Agile leadership as a driver of sustainable growth for SMMEs in the construction sector in Gauteng

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Master of Business Administration (MBA)

By

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Johannesburg, November 2025

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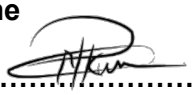
Declaration

I Lucas Nkuna hereby declare that the research titled “Agile leadership as a driver of sustainable growth for SMMEs in the construction sector in Gauteng province” is my original work. All sources used and cited in this study have been fully acknowledged and referenced accordingly.

Lucas Nkuna ..... 12 November 2025 .....

Name **Date**



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Abstract

This study investigates the role of agile leadership in promoting sustainable growth within construction SMMEs in Gauteng Province, South Africa. Given the increasing volatility and complexity of the construction sector, Agile leadership and organisational agility have become essential capabilities for sustained competitiveness. Drawing upon systems theory and the dynamic capabilities framework as defined by Ellström et al. (2022), the study examined the relationships between Agile leadership, organisational agility, and sustainable growth.

A quantitative research design was employed in this study, and data was collected using a convenience sampling. An online structured questionnaire was sent to 100 people who are business owners and senior managers of SMMEs in construction sector and a total of 31 responded to the survey. The results of the study revealed a strong positive correlation, and the significant relationship between agile leadership and organisational agility ($r = 0.919$, $p < 0.001$), and between organisational agility and sustainable growth ($r = 0.977$, $p < 0.001$). Although Agile leadership was also associated with sustainable growth ($r = 0.880$, $p < 0.001$), regression analysis confirmed that this relationship is slightly lower but still significant.

These findings suggest that Agile leadership drives sustainable growth primarily through the development of organisational agility. The study concludes that for construction sector's SMMEs to thrive in dynamic environments, they should invest in Agile leadership development while institutionalising systems for adaptive organisational practices. Limitations observed in the study include a small sample size. Future research should consider larger sample size and multi-industry studies to validate and extend these findings.

Keywords: Agile leadership, organisational agility, Sustainable growth.

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Firstly, I would like to acknowledge the Lord for the Grace upon my life. Indeed, with God everything is possible for one who believes. The journey has been challenging and fulfilling at the same time, but the Lord's Grace carried me through.

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List of Abbreviations

SMMEs – Small Micro and Medium Enterprises

Stats SA – Statistics South Africa

POPIA - Protection of Personal Information Act

SEDA – Small Development Enterprise Agency

GDP – Gross Domestic Product

RDP - Reconstruction and Development Programme

7th Administration – The seventh democratically elected government of South Africa

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Chapter 1

1.1. Introduction

This chapter provides a clear overview of the research context within the construction sector in Gauteng. It explains the motivation for examining agile leadership as a catalyst for sustainable growth among Small, Medium, and Micro Enterprise (SMME) construction firms. The chapter introduces the research title, background to the study, problem statement, research purpose, rationale, and significance. In addition, it outlines the study's delimitations and assumptions. The chapter concludes with a brief summary that guides the reader toward the next chapter.

1.2. Research title

Agile leadership as a driver of sustainable growth for SMMEs in the construction sector in Gauteng province

1.3. Statement of purpose

This research's aim was to investigate how the adoption of agile leadership practices characterised by adaptability, collaboration, continuous learning, and decentralised decision-making can enhance organisational agility and contribute to the long-term sustainable growth of SMMEs in the construction sector. It further sought to bridge the gap between policy-driven opportunities and the practical leadership approaches required to capitalise on them effectively. By employing empirical analysis, it aimed to provide insights that inform leadership development, policy formulation, and strategic planning within the construction sector, particularly in Gauteng.

According to Šochová (2021), agile leadership is a mindset and philosophy that encourages leaders to remain adaptive and flexible in the face of rapid environmental change. Similarly, Akkaya et al. (2022) describe agile leadership as a dynamic leadership practice that builds an organisation's capacity to succeed in volatile and uncertain contexts. Junker et al. (2021) further add that agile leadership fosters behaviours such as decentralised decision-making, iterative feedback, and empowerment, which are critical in enabling team adaptability and performance in fast-changing environments.

On the other end, Lozano (2015), defines sustainable growth as integration of economic, social, and environmental dimensions into business operations to ensure long-term viability. Yusoff et al. (2018) expand to this definition, describing sustainable growth as an

organisation's ability to consistently attain incremental financial and operational development while remaining competitive and resilient in uncertain conditions.

This study, therefore, sought to contribute to the growing body of knowledge on agile leadership theory by empirically assessing its role and effect in driving sustainable growth through organisational agility in construction-sector SMMEs in Gauteng.

1.4. Background of the study

Following the recent national elections in South Africa, where no political party managed to secure more than 50%, which is a constitutional requirement to form a government by one political party, which had resulted in the formation of a coalition government, termed Government of National Unity (Chathamhouse, 2024). This coalition has seen President Cyril Ramaphosa return for a second term in office. Soon after being elected as the President for the seventh administration, Ramaphosa announced his administration's ambitious plan to turn South Africa into a "construction site," aiming to boost economic performance through infrastructure development (SANews, 2024).

While this level of commitment presented a significant opportunity for the construction sector, its successful realisation largely depended on the industry's ability to adapt an effective response to a rapidly changing and competitive environment.

This underscores an urgent need for a shift in leadership approaches, particularly leaning towards agile leadership style due to its characteristics of flexibility, responsiveness, and collaboration, which are critical in driving innovation, improving project delivery, and ensuring sustainable growth among SMMEs in the construction sector.

Without such a transformation in leadership, the industry risked falling short of the economic potential promised by this historic and bold infrastructure plan by the 7th Administration. Additionally, SMMEs play a crucial role in the South African economy, particularly those in the construction sector due to its ability to create more jobs as it is inherently high labour intensity (CIDB, 2023). Furthermore, the construction sector alone contributes 7% of formal and 17% informal jobs of the total employment in South Africa (Stats SA, 2023).

1.5. Research problem

With over a decade of experience in the construction sector, I observed a recurring pattern among Small, Medium, and Micro Enterprises (SMMEs). Many of these businesses demonstrated promising growth during their early stages, often gaining considerable momentum within the first months of operation. However, this initial progress was seldom sustained. Over time, a significant number began experiencing operational, financial, and

leadership challenges, which ultimately resulted in declining performance. Within five years, many either drastically scaled down their operations or ceased business entirely.

This observation is consistent with the findings of the University of the Western Cape (UWC, 2023), which reported that 70%–80% of SMMEs in South Africa fail within their first five years. Similarly, Francisco and Fernandes (2010) highlight that the construction sector is characterised by high levels of competition and unpredictable market conditions. Furthermore, Enwerenji (2023) argues that ineffective management and leadership practices are among the key constraints hindering growth and sustainability in SMMEs.

These trends prompted critical reflection on the factors that influence long-term sustainability in the construction industry, particularly the role of leadership in navigating change, fostering innovation, and enhancing organisational resilience. This reflection informed the motivation to explore agile leadership as a strategic enabler of sustainable growth among construction SMMEs in the Gauteng province.

While Francisco and Fernandes (2010) examined the role of agility in strengthening the competitiveness of construction SMEs in European contexts—predominantly first-world economies—the present study focuses on the Gauteng Province in South Africa, a developing country. The study explores the applicability and impact of agile leadership within a distinct socio-economic and cultural environment, which may shape how agility is interpreted and implemented in practice.

This contextual consideration is particularly significant given that SMMEs constitute a major source of job creation in developing economies (Dadić et al., 2021). In South Africa, the construction sector accounts for 14.4% of all SMMEs (SEDA, 2023). Therefore, examining how agile leadership can support sustainable growth in this sector has practical relevance. The insights gained from this study may assist policymakers, business leaders, and financial institutions in designing evidence-based interventions and support frameworks that enhance the long-term viability of construction SMMEs.

1.6. Research objectives

Considering the problem statement and the contextual challenges highlighted in the literature, this study aimed to investigate the following objectives designed to guide the research process and provide a focused framework for data collection and analysis:

- To evaluate the influence of agile leadership on sustainable growth for SMMEs in the construction sector.
- To investigate key characteristics and practices of agile leadership within SMMEs operating in the construction sector.

- To investigate correlations between agile leadership practice and sustainable growth to SMMEs operating in the construction sector.

1.7. Research questions

Based on the research objectives, problem statement, literature review, and the contextual challenges faced by SMMEs in South Africa's construction sector, particularly in Gauteng Province, it is imperative to explore how leadership practices, specifically agile leadership can influence Organisational agility and sustainable growth. To guide this investigation, the following research questions were developed to address the core issues identified and to provide a structured pathway for empirical analysis. Research questions was broken into three constructs, namely; Agile leadership practices, Organisational agility, and lastly, sustainable growth.

1.8. Agile Leadership

RQ1: To what extent are agile leadership practices adopted in construction SMMEs in Gauteng?
RQ2: How do agile leadership behaviours such as empowerment, collaboration, open communication manifest within these organisations.

1.9. Organisational Agility

RQ3: How does agile leadership influence organisational agility in SMMEs?

1.10. Sustainable Growth

RQ4: What is the relationship between agile leadership and sustainable growth (e.g., turnover, profitability, innovation) in construction SMMEs

1.11. Rationale of the Study

Given the pivotal role the construction sector plays in South Africa's economic development, where it contributes significantly to job creation, infrastructure development, and Gross domestic product (GDP) growth (SEDA (2023). Coupled with the recent commitment by the South African government to revitalize the economy through large-scale infrastructure investment evidenced by President Cyril Ramaphosa's announcement of over R238 billion in pledged funding, there was a growing need for construction SMMEs to position themselves to take full advantage of these opportunities.

Despite all these opportunities, I had experienced that many SMMEs in the construction sector faced systemic challenges such as poor project delivery on programs like the government

subsidised housing scheme, known as the Reconstruction and Development Programme (RDP), weak adaptability to change, and insufficient innovation, all of which affect sustainable growth of these SMMEs. In addition, the industry was increasingly plagued by external threats such as criminal syndicates, commonly referred to as "construction mafias" (Webber Wentzel, 2023).

These groups unlawfully demanded protection fees from contractors, and non-compliance often results in intimidation, project disruption, and work stoppages. Such criminal activity not only undermined investor confidence but also caused severe delays and cost overruns, particularly affecting vulnerable SMMEs with limited capacity to absorb such shocks. These challenges were often rooted in outdated and rigid leadership styles not aligned with dynamic, complex and competitive business environment.

