana (2023) discusses the effect of organizational archetype on open innovation implementation, detailing that the organization has to cultivate an environment in terms of the values, behaviors and culture that encourage the adoption of open innovation. This is further supported by Singh et al. (2021), who found out through their study, that open innovation adoption is majorly affected by the organizational flexibility to change, organizational culture, employee characteristics, innovation climate and innovation strategy. It is therefore important that SMEs cultivate an environment that encourages the adoption and execution of open innovation. Additionally, Annamalah et al. (2022) give the term “organizational citizenship

behavior, which they describe as behaviors that go beyond the official roles and those that do not have a formal award system. Such behaviors are said to foster a positive working environment and employees supporting other employees and also take care of the well-being of their co-workers in an open-innovation environment. Hence, the authors believe that the success of open innovation adoption in an organization is highly influenced by employees and their attitude and behavior.

Leadership has been defined as the process of socially influencing people while gathering their support in achieving a shared goal or vision (Tikas 2017 & Chemers 1997). Leadership is different from management as the latter uses authority, while leadership focuses on setting the vision and goal of the firm then motivating and mobilizing the team to achieve the goal (Tikas 2017 & Chemers 1997).

Today's firms are looking for leaders who will not only perform the ordinary management duties such as planning and controlling but leaders who will jointly work with the teams in new idea generation and new risk-taking activities (Kozioł-Nadolna 2020). Open innovation mainly involves the exploration and exploitation of resources and knowledge inside and outside the organization and this calls for firms to embrace open and less traditional leadership, a leadership style that encourages knowledge creation and application (Naqshbandi 2019).

Transformational leadership has been defined as the leadership style where the leader and followers empower and motivate each other, and influences the followers' trust and loyalty to the leader and the vision that team is working towards Louw (2017). Naqshbandi (2019) adds that a transformational leader, also referred to as an empowering leader, is characterized by reposing trust in the followers and allowing them autonomy in running with their self-set goals.

Transactional leadership focuses on the implementation of strategies at the middle and lower levels of management whereas transformational leadership focuses on the harmonious working between the leader and followers. Louw (2017) and Amos (2012) believe that leaders must adapt the transformational style in order to be effective and competitive. However, some researchers such as Hussain (2017) believe that transactional leadership style also motivates organizational innovation and employee creativity.

Based on over 500 doctoral studies, Naqshbandi (2019) hypothesized that there is a strong connection between transformational leadership and leadership effectiveness. In that study, Naqshbandi (2019) found that an empowering leader creates an environment known as employee involvement climate where employees have the benefit of access to information and have the autonomy of using that information to set and attain their goals, which are in line with the organizational goals and strategies.

According to Chukwuemeka (2021), empowering leadership, another description of transformational leadership, allows followers the freedom to make independent creative decisions concerning different situations, which encourages the followers to take initiative in managing and controlling their personal behaviors.

A meta-analysis carried out by Lee et al. (2017) compared leaders said to be empowering and those rated as non-empowering, and the results found out that the employees managed by empowering leaders were more likely to come up with new ideas and new ways of doing things. Hence, their conclusion was that transformational leadership is more effective when employee creativity and innovation is required.

Directive leadership also termed as transactional leadership is leadership behavior that focuses on a power position which is at times referred to as coercive power, it is associated with metaphors such as direction, command, intimidation, and reprimand as primary instruments to manage followers (Chukwuemeka 2021 & Pearce et al. 2003). According to Colovic (2022), directive leadership is associated with orders by the leader to pursue non-negotiable goals, failure to which the follower is reprimanded. According to the author above, this action leaves no room for the follower to exercise autonomy, creativity and innovativeness, and motivation, and this leads to an unexciting work atmosphere.

Chukwuemeka (2021) and Yun et al. (2006) maintain that directive leadership does not only lead to lower or no employee empowerment, but that this leadership style lowers the followers' self-leadership and affects employees' need for autonomy. However, Chukwuemeka (2021) and Martin et al. (2013) found that even though both directive leadership (DL) and empowering leadership (EL) increased work task proficiency, only EL increased proactive behaviors.

2.11 Transformational leadership and open innovation

The two main crucial functions of a leader are communicating a vision and working to engage the followers into actualizing it (Colovic 2022). A leadership style on the other hand refers to the leader's response and reaction to how decisions are made, engaging the employees and the level to which the leader allows his followers attain autonomy in their work. These are the traits that used to define the leadership style implemented by an individual. It is therefore believed that the style that a leader adopts is based on how they approach decision making, employees' engagement and giving autonomy in the followers' work. This style can be termed as either directive, which is quick to attain goals but lack the long-term innovative effect, or empowering, where the followers are intrinsically motivated to be innovative and creative, which is a long-term effect of productivity (Lorinkova 2012).

Transformational leadership, which was originally conceptualized by James MacGregor Burns in 1978 and later extended by Bass & Riggio (2006) is termed a modern leadership style and classified as an empowering leadership style. Based on the traits above, transformational leadership allows inclusive decision making where the subordinates participate in the organizational decisions, the followers are allowed self-leadership in their workstations, and the employees are all involved in the organizational matters and decisions (Colovic 2022).

Empowering leadership is different from directive leadership in that the latter is authoritative and leans more on ordering the employees to follow guidelines given to carry out assignments. This type of leadership leaves no room for autonomy, involvement in decision making for the followers (Colovic 2022).

In the era of stiff competition and rapid technological changes in the external environment, transformational leadership is seen as a possible solution for an organization in tackling these changes (Waham 2020). Transformational leadership fosters intellectual stimulation and creates an environment of openness among the members which translates to productivity, loyalty and innovation (Junni 2016). As the transformational leadership style became popular, the four dimensions depicted below are said to be the backbone of the leadership style;

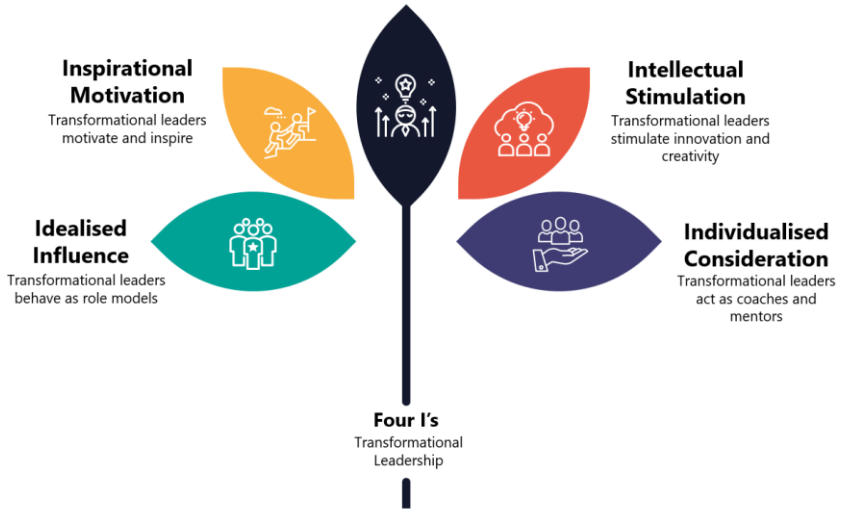

Figure 10: Transformational leadership model: Waham, (2020)

The points below explain the 'Four I's of transformational leadership as modeled by (Waham 2020). A leader exhibiting the transformational leadership style tends to act as a role model to the followers, which is where they lead by example. The leader exhibits the behaviors that are expected from the followers, for example, aligning one's values to those of the organization. This allows the employees and followers to have a role model to look up to, which acts as an idealized influence.

A transformational leader will inspire motivation based on how they communicate the organizational goals and vision. Communicating the vision and goals in a way that motivates the employees to feel proud of being associated with these goals, and hence work hard to actualize the goals.

Intellectual stimulation refers to the level to which the leader will encourage the followers to challenge and question the status quo. This encourages the followers to take risks, and develop new solutions to problems in the process, the employee's creativity and innovativeness is tried and encouraged.

In individualized consideration, the leader treats each follower individually, which comes from knowing that everyone is different and that they will be having different aspirations. This allows the leader to mentor and coach the followers based on their needs, which ultimately leads to

employee involvement and results in productivity (Junni 2016). Hence this study will look at how transformational leadership style impacts the adoption of open innovation in a small and medium sized enterprise.

3. Research methodology

The aim of this chapter is to describe the research design and methodology and the strategy the study used to answer the key research questions.

3.1 Research design and strategy

There are two main methodological approaches to research namely, qualitative and quantitative. According to Rahman (2017), over the years quantitative research was considered superior by some positivistic scholars, who believed that the world consisted of a reality that is unchangeable and can be objectively quantified. On the other hand, qualitative research is often used under the interpretive paradigm, which advances the notion that reality is determined by humans, implying that it can be changed and subjectively understood. Qualitative research has been defined as a type of research whose findings and results are not quantified or arrived at by statistical analysis (Rahman, 2017). Quantitative research, on the other hand, refers to any research whose findings and analysis of the findings are quantified (Bryman, 2012).

This cross-sectional exploratory study used a qualitative research method and will focus on 10 SMEs in three different sectors, namely, manufacturing, retail and ICT. According to Rahman (2017), qualitative research is said to produce detailed opinions and experiences of participants which makes it suitable for this study to understand the experiences of the SME owners and employees in their adoption and implementation of open innovation.

Qualitative research methods typically use participant observation, interviews, and document reviews (Rahman 2017). Hence, this study used a combination of face-to face-and semi-structured telephone interviews, which allowed the researcher to elaborate on the questions and at the same time, the participants were able to clarify points that were not clear, as well as give detailed answers to the interview questions.

3.2 Participants selection

This study employed purposive sampling, also referred to as selective sampling, wherein specific selection criteria were established to identify participants who best aligned with the research

objectives. By applying these criteria, the researcher ensured that the chosen participants possessed relevant knowledge and experience pertinent to the study's aims. In addition to purposive sampling, a convenience sampling method was utilized, allowing the researcher to initially approach SMEs already known to them. Subsequently, a snowball sampling technique was adopted, enabling current participants to refer to other qualified SMEs, thereby expanding the participant pool. This combined sampling approach was deemed optimal given the time constraints and the cross-sectional, exploratory nature of the study, which required an efficient, yet targeted method to capture meaningful insights within a limited timeframe.