Agile leadership, according to Grieneder and Leicht (2020), is characterised by adaptability, collaborative decision-making, continuous learning, and responsiveness, offers a potential solution to this ongoing problem. Yet, there is limited empirical research exploring how Agile leadership practices affect the growth and agility of construction sector's SMMEs, particularly within the South African context. Additionally, Bajrami et al. (2024) argues that leadership practices are critical for the development and success of an organisation. This is also supported by Benmira and Agboola (2021) who state that leadership is key for the success of any business or organisation.

Therefore, this study more relevant as it investigated the potential of agile leadership to act as a catalyst for sustainable growth among SMMEs in Gauteng's construction sector. Additionally, the research sought to contribute to the body of knowledge around the evolving theory on Agile leadership.

1.12. Delimitations of the study

The study was delimited to SMMEs operating within the construction sector in Gauteng Province, South Africa. The focus was specifically on organisations that had been in operation for at least more than one year, as they were more likely to have developed basic leadership structures and growth trajectories suitable for assessing agile leadership practices.

While the Western Cape and other provinces may have experienced notable infrastructure projects in recent years, geographically, the study was confined to Gauteng Province due to its significant economic contribution to the country and high volume of construction activities, making it a strategic region for evaluating the role of agile leadership in driving sustainable growth. The study did not not cover large construction firms, public-sector infrastructure

departments, SMMEs operating outside of Gauteng Province and/or financial challenges faced by SMMEs.

Furthermore, the research focused primarily on the perceptions of leadership, sustainable growth and organisational agility as reported by directors, senior managers, team leaders, and key decision-makers within these enterprises. It did not seek to evaluate the technical competencies of leaders or conduct in-depth financial audits on growth. Lastly, the study used quantitative approach through self-administered questionnaires. Qualitative data such as interviews or case studies was excluded.

1.13. Assumptions

The study assumed that participants would provide honest and accurate responses to the questionnaire, reflecting their true perceptions of leadership practices and organisational performance. It also assumed that Agile leadership practices, organisational agility and sustainable growth factors can be effectively measured through self-reported instruments. In addition, it presumed that the construction SMMEs included in the sample represented a broad spectrum of the sector within Gauteng, allowing for generalization within this context.

Furthermore, this study assumed that Agile Leadership theory was an effective driver of sustainable growth in the construction sector SMMEs. It also assumed that organisational agility and sustainable growth for SMMEs in the construction sector are correlated.

1.14. Summary of the Chapter

This chapter has introduced the study by outlining the background and context within which the research is situated. It presented the problem statement, highlighted the purpose and rationale of the study, and described the delimitations and assumptions underpinning the research.

The next chapter will provide a comprehensive review of the relevant literature, examining key concepts such as leadership, agile leadership, organisational agility, and sustainable growth. This review will establish the theoretical foundation of the study and contribute to the development of the conceptual framework that guides the research.

The following chapter will therefore focus on the literature review and the formulation of the study’s hypothesis.

Chapter 2: Literature review

2.1. Introduction

This chapter presents a review of key literature relevant to this study, focusing on leadership, particularly Agile leadership, organisational agility and sustainable growth. Emphasis is placed on how these concepts interact within the context of construction sector's SMMEs in Gauteng. The review outlines theoretical frameworks, identifies research gaps, and builds the foundation for the study's hypotheses and conceptual framework.

2.2. Leadership theories and Agile leadership

2.2.1. Definition of leadership

It is essential to begin by defining leadership to broadly understand the underpinnings of Agile leadership. According to Northouse (2021), leadership is defined as a way in which a person influences a group of people to achieve a particular common objective or goals. While Bass and Riggio (2006) in their earlier studies further defined leadership as the ability to influence, encourage, and inspire people to perform at their highest levels. In general, people lead differently, and it is important to examine various leadership styles as presented in the literature.

2.2.2. Agile Leadership

Grieneder and Leicht (2020), defines Agile leadership as a style and practices applied by leaders as a strategy to respond to rapid environmental changes within organisations, particularly those with flat hierarchies. This definition further highlights the structural adaptability of agile leadership in contrast to traditional hierarchical models. Similarly, Šochová (2021) defines agile leadership as a mindset and philosophy that compels leaders to remain flexible and responsive in rapidly evolving environments.

Šochová (2021), goes further and explain that Agile leadership does not follow a specific method, process, or formalized structure, which makes it inherently flexible and adaptable. These definitions align in their assertion that organisational agility is the core trait of Agile leadership, positioning it as a strategic approach to navigating uncertainty and complexity. A key characteristic of Agile leadership is its non-reliance on rigid frameworks or prescriptive

processes. This flexibility allows leaders to tailor their approach based on situational demands of specific organisation while remaining aligned with long-term strategic goals.

In their study, Joiner and Josephs (2007) describe Agile leadership as the ability to navigate complex and fast-changing environments, using a variety of leadership styles suited to the context while maintaining a focus on the organisation's vision. They emphasize the importance of strategic adaptability, where leaders shift tactics dynamically to align with organisational needs. This suggests that agile leaders are not confined to a single leadership archetype but are instead situational and transformational in their execution, aligning with earlier definitions.

Agile leadership is not only conceptual but deeply practical. It involves observable behaviours that foster a high-performance, innovation-driven culture. According to Damelio (2020), Agile leadership aims to develop others and create enabling conditions for success. Leaders do this by motivating team members, encouraging collaborative problem-solving, and fostering innovative thinking. This approach transforms leadership from a directive function into a facilitative and empowering role, where leaders enable rather than control.

Furthermore, Junker et al. (2021) point out that agile leadership practices can be implemented by nearly any team, regardless of whether they follow a formal agile framework. Agile behaviours, such as regular feedback loops, empowerment, and iterative planning, can be adopted organically, often through modelling the actions of effective leaders. This demonstrates that Agile leadership is scalable and transferrable, even in settings without formal agile systems in place.

The construction sector, particularly for SMMEs in Gauteng, is marked by dynamic project demands, stakeholder diversity, and frequent changes in market conditions. In such an environment, the ability to adapt quickly is a critical success factor. Agile leadership, with its emphasis on adaptability, team empowerment, and responsive decision-making, may offer a compelling model for navigating these complexities. When effectively applied to SMMEs in the construction sector, Agile leadership may offer significant advantages.

2.2.3. Transformational Leadership

Bass (2006) defines transformational leadership as the ability to motivate and inspire members of the team to a level where the interest of the organisation becomes higher than those of their own. Transformational leaders generally achieve their goals by setting up and clearly articulating their vision to their followers, and in turn followers captures it and realise the value vision which fuels internal motivation to perform. Transformational leadership style aims to motivate, encourage and meet followers at point of their need (Antonopoulou, 2021). Both the leader and the followers have each other's interest at heart, leading to motivation to achieve higher levels from both sides (Puni et al., 2021).

2.2.4. Transactional Leadership

According to Bass (1985), transactional leadership can be defined as a process where leaders and followers' exchanges values amongst each other. Similarly, Bwalya (2023) describe transactional leadership as style that is characterised by a mindset of rewarding members for the performance by inspiring them to achieve at their best levels. Jaqua and Jaqua (2021) further state that leaders follow a reward and punishment system to motivate members to achieve the objectives of the organisation. Although the transactional leadership style may produce desired results in terms of short-term performance, it is less effective for fostering long-term sustainable growth in organisations operating in rapidly changing environments (Al Qaradaghi & Ahmad, 2024).

2.3. Organisational Agility

Organisational agility refers to a firm's capability to rapidly sense and respond to environmental changes through flexible structures, fast decision-making, and resource reconfiguration (Tallon, 2019). In dynamic sectors like construction, particularly among SMMEs, agility is increasingly recognised as a strategic asset that enables firms to navigate uncertainty, client demands, and operational risks. Agile organisations are characterised by their ability to learn continuously, collaborate across boundaries, and pivot, when necessary, all of which contribute to enhanced innovation and resilience (Doz & Kosonen, 2010).

The literature also highlights that leadership plays a central role in fostering agility by encouraging adaptive mindsets, decentralised authority, and a culture of experimentation (Rigby, 2018). In this study, organisational agility is examined as a possible mediating mechanism through which Agile leadership affects long-term performance and growth within construction sectors' SMMEs in Gauteng.

2.4. Sustainable Growth

Elkington (1998) argues that sustainable growth encompasses an enterprise's ability to scale economically while ensuring long-term social and environmental responsibility. Lazano (2015) further explains that unlike short-term expansion, sustainable growth involves the integration of economic performance with ethical labour practices, environmental stewardship, and strategic foresight. In the study by (Zhou, 2020), they state that within construction SMMEs, sustainable growth is achieved not only by generating profit, but also through optimised resource use, risk mitigation, employee development, and regulatory compliance.

Scholars argue that leadership orientation is key to enabling such growth, as leaders determine strategic priorities, embed sustainability into the business model, and build agility into operations (Avery & Bergsteiner, 2011). In this study, sustainable growth is treated as a multidimensional outcome influenced both directly and indirectly by Agile leadership and organisational agility.

2.5. Development of Hypotheses

To address the research questions, three core variables have been selected: agile leadership, organisational agility, and sustainable growth. These constructs were chosen based on their theoretical significance and practical relevance as identified in the literature. Agile leadership has been recognised for its adaptability and empowering practices that support team performance in dynamic environments.

Organisational agility is essential for rapidly responding to change, while sustainable growth encompasses the long-term viability of construction SMMEs in Gauteng. The following hypotheses have been developed based on the literature and research questions:

2.5.1. First Hypothesis – Agile leadership vs Sustainable growth factors

H_0 (Null): There is no significant relationship between agile leadership and sustainable growth in construction SMMEs in Gauteng.

H_1 (Alternative): There is a significant positive relationship between agile leadership and sustainable growth in construction SMMEs in Gauteng.

2.5.2. Second Hypothesis – Agile leadership vs Organisational agility

Ho (NULL): Agile leadership has no significant effect on organisational agility.
H1(Alternative): Agile leadership has a significant positive effect on organisational agility.

2.5.3. Third Hypothesis – Organisational agility vs Sustainable growth

Ho (Null): Organisational agility does not significantly influence sustainable growth.
H1(alternative): Organisational agility significantly influences sustainable growth.

2.6. Summary of the Chapter

This chapter reviewed the foundational literature on agile leadership, organisational agility, and sustainable growth, situating these concepts within the context of construction sector SMMEs in Gauteng. Agile leadership was discussed as a flexible and empowering leadership approach suited to rapidly changing environments, with transformational and transactional leadership styles examined as points of comparison.