3.2.1 The Selection Criteria

According to Reybold et al. (2013), the selection of participants is an area within research methodology that often receives relatively limited critical examination compared to other aspects, such as data analysis or measurement techniques. The authors argue that this oversight is significant because the process of selecting participants inherently involves subjective judgments by researchers about who can provide, or what constitutes valuable data. This implies that researchers play an influential role in shaping the scope and direction of the research by making choices about which individuals or groups will provide insights that align with the study's objectives. In this sense, participant selection is not merely a logistical step but rather an integral part of the research design that can profoundly impact the findings and conclusions. For this reason, the researcher used the criteria below to select the participants for this study.

- The participants had to be representatives of SMEs. According to Krause (2015), organizations are termed "small" if they are made up of 1-50 employees and "medium" if they have about 50-200 employees. The SMEs had to be based in Kenya as the geographical location.
- The SMEs had to have been operational for a minimum of four years, which is a period that is widely recognized as critical for long-term survival and growth
- The SMEs had to be in either manufacturing, retail or ICT industry sectors

3.2.2 Sampling

According to Ragab (2018), sampling is the process of selecting a subset from a larger population that accurately represents the characteristics of the whole population, allowing researchers to conduct their studies effectively within practical limitations of time and budget. For the purpose of this study, sampling is vital given the large number of Micro, Small, and Medium Enterprises (MSMEs) in Kenya. Recent data from the Kenya National Bureau of Statistics (KNBS) reports that about 7.41 million MSMEs are present in the Kenyan economy, out of which approximately 1.56 million MSMEs are formally licensed entities, while the remaining? 5.85 million operate in the informal sector (KNBS, 2024).

This study targeted a total of 10 SMEs within the ICT, manufacturing, and retail sectors so as to gain a focused understanding of the challenges and practices unique to these industries and their openness to the adoption of open innovation. Of these 10, five SMEs will be selected from the ICT sector, three from manufacturing, and two from retail. The research design being employed in this study will include interviews with each SME's founder or CEO and an employee who works closely with the leader of the organization, offering both strategic and operational perspectives on the SME's functioning, challenges and open innovation perspective on the strategic and operational levels. This approach not only enhances the reliability of insights but also ensures that the perspectives gathered reflect the dynamics of both leadership and workforce within the chosen SMEs.

3.3 Data Collection

Qualitative interviews vary in structure. On the one hand, we have highly structured formats, with predetermined questions, and on the other, we have semi-structured and unstructured formats, where a researcher makes use of open-ended questions to lead the conversation and at the same time allowing participants to discuss topics in their own terms. One major reason why semi-structured interviews are commonly used in exploratory research, is their ability to balance between gathering comparable data and allowing new themes to emerge organically (DiCicco-Bloom 2006). Moreover, interviews are importantly known to create a space for participants to share their stories and experiences, which makes this data collection method

best suited for use in contexts where understanding individual experiences is crucial. However, on the flip side, interviewing also requires careful consideration of researcher influence, as interpersonal dynamics and question phrasing can shape responses, potentially introducing bias (Seidman 2019).

This study used a combination of face-to-face and virtual semi-structured interviews in collecting data. It comprised of one in-person and nine virtual interviews which were conducted for over a period of three weeks. Each interview session lasted between 45 to 60 minutes, with durations varying based on the participants' engagement and willingness to share detailed narratives of their innovation experiences. Prior to the interviews, each participant was given a comprehensive briefing and information on the research topic and an introduction to the concept of “open innovation adoption”. It turned out that most of the participants were unfamiliar with the term despite engaging in collaborative practices which were indicative of open innovation principles (Chesbrough, 2006). This introductory explanation helped align participants’ understanding with the research context, promoting richer and more relevant responses.

The researcher assured the participants of the confidentiality of their responses and clarified that any information shared regarding their organizations would be anonymized and would not be personalized so as to ensure transparency and ethical integrity. Participants were informed of the study’s intent to audio-record the interviews, solely for research purposes, and each participant provided verbal consent to participate in the study and to be recorded. This consent process is crucial when engaging in getting personal information and it aligns with the ethical standards of research practices as recommended in qualitative research, which emphasizes informed consent and respect for participants' autonomy (Creswell & Poth, 2018).

3.4 Data Analysis

For data analysis purpose, a tested framework has been proposed in different settings by different authors who term it a primary tool for qualitative data analysis. A six stage framework has been suggested by Clarke and Braun (2013), Creswell (2002), and Belotto (2018). The approach enables a researcher to effectively identify and interpret varied themes in a data set

which enables data analysis in a systematic and rigorous manner. This framework begins with *data collection*, where relevant qualitative data is gathered from different sources through interviews, reading secondary publications or other means. Secondly, the researcher then *familiarizes* themselves with the data, which in most cases is attained by fully immersing themselves in the data, through repeated readings or reviewing of transcripts, to gain an in-depth understanding.

The third phase involves *coding* where the data collected is labeled according to the research questions and the codes grouped in *categories* of similarity, which form a certain pattern. It is with these patterns and categories that the researcher generates a theme, which allows a deeper conceptualization of the insights collected.

Finally, the final and sixth phase involves the *contextualization and presentation of findings*, where themes are interpreted within the study's broader context, and results are communicated in a structured format. The thematic analysis framework thus provides a flexible, yet robust structure, enabling the researcher to capture both explicit and implicit meanings within the data while aligning with the study's objectives (Braun & Clarke, 2006; Nowell et al., 2017).

3.4.1 Familiarization

The familiarization stage involved an in-depth review of the data, requiring the researcher to re-listen to each interview recording and thoroughly read through participants' responses. This process allowed the researcher to immerse herself in the data, an essential step to gain a comprehensive understanding of the perspectives shared. Key responses to each question were systematically recorded in an Excel table, which facilitated the organization and comparison of data across interviews. By documenting responses in this structured format, the researcher could more easily identify recurrent patterns and prominent responses, ultimately enabling the emergence of initial themes.

3.4.2 Coding the collected data

The coding process followed a structured approach aligned with the thematic framework developed in Chapter 2. This thematic framework, rooted in the study's conceptual framework, served as a guiding template for identifying and categorizing emerging themes. Based on this framework, key thematic blocks were established, forming the foundation for both the development of interview questions and the subsequent analysis of responses.

During coding, the researcher systematically examined the collected data, assigning codes to segments of text that corresponded to pre-defined themes as well as any new insights that emerged naturally from participants' responses. This approach to coding is grounded in thematic analysis principles, which support both deductive (top-down) and inductive (bottom-up) theme identification (Braun & Clarke, 2006; Nowell et al., 2017). Deductive themes were based on the conceptual framework, allowing for structured analysis aligned with the research objectives, while inductive themes offered flexibility, capturing unique patterns beyond the initial framework.

3.4.3 Conceptualization of the themes

During the conceptualization phase, the researcher engaged in a thorough interpretation of the data collected from the interviews, striving to align the emerging themes with existing findings from the literature. This process is critical as it not only situates the research within the broader academic discourse but also enhances the credibility of the study by demonstrating how the findings resonate with, or challenge previous work in the field (Nowell et al., 2017).

The researcher meticulously analyzed the coded data, identifying patterns and relationships among themes that reflected the participants' experiences and perspectives on open innovation. By comparing these themes to established literature, the researcher was able to draw connections between the participants' narratives and theoretical frameworks, highlighting consistencies and discrepancies that could provide valuable insights into the phenomenon under investigation (Braun & Clarke, 2006).

3.4.4 Contextualize and present the findings

The contextualization and presentation of findings represent a critical stage in qualitative research, wherein the researcher organizes and articulates the results in a manner that enhances understanding and accessibility. In this study, the researcher employed graphical representations, including tables, to effectively convey key findings derived from the data analysis. This approach facilitates the visualization of complex data, allowing for clearer comparisons and contrasts among themes and participant responses (Creswell & Poth, 2018).

The use of tables is particularly advantageous in qualitative research as it aids in summarizing large volumes of information succinctly, making it easier for readers to grasp significant trends and patterns without wading through extensive textual descriptions. By organizing data thematically, the researcher was able to highlight how specific responses relate to broader concepts within the study, thereby providing a structured overview that connects empirical findings to the theoretical framework established earlier in the research.

3.5 Limitations of the Study

This study encountered several significant limitations that must be acknowledged to provide a balanced understanding of its findings and implications. Firstly, due to constraints related to time and budget, the researcher focused exclusively on a sample of only 10 SMEs. This limited sample size raises concerns regarding the generalizability of the findings. While qualitative research often prioritizes depth over breadth, the small number of participants means that the results may not accurately reflect the experiences of a broader population of SMEs in Kenya or beyond

Secondly, the research was geographically confined to SMEs operating within Kenya. Consequently, the findings may lack transferability to SMEs in different cultural, economic, or regulatory contexts. Variations in market dynamics and business practices across regions can lead to divergent experiences that may not be captured by this study, thereby limiting the applicability of the results to similar enterprises in other countries.

Lastly, a potential risk in semi-structured interviews entails participants tailoring their responses to align with what they perceive the researcher as wanting to hear. This phenomenon, known as response bias, can affect the authenticity of the data collected, as participants may prioritize socially desirable responses over candid reflections of their experiences. Nevertheless, semi-structured interviews are valuable for allowing flexibility and depth in responses, and researchers must remain vigilant about these dynamics in order to mitigate their impact on data integrity.

3.6 Research Quality

Trustworthiness is a fundamental criterion for qualitative research, as it assures readers of the rigor and authenticity of the study's findings. To establish trustworthiness, researchers must strive to meet key criteria, including credibility, transferability, dependability, and confirmability (Nowell et al., 2017). The criteria described as below by the authors Nowell et al. (2017):

Credibility refers to confidence in the truth of the findings which is attained by spending time and talking to participants and getting as much information as possible.

Transferability refers to the extent to which the findings of a study can be applicable to other contexts.

Dependability This refers to ensuring that it is possible for readers to judge the reliability of the findings, which is attained by ensuring that the research process is consistent and repeatable.

Confirmability This means that the researcher has to prove that the findings are not their own interpretations but are based on participants' findings and any other information from secondary sources of data.

For this study, the actions as presented in the table below were taken to ensure that the study adhered to the quality standards required.

Table 5: Quality assurance criteria

Criteria	**Action Taken**
Credibility	Participants for the study were carefully selected which means the information gathered was relevant to the study topic
Transferability	The findings of this study are not generalizable, but may provide very valuable insights for analogous studies and contexts
Dependability	This was ensured by having a number of participants in a similar category reporting their experiences
Confirmability	This was done by following a proven research process in collecting, analyzing and interpreting the data

3.7 Ethics consideration

The study adhered to the highest ethical standards. Following the approval of the ethics application by the University of the Witwatersrand, the researcher ensured that participants comprehended the study's purpose by providing them with an informative letter. Additionally, according to Creswell & Poth (2018), the consent process aligns with ethical research practices as recommended in qualitative research, which emphasizes informed consent and respect for participants' autonomy. As a result, prior to starting the conversation with the participant, the researcher obtained informed consent from each participant and assured them that their data would be securely stored on a password-protected laptop, accessible only to the researcher and their supervisor.

Chapter 4: Presentation of Findings

4.1 Introduction

This chapter presents the results and findings derived from a series of 15 interviews conducted with small and medium-sized enterprises (SMEs) based in Kenya. Of these interviews, 10 were conducted with the founders and Chief Executive Officers (CEOs) of the SMEs, providing open innovation insights from the perspective of senior leadership. The remaining five interviews were conducted with employees who work closely with senior management, offering a comprehensive understanding of their internal leadership dynamics and how those impact adoption of open innovation.

4.2 Demographic profile of Participants

The two tables below give a brief description of the interviewed participants who include the founders of the SMEs for the first table and the employees in the second table;

Table 6: Founders/CEO interviewed

Participant Number	Person Interviewed	Industry	Number of staff	Date founded
P1	Co-Founder	Retail	14	2017
P2	Founder	Manufacturing	3	2020
P3	Founder/CEO	Manufacturing	53	2020
P4	Founder/CEO	Manufacturing	8	2016
P5	Founder/CEO	ICT	5	2018
P6	Co-Founder/CEO	ICT	10	2015
P7	Co-Founder/COO	Retail	5	2019
P8	Founder	ICT	4	2018
P9	Founder	ICT	3	2019
P10	Founder	ICT	3	2019

The participants listed in the table below, designated as "EP 1 to EP 5," represent the employees working directly with the founders and CEOs described in the previous table. These employees are significantly impacted by the leadership styles employed by the SME owners. By examining these employees' perspectives and experiences, the study aims to provide a comprehensive understanding of the effects of leadership style on the adoption of open innovation within Kenyan SMEs.

Table 7: Employee Participants interviewed

Participant Number	Person Interviewed	Industry	Duration served in the role
EP 1	Electrical engineer	Manufacturing	2 years
EP 2	Operation assistant	Manufacturing	3 years
EP 3	Technical manager	ICT	5 years
EP 4	Front end developer	ICT	5 years
EP 5	Supervisor	Retail	3 years

4.3 Presentation of results

Based on the data collected from a series of 15 interviews, the findings are structured around four key themes identified through an extensive literature review, which were embedded in the conceptual framework presented in Chapter 2 of this study. These themes collectively serve as building blocks of the analytical lens through which the interview data is interpreted, allowing for a comprehensive understanding of the research questions and objectives. The integration of literature-derived themes ensures that the analysis is grounded in established theoretical perspectives, thereby enhancing the validity and depth of the study's conclusions.

Based on **Research question 1**: “Are SMEs in Kenya embracing the concept of open innovation? If so, in what ways?” the study looked at the thematic factors below:

- Drivers of open innovation
- Benefits of open innovation

- Challenges of open innovation

In reference to **Research question 2,** "How does transformational leadership style promote or hinder the adoption of open innovation in the SMEs?", the researcher looked at responses relating to the thematic factor below;

- Impact of transformational leadership on open innovation adoption

The results presentation follows the order of the themes above, with the first three points being insights from the founders/CEOs participants and the last theme being a perspective from employee participants.

4.3.1 Motivation for starting the business

Before delving into the primary themes of the study, the researcher identified a notable trend in participants' responses regarding their primary motivation for starting their business. A significant majority of participants indicated that their entrepreneurial endeavors were driven by a desire to provide solutions to existing problems. These problems were either directly experienced by the participants themselves or observed within their immediate environment. This trend underscores the participants' inclination towards problem-solving as a fundamental impetus for their business ventures.

The table below shows some of the reasons that led to the participants starting their own small businesses.

Table 8: Reasons for starting own businesses

Participant/Reason	Offer solution	Gap Identification	Passion	Seeking financial freedom
P1	x	x		
P2		x		x
P3	x		x	
P4	x	x		
P5	x		x	

P6	x	x		
P7	x	x		
P8		x		x
P9			x	
P10		x		

Most participants reported having started their business in an effort to offer solutions to existing challenges present in the market. In most cases, the participants went through the challenges themselves.

P3: Having been a fish farmer myself, and knowing the struggles that these farmers experience, I started my company to offer support to the farmers focusing on their greatest problems which are access to credit, fish feeds and market.

Some of the participants reported that they initially spotted a gap in the market, where some customers were not being served by what was available in the market.

P1: We realized that there was a gap in the provision of cooling facilities for the smallholder farmer dealing with perishable goods, and that is how we started our business to serve the smallholder farmer by offering them a solution to transport their perishable products to the market without worrying about them going bad.

P2: Besides seeking financial freedom, I realized there was a gap for nutritious animal feeds at a lower price. As all the big manufacturers were charging higher prices, I decided to skip the retail part of the value chain, and offer the feeds directly to the customer from the factory which led to lower prices for the farmers.

P4: In Kenya, most customers were being served by the big steel manufacturers, which meant that there was a gap in the market for a small company serving the small customers and that is how and why we started out steel manufacturing company.

P7: There was a gap in the area of operations for a small retail store and that is why we started our retail business, to serve the people in the geographical area.

A small number of the participants reported that they started their business due to a passion in a certain area which led them to pursue their current business.

P9: When I built a platform for my first customer, and later saw the direct benefit of that platform in the growth of the business, I became passionate about growing small businesses, and that is why I started my business.

P6: What motivated me to start this business is the desire to have a local company offering local IT solutions to local enterprises.

4.3.2 Drivers of open innovation

This section of the results delves into the primary factors influencing small and medium-sized enterprises (SMEs) in their consideration to adopt open innovation practices, with a particular emphasis on the role of collaboration. The key factors identified include access to finance, the inherent risks associated with innovation, the need to reduce the time required for innovation processes, the necessity of managing competitive pressures, and the availability of government subsidies. Each of these factors plays a crucial role in shaping the decision-making process of SMEs as they navigate the complexities of integrating open innovation into their strategic operations. The detailed findings are presented as follows:

Table 9: Drivers of collaboration

Participant	Access to finance	Innovation risk	Time efficiency	Managing competition	Government subsidies
P1	x			x	x
P2		x			
P3		x	x		
P4		x	x		
P5	x			x	
P6		x	x		
P7			x	x	
P8			x		

P9	x			x	
P10	x				

4.3.2.1 Access to finance

When it comes to accessing finance, various small and medium-sized enterprises (SMEs) reported engaging with different stakeholders depending on their specific financial needs. The majority of participants indicated a preference for utilizing bank loans and incurring debt rather than seeking investment partnerships. They expressed a concern that collaborations with investors could result in loss of control over their businesses, making them more inclined toward financial arrangements that do not compromise their autonomy. Consequently, they favored bank loans or partnerships that did not involve relinquishing any degree of control. Additionally, several participants mentioned relying on their personal savings as a primary source of funding. In the early stages of their business ventures, before attaining the break-even point, they also turned to family and friends for financial support. This approach was particularly common among those who wished to maintain full ownership and control of their businesses while navigating the challenges of financial sustainability.

P1: Besides using debt and loans, we partner with development partners.

P2: We use retained profits, and in times of emergency, we use the quick mobile loans. Venture capital has unfavorable terms that do not work for our business at the moment.

P3: We prefer seeking seed funds, grants or bank loans for expansion.

P4: Bank loans and social fundraising from friends and families is our go to option in raising capital.

4.3.2.2 Managing Innovation risk

Some of the participants opted for collaborative approaches as a way of managing innovation risk. When a business anticipates demand for a specific product but lacks the requisite manufacturing capabilities or resources, it often opts to collaborate with another manufacturer. This strategic partnership allows the business to capitalize on the complementary strengths and

expertise of its partners, thereby facilitating efficient and effective production. Additionally, most of the participants choose to pilot the products with customers before proceeding to mass production, allowing them to gather valuable feedback and mitigate potential risks associated with large-scale manufacturing.

P1: In order to avert the risk of innovation, we work closely with the customers, to understand their needs, what works for them and what does not. Upon learning this, we are able to produce products that are acceptable in the market.

P2: When we develop a new product, we give our loyal customers a few bags for free. If they like the product, they will place orders and spread the word; that is our go-to strategy in introducing new products.

P3: As a business, we have created an ecosystem which brings together different actors that benefit from our business directly and indirectly, as a result, the business runs in a loop sort of a design.

P4: In a scenario where my customers repeatedly ask for a product, I will not turn them down because I do not have the tools to manufacture it, and I will not invest in the machinery yet. So, in such cases I work with another manufacturer who has the capability to manufacture.

4.3.2.3 Handling competition

To effectively address competition, most of the participants reported that they prioritize maintaining high-quality products in the market and fostering strong relationships with their customers. Ensuring product quality involves rigorous quality control measures, continuous improvement processes, and staying updated with industry standards and innovations. This focus on quality not only differentiates their offerings from competitors but also builds customer trust and loyalty.

P1: We work closer and maintain good relationships with our customers and work closer with them for feedback; this is how we handle competition.

P3: We ensure that we differentiate our products, where we air fry our final fish to customer instead of the traditional method of frying it in oil, and maintaining high hygienic standards all the time.

P4: In the face of competition, we ensure we maintain our high-quality offering and combine it with good customer service.

P6: We listen to our customers and offer what they need. We also add value to our customer offering, offering above and beyond what the customer asks for.

P7: We tackle competition by building our brand, ensuring that our shop is appealing to our customer.

4.3.2.4 Commercialization

Most of the participants reported collaborating with different players when it comes to taking the products to the market. However, some participants who initially tested their prototypes with the customers before, just roll out mass production and commercialization.