Organisational agility was highlighted as a strategic capability that may act as a mediating factor in enabling adaptability and competitive advantage. Sustainable growth was framed as a multidimensional objective encompassing financial viability, social value, and environmental responsibility.

Drawing from this literature, three hypotheses were developed to guide the empirical phase of the study. The next chapter outlines the research methodology employed to test these hypotheses.

Chapter 3: Research Methodology

3.1. Introduction

This chapter outlines the research design and methodology employed in this study. It describes the research design, data collection methods, population, sample method, research instrument, and procedures for data analysis. Furthermore, it discusses the limitations of the study and outlines measures taken to ensure the validity, reliability, and ethical integrity of the research.

3.2. Research design

A research design serves as the blueprint for conducting a study, guiding the methods used for data collection, analysis, and interpretation. Parahoo (2006) describes it as a structured plan indicating who will participate, where the research will take place, and how data will be gathered and analysed. Burns and Grove (2009) assert that selecting an appropriate design is critical to adequately address the research problem. J. Creswell and D. Creswell (2023) define research design as the logical connection between research questions and empirical data, forming a framework that links theory to observation.

This study adopts a descriptive quantitative research design, which is non-experimental and focuses on describing phenomena as they naturally occur. This design is appropriate for measuring and analysing numerical data to explore the relationships among agile leadership, organisational agility, and sustainable growth in the construction SMME sector of Gauteng. The quantitative approach allows for statistical testing of hypotheses and supports the generalisation of findings to similar contexts.

3.3. Research setting

The research was conducted within the construction sector in Gauteng Province, South Africa. Gauteng is South Africa’s economic hub, hosting a high concentration of SMMEs in the construction industry. The province's dynamic and competitive environment presents a suitable context for examining how agile leadership contributes to sustainable business growth amidst economic challenges, regulatory pressures, and operational complexity.

3.4. Data collection methods

The study employed online surveys as the primary data collection tool, targeting leaders and senior managers of SMMEs in the construction sector. Online surveys was selected due to their cost-effectiveness, environmental friendliness (Wright, 2005), and ability to facilitate rapid and efficient data collection (Jain, 2021). Given the demanding schedules of the target

population, the online format was also considered more convenient and likely to enhance the response rate.

3.5. Population and sample size

J. Creswell and D. Creswell (2023) in their study define the population as the complete set of individuals or entities relevant to a research inquiry. While Chaokromthong and Sintao (2021) argues that it is crucial to consider factors such as time, cost and data collection method when determining sample size, and furthermore where the population has similar characteristics, a small sample size could still yields reliable results.

For this study, the target population comprises employees of construction-based SMMEs in Gauteng, including owners, senior executives and middle management. A total of 100 questionnaires were distributed via email and WhatsApp, and 31 fully completed questionnaires were returned and deemed usable. This sample size, although modest, was sufficient for identifying relationships and trends in alignment with the study's descriptive quantitative approach. Additionally, the characteristics of the population are similar, less budget for conduct a thorough study and time limitation due to the program timeline.

3.6. Sampling method

The study employed non-probability sampling, specifically convenience sampling, wherein participants were selected based on their accessibility and willingness to participate (Golzar et al., 2022). Stratton (2021) states that convenience sampling can be characterised by being simplistic, cost effective and consume less time. This approach was deemed suitable due to time, financial, and logistical constraints. The rationale for adopting convenience sampling included:

- Practicality: It allowed for quick and cost-effective data collection.
- Feasibility: Given limited access to a complete database of all potential respondents, this approach enabled participation from readily available individuals.
- Exploratory nature: The study's aim to identify patterns rather than establish causality aligns with the characteristics of non-probability sampling.

3.7. The research instrument

A structured, self-administered questionnaire was developed based on the research objectives and variables. Sukmawati (2023) defines a research instrument as a tool used to collect data from source, process and arrange it for a study of interest. Oben (2021) concurs by simple defining it as a scientific and systematic device developed for the purpose of collecting source data, measure and process it. The questionnaire consisted primarily of

closed-ended items and included sections to capture demographic data and measure the three main constructs: Agile leadership, organisational agility, and sustainable growth.

The first section was regarding demographic information of the participants such as country, gender, companies operating area, employee, etc. The questions about participants' perceptions of Agile leadership at workplace, organisational agility and sustainable growth's is covered in section one to three respectively. A 5-point Likert scale adopted from Akkaya et al. (2022) instrument was used. The scale ranges from 1 = Strongly Disagree to 5 = Strongly Agree. The scale reasonably ensured consistent measurement of respondents' perceptions and experiences, and further facilitated statistical analysis.

Details of the questionnaire are provided in Appendix A.

3.8. Data Management and processing

Responses were collected using Qualtrics, an online survey platform; data were , exported into SPSS for statistical analysis. Data management involved:

- Assigning unique variable names and labels
- Coding Likert scale responses from 1 to 5
- Handling missing values using SPSS's recoding functions

Descriptive statistics (mean, standard deviation) was used to summarise data, correlation and regression analyses were conducted to test relationships among variables. Cronbach's alpha is considered to be the most reliable instrument to assess internal consistency for data collected by survey questionnaire. Cronbach's alpha results was interpreted using the values ranging from 0 to 1, where the closer the number is to 1.0 is considered higher reliability (Gliem & Gliem 2003). While George and Mallery (2003) further add that an acceptable value is > 0.7.

3.9. Limitations of the study

Like many research endeavours, this study is subject to certain limitations. These limitations primarily pertain to issues of generalisability, time constraints, accessibility of respondents, and limited resources. Several limitations affect the scope and generalisability of this research:

- The **use of self-reported data** may introduce bias (Etikan, 2016).
- **Exclusion of qualitative methods** limits the depth of contextual insight.
- The focus on **Gauteng Province** constrains generalisability to other regions or industries (Stratton, 2021).

- **External factors** such as political instability or economic downturns affecting the construction sector is not factored in this study.
- **Sample size** due to inherent risk associated with quantitative research (Chaokromthong & Sintao, 2021).

3.10. Validity and Reliability

Ahmed and Ishtiaq (2021) defines validity at an extent to which an instrument accurately measures what it is intended to measure while define reliability is measured by the instrument consistency in producing stable and repeatable results under unchanged conditions. Sürücü, and Maslakçı (2020) concurs with these findings, in that their argue that reliability of an instrument is tested by its consistency over a period of time, while they content that validity is tested by assessing the instrument ability to perform in accordance with intended purpose. The study by J. Creswell and D. Creswell (2023) also agrees that reliability refers to the consistency of a method used in a study, to the level that the results can be replicated to a similar context over time.

3.10.1. External validity

Findley et al. (2021) define external validity of the research findings that can be generalised and/or applied to a broader population and context beyond that which the study focused on. The findings of this study may be transferable to sectors of the economy with similar context. However, the generalisability of the findings may be limited due to the inherent risks associated with the convenient sampling method (Stratton, 2021).

3.10.2. Internal validity

Internal validity of the study refers to the controls and measures in place to ensure that the findings are free from trustworthy, free from bias and errors that may influence the outcome of the investigation (Slater & Hasson, 2025). Internal validity was enhanced by:

- Adopting a validated instruments designed by Akkay et al. (2022)
- Further testing the instrument using Cronbach's alpha tool in SPSS.
- Ensuring transparency in data collection and analysis procedures

3.11. Ethical considerations

Hasan et al. (2021) highlight the importance of ethical conduct by researchers when conducting and presenting research findings. Chervenak and McCullough (2021) highlight the importance of ethics in a research by simple defining it as a disciplined study of morality. In this study, the

usual ethical guidelines was applied. Participant' voluntary and informed consent was obtained, and the participant's right to privacy regarding anything they might reveal about themselves. They further state that the researcher must obtain permission from the appropriate committee at their institution for any research that involves human respondents. When conducting the research, integrity and ethics in the entire process was prioritised to ensure the participants are protected. Prior to the data collection, all participants were asked to consent in writing and were made to understand that they have a right to withdraw from the surveys at any stage.

The names of the participants or any information that can directly link to them was omitted from the study outcome to ensure their confidentiality and anonymity. Lastly, the research followed the ethical guidelines set forth by the University of Witwatersrand ethics committee. The ethical clearance obtained on the 25 October 2024, clearance number *WBS/BA880884/665*. Data was collected from May to June 2025.

The study complies with the Protection of Personal Information Act (POPIA), Act No. 4 of 2013, which governs the lawful processing of personal information in South Africa. All data collected were securely stored and processed solely for academic purposes, and no personal information was used in a way that could compromise privacy or identity. Data will be securely destroyed after the completion of the research project.

3.12. Summary of the Chapter

This chapter outlined the research methodology employed to examine the relationship between agile leadership, organisational agility, and sustainable growth within construction SMMEs in Gauteng. A quantitative research design was adopted, using a structured survey questionnaire to gather primary data from owners and managers actively involved in strategic and operational decision-making. A convenience sampling technique was applied to select respondents who could offer relevant insights based on their leadership roles.

Data analysis was conducted using SPSS and involved reliability testing through Cronbach's alpha, descriptive statistics, Pearson correlation, and both simple and multiple regression analyses to evaluate the proposed hypotheses.

The methodological choices presented in this chapter establish a rigorous foundation for examining the relationships among the study variables and for validating the conceptual model. The next chapter presents the results and findings derived from the empirical analysis.

Chapter 4: Data Analysis and Discussion

4.1. Introduction

This chapter presents a comprehensive analysis of the data collected during the study and outlines the key research findings. The analysis includes a breakdown of the sample demographics, descriptive statistics of the measured variables, and reliability testing using Cronbach's alpha coefficient. Furthermore, Pearson's correlation analysis was employed to examine the relationships between the key constructs. The chapter concludes with a summary highlighting the main insights derived from the data.

4.2. Sample analysis results

The data for this study was collected using an online structured questionnaire administered through Qualtrics Survey Software. The target population consisted of junior employees, middle managers, and senior managers within construction SMMEs operating in Gauteng Province. Given the exploratory and quantitative nature of the study, the use of Qualtrics allowed for efficient distribution and real-time tracking of responses.

A total of 43 responses were received, of which 31 were fully completed and valid for analysis. This sample size was deemed adequate for conducting descriptive and inferential statistical analysis, including reliability testing and correlation analysis, using SPSS software. The sampling approach employed was non-probability convenience sampling, which was appropriate given time constraints and accessibility limitations.