P1: Before we embark on mass producing our new products, we collaborate with customers in testing the product. Once we are satisfied that the customers are happy, we then roll out mass commercialization. Hence, we do not collaborate with other organizations at this point.

P2: In order to keep costs low, we take our products directly to the farmers, after they have tested our products during the prototyping stage of manufacturing.

P3: We collaborate with social media influencers, government officials as well as farmers when it comes to commercialization.

P4: Our company partners with local hardware, distributors and contractors when rolling out our new products to the market, which enables us to reach a wider market.

P5: We manage to roll out products by big famous brands in the tech space that are well known in the market, hence customers realize that we are working with good brands and that makes it easier to penetrate the market.

4.3.2.5 Government subsidies

Most of participants reported a lack of direct support from the government in terms of subsidies that would be necessary for the survival of small businesses. However, some participants reported that they have benefited from small subsidies from the government in terms of grants and infrastructure.

P1: We have been lucky to receive some grants from the government that have aided in the expansion of our business.

P2: Some of the raw materials that we use in our production are zero rated, and this means that getting these raw materials is cheaper.

P6: We have access to the infrastructure needed for internet networks; however, we do not receive any direct subsidies from the government.

4.3.3 Benefits of Collaboration

Some participants found adopting open innovation beneficial as it facilitated growth and enabled them to serve larger markets. Open innovation, which involves collaborating with external partners and integrating external knowledge into the innovation process, allowed these SMEs to access new ideas, technologies, and resources that they might not have been able to develop internally. This approach not only accelerated their innovation cycles but also improved the quality and relevance of their products and services.

P1: Collaborating with experts has enabled us to get ideas at the conceptualization stage advice which has led to indirect profit increases.

P2: As a result of working with specific middlemen, we have managed to gather more customers which we would not have reached were it not for the connections; the reason is because we sell of our feeds directly to the famers without engaging retail outlets for our distribution.

P3: We have managed to increase our revenue because of collaborating with different farmers in our areas of operation.

P4: As a result of collaborating with other partners, we are able to meet our customers' needs better, acquire more contracts and improve our business processes, which lead to us serving larger markets. Working closely with contractors allows us to know when the market is changing and what the customers are demanding. With this information, we can serve customers better and in a more timely manner.

P5: Working in close collaboration with the partners leads to product sensitization which makes it easy to market ourselves. We sell products from big brand companies, hence marketing is made easier for us.

P7: Collaboration with distributors allows us to get longer credit periods. We have also partnered with a liquor distributor where we bundle up some products with the drinks from the distributor's shop. This has led to increased sales.

4.3.4 Access to Innovation/entrepreneurial hubs

Some of the participants reported access and being part of an innovation hub, which impacts their businesses as they are able to interact and exchange ideas with fellow small business owners. Simultaneously, they get to be mentored and have access to capital in terms of seed grants from different investors.

A second set of participants reported that they do not have access to formal hubs, but they have small social informal groups of small business owners with whom they exchange ideas and share challenges and possible solutions with.

Table 10: Access to Entrepreneurial hubs

Participants/ Response	YES	NO	If YES, how?/If NO why?
P1	*x*		Networking, built confidence
P2		*x*	Has not ventured into being part of a hub or informal group
P3	*x*		Networking, mentorship, access to funding

P4		x	Is part of an informal group of entrepreneurs in the same industry sector,
P5	x		Access to info on how to sell, new technology info, networking.
P6		x	Has not joined any hub, but planning to join one in the future
P7		x	Is part of an informal society where there is exchange of important information necessary for the business.
P8		*x*	Considering it for the near future
P9	*x*		Has helped with networking quite a lot
P10		*x*	Part of an informal group of business people

4.3.5 Challenges of open innovation

Different participants in the study experienced different challenges in their collaboration journey which fell into different categories such as managing partnerships, resource constraints, operational challenges of the partnerships, and the impact assessments of the partnerships.

P1: We have experienced some partners not honoring their part of the contract. We also experienced some of our partners overusing our brand names in their favor.

P2: In our experience, we have had to develop a cheaper line of our product to cater for a group of customers being served by our middlemen. This means reducing the quality of the product.

P3: As an entrepreneur, you experience burn out when trying to manage relationships with the partners.

P4: Working with other partners affects your turnaround time, as you are forced to work with their timelines. Secondly, you pay a premium for the cost of production, which affects your profits.

P5: Collaborations at times make it difficult to control the quality of your product. And it is also tedious to manage the relationships.

4.3.5.1 Relationship management

Managing the challenges experienced in collaborations called for managing the relationships as there are benefits that come with collaborations. As per the participants' responses on how they manage relationships, the most frequent mode was ensuring they meet their deadlines, keeping in touch with the partners, by ensuring they keep communicating even when there is really no business conversation. Some participants argued that to maintain relationships, there is need for transparency.

P1: We manage relationships with the partners by being keen and cautious about our interactions, ensuring we are transparent with all stakeholders.

P2: I go out of my way to keep an active relationship with my partners, which may include a random call without necessarily talking about business.

P3: To manage relationships with our partners, we ensure that we play our part in the agreement. This would include paying our dues on time and being transparent.

P6: I often try to partner with familiar partners, people that I have worked with before. This makes it easier to manage the relationships.

The participants reported that they use their networks and referrals to get information on prospective partners. They reported that there is no data for organizations where they can go gather information on prospective partners. This means that there is no cost associated with gathering information on partners.

4.4 Research question 2: Impact of transformational leadership on open innovation adoption

In terms of transformational leadership, the employee participants were asked a few questions, to try and find out the management style of their managers and how the styles impact the employees. The researcher also asked the participants about how management styles allow or discourage them to be productive in the organization.

4.4.1 Decision making

A majority of the participants indicated that decision-making within their organizations was decentralized, granting them the autonomy to make decisions pertinent to their roles. However, in certain situations, employees were required to seek managerial approval before finalizing their decisions. Participants who were actively involved in the decision-making process expressed a sense of belonging within the organization. This inclusion fostered a greater sense of accountability and responsibility toward organizational outcomes.

Table 11: Type of decision making

Participant Number	Decision making type	What the employee feels
EP 1	Decentralized	Makes them feel encouraged that they are a part of the organization.
EP 2	Decentralized	They get a sense of belonging because they can contribute by making decisions on her level.
EP 3	Centralized	Decisions are made at the top by senior managers.
EP 4	Decentralized	Feels confident that she can make decisions that will be heard.
EP 5	Decentralized	Feels appreciated because she is allowed to make decisions that are respected.

4.4.2 Collaboration between staff and management

The majority of participants indicated that there was significant collaboration between employees and managers within their organizations. They highlighted that teamwork was a prominent feature of their workplace culture, with many stating that they felt encouraged to share their ideas and contribute to discussions. The participants also reported that this collaboration and teamwork made them feel involved which led to them engaging even more in the organizational activities, and increasing their morale and productivity in their daily activities.

EP 1: There is collaboration, and we are all allowed to share our different ideas

EP 2: It is 50/50 as there are times when we are involved in decision making, but there are times when the leaders operate without engaging us.

EP 3: When we start a new project, everyone including the leaders have a role to play in the implementation of the project. This increases productivity because as an employee, you feel like your participation matters.

EP 4: Yes, there is collaboration. As an employee you feel appreciated when you work in collaboration with your manager.

4.4.3 Mentoring

Some of the participants reported that their leaders offer mentorship in the organization, as the managers lead by example, and are not subjected to a command-and-control style of leadership.

EP 1: Our manager shows us the way and walks us through it till you can handle it by yourself.

EP 5: My manager is quick to give me feedback on areas I need to improve on while praising me for the areas that I am good at.

4.4.4 Intellectual Stimulation

Some of the participants reported that their leaders push them to independently think out of the box when coming up with solutions to everyday operational challenges.

EP 6: Our leaders do not spoon feed us. Anytime I am stuck, my manager encourages me to figure it out on my own, it gives you a sense of fulfillment once you are able to figure out a solution for yourself.

EP 7: My manager leaves me in the deep end to figure out a solution to a problem. This has made me grow in my current position.

4.5 Research question 3: How does the adoption of open innovation by SMEs vary in different sectors?

According to this study, the manufacturing sector exhibited a higher degree of collaboration compared to other sectors, with retail following, and the information and communication technology (ICT) sector demonstrating the least collaboration. Participants from the manufacturing sector reported extensive collaboration with other small businesses, particularly in cases where they were unable to fulfill a customer's manufacturing request. Additionally, one participant highlighted partnerships with intermediaries who serve as connection points between the business and its customers.

Some participants in the manufacturing sector also noted collaboration with customers by actively gathering insights and feedback on prototyped products. This feedback loop allowed organizations to refine their offerings, thereby ensuring that the final products better aligned with market demands. This form of collaboration is essential for fostering innovation and maintaining a customer-centered approach to production, leading to greater customer satisfaction and competitive advantage.

In contrast, participants from the retail sector emphasized their partnerships with distributors. These collaborations primarily benefited retailers through extended credit periods, which provided greater financial flexibility and improved cash flow management. Such partnerships

are crucial for sustaining operations, particularly in retail environments where inventory turnover rates and capital requirements can fluctuate significantly.

Overall, the study highlights the varying levels of collaboration across sectors, These levels are shown in figure 11 below, where manufacturing shows more innovative partnerships compared to ICT at the top level of the diagram.

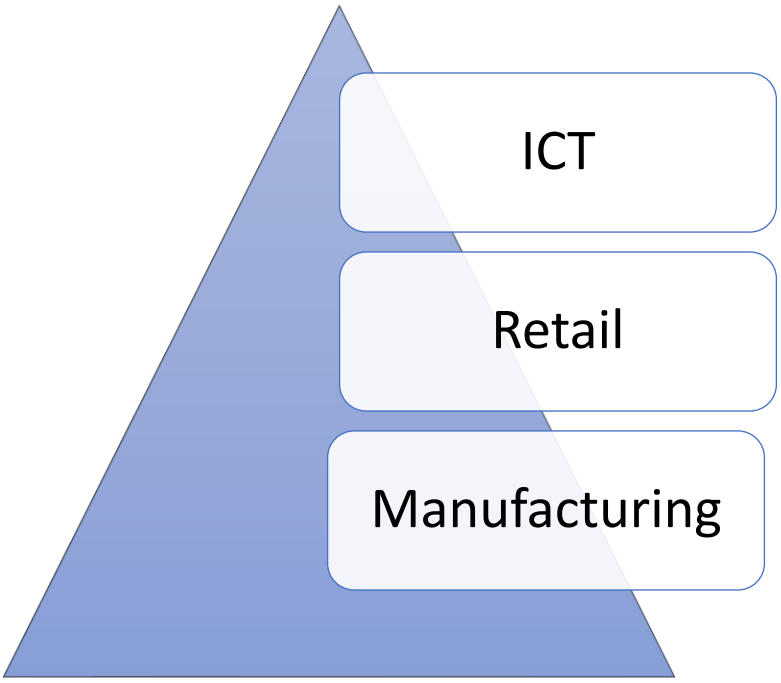

Figure 11: Variation of open innovation adoption in different sectors

As shown schematically on the figure above, the manufacturing sector demonstrates more diverse and more impactful innovation-driven partnerships. These collaborations not only enhance operational efficiency but also foster stronger relationships with both business partners and customers. The retail sector, while also collaborative, tends to focus more on financial and logistical benefits derived from partnerships with distributors. In the ICT sector, collaborations often take the form of franchising, where small SMEs serve as intermediaries in marketing and distributing products and services on behalf of larger organizations. Additionally, these SMEs frequently establish partnerships with financial institutions, primarily to secure the necessary capital required for project execution.

Chapter 5 Analysis and discussion of the research findings

5.1 Introduction

This chapter discusses the results that have been presented in Chapter Four of this study. The discussion will also synthesize the results collected with the literature, as discussed in Chapter 2 of this study, following the themes emanating for the guiding research questions as below.

Research question 1: Are SMEs in Kenya embracing the concept of open innovation? If so, in what ways? The study focused on the thematic factors below.

- Drivers of open innovation
- Benefits of open innovation
- Challenges of open innovation

Research question 2: How does transformational leadership style promote or hinder the adoption of open innovation in the SMEs? In relation to this question, we look at responses on the thematic factor below;

- Impact of transformational leadership on open innovation adoption

Research Question 3: How does the adoption of open innovation by SMEs vary in different sectors?

Research question 1: Are SMEs in Kenya embracing the concept of open innovation? If so, in what ways?

5.2 Drivers of open innovation

The literature argues that open innovation is essential to SMEs due to the struggles they experience because of their small nature. Challenges such as financial constraints, limited technical capabilities, high competition and a fast-changing business environment makes it necessary for small businesses to look at opportunities that would enable them to tackle these challenges (Oduro 2019). Additionally, small businesses are able to benefit from their collaboration with large organizations and other small businesses to overcome their newness

and smallness liabilities (Rodríguez- Ferradas, 2019). The results of this study's interviews show that some small businesses collaborated in order to access capabilities they did not have in-house, others to reach a wider market, some to deal with a notable brand and some to access financial services, as well as mentoring and guidance available in various entrepreneurial hubs.

5.2.1 Financial constraints

The literature highlights that constrained financial capacity is a major factor driving small and medium-sized enterprises (SMEs) to seek partnerships with financial institutions. Such collaborations are often necessary to overcome funding constraints, which hinder SMEs' ability to invest in growth, innovation, and competitiveness (Adu-Danso, 2023). A lack of financial resources is one of the biggest obstacles that SMEs encounter, because unlike large businesses, SMEs operate on constrained resources which make it difficult for them to expand their operations, invest in their internal R&D, as well as venture into new innovative opportunities (Nkwinika 2023).

The results of the study showed that most of the small and medium sized companies do not have profits to plough back into their operations and innovation processes, and hence have to rely on external financing most of the time. Most of the participants reported social fundraising as their source of capital while others (representing a bigger number) reported having contracts with banks where they take loans when needed. Some participants reported relying on seed funds and grants from investors, funds that do not require any strings attached to ensure that the business maintains autonomy. These types of funds are important to small businesses that are keen on flexibility and independence.

According to the literature, small and medium-sized enterprises (SMEs) have the potential to introduce new products to the market, provided they can establish partnerships with suitable collaborators (Wibisono, 2021). These collaborations often serve as a critical factor in compensating for the inherent limitations many SMEs face, particularly in terms of innovation and production capabilities. SMEs frequently struggle with the technical and financial resources required to develop new products independently or enhance their existing production processes. As a result, strategic partnerships can enable them to access the necessary expertise,

technology, and market knowledge that they might otherwise lack. Such partnerships not only facilitate innovation but also improve operational efficiency, enabling SMEs to remain competitive in an increasingly dynamic market environment. Consequently, collaboration becomes a pivotal strategy for SMEs seeking to overcome their resource constraints and drive sustainable growth.

The findings of this study show that SMEs more often engage in strategic collaborations with other small business enterprises that possess these complementary capabilities. Such partnerships enable the business to address existing gaps in expertise, resources, or technology that they may not have available in-house.

According to the literature, customer immersion is a key strategy employed by small and medium-sized enterprises (SMEs) in their adoption of open innovation practices (Oduro, 2019). This approach involves deeply engaging customers throughout various stages of product development, relying heavily on their feedback to refine goods and services. By actively incorporating customer input, SMEs are better able to align their offerings with market demands, ensuring that their innovations are both relevant and competitive. Customer immersion enables SMEs to gain valuable insights into consumer preferences, behaviors, and pain points, which may not be easily accessible through internal processes alone. Moreover, this strategy enhances the agility of SMEs by allowing them to respond quickly to changing market conditions and evolving customer needs. In adopting this collaborative approach, SMEs can effectively leverage external knowledge, thereby overcoming their own resource constraints and fostering a more innovative and customer-centric business model.

This report shows that a majority of the small business enterprises rely on getting customer feedback pertaining to their goods and services, and tailor-make these products based on the market requirement. This allows them to bring to the market products that serve and meet the needs of the customers.

The existing literature suggests that governments, particularly those in African countries, have significant room for improvement in fostering an enabling environment for small and medium-sized enterprises (SMEs) to thrive. In alignment with this view, Yeboah (2015) reports that

insufficient governmental support is a key factor contributing to the high failure rate of SMEs, with five out of every seven SMEs collapsing within their first year of operation. This alarming statistic underscores the critical role that government policies and interventions play in the survival and success of these businesses.

The lack of support can manifest in various ways, such as inadequate access to financial resources, insufficient infrastructural development, and a regulatory framework that does not cater to the unique needs of SMEs. Furthermore, without targeted interventions such as tax breaks, subsidies, and easier access to credit, SMEs struggle to compete in markets dominated by larger firms with greater financial and operational capacities. This situation stifles innovation, limits job creation, and ultimately hampers broader economic growth. The findings call for a more nuanced and proactive governmental approach to addressing the challenges faced by SMEs, ensuring they not only survive but also contribute meaningfully to national economic development.

The study revealed that small and medium-sized enterprises (SMEs) are not receiving adequate government support, which is crucial for their sustainability and growth. A significant number of respondents reported that SMEs are subjected to the same tax policies as larger corporations, despite their limited financial capacities and market reach. This uniform taxation places a disproportionate burden on SMEs, as they lack the economies of scale that larger firms benefit from. Additionally, the absence of targeted subsidies or incentives further hinders their ability to reduce operational costs, limiting their capacity for profit maximization and stifling innovation. Without these crucial forms of governmental intervention, SMEs face significant challenges in remaining competitive and fostering long-term growth. These findings highlight the need for more tailored fiscal and policy support to help SMEs thrive in a highly competitive and resource-constrained environment.

5.3 Benefits of Collaboration

The existing body of literature highlights the significant advantages that small and medium-sized enterprises (SMEs) derive from the implementation of open innovation practices. According to Krause (2015), open innovation enables SMEs to access and integrate external knowledge,

which in turn enhances their innovation capabilities and overall performance. This approach allows SMEs to overcome internal limitations by leveraging external expertise, technologies, and resources that may not be available within their own organization. Furthermore, Alyami (2024) underscores the importance of external collaborations, positing that organizations with robust and extensive external networks are more likely to generate innovations that are commercially viable. Such collaborations provide SMEs with access to new markets, diverse perspectives, and specialized knowledge, all of which contribute to more successful innovation outcomes. Therefore, open innovation serves as a critical strategy for SMEs seeking to remain competitive and agile in rapidly evolving market environments.

In conclusion, the adoption of open innovation has emerged as a transformative approach for SMEs, enabling them to harness external knowledge and collaborative opportunities that enhance their innovation performance and market competitiveness. The literature consistently supports the view that external partnerships are key drivers of innovation success, particularly for smaller firms with limited internal resources (Chesbrough 2017).

The study demonstrates that small and medium-sized enterprises (SMEs) are reaping significant benefits from collaborative efforts with various stakeholders, including other SMEs, customers, suppliers, and large technology companies. Such collaborations have proven to be instrumental in enhancing their innovation processes and overall business performance. A subset of participants in the study reported that they had gained substantial value by sourcing ideas and insights from universities and research institutions. These academic partnerships provided SMEs with access to cutting-edge research and development, which they otherwise might not have been able to access internally, thereby fostering innovation and improving their product offerings.

This phenomenon, however, remains relatively uncommon. Wibisono (2021) highlights that despite the establishment of numerous policies in developing economies aimed at fostering collaboration between SMEs and universities, as well as research institutions, the level of engagement remains minimal. These policies were specifically designed to enhance the research and development (R&D) capacities of SMEs, providing them with access to academic

expertise and cutting-edge innovations that could stimulate their internal R&D efforts. However, the anticipated outcomes have not been fully realized, as many SMEs in these regions still demonstrate limited involvement in such collaborative initiatives.

Additionally, another group of participants indicated that collaboration with other firms equipped with advanced machinery and technologies had been highly beneficial. These partnerships allowed SMEs to leverage the technological capabilities and infrastructure of their collaborators, addressing internal limitations and enabling the development of more sophisticated products and processes. This form of collaboration not only reduces the capital expenditure required for SMEs to acquire such technologies themselves but also facilitates knowledge transfer and the sharing of technical expertise.

A third set of participants emphasized the value of customer immersion in their collaborative practices. These SMEs had engaged directly with their customers to gather feedback on their products, gaining critical insights into customer preferences, needs, and expectations. This feedback loop enabled SMEs to tailor their products more effectively to meet market demands, leading to increased customer satisfaction and competitive advantage. By incorporating customer feedback into their innovation processes, these firms were able to create products that were more aligned with consumer needs, thus improving their market positioning and long-term sustainability.