4.3. Demographic descriptive statistics

To gain a comprehensive understanding of the participants' background, demographic information was collected through the first section of the survey instrument. This section comprised five targeted questions designed to capture key demographic attributes, including current Job level, years of professional experience, size of the organisation, type of industry, and the number of years the company has been in existence.

4.3.1. Current job level with the organisation

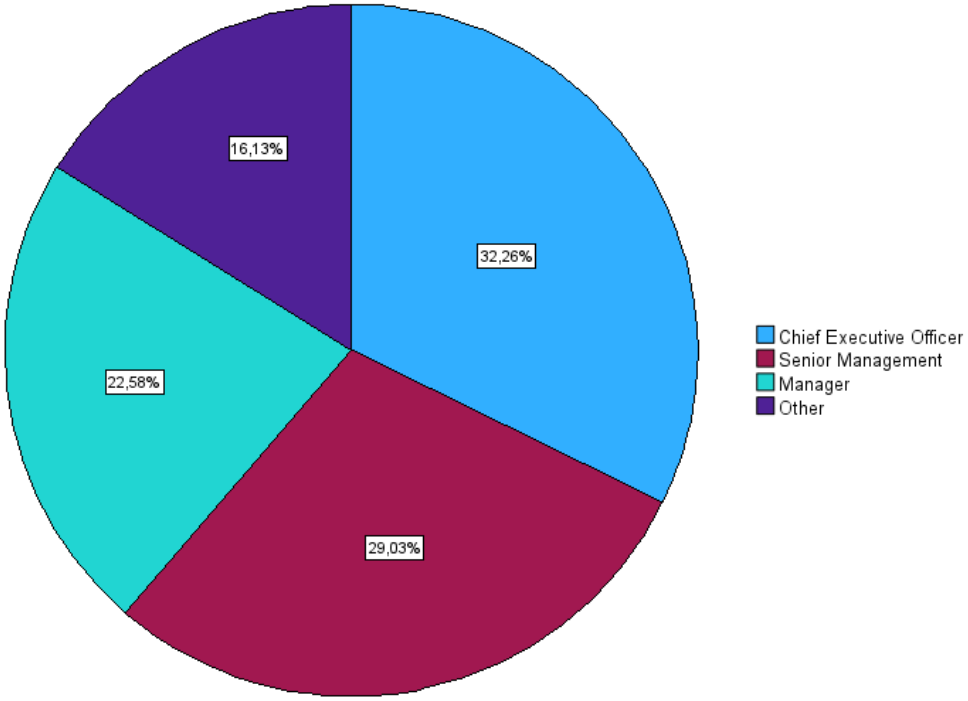

Figure 1: Participant Job Level

The data highlighted the distribution of participants by job level within their organisations as depicted in Figure 1. About 32.26% of participants were Chief Executive Officers, followed by 29.03% who were in Senior Management roles, 22.58% held Managerial positions, and 16.13% accounted for other job categories.

The distribution suggests that a significant number of participants were in leadership and decision-making positions, which was critical for understanding perspectives on agile leadership, organisational agility, and sustainable growth within construction SMMEs.

4.3.2. Years of professional experience

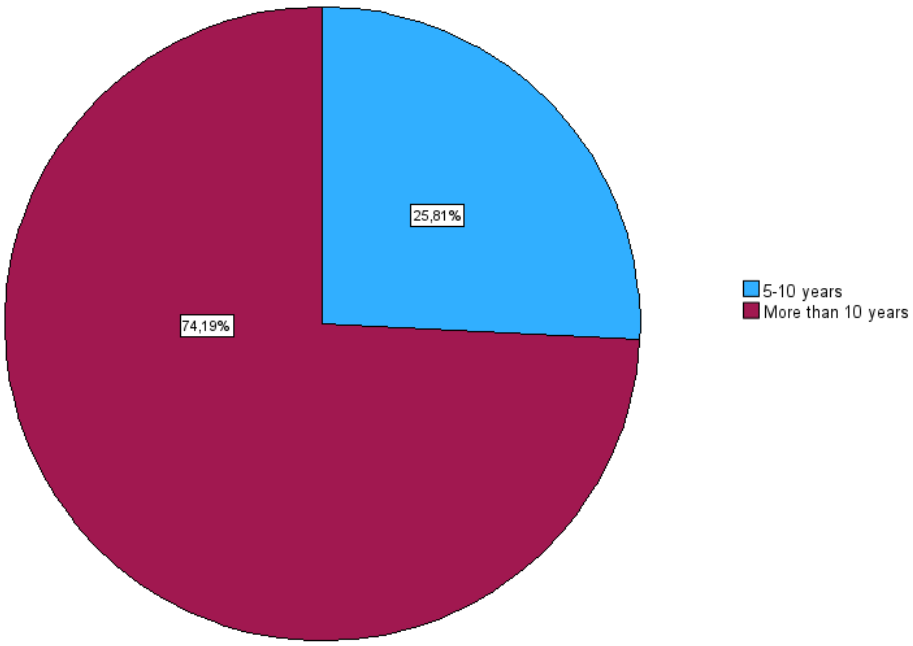

Figure 2: Participants' Years of professional experience

The data revealed that most respondents, represented by 74.19 % had accumulated more than 10 years of professional experience, while 25.81% had 5 to 10 years of experience. This indicated that the sample predominantly consisted of seasoned professionals with substantial industry experience, a scenario that strengthened the credibility of responses regarding agile leadership and organisational practices. Their extensive experience in senior positions suggests they are more likely to have encountered various leadership styles and many business cycles which is critical to offer an informed view for implementing sustainable growth strategies within SMMEs.

4.3.3. Primary business location

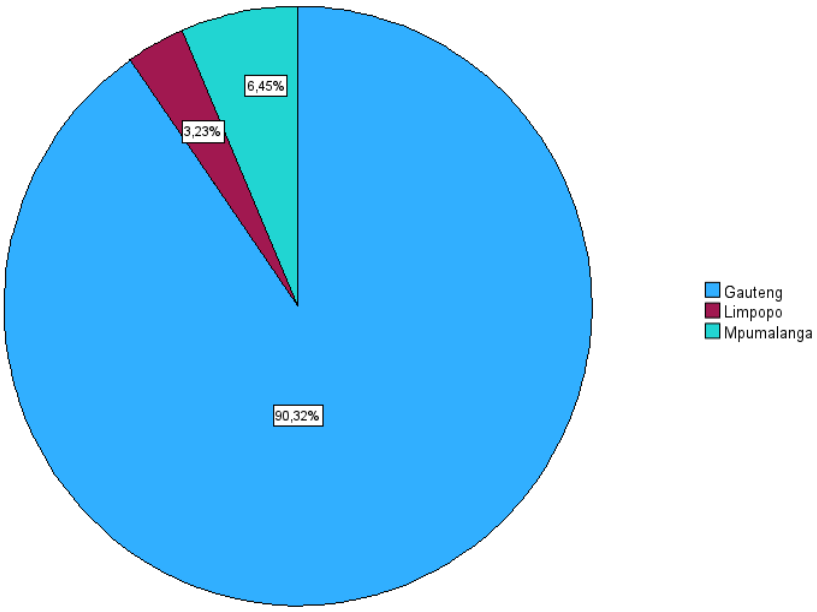

Figure 3: Primary business location of participants

The data further showed that most participants represented by 90.32% are primarily based in Gauteng, with smaller proportions in Mpumalanga represented by 6.45% and the smallest percentage located in Limpopo represented by 3.23%. This was consistent with the study's geographic focus on construction SMMEs in Gauteng. The dominance of Gauteng-based participants enhanced the regional relevance of the study and ensured that the findings are reflective of the local business climate and industry dynamics where the study was intended to have the most impact.

4.3.4. Organisation size

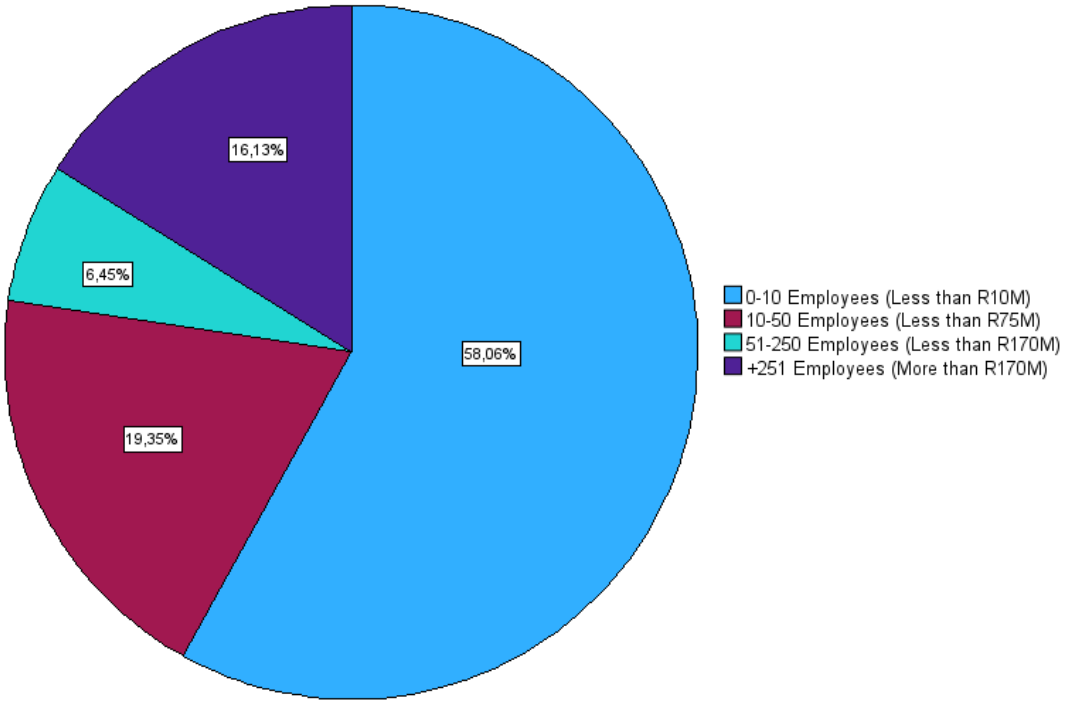

Figure 4: Participant's organisation size

The data further revealed that most participants represented by 58.1% were from micro enterprises, followed by 19.4% from small enterprises, 16.1% from medium enterprises, and lastly 6.5% from large organisations.