In conclusion, the study highlights the multifaceted benefits of collaboration for SMEs, emphasizing the importance of external partnerships in driving innovation, improving technological capabilities, and enhancing customer satisfaction. Through these diverse forms of collaboration, SMEs are able to overcome resource constraints, access specialized knowledge and technology, and ultimately strengthen their competitive position in the market.

5.4 Access to Entrepreneurial hubs

Based on performance reports by associations meant to support SMEs in Kenya such as the Association of Startups and SME Enablers of Kenya (ASSEK), it is believed that SMEs are increasingly engaging with innovation hubs, which are playing a major role in their growth and access to new technologies and technologies they do not have inhouse. The hubs, said to be

coordinated by a government parastatal, the Association of Startups and SME Enablers of Kenya (ASSEK), and supported by the Kenya National Innovation Agency (KeNIA), mainly focus on creating a conducive environment for innovation. They achieve this by offering access to resources, networks, and capacity-building programs to aid in SMEs' development. This collaboration with innovation hubs allows SMEs to benefit from shared infrastructure and expertise, enabling them to access new markets and enhance their competitiveness.

A seen in the parastatal's reports, KeNIA has been working towards improving the commercialization of research and innovations, by stimulating stronger collaborations between SMEs, research institutions and academic institutions. It is in such partnerships that SMEs have access to research and development outputs, which they can translate into market-ready innovations. Furthermore, some of the hubs in Kenya are trying to offer support to SMEs, particularly tech startups, by providing access to incubation services and access to seed funding, which are critical for scaling up operations in the small organizations and startups.

This study highlights the limited and underwhelming levels of collaboration between small and medium-sized enterprises (SMEs) and innovation or entrepreneurial hubs. Despite the critical role these hubs play in fostering innovation, providing access to resources, and offering support in technology and business development, many SMEs report insufficient access to these crucial facilities. A significant portion of participants in the study indicated that they are not part of formal innovation hubs but instead rely on informal small business associations. These associations, while helpful in fostering local business networks, lack the structural and technological resources typically offered by innovation hubs.

According to the study and interaction with the participants of this study, the lack of access to innovation hubs is attributed to several factors, such as inadequate infrastructure and lack of awareness. SMEs that are unable to connect with these hubs miss out on vital opportunities for growth, which include but are not limited to access to mentorship, incubation programs, and funding opportunities, which are often essential for innovation and scaling. Consequently, they are compelled to participate in informal business networks that, while offering peer support, are often limited in their capacity to provide comprehensive innovation resources.

5.5 Challenges of open innovation adoption

The literature on open innovation cautions organizations to remain vigilant regarding the potential challenges associated with its adoption. While open innovation offers significant opportunities for knowledge sharing and collaboration, Zyang (2018) and Chesbrough (2017) emphasize that it is not a one-size-fits-all solution. These scholars warn that organizations must be wary of the "crowding-out effect," a phenomenon that arises when companies absorb an excessive amount of external knowledge without having the capacity to effectively process and transform it into valuable innovations. This overload of external information can overwhelm the organization's internal systems, leading to inefficiencies and stagnation rather than fostering innovation.

Additionally, based on existing literature, Alyami (2024) contends that small and medium-sized enterprises (SMEs) in developing economies are generally more cautious when entering collaborative ventures. This hesitation stems from the limited opportunities available to recover from unsuccessful partnerships. In contrast, SMEs in developed economies are more inclined to engage in collaborations, as they operate in environments that provide more opportunities for recovery and reinvestment after failure. Moreover, both Alyami (2024) and Vrgovic et al. (2012) suggest that the lack of robust legal frameworks and enforcement mechanisms in developing countries further exacerbates the challenges of managing partnerships. This deficiency creates additional risks for SMEs, making it difficult to establish trust and effectively govern collaborative initiatives, thereby discouraging engagement in open innovation and partnerships.

Furthermore, the existing literature indicates that the effective management of external partnerships presents significant challenges, particularly due to the resource-intensive nature of these endeavors. Managing partnerships necessitates not only financial investment but also human capital and time, which can strain the limited resources of small and medium-sized enterprises (SMEs) in developing economies. As noted by Parida et al. (2012) and Alyami (2024), this scarcity of resources creates substantial barriers for SMEs, making it increasingly difficult for them to leverage partnerships for long-term benefit. Consequently, the inability to adequately manage these external collaborations may hinder their potential for innovation and growth,

ultimately impacting their competitiveness in both local and global markets. This situation underscores the need for targeted support mechanisms to assist SMEs in developing countries in navigating the complexities of partnership management and maximizing the value derived from collaborative efforts.

This study underscores several significant challenges that small and medium-sized enterprises (SMEs) encounter when attempting to implement open innovation practices. A considerable number of participants reported difficulties in managing collaborative relationships, often resulting in emotional and operational strain, with some individuals experiencing burnout. Furthermore, several participants shared instances in which their partners exploited their brand for self-serving purposes, undermining the mutual benefits of the collaboration. Another group of participants faced delays in the production process, particularly when manufacturing was outsourced. These delays not only disrupted the supply chain but also negatively impacted profitability, as businesses were required to pay a premium for external manufacturing services. Such issues highlight the complexity of managing external partnerships in the context of open innovation, particularly for SMEs with limited resources and capacity to mitigate these challenges efficiently.

5.5.1 Relationship management

Oduro (2019) asserts that challenges in relationship management can be categorized into various clusters, with one of the most critical being the management of collaboration. He emphasizes that effective management of partnerships is essential to ensure smooth and productive collaboration between organizations. Oduro further argues that without proper oversight and strategic coordination, partnerships are prone to misalignment, inefficiencies, and conflicts, all of which can undermine the intended goals of collaborative ventures. For organizations, particularly those engaged in open innovation or inter-organizational cooperation, a well-structured approach to managing relationships is crucial. This includes clear communication, mutual trust, and the establishment of mechanisms for conflict resolution. Properly managing these aspects not only facilitates seamless collaboration but also fosters long-term partnerships that can drive innovation and growth. As such, organizations must invest

in developing the capabilities to handle complex partnerships, especially in dynamic environments where agility and adaptability are key to maintaining competitive advantage.

This study highlighted the crucial importance of maintaining and managing partnership relationships effectively. Several participants emphasized that fostering strong, cordial relationships was essential, and this was achieved when each party fulfilled their obligations in a timely manner. Specifically, this involved making payments on time and delivering agreed-upon outputs punctually. Additionally, some participants noted the significance of budgeting for occasional gestures, such as gifts, to strengthen and sustain these partnerships over time. Another key finding from the study was the necessity of transparency between the parties involved, ensuring open communication and trust. Moreover, maintaining a high level of professionalism throughout interactions was identified as a fundamental aspect of successful relationship management. Collectively, these strategies were seen as vital for cultivating productive and long-lasting partnerships.

5.5.2 Tracking External Partners

According to the literature, it is crucial for organizations to actively monitor potential partners, a process that necessitates the allocation of significant resources (Alyami, 2024). This monitoring includes identifying, evaluating, and maintaining relationships with partners who align with organizational goals. However, due to resource constraints, particularly in the case of small and medium-sized enterprises (SMEs), many opt to leverage their existing social and professional networks to identify and engage potential partners (Oduro 2019). These networks provide a more cost-effective and accessible means for SMEs to expand their partnerships, allowing them to overcome the limitations posed by financial and operational challenges. Consequently, the strategic use of such networks plays a vital role in the partnership development process for resource-limited organizations, facilitating both growth and competitive advantage.

The study revealed that a majority of small and medium-sized enterprises (SMEs) predominantly rely on their social and professional networks, particularly on a needs-based approach, to establish collaborations. This strategy is employed when a specific partnership or collaboration becomes necessary for business operations. Many participants indicated that the

financial costs associated with forming new professional relationships are often prohibitively high. As a result, most SMEs prefer to leverage their existing social networks, which offer a more affordable and readily accessible alternative for initiating partnerships. These networks not only help reduce expenses but also enable businesses to form partnerships more efficiently by utilizing pre-existing trust and familiarity. This reliance on social circles underscores the importance of informal networking for SMEs, particularly in navigating resource constraints and achieving sustainable growth.

Research question 2: How does transformational leadership style promote or hinder the adoption of open innovation in the SMEs? In addressing this question, the researcher looks at responses on the thematic factor below.

- Impact of transformational leadership on open innovation adoption

5.6 Decision making

According to the literature, transformational leadership is seen as a leadership style where the leader and followers empower and motivate each other, this leadership style which has shown consistent result over the decades influences the followers' trust and loyalty to the leader and the vision that team is working towards (Louw 2017 & Burns 1978). Naqshbandi (2019)adds that a transformational leader also referred to as an empowering leader, is characterized by reposing trust in the followers and allowing them autonomy in running with their self-set goals.

This study revealed that employees in organizations where they are given the opportunity to participate in decision-making processes experience increased confidence and develop greater trust in their leaders. The findings suggest that involving employees in such processes fosters a sense of ownership and responsibility, which in turn enhances their engagement and commitment to organizational goals. Furthermore, the study highlighted that employees feel more appreciated and valued when their input is solicited and considered in decision-making. This sense of recognition not only improves their morale but also strengthens their loyalty to the organization, contributing to a more positive workplace culture. Overall, these results emphasize the importance of participatory decision-making as a strategy for enhancing

employee satisfaction and organizational cohesion which can be effective when an organization is seeking to adopt open innovation.

5.7 Collaboration between employers and employees

According to the literature, involving employees in decision-making processes while simultaneously granting them autonomy in their roles has been shown to have a positive long-term impact on employee productivity (Lorinkova, 2012). This approach is considered empowering, as it shifts from a purely directive management style to one that encourages employee initiative and creativity. By fostering a sense of ownership and responsibility, employees are more motivated to contribute meaningfully to organizational goals. This concept of employee empowerment aligns closely with the principles of open innovation, particularly in the context of small and medium-sized enterprises (SMEs).