This reflects the study's intentional focus on small, micro, and medium enterprises (SMMEs) in the construction sector. The high proportion of micro and small businesses highlights the sector's fragmented nature and underscores the importance of leadership and agility in resource-constrained environments.

4.3.5. Primary industry of operation

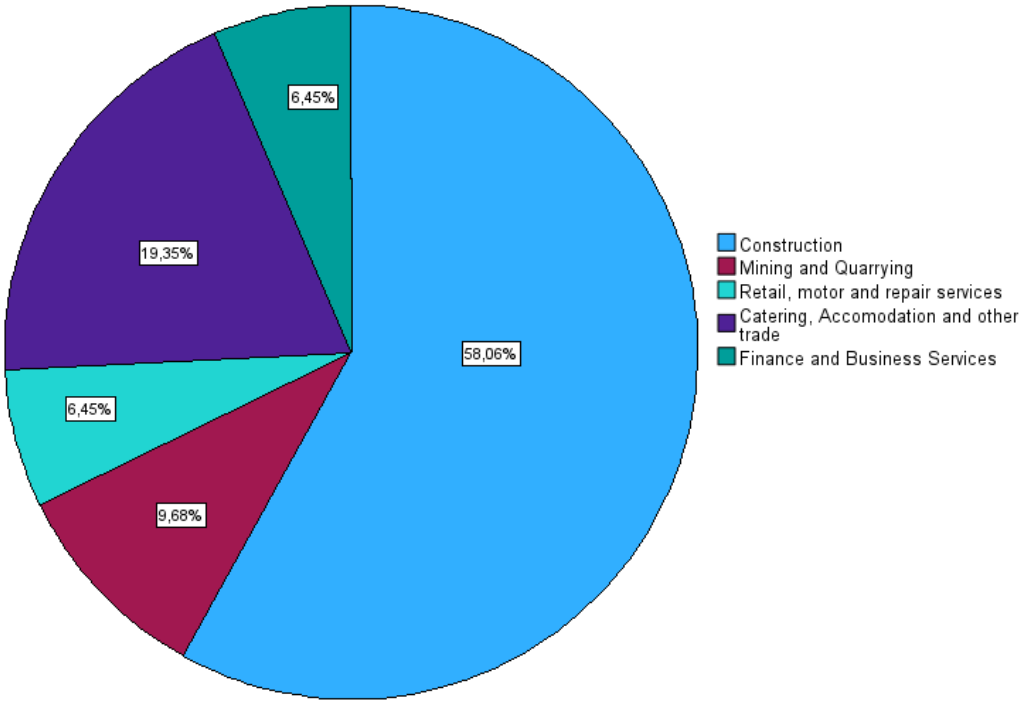

Figure 5: Participants' primary industry of work

The data revealed the distribution of participants according to their primary industry of operation. Most participants represented by 58.1% reported operating in General Construction, indicating that most SMMEs in this study are engaged in core construction activities. The data also revealed that other industries represented include catering, accommodation and other trade represented by 19.4%, mining and quarrying at 9%, followed by finance and business services; and retail, motor and repair services at 7% and 6.5% respectively.

The diversity in industry participants, suggests that while the study focused on construction SMMEs, there were representation across various construction-related disciplines, reinforcing the relevance of agile leadership and organisational agility across different operational contexts.

4.3.6. Years in business/Organisation age

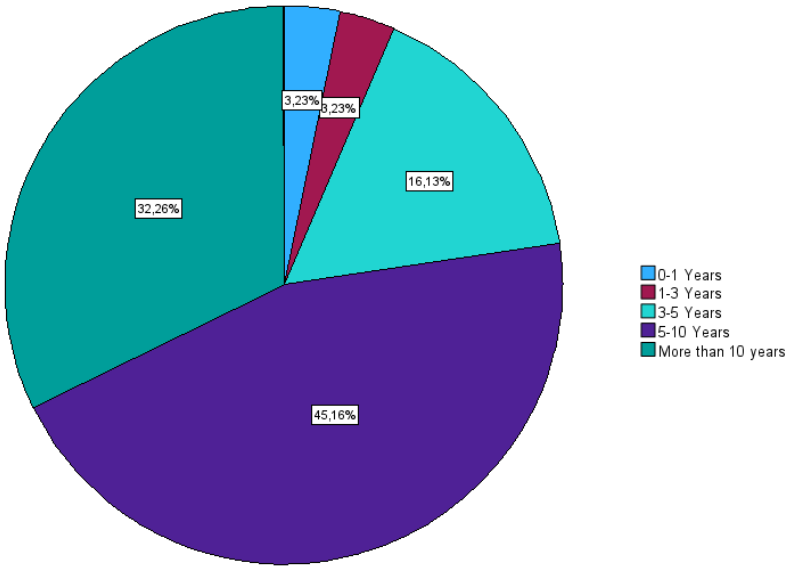

Figure 6: Number of years of existence for participant's organisation.

The survey data indicated that a significant proportion (45.2%) of the organisations had been in operation for a period between 5 – 10 years. Followed by those with more than 10 years in operation at 32.3%. Furthermore, the data revealed that 16.1% of organisation have been in existence for 3.5 years. Lastly, 6.4% and 3.2% each had been in existence for 0–1 and 1–3 years, respectively. This indicates that most of the surveyed construction SMMEs had over a decade of operational experience, suggesting a level of maturity and potential resilience in navigating complex market environments. This background may have influenced their approaches to agile leadership and organisational agility practices.

4.4. Descriptive statistics of variables

4.4.1. Descriptive statistics on Agile leadership

Table 1: Leaders in my organisation promote continuous learning.

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	6.5	6.5	6.5
	Neither Agree nor Disagree	1	3.2	3.2	9.7
	Somewhat Agree	6	19.4	19.4	29.0
	Strongly Agree	22	71.0	71.0	100.0
	Respondents	31	100.0	100.0	

A total of 22 participants out of a sample of 31 which represented 71% of the population strongly agreed that leaders in their organisation promote continuous learning and foster adaptability to the teams. However, 2 participants which represented 6.5% strongly disagree that leaders in their organisations promote continuous learning and fostering adaptability to the teams.

Table 2: Team encouragement and empowerment by organisational leaders

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	6.5	6.5	6.5
	Neither Agree nor Disagree	1	3.2	3.2	9.7
	Somewhat Agree	13	41.9	41.9	51.6
	Strongly Agree	15	48.4	48.4	100.0
	Total	31	100.0	100.0	

A combined total of 90.3% of participants(13 somewhat agree + 15 strongly agree) indicated that they perceived their leaders their organisations to be encouraging and empowering teams to make decisions independently. However, about 6.5% strongly disagree that their leaders encourages and empowers teams to make decisions independently.

Table 3: Strategy adaptation as an indicator of leadership agility

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	6.5	6.5	6.5
	Somewhat Disagree	1	3.2	3.2	9.7
	Neither Agree nor Disagree	3	9.7	9.7	19.4
	Somewhat Agree	10	32.3	32.3	51.6
	Strongly Agree	15	48.4	48.4	100.0
	Total	31	100.0	100.0	

A total of 80.7% of participants which represents most of the sample population either somewhat agreed or strongly agreed that leaders in their organisations quickly adapt strategies to respond to new situations.

Table 4: Customer centricity by organisational leaders

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	3.2	3.2	3.2
	Somewhat Disagree	1	3.2	3.2	6.5
	Neither Agree nor Disagree	2	6.5	6.5	12.9
	Somewhat Agree	8	25.8	25.8	38.7
	Strongly Agree	19	61.3	61.3	100.0
	Total	31	100.0	100.0	

A combined total of 87.1% of participants(19 strongly agree + 10 somewhat agree) indicated that leaders in their organisation are customer-centric. The 61.3%, which represents the highest percentage strongly agreed that leaders in their organisation are customer-centric while 3,2% strongly disagreed that leaders in their organisation are customer centric focused.

Table 5: Leaders in my organisation are always ahead of challenges

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	3.2	3.2	3.2
	Somewhat Disagree	2	6.5	6.5	9.7
	Neither Agree nor Disagree	4	12.9	12.9	22.6
	Somewhat Agree	10	32.3	32.3	54.8
	Strongly Agree	14	45.2	45.2	100.0
	Total	31	100.0	100.0	

Out of a total of 31 valid respondents, 19 participants, which represents 45.2%, strongly agreed Leaders their organisations are always ahead of challenges and very proactive in addressing them. An additional 10 participants(32.3%) somewhat agreed, indicating a generally strong consensus on leadership ability to address arising challenges. In contrast, only 2 participants, which represented 3.2% strongly disagreed, that leaders in the organisation are always ahead of challenges and very proactive in addressing them.

Table 6: Leaders in my organisation practice open door policy

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	3	9.7	9.7	9.7
	Neither Agree nor Disagree	3	9.7	9.7	19.4
	Somewhat Agree	5	16.1	16.1	35.5
	Strongly Agree	20	64.5	64.5	100.0
	Total	31	100.0	100.0	

From the 31 valid respondents, 20 participants, which represents 64.5%, strongly agreed that leaders in their organisation practice open-door policy, encouraging open communication, transparency, and approachability. An additional 5 participants(16.1%) somewhat agreed, indicating a generally strong consensus on leadership openness and accessibility. In contrast, only 3 participants, which represents 9.7% strongly disagreed, that leaders in their organisations practice open-door policy, encouraging open communication, transparency, and approachability reflecting a minimal perception of leadership inaccessibility.

Table 7: Team members in my organisation feel comfortable sharing ideas without hesitation

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely uncomfortable	2	6.5	6.5	6.5
	Neither comfortable nor uncomfortable	4	12.9	12.9	19.4
	Somewhat comfortable	10	32.3	32.3	51.6
	Extremely comfortable	15	48.4	48.4	100.0
	Total	31	100.0	100.0	

The data revealed that a substantial majority of participants, representing 80.7% either extremely comfortable or somewhat comfortable that team members in their organisations felt comfortable sharing ideas, raising concerns, and seeking guidance without hesitation. However, about 12.9% of participants who selected a neutral position may represent employees who are uncertain of the statement. Meanwhile, the 6.5% indicated that team members in their organisations feel extremely uncomfortable sharing ideas, raising concerns, and seeking guidance without hesitation.

The overall positive sentiment suggests that many construction SMMEs within the sample exhibited agile leadership traits that promoted openness and approachability. This finding supports the broader aim of the study.

Table 8: Our organisation is highly responsive and adapt swiftly to change

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	12.9	12.9	12.9
	Neither Agree nor Disagree	1	3.2	3.2	16.1
	Somewhat Agree	12	38.7	38.7	54.8
	Strongly Agree	14	45.2	45.2	100.0
	Total	31	100.0	100.0	

Most participants, represented by 83.9% either strongly agreed or somewhat agreed that their organisations are highly responsive and swiftly adapts to changes in the market environment. However, there was 12.9% of participants who strongly disagreed that their organisation was highly responsive and adapts swiftly to changes in the market environment.

The high level of agreement by participants reinforces the view that these organisations operated with an agile mindset, a critical capability for survival and growth in volatile and competitive environments such as the construction sector. These findings support the central argument of this study in that agile leadership can serve as a driver for sustainable growth in SMMEs.

Table 9: Our organisation view challenges as opportunities

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	3.2	3.2	3.2
	Somewhat Disagree	2	6.5	6.5	9.7
	Neither Agree nor Disagree	2	6.5	6.5	16.1
	Somewhat Agree	4	12.9	12.9	29.0
	Strongly Agree	22	71.0	71.0	100.0
	Respondents	31	100.0	100.0	

71.0% of participants strongly agreed that their organisations views challenges as opportunities. Interestingly, the overwhelming majority of participants represented by 83.9% who either strongly agreed or somewhat agreed that their organisation viewed challenges as opportunities. A small percentage represented by 3.2% of participants strongly disagreed that their organisation views challenges as opportunities.

These findings provide empirical support for the premise that agile leadership fosters a culture of opportunity in the face of adversity, an essential trait for sustainable growth in volatile environments such as the construction sector. The results aligned with the literature that

positions agile leadership as a catalyst for innovation, resilience, and long-term strategic adaptation.

Table 10: Our organisation encourages innovation

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	6.5	6.5	6.5
	Somewhat Disagree	2	6.5	6.5	12.9
	Neither Agree nor Disagree	1	3.2	3.2	16.1
	Somewhat Agree	6	19.4	19.4	35.5
	Strongly Agree	20	64.5	64.5	100.0
	Total	31	100.0	100.0	

The data indicated that a substantial majority of participants amounting to 83.9% either strongly agreed or somewhat agreed that their organisations encourages innovation and changes are quickly implemented where necessary. It is also worth noting that about 20 participants which represented a majority, strongly agreed that their organisations encourages innovation and changes are quickly implemented where necessary. However, a combined total which is 13% of participants strongly disagreed and somewhat disagreed suggesting that their organisations does not encourage innovation and changes are not quickly implemented.

It can be argued that the strong support for innovation and rapid change implementation highlights the presence of agile leadership characteristics within the surveyed organisations. This aligned well with the broader objectives of the study, which sought to assess the role of agile leadership in driving sustainable growth among construction SMMEs.

Table 11: Our organisation value customers feedback

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	3.2	3.2	3.2
	Neither Agree nor Disagree	2	6.5	6.5	9.7
	Somewhat Agree	5	16.1	16.1	25.8
	Strongly Agree	23	74.2	74.2	100.0
	Total	31	100.0	100.0	

The findings indicated that a substantial majority of participants which represented 90.3% perceived their organisation as valuing customer feedback and adjusted to customer needs where necessary. The majority, representing 74.2% of participants strongly agreed that their organisations valued customer feedback and adjusted to customer needs where necessary.

However, a small percentage of participants which represented 3.2% of the population strongly disagreed that their organisation valued customer feedback and adjusting to customer needs where necessary.

The strong agreement with this statement reinforces the perception that those organisations were agile and responsive to external factors, which is critical for achieving sustainable competitive advantage. This finding further supported the central premise of the study in that agile leadership contributes meaningfully to sustainable business growth in SMMEs.

Table 12: The organisation encourages team work

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	3.2	3.2	3.2
	Neither Agree nor Disagree	2	6.5	6.5	9.7
	Somewhat Agree	4	12.9	12.9	22.6
	Strongly Agree	24	77.4	77.4	100.0
	Total	31	100.0	100.0	

An overwhelming 90.3% of participants which represented the majority either strongly agree or somewhat agree that their organisation encourages teamwork and cross functional sharing of ideas to solve challenges. However, the small minority of participants who expressed somewhat disagreement (3.2 % of respondents) indicated that their organisation encourages teamwork and cross functional sharing of ideas to solve challenges.

These results suggest that the organisation had effectively cultivated a collaborative environment that supports agile principles. Fostering teamwork and cross-functional idea sharing was essential for promoting agility, encouraging innovation, and ultimately achieving sustainable business growth.

Table 13: Our organisation's turnover has been growing consistently

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	4	12.9	12.9	12.9
	Neither Agree nor Disagree	7	22.6	22.6	35.5
	Somewhat Agree	8	25.8	25.8	61.3
	Strongly Agree	12	38.7	38.7	100.0
	Total	31	100.0	100.0	

The results showed that 64,5% which represents most participants believed that their organisation turnover has been growing consistently in the past 3 years, with 38.7% participants strongly agreeing and 25.8% somewhat agreeing with the statement. However, 22.6% of participants neither agreed nor disagreed that their organisation turnover has been growing consistently in the past 3 years. Furthermore, a significant number of participants who represented 12.9% of participants somewhat disagreed that their organisation turnover had been growing consistently in the past 3 years.

The perception of consistent turnover growth supports the broader hypothesis that agile leadership practices such as adaptability, collaboration, and responsiveness to market changes can contribute to sustainable growth in construction SMMEs. However, the presence of uncertainty among a significant portion of participants points to an opportunity for leadership to improve transparency around financial outcomes and engage all employees in the organisation's performance journey.

Table 14: Our organisation client database has been growing consistently

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	9.7	9.7	9.7
	Somewhat Disagree	4	12.9	12.9	22.6
	Neither Agree nor Disagree	5	16.1	16.1	38.7
	Somewhat Agree	8	25.8	25.8	64.5
	Strongly Agree	11	35.5	35.5	100.0
	Respondents	31	100.0	100.0	

The data revealed that 61.3% of participants believed that their organisation's client database has grown consistently over the past three years. However, 22.6% of participants either somewhat or strongly disagreed that their organisation's client database has been growing consistently in the past 3 years. Additionally,16.1% neither agreed nor disagreed that their organisation's client database has been growing consistently in the past 3 years.

The responses suggested a consensus toward growth in the client database, which supports the broader objective of the study that agile leadership can drive sustainable business development. Nonetheless, the presence of uncertainty and disagreement which was nearly 40% of participants suggest the need for improved internal communication regarding client development metrics and strategic direction. Ensuring that employees at all levels are informed about growth outcomes can strengthen alignment and foster a more cohesive organisational culture.

Table 15: Our organisation profitability has been satisfactory

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	6.5	6.5	6.5
	Somewhat Disagree	5	16.1	16.1	22.6
	Neither Agree nor Disagree	8	25.8	25.8	48.4
	Somewhat Agree	9	29.0	29.0	77.4
	Strongly Agree	7	22.6	22.6	100.0
	Respondents	31	100.0	100.0	

The data indicated a moderate positive sentiment regarding the organisation's profitability over the past three years. A combined 51.6% of participants expressed agreement (somewhat or strongly) with the statement that their organisation profitability had been satisfactory in the past 3 years. Conversely, a notable participants represented by 22.6% indicated some level of disagreement, while 25.8% being neutral.

The mixed responses highlighted a diverse perception of financial performance within the organisation. While the majority perceive profitability as satisfactory, the combined 48.4% of neutral or disagreeing responses signals a potential gap in strategic communication or varied performance across departments. For construction SMMEs operating in a volatile economic environment, these results underline the importance of agile financial leadership that both drives sustainable outcomes and transparently communicates those outcomes to internal stakeholders.

Table 16: Our organisation's operations has been growing consistently

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	3.2	3.2	3.2
	Somewhat Disagree	5	16.1	16.1	19.4
	Neither Agree nor Disagree	4	12.9	12.9	32.3
	Somewhat Agree	11	35.5	35.5	67.7
	Strongly Agree	10	32.3	32.3	100.0
	Respondents	31	100.0	100.0	

A combined 67.8% of participants, either strongly or somewhat agreed that their organisation's operations have been growing constantly in the past 3 years. However, 19.3% of participants expressed disagreement that their organisation's operations have been growing constantly in the past 3 years and 12.9% of participants remained neutral.

The results demonstrated that most employees perceive their organisation's operations as steadily expanding, aligning with the principles of agile leadership, which focuses on adaptability and iterative improvement. However, the presence of neutral views underscores the importance of inclusive communication and cross-departmental visibility to ensure that growth is not only achieved but also widely recognised and experienced across all organisational levels.

Table 17: Investment in new innovation consistently yields positive results

	Likert - Scale	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely negative	2	6.5	6.7	3.2
	Neither positive nor negative	9	29.0	30.0	19.4
	Somewhat positive	8	25.8	26.7	32.3
	Extremely positive	11	35.5	36.7	67.7
	Sub - Total	30	96.8	100	100.0
	Missing system	1	3.2		
	Total	31	100.0		

The data indicated that 61.3% of participants, which represented majority of the population, were positive that investment in new innovations in their organisations consistently yielded positive results, with over one third representing 35.5% showing great confidence. However, there was a significant number of participants who remained neutral. Additionally, a small percentage of participants were negative that investment in new innovations in their organisations consistently yielded positive results.

The organisations were largely perceived as achieving positive returns on innovation investments, aligning with agile principles that emphasise experimentation, adaptability, and iterative learning. However, the substantial number of participants was neutral, highlighting an opportunity for leadership to improve on transparency, employee involvement, and evidence-based reporting on innovation outcomes to increase overall engagement and confidence in innovative efforts.

4.5. Reliability analysis (Cronbach alpha)

4.5.1. Agile leadership practices

Table 18: Agile leadership practices Cronbach's alpha internal reliability results

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q15	25,3871	20,179	,407	,565	,798
Q16	25,6129	20,245	,417	,476	,796
Q17	25,7419	18,398	,556	,481	,772
Q18	25,4839	18,791	,631	,572	,759
Q19	25,7742	18,781	,563	,581	,770
Q20	25,5161	19,458	,522	,527	,778
Q21	25,7097	17,946	,648	,656	,754

The data for Agile leadership practices indicated the Cronbach's alpha of >0.70 which suggests that the items used in the scale are sufficiently correlated and internally consistent, meaning they collectively measure the same underlying construct of Agile leadership practices.