This study found that employees demonstrated higher levels of motivation in situations where collaboration between management and staff was actively encouraged. When leaders were visibly involved in new organizational initiatives, employees reported feeling a stronger connection to leadership, which in turn enhanced their sense of being well-guided. This direct involvement from management not only fostered trust but also led to increased employee engagement, as employees felt their contributions were valued and aligned with the organization's strategic direction. Employees are more likely to contribute creative solutions and engage in innovative projects when they feel supported and involved in key organizational activities. Furthermore, this collaboration between leadership and employees facilitates the successful implementation of open innovation strategies by ensuring that all levels of the organization are aligned in their efforts to embrace external collaborations, explore new opportunities, and drive innovation. Thus, fostering such collaborative relationships is not only beneficial for employee motivation but also critical for the effective adoption of open innovation in SMEs.

5.8 Idea suggestion

According to the literature, open innovation involves the acquisition and utilization of knowledge from both internal and external sources, particularly when the necessary expertise is

not available within the organization's boundaries (Chesbrough, 2017). This approach emphasizes the importance of integrating diverse ideas and insights to enhance innovation capabilities. In this context, employee contributions become a valuable asset, as they serve as a crucial source of internal knowledge that can drive open innovation. The extent to which employees are motivated to seek external knowledge, collaborate with others, and contribute to innovation efforts is significantly influenced by the leadership style within the organization.

Transformational leadership, as noted by Junni (2016), plays a pivotal role in fostering an environment that is conducive to open innovation. This leadership style promotes intellectual stimulation, encouraging employees to challenge the status quo, explore new ideas, and seek innovative solutions. Transformational leaders create a culture of openness, where employees feel empowered to share their knowledge and collaborate across organizational boundaries. This openness is essential for the successful adoption of open innovation, particularly in small and medium-sized enterprises (SMEs), where resource constraints may limit internal knowledge and expertise.

According to the participants in this study, employees whose ideas were acknowledged and treated with importance reported feeling more motivated and inspired to actively seek external knowledge and expertise to bring into the organization. This positive reinforcement of employee contributions fosters a sense of value and empowerment, which, in turn, encourages a proactive approach to problem-solving and innovation. Employees are more likely to explore external sources of knowledge—such as industry trends, academic research, and partnerships—when their ideas are respected and incorporated into the organization's strategic direction.

According to the literature, transformational leadership is founded on four core components: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Waham, 2020). Idealized influence refers to the leader's ability to act as a role model, earning the respect and admiration of followers through their ethical conduct and vision. Inspirational motivation involves the leader's capacity to articulate a compelling vision that motivates and inspires employees to pursue shared organizational goals. Intellectual stimulation encourages creativity and innovation by challenging existing assumptions and

promoting new ideas. Finally, individualized consideration emphasizes the leader's role as a mentor and coach, providing personalized support to followers based on their individual needs and aspirations.

Transformational leadership has been linked to enhanced innovation and organizational performance. As Junni (2016) highlights, transformational leaders foster intellectual stimulation and create an environment of openness, encouraging employees to engage in creative problem-solving and share knowledge freely. This openness and intellectual stimulation are crucial in promoting innovation, as employees feel empowered to contribute ideas and explore new approaches. Additionally, this leadership style translates into greater employee loyalty and productivity, as workers feel valued and supported.

When considering the adoption of open innovation, transformational leadership plays a vital role in driving success, particularly for small and medium-sized enterprises (SMEs). Open innovation requires an organizational culture that encourages the free exchange of internal and external knowledge. As noted by Chesbrough (2017), SMEs often face resource constraints, making external collaboration and knowledge acquisition essential for innovation. Transformational leaders can facilitate this by creating a culture of trust and openness, motivating employees to seek external expertise and integrate it into the organization's innovation processes (Northouse, 2019). Thus, transformational leadership not only enhances employee engagement but also supports the successful implementation of open innovation strategies, leading to improved innovation performance and competitive advantage.

According to this study, employees reported positive experiences with their leaders when they were assigned challenging tasks that encouraged them to think creatively and independently. Several participants noted that being pushed to think "outside the box" allowed them to develop problem-solving skills without relying on constant direction or micromanagement, thereby fostering a sense of autonomy and ownership over their work. This lack of "spoon-feeding" was seen as empowering, as it enabled employees to engage more deeply with their tasks and explore innovative approaches.

Additionally, some employees highlighted that their leaders acted as role models, offering guidance and support as they navigated various challenges. This mentorship not only provided reassurance but also helped employees feel more confident in overcoming obstacles. These findings support the argument that certain characteristics of transformational leadership—such as intellectual stimulation and individualized consideration—play a significant role in enhancing employee motivation and engagement. By encouraging employees to think creatively and providing mentorship, transformational leaders foster a culture of innovation and self-efficacy.

This leadership style is particularly relevant in the context of open innovation. Transformational leaders, by promoting intellectual stimulation and fostering an environment of trust, encourage employees to seek out external knowledge and collaborate with partners beyond the organization’s boundaries. As research indicates, such an approach is essential for the adoption of open innovation, especially in small and medium-sized enterprises (SMEs), where resources may be limited. When employees are motivated and feel supported, they are more likely to engage in open innovation practices, such as bringing in external expertise and integrating diverse ideas into the organization’s innovation processes. This not only enhances individual employee performance but also contributes to the organization's overall innovation capacity, making transformational leadership a critical driver of both employee development and open innovation success.

6 CONCLUSION AND RECOMMENDATIONS

This study explored the adoption of open innovation in small and medium enterprises in Kenya, a country in an emerging economy in Sub-Saharan Africa. Its main aim was to understand the concept of open innovation, which the literature suggests, is an under studied phenomenon in much of Africa. The main purpose of this chapter is to summarize the findings and conclusions that have emanated from the literature, as well as the interviews that were carried out in this study. The key study questions were as follows;

Research question 1: Are SMEs in Kenya embracing the concept of open innovation? If so, in what ways?

In this question we looked at the drivers, benefits and challenges of open innovation adoption in the SME sector in Kenya

Research question 2: How does transformational leadership style promote or hinder the adoption of open innovation in the SMEs?

Research question 3: How does the adoption of open innovation by SMEs vary in different sectors?

In this section, we analyzed the concept of open innovation in manufacturing, retail and ICT sectors and how they differ in terms of levels of adoption.

As highlighted in Chapter 3 of this study, 10 CEOs were interviewed, together with an additional five employees who work closely with the CEOs to understand the impact of leadership offered in the company.

Research question 1: Are SMEs in Kenya embracing the concept of open innovation? If so, in what ways?

6.2 Major Findings

The findings of this study reveal that open innovation practices are extensively employed by small and medium-sized enterprises (SMEs) in Kenya. While the specific terminology of "open innovation" may not be widely recognized or explicitly used by business practitioners, their engagement in collaborative activities and active pursuit of external knowledge sources demonstrates the application of open innovation principles within the SME sector. Notably, the study highlights that these practices are predominantly informal in nature, suggesting a lack of structured frameworks or strategic approaches to integrating open innovation into their business operations. This informality might be attributed to limited awareness, resource constraints, or the dynamic and adaptive nature of SMEs in responding to market demands and opportunities. Nevertheless, the findings underscore the inherent value of open innovation in fostering knowledge exchange, enhancing competitiveness, and driving growth among Kenyan SMEs, even in the absence of formalized processes. Future research could explore ways to formalize and optimize these practices to maximize their potential benefits.

6.2.1 Drivers of Open Innovation

According to the findings of this study, several key drivers are seen to motivate small and medium-sized enterprises (SMEs) to engage in collaborative practices, highlighting the strategic importance of partnerships in addressing their unique challenges and resource constraints. One of the primary drivers is the need for access to finance, which leads SMEs to establish working relationships and collaborations with financial institutions to secure the capital required for their operations and growth. It is through these partnerships that SMEs are able to overcome financial barriers that may otherwise hinder their ability to innovate or expand.

Another significant driver is the lack of production capacity. SMEs frequently collaborate with other small and medium-sized enterprises in order to access resources, expertise, or infrastructure they may not possess internally. By pooling resources and capabilities, these

enterprises can enhance their operational efficiency and scale their production processes to meet market demands effectively.

Collaboration is also seen to serve as a means for SMEs to generate and incorporate new ideas that improve their ability to serve their existing and new markets. This approach reduces reliance on internal research and development (R&D) departments, which many SMEs seem to lack due to limited resources. Partnering with external stakeholders, such as other businesses, innovation hubs, or research institutions, allows SMEs to leverage external expertise and insights to develop innovative products and services.

Moreover, SMEs are increasingly collaborating with customers to gain valuable feedback on their products before mass production, this is achieved by involving customers in the early stages of product development. SMEs are better able to understand consumer preferences and tailor their offerings to align with market needs. This customer-centric approach enhances product-market fit and increases the likelihood of commercial success.

Additionally, SMEs collaborate with other organizations and individuals to bring their products to market more effectively. In some cases, they achieve this by out-licensing their innovations to larger entities or specialized partners, allowing them to commercialize their products without bearing the full burden of marketing and distribution. These partnerships not only help SMEs reach wider audiences but also facilitate resource-sharing and risk mitigation.

Overall, the study underscores that collaboration is a crucial strategy for SMEs, enabling them to address financial, operational, and market challenges while fostering innovation and competitiveness. These partnerships provide SMEs with the flexibility and support they need to navigate their resource-constrained environments and thrive in dynamic markets.

6.2.2 Benefits of Collaboration

The findings of this study have revealed that SMEs in Kenya have derived significant benefits from engaging in collaborations with other SMEs, individuals, and customers. One of the most prominent advantages reported is an increase in product sales, a growth that can be attributed to partnerships with businesses that possess the resources or capacities lacking within

individual organizations. Such collaborations enable resource-sharing which allows SMEs to overcome limitations in production, marketing, and distribution. Moreover, partnerships with customers have proven instrumental, where customer feedback on products offers valuable insights that help organizations improve and tailor their offerings to meet market demands effectively.

In addition to enhanced sales, SMEs benefit from the exchange of ideas and knowledge that has been facilitated by collaborations with research institutions and centers which significantly contribute to the generation of innovative ideas, particularly in product inception and development stages. These partnerships provide SMEs with access to advanced research, technical expertise, and novel methodologies, which enable them to develop more competitive and market-aligned products. Similarly, engaging with customers during the early stages of product development ensures that the final products are better suited to consumer needs, thereby increasing the likelihood of market success.