In addition to the alpha coefficient, the standard deviation (SD = 5.02) of the scale items indicated a reasonable spread of responses around the mean. This variability reflects that participants did not respond uniformly, which is desirable in most quantitative studies, as it implies the scale can differentiate between varying perceptions of Agile Leadership within the organisation. The results implied that the data can be relied upon for correlation and regression analysis to test hypothesis and answer the research question.

4.5.2. Organisational agility

Table 19: Organisational agility Cronbach's alpha internal reliability results

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q22	17,9355	11,796	,857	,834	,879
Q23	17,5484	13,256	,848	,899	,877
Q24	17,6774	12,492	,837	,921	,881
Q25	17,3871	15,912	,632	,908	,920
Q26	17,3226	15,759	,807	,913	,898

Cronbach's alpha for Organisational agility was found to be greater than 0.80, which indicated a good level of internal reliability among the 5 items used in the scale. A value above 0.80 suggests that the scale items are highly correlated and effectively capture the underlying construct of organisational agility. This high reliability reinforces confidence that the responses are dependable and that the instrument used was statistically sound for inferential analysis such as correlation and regression.

Additionally, the standard deviation of 4.6 demonstrated a moderate degree of variability in responses, indicating that while participants had differing perceptions of agility within their organisation, the variation is consistent and meaningful. This diversity of responses was beneficial for robust statistical modelling and enhanced the scale.

4.5.3. Sustainable growth

Table 20: Sustainable growth Cronbach's alpha internal reliability results

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q30	14,8667	17,775	,793	,750	,889
Q31	15,1333	15,016	,871	,786	,871
Q32	15,3000	16,562	,839	,732	,878
Q33	14,9667	16,723	,866	,764	,873
Q34	14,9333	19,513	,534	,385	,937

Case Processing Summary			
Cases		N	%
	Valid	30	96.8
	Excluded	1	3.2
	Total	31	100.0

Like organisational agility, the Cronbach alpha for Sustainable growth factors was greater than 0.8. This high value suggested a good level of internal reliability among the 5 items used in the scale. Furthermore, the standard deviation of 5.11 suggests a moderate to high dispersion in participant responses. This level of variation implied a healthy spread of perceptions regarding agile leadership behaviours across the organisation. The missing data point was appropriately managed during the analysis phase to ensure that it did not compromise the

reliability assessment or the integrity of the results. This missing data point was excluded from analysis.

4.6. Hypothesis testing results (Correlation and regression of constructs)

4.6.1. Agile leadership vs Sustainable growth

Table 21: Agile leadership vs Sustainable growth relationship

Model		Unstandardised B	Coefficients Std. Error	Standardised Coefficients Beta	t	Sig.
1	(Constant)	-1,037	,847		-1,224	,231
	Agile Leadership	1,504	,151	,880	9,987	<,001
a. Dependent Variable: Sustainable Growth						

The observed relationship between agile leadership and sustainable growth was statistically significant ($p < 0.001$). The standardized beta coefficient = 0.880, indicated a very strong, positive relationship. This implied that agile leadership practices was strongly associated with sustainable growth factors.

4.6.2. Agile leadership vs Organisational agility

Table 22: Agile leadership vs Organisational agility relationship

Model		Unstandardised B	Coefficients Std. Error	Standardised Coefficients Beta	t	Sig.
1	(Constant)	-,606	,588		-1,032	,311
	Agile Leadership	1,312	,104	,919	12,564	<,001
a. Dependent Variable: Organisational Agility						

The observed relationship between agile leadership and organisational agility was found to be statistically significant ($p < 0.001$). The standardized beta coefficient is 0.919, which indicated a very strong, positive effect. This implied that as Agile leadership practices increase, so does organisational agility. Therefore, it can be concluded that the relationship is both statistically and practically significant.

4.6.3. Organisational agility vs Sustainable growth

Table 23: Agile leadership vs Sustainable growth relationship

Model		Unstandardised B	Coefficients Std. Error	Standardised Coefficients Beta	t	Sig.
1	(Constant)	-,495	,323		-1,531	,13
	Org.Agility	1,169	,047	,977	24,750	<,00
a. Dependent Variable: Sustainable Growth						

The data revealed a p-value of < .001, which was statistically significant. The standardized beta coefficient was 0.977, indicating a very strong positive relationship. This implied that organisational agility was strongly associated with higher sustainable growth.

4.6.4. Correlation: Agile leadership vs Organisational agility vs Sustainable growth.

Table 24: Agile leadership vs Organisational agility vs Sustainable growth corelations

		Agile Leadership	Organisational Agility	Sustainable Growth
Agile Leadership	Pearson Correlation	1	,919”	,880”
	Sig. (2-tailed)		<,001	<,001
	N	31	31	31
Organisational Agility	Pearson Correlation	,919”	1	,977”
	Sig. (2-tailed)	<,001		<,001
	N	31	31	31
Sustainable Growth	Pearson Correlation	,880”	977”	1
	Sig. (2-tailed)	<,001	<,001	
	N	31	31	31
“. Correlation is significant at the 0.01 level (2-tailed).				

4.6.4.1. Agile leadership vs Organisational agility (r = 0.919, p value < 0.001)

The data suggested a very strong positive correlation, indicating that as agile leadership practices increase, organisational agility also increases significantly. It can be concluded that agile leadership has a significant positive effect on organisational agility. Therefore, the finding supported the second hypothesis.

4.6.4.2. Agile leadership vs Sustainable growth (r = 0.880, p value < 0.001)

The data further suggested another very strong positive correlation between agile leadership and sustainable growth factors, suggesting that higher levels of agile leadership are strongly associated with greater sustainable growth. The finding supported the first hypothesis.

4.6.4.3. Organisational agility vs Sustainable growth (r = 0.977, p value < 0.001)

The data showed an extremely strong correlation between organisational agility and sustainable growth, with r-value close to 1, suggesting an almost perfect linear relationship existed. This strongly supported the third hypothesis that organisational agility significantly influences sustainable growth.

4.7. Summary

The chapter presented results of the statistical analysis performed on data collected from participants within construction SMMEs in Gauteng. The chapter began with descriptive statistics that outlined the demographic characteristics of the participants and their organisations. Key findings included the following:

- Most participants held middle or senior management positions.
- Over 70% of participants had more than five years of professional experience.
- Most businesses were classified as micro-enterprises represented by 58.1%, with others ranging from small to large.

The primary industry was construction represented by 58.1%, and nearly half the businesses accounting 45.2% had been operating for 6–10 years.

Furthermore, the chapter reported on reliability analysis. All three constructs, Agile Leadership ($\alpha = 0.927$), Organisational Agility ($\alpha = 0.946$), and Sustainable Growth ($\alpha = 0.931$) exhibited excellent internal consistency, with Cronbach's alpha values exceeding the acceptable threshold of 0.70. The inferential analysis used Pearson correlation and regression techniques to test the study's hypotheses. The findings revealed the following:

- A strong positive correlation between Agile Leadership and Organisational Agility ($r = 0.919$, $p < 0.001$).
- A significant relationship between Agile Leadership and Sustainable Growth ($r = 0.880$, $p < 0.001$).
- Organisational Agility had the strongest correlation with Sustainable Growth ($r = 0.977$, $p < 0.001$).

These results confirmed all three hypotheses, indicating that agile leadership fosters organisational agility, which in turn strongly influences sustainable growth.

Chapter 5: Conclusions and Implications

5.1. Introduction

This chapter presents a critical discussion of the research findings outlined in Chapter 4. It integrates the findings with the original research objectives, theoretical framework, and existing literature to derive meaningful conclusions. The primary objective of the study was to explore how Agile leadership, and Organisational agility influences sustainable growth for SMMEs in the construction sector in Gauteng Province. The chapter further introduces a conceptual process model developed from the study and concludes with practical implications, limitations, and recommendations for future research.

5.2. Key findings

The results of the study supported the assertion that agile leadership and organisational agility plays crucial role for achieving sustainable growth in construction SMMEs. All three hypotheses were tested using correlation and regression analysis. The key findings from statistical analysis supported the hypothesised relationships among Agile leadership, Organisational agility and Sustainable growth. The key insights are summarised as follows:

- Agile leadership has a significant and positive influence on organisational agility ($r = 0.919$, $p < 0.001$).
- Agile leadership also shows a strong positive relationship with sustainable growth ($r = 0.880$, $p < 0.001$).
- Organisational agility has the strongest positive relationship with sustainable growth ($r = 0.977$, $p < 0.001$).

These results reinforced the theoretical premise that Agility leadership fosters internal capabilities, such as organisational agility, which in turn enhances sustainable growth.

5.3. Interpretation of results

The strong correlation ($r = 0.919$) between Agile leadership and Organisational agility confirmed the literature review perspective that leadership sets the tone for adaptive and flexible organisational culture. The significant relationship between Agile leadership and Organisational agility supported the theoretical position that leadership behaviours significantly shape organisational responsiveness. The study proved that Agile leaders promoted a culture of learning, collaboration, and empowerment, which enhanced an organisation's ability to adapt to changes from external environment. These findings aligned with existing literature that identifies leadership agility as foundational for developing

organisational agility (Joiner & Josephs, 2007). Organisational agility emerged as the most critical predictor of sustainable growth. This supports the argument that the ability of firms to rapidly sense and respond to changes is a key driver of competitiveness and long-term performance (Kocot, 2023). The high correlation between organisational agility and sustainable growth (r = 0.977) revealed that agility was not merely a consequence of leadership, but a central driver of the overall business performance.

This confirms that in a complex and dynamic environments like the construction sector, an organisation's agility to adapt swiftly is more predictive of growth than leadership practices alone. To ensure the internal consistency of the measurement instruments, Cronbach's alpha was computed for each construct and the results were as follows:

- Agile leadership: α = 0.927
- Organisational agility: α = 0.946
- Sustainable growth: α = 0.931

All three constructs demonstrated excellent reliability, with alpha coefficients well above the acceptable threshold of 0.70. These results confirmed that the survey instrument used were valid and reliable for this study.

5.4. Descriptive analysis and sample characteristics

Descriptive statistics of demographic data provided a clear understanding of the participant and their organisational profile. These characteristics were essential for contextualising the findings of the study:

- Job Level: Most participants were found to hold middle or senior management positions.
- Years of Experience: Over 70% had more than five years of professional experience, indicating a knowledgeable respondent base.
- Business Location: Most businesses were in Gauteng, the economic hub of South Africa.
- Organisation Size: 58.1% were from micro-enterprises, 19.4% from small, 6.5% from medium, and 16.1% from large organisations.
- Industry: The majority operated in the construction industry (58.1%), followed by representation from other non-related construction companies.
- Years in Operation: A large portion (45.2%) of businesses had been in operation for 6–10 years, suggesting relative stability.

These demographics reinforced the representativeness of the sample and the applicability of the findings to the target population of construction SMMEs in Gauteng.

5.5. Conceptual process model

The study, therefore, concludes that agile leadership plays a crucial enabling role in fostering organisational agility, which in turn is essential for achieving sustainable growth for construction sectors' SMMEs in Gauteng. While leadership is important, its most substantial contribution lies in shaping organisational capabilities that allow for swift and strategic responses to environmental changes. The findings presented in this chapter reflected and validated the conceptual process model depicted in Figure 7.

The model outlined the research flow from literature review through data collection and analysis, highlighting the hypothesised links between agile leadership, organisational agility, and sustainable growth. Empirical evidence from the study supported the model's logic, confirming that agile leadership and organisational agility are significantly and positively related to sustainable growth. Moreover, the high Cronbach's alpha values reported across constructs (>0.7) further reinforce the reliability of the model's measurement components. The model provides a visual representation of the study's theoretical and empirical contributions.

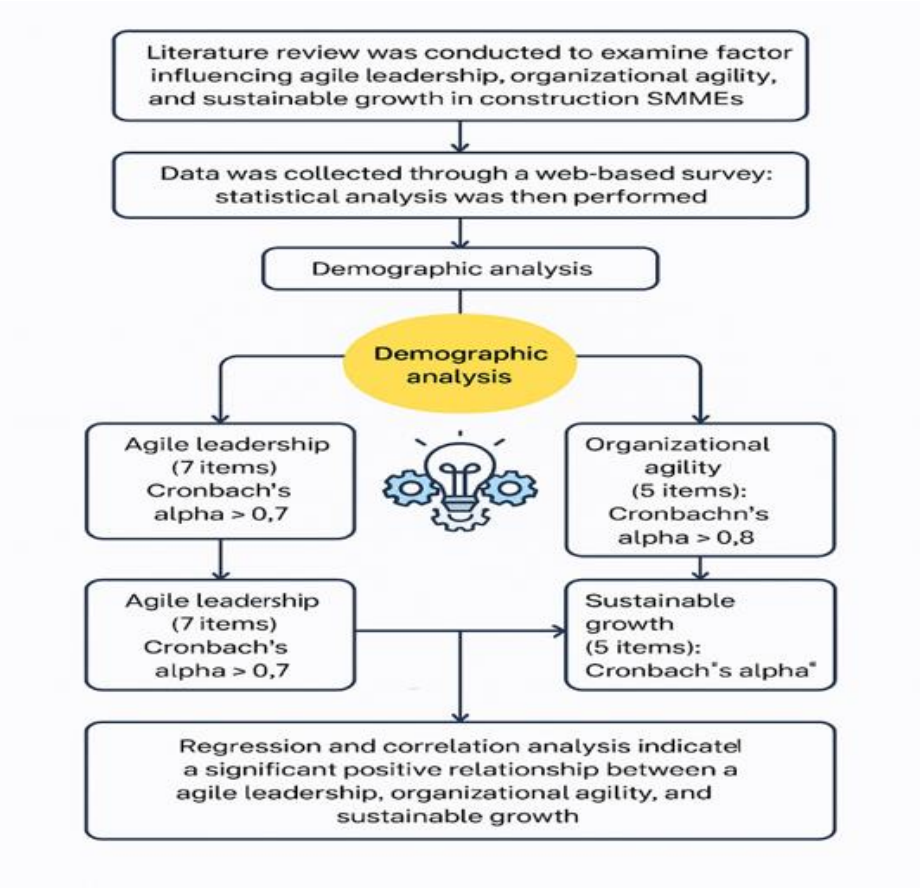

Figure 7 shows a conceptual process flow

5.6. Implications for practice

The study offers the following practical guidance for leaders, policymakers, and practitioners within the construction sector:

- ***Strategic leadership development initiative*** by investing in leadership training programmes that emphasises agility, adaptability, and responsiveness.
- ***Operational agility initiatives*** which translate into practical agility mechanisms such as flexible team structures, rapid communication channels, and customer-focused decision-making.

Despite these limitations, the study provided strong evidence for the importance of organisational agility in translating Agile leadership into sustainable growth in construction sector's SMMEs in Gauteng.

5.7. Recommendations for future research

longitudinal studies should be conducted to assess how the relationships among agile leadership, organisational agility, and sustainable growth evolve over time. The scope of research should be extended to other industries beyond construction to explore generalisability and sector-specific variations.

5.8. Limitations of the study

- The sample size (n = 31) is relatively small, which may limit the generalisability of the findings.
- The reliance on self-reported data introduces the possibility of response bias.
- The cross-sectional design limits the ability to draw causal conclusions.

Despite these limitations, the study provides robust evidence supporting the proposed conceptual model and offers valuable insights for both academic and practical audiences.

5.9. Summary of the chapter

This chapter provided a comprehensive interpretation of the findings, linking them to the research questions and theoretical framework. It confirmed that agile leadership significantly influences organisational agility, which in turn is the strongest driver of sustainable growth among construction SMMEs in Gauteng. The high reliability of the constructs and the validated

conceptual model affirm the strength of the study's design and findings. The chapter concludes with actionable recommendations for practice, limitations, and avenues for future research.

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Appendix (A) Instrument

Agile Leadership Study - Lucas Nkuna

Start of Block: Default Question Block

Q1 Dear Participate, My name is **Lucas Nkuna**. I am a **Master of Business Administration** student at the University of the Witwatersrand, and my supervisor is Dr. Lehlohonolo Tabane. I am conducting a study on Agile Leadership practices. The study title is **Agile Leadership as a driver of sustainable growth for SMMEs in construction sector in Gauteng**. I am inviting you to take part in answering an online survey which will last approximately 15 minutes. The survey will be confidential and anonymous. Only the researcher and supervisor will have access to the data. Participation is voluntary, and you may withdraw at any time without incurring any penalties. This research study will be written up as a research report which will be available on the university library website. We value your time and contribution to the study. Should you have any question or interested on the findings of the study, you may contact us on the following contact details. Researcher: Lucas Nkuna, email: 880884@studnets.wits.ac.za

Q1 I concert to voluntarily participate in this survey and my responses may be used for this project.

- ○ Yes (1)
- ○ No (2)

End of Block: Default Question Block

Start of Block: Demographic Information

Q2 What is your current job level within the organization?

- ○ Chief Executive Officer (1)
- ○ Senior Management (2)
- ○ Manager (3)
- ○ Other. (4)

Q3 How many years of professional experience do you have?

- ○ 0 - 3 Years (1)
- ○ 3 - 5 Years (2)
- ○ 5 - 10 Years (3)
- ○ More than 10 Years (4)

Q4 Where is your primary business located? (Please select the province.)

- ○ Eastern Cape (1)
- ○ Free State (2)
- ○ Gauteng (3)
- ○ KwaZulu-Natal (4)
- ○ Limpopo (5)
- ○ Mpumalanga (6)
- ○ Northern Cape (7)
- ○ North West (8)
- ○ Western Cape (9)

Q5 What is the size of your organization

- ○ Micro: 0 - 10 Employees (Less than R10 million) (1)
- ○ Small: 10 - 50 Employees (Less than R75 million) (2)
- ○ Medium: 51 - 250 Employees (Less than R170 million) (3)
- ○ Large: 251 + Employees ((More than R170 million) (4)

Q6 In which industry does your organization primarily operate?

- ○ Construction (1)
- ○ Agriculture (2)
- ○ Mining and Quarrying (3)
- ○ Manufacturing (4)
- ○ Electricity, Gas and Water (5)
- ○ Retail, motor trade and repair services (6)
- ○ Wholesale (7)
- ○ Catering, Accommodation and other trade (8)
- ○ Transport, Storage and communication (9)
- ○ Finance and Business Services (10)
- ○ Community, Social and Personal Services (11)

Q7 How long has your organisation been in existence

- ○ 0 - 1 Year (1)
- ○ 1 - 3 Years (2)
- ○ 3 - 5 Years (3)
- ○ 5 - 10 Years (4)
- ○ More than 10 Years (5)

End of Block: Demographic Information

Start of Block: Agile Leadership Practices

Q8 Leaders in my organisation promotes continuous learning and fosters adaptability to all teams.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q9 Leaders in my organisation encourage and empower teams to make decisions independently.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q10 Leaders in the organisation quickly adapt their strategies to respond to new situations

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q11 Leaders in my organization customer-centric focused

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q12 Leaders in the organization are always ahead of challenges very proactive in addressing them.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q13 Leaders in the organisation practice an open-door policy, encouraging open communication, transparency, and approachability.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q14 Team members in the organisation feel comfortable sharing ideas, raising concerns, and seeking guidance without hesitation.

- ○ Extremely uncomfortable (1)
- ○ Somewhat uncomfortable (2)
- ○ Neither comfortable nor uncomfortable (3)
- ○ Somewhat comfortable (4)
- ○ Extremely comfortable (5)

End of Block: Agile Leadership Practices

Start of Block: Organizational Agility

Q15 Our organisation is highly responsive and adapts swiftly to changes in the market environment.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q16 Our organisation view challenges as opportunities

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q17 Our organisation encourages innovation and changes are quickly implemented where necessary.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q18 Our organisation value customer feedback and adjust to customer needs where necessary.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q19 The organisation encourages team work and cross functional sharing of ideas to solve challenges.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

End of Block: Organizational Agility

Start of Block: Sustainable Growth Indicators

Q20 Our organisation turnover has been growing consistently in the past 3 years.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q21 Our organisation client database has been growing consistently in the past 3 years

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q22 Our organisation profitability has been satisfactory in the past 3 years

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q23 Our organisation's operations has been growing constantly in the past 3 years

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Q24 Investment in new innovations in our organisation consistently yields positive results

- ○ Extremely negative (1)
- ○ Somewhat negative (2)
- ○ Neither positive nor negative (3)
- ○ Somewhat positive (4)
- ○ Extremely positive (5)

End of Block: Sustainable Growth Indicators