Overall, the collaborative approach adopted by SMEs in Kenya has enhanced their ability to innovate, improve product quality, and expand their market reach. Such partnerships not only address resource and knowledge gaps but also foster a culture of innovation and adaptability that is crucial for SMEs operating in dynamic and resource-constrained environments. By leveraging the strengths and expertise of their collaborators, Kenyan SMEs have been able to enhance their competitiveness and resilience in the market.

6.2.3 Challenges of collaboration

The findings of this study have identified several challenges faced by SMEs in managing partnerships and collaborations. One of the primary challenges lies in relationship management, where maintaining effective communication and coordination in partnerships often leads to significant time investment and, in some cases, burnout among the parties involved. This challenge is exacerbated by the complex dynamics of partnerships, which require ongoing efforts to balance competing priorities and ensure mutual benefits.

Another major challenge reported is the tendency of some partners to exploit the collaboration beyond the agreed terms. Such behavior can lead to imbalanced relationships, straining trust

and undermining the intended benefits of the partnership. This challenge highlights the need for clear contractual agreements and mechanisms to address disputes in collaborative ventures.

The study also reveals that most SMEs rely on familiar referrals when seeking partnerships. This approach is favored because it involves minimal costs and reduces the need for extensive background checks, as referrals often come with a degree of pre-established trust. However, while this method is cost-effective and efficient, it may limit the diversity of potential partnerships and prevent SMEs from accessing broader networks that could provide greater value.

Another notable finding is the limited interaction between SMEs and entrepreneurial hubs, which could otherwise play a crucial role in supporting innovation, providing resources, and fostering networks. Instead of leveraging these structured ecosystems, many SMEs rely on informal setups, such as personal connections or community networks, to obtain valuable business information. While these informal arrangements can be effective, they may lack the strategic depth and broader opportunities offered by formal entrepreneurial hubs.

Finally, the study highlights the lack of government subsidies as a significant barrier for SMEs. Without financial support or policy incentives from the government, SMEs miss out on opportunities to alleviate operational costs, invest in innovation, or scale their operations. This absence of subsidies places an additional strain on SMEs, which already operate in resource-constrained environments, and limits their ability to compete effectively in local and global markets.

Addressing these challenges will require targeted efforts to improve partnership governance, foster access to diverse networks and entrepreneurial hubs, and advocate for increased government support tailored to the needs of SMEs.

6.2.4 Transformational leadership

The findings of this study have confirmed a highly positive relationship between transformational leadership and employee motivation which is seen to enhance employee productivity, fosters openness to collaboration, and is supportive of the adoption of open

innovation practices within organizations. Transformational leaders create an environment where individuals feel valued, engaged, and committed to organizational goals through their ability to inspire and empower employees.

One of the key findings highlights the high levels of employee satisfaction observed among those who are actively involved in decision-making processes and are entrusted with the autonomy to lead decisions within their respective departments. Employees whose leaders demonstrated trust in their judgment and encouraged participatory decision-making reported greater happiness and engagement in their roles. This inclusive leadership approach fosters a sense of ownership and accountability, motivating employees to perform at their best.

The study also revealed that employees whose leaders consistently motivated and challenged them to step outside their comfort zones felt appreciated and valued. Leaders who provided constructive support and recognized employee contributions helped cultivate a sense of purpose and belonging. This sense of value translated into increased engagement in organizational activities, as employees were more likely to take initiative and demonstrate commitment to achieving shared objectives.

Furthermore, the study underscores the critical role of transformational leadership in promoting a culture of innovation and collaboration. Leaders who prioritize employee development and emphasize the importance of collective effort inspire employees to embrace open innovation practices, including knowledge-sharing and partnerships. This approach not only enhances individual productivity but also strengthens the organization’s capacity to innovate and adapt to changing market demands.

In conclusion, the findings demonstrate that transformational leadership is a powerful driver of employee motivation, engagement, and productivity. By fostering an environment of trust, inclusivity, and encouragement, transformational leaders enable employees to thrive, take ownership of their roles, and actively contribute to the organization's success in innovation and collaboration.

6.3 Recommendations

1. **Building strategic partnerships and networks**

Small and medium-sized enterprises (SMEs), regardless of their size or resource constraints, should actively pursue strategic partnerships and networks, including those with larger or more established organizations. These partnerships have the potential to accelerate growth, foster innovation, and provide access to resources and expertise that SMEs may not possess internally.

2. **Leveraging on government support and subsidies**

The government of Kenya should offer more targeted support to SMEs in the economy, which would take the form of targeted subsidies, grants, and tax incentives for SMEs engaging in open innovation. The government should also establish policies that encourage public-private partnerships, enabling SMEs to collaborate with state-funded research institutions and access cutting-edge technologies.

3. **Adopt policies for intellectual property (IP) protection**

In order to foster trust in open innovation, it is necessary to have frameworks for protecting intellectual property. The government should streamline the process of obtaining IP rights, offer support in managing intellectual assets, and ensure that SMEs are aware of their legal rights when entering collaborations. Clear IP regulations can mitigate the risk of exploitation and encourage SMEs to engage more confidently in open innovation.

4. **Investing in employee development and organizational culture**

It is necessary for leaders in the SMEs to cultivate a culture that values innovation and collaboration. Leaders should train employees to embrace external knowledge and integrate it effectively with internal processes. Policies could support this by mandating funding for employee training programs and encouraging partnerships with entrepreneurial hubs to provide tailored workshops and innovation boot camps. Entrepreneurial hubs could further assist by offering innovation management training and fostering knowledge exchange among SMEs.

6.4 Suggestions for Future Research

6.4.1 Methodological Enhancements

Mixed-Methods Approaches

- Future studies could combine quantitative surveys with qualitative interviews to obtain both breadth and depth of insights.

Longitudinal Designs

- Tracking SMEs over several years would allow researchers to capture the evolution of innovation practices as well as growth occurring as a result collaborations, particularly in fast-changing sectors like ICT.

Larger and More Diverse Samples

- Expanding the sample size to include SMEs from multiple counties, different industries and different innovation ecosystems would improve representativeness.

6.4.2 Sector-Specific Research Directions

Manufacturing SMEs

- Examine how industrial clusters and supplier-buyer networks foster or hinder open innovation.
- Assess the role of government-funded R&D programs in supporting collaborative innovation.
- Explore differences between formalized manufacturing SMEs and informal cottage industries regarding innovation practices.

ICT SMEs

- Investigate in-depth, the influence of accelerators, incubators, and innovation hubs on ICT SMEs' adoption of open innovation.
- Conduct comparative studies between ICT SMEs located in urban innovation hubs such as Nairobi and those operating in secondary towns.

- Explore how cloud-based platforms and digital ecosystems enable collaboration and knowledge-sharing.

Retail SMEs

- Study the impact of digital platforms such as e-commerce and mobile payments on open innovation adoption.
- Investigate customer co-creation and its role in shaping innovation strategies within informal retail settings.
- Examine how social media and online marketplaces facilitate or hinder collaborative innovation in the retail sector.

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List of Appendix

Appendix 1: Consent Form

Title of project: Open innovation and transformative leadership in small and medium-sized enterprises in Kenya

Name of researcher: Ruth Kinuthia

I, …….., agree to participate in this research project. The research has been explained to me and I understand what my participation will involve. I agree to the following:

(Please circle the relevant options below).

I agree that my participation will remain anonymous	YES	NO
I agree that the researcher may use anonymous quotes in his / her research report	YES	NO
I agree that the interview may be audio recorded	YES	NO

…… (signature)
…… (name of participant)
…… (date)

…… (signature)
…… (name of person seeking consent)
…… (date)

Appendix 2: Interview protocol for the CEOs/ Business owners

Interview protocol

Thank you for agreeing to participate in this interview, which will be used in my thesis as a partial fulfillment of my master's degree in management of innovation studies. The research is on the adoption of open innovation in the small and medium sized enterprises in Kenya, and the role of transformational leadership.

Introductory questions

1. What is the title of your role, and how long have you been serving in that role?
2. What does your role entail mainly?
3. What was your biggest motivation to start this business/ company?

Drivers of open Innovation adoption

4. How often does your organization introduce new products/services or change the process of production?
5. Financial resources are said to represent the biggest factor that hinders expansion and growth in SMEs. How does your organization manage this factor?
6. How does your organization manage the risk of introducing new products and services in the market?
7. How does your organization manage to keep up with competition in the market?
8. Once your organization comes up with a new product, how does it take it to the market?
    - Does your organization collaborate with other organizations for such processes?
9. Are there any subsidies being provided by the government to enable the survival of SMEs? If yes, how does your organization access these subsidies?

Benefits of open innovation

10. How would you say your business has benefited from collaborating with other organizations or individuals? For instance, in terms of profits, growth and competitive advantage?
11. Does your business have access to entrepreneurial hubs /innovation hubs? If yes, how has your business benefited from its interaction with such?

Challenges of open innovation

12. What is the biggest challenge that your organization has experienced when collaborating with other partners?
13. How does your organization manage relationships with external parties in the partnership?
14. How does your organization gather information on potential partners?

- Is there a cost associated with that?

Leadership

15. How does your organization handle decision making? Is it centralized or decentralized?

16. Does your organization foster collaboration between the managers and employees? If yes, how does this take place?

17. Do you think that your role challenges you to suggest ideas that could lead to growth and productivity in the organization?
    - If yes, how open is your leader to receiving ideas from employees?

Final remarks

Are there any other business owners/entrepreneurs that you can recommend I can speak to?

Thank you so much for taking the time to participate in the interview.

Appendix 3: Information Sheet

Dear Participant,

My name is Ruth Kinuthia and I am a Masters student in masters of management in innovation studies at the university of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating the impact of open innovation and transformative leadership in the small and medium -sized enterprises in Kenya under the supervision of Prof. Diran Soumonni. The aim of this research project is to analyze the drivers, benefits and challenges of the adoption of open innovation by SMEs in Kenya and how transformational leadership impacts the process.

As part of this project, I would like to invite you to take part in an interview which will take around 30 - 45 minutes. With your permission, I would also like to audio record the interview conversation. This recording will be stored in a password protected laptop and only the researcher will have access to this recording.

There will be no personal costs to you if you participate in this project, you will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you feel uncomfortable. The information you give to me will be held securely and not disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation in my final research report.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I

will be happy to send it to you. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za

Yours sincerely,

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