Leadership Framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province of South Africa

by

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DECLARATION

I, **Musa Conrad (198054378**, hereby declare that this thesis titled **"Leadership Framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province of South Africa"** is my original work and has not been submitted for any other degree or qualification at any institution other than the Cape Peninsula University of Technology. All information and data sources used in this research have been duly acknowledged. This research is submitted in partial fulfilment of the requirements for the Master of Construction degree at the Cape Peninsula University of Technology.

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Signature   Date

ABSTRACT

South Africa's construction industry has been confronted by challenges related to productivity, workforce engagement, and operational efficiency. The purpose of this study is to investigate the impact of leadership in developing workforce diversity and inclusion (D&I) and enhancing productivity in construction business within the Western Cape Province's construction industry. Understanding construction dynamics workforce and the socioeconomic significance of inclusive practices, the study creates a holistic leadership framework that combines diversity management and inclusive leadership principles to boost team and individual performance in construction project delivery.

A sequential mixed-methods approach was used, beginning with quantitative data gathered from structured surveys given to construction professionals involved in leadership position, followed by qualitative interviews with industry leaders and stakeholders. To collect quantitative data, organised (135) surveys was distributed to construction team involved in leadership positions such as construction managers, and site supervisors to leadership practices, engagement levels, diversity and inclusion practices. This method enables measurable information about how leadership affects team and individual productivity in construction project delivery. In addition, qualitative data was collected through (5) semi-structured interviews with diverse contractor management teams who took part in survey to acquire a better understanding of the difficulties and tactics associated with diverse and inclusive leadership. This study adopted a combination of descriptive and inferential statistics to comprehensively interpret and analyse quantitative data. The use of mean ranking and standard deviation was adopted in descriptive analysis, while factor analysis was adopted to further explore the underlying relationships among variables, identifying key leadership practices adopted by contractors and inclusion strategies that significantly impact team and individual productivity. For qualitative data analysis from interviews, content analysis was adopted to systematically code and categorize responses, allowing for the identification of recurring themes and insights into leadership, diversity and inclusive practices.

The quantitative findings reveal patience, patience, humility, and lead by example as the leadership characteristics patenting to general management of leadership. Moreover, this study reveals inclusive decision-making, proactive diversity initiatives to empower the workforce, and problem-solving skills as effective leadership characteristics linked to Workforce productivity leadership. Factor analysis revealed the following components celebration of success and achievement of the workforce, problem-solving skills, conflict resolution skills, and emotional intelligence to empower the workforce. On the other hand, the qualitative findings reveals the

following leadership characteristics, effective communication skills, employee support and coaching, adaptability and flexibility, empathy and emotional intelligence, integrity and accountability, motivational and innovative leadership, fairness and patience, and inclusive decision-making.

Concerning leadership management practices this study uncovers that demonstrating behavior when engaging the workforce, accountability, and commitment to organisational goal as the leadership commitment indicators. While, mentorship programme to support workforce career development, accessibility of mentorship programmes to all employees, and mentorship programmes are adopted to ensure the retention and advancement of diverse workforce are revealed as mentorship and sponsorship programmes. Regarding inclusive policy the findings from this study reveal feedback-oriented policy, the clear and explicit policy articulated organisational commitment to diversity equity and inclusion, and proactive and preventative measures highlighted in the policy. The findings from celebrating diversity within the organisation reveals that contractors adopt diversity and inclusion awards, employee's spotlight, diverse cultural event, and community partnership. The qualitative findings reveal the following leadership management practices that include flat line management structure, mentorship and skills development, performance reviews and reward systems, inclusive recruitment practices, bias confrontation and accountability, encouraging independent thinking, commitment to a safe and inclusive environment, effective communication strategies, and diverse team formation.

The quantitative findings reveal the following components concerning employee engagement and inclusion comprising cultural awareness training, promoting a sense of ownership among employees, encouraging employees to participate in community engagement, leadership engagement and visibility, and prioritise employee's well-being. The qualitative findings reveal the following employee engagement and inclusion practices including effective communication and feedback, inclusive decision-making, recognition and reward systems, team building activities, respect for cultural diversity, fostering a valued and open culture, and coaching and direct support from management. Additionally, the study identifies key barriers to implementing diversity and inclusion initiatives, including resistance to change, limited leadership commitment, and inadequate policy enforcement to name few.

Based on these findings, this research recommends a leadership framework that prioritises inclusive decision-making, diversity training, and accountability measures to enhance contractors workforce productivity. The framework provides practical techniques for contractors to use workforce diversity as a catalyst for contractors performance improvement. This study adds to the

body of knowledge on leadership and organisational performance in the construction industry while making concrete suggestions to public officials and construction industry leaders.

Keywords: Leadership, workforce diversity, inclusion, productivity, construction industry, Western Cape, South Africa

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DEDICATION

I dedicate this thesis to my family (Conrad family), who has always been there for me throughout my study period. To my beloved family my wife, and my kids. I will be eternally grateful for your encouragement and belief in me, and this success is as much yours as mine.

ABBREVIATIONS

D&I	Diversity and inclusion
cidb	Construction Industry Development Board
GB	General Building
HR	Human Resource

GLOSSARY TERMS

Barriers – In the context of this research barriers is referred to as challenges preventing leaders from the adoption of diversity and inclusion in the construction industry.

Commitment – Leadership commitment towards organizational values and goals that seeks to improve oranisational performance in an ethical manner (Jackson, Meyer and Wang, 2013; Yahaya and Ebrahim, 2016).

Diversity - Diversity incorporates differences among individuals, such as individual race, age, gender, disability, geographic origin, family status, education, or social background (Thistlethwaite, 2013).

Inclusion – Referred to as the acceptance and recognition of employees in the workplace environment this includes feeling belonging, phycological satisfaction, fair treatment of employees in the oganisation (Chen and Tang, 2017; Nair and Vohra, 2015).

Leadership – In the context of construction industry leadership takes place during the interactions among construction practitioners and those communications leads to a change the way construction practitioners relate to one another (Volckmann, 2012).

Productivity – In the construction industry complex productivity heights invariably lead to superior profitability, drawing the constant attention of the management (Dixit, Mandal, Sawhney and Singh, 2017)

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CHAPTER ONE
INTRODUCTION

1.1 Background of the study

According to Osunsanmi, Aigbavboa, and Oke, (2018), the construction industry is a significant contributor to South Africa's economy, employing approximately 1.4 million people and reducing the unemployment rate. Although the construction industry has a significant impact on economic development, a report by Statistics SA (2017) revealed that production output decreased from 3.9% in 2017 to 2.7% in 2021, leading to a 0.7% decline in GDP due to low construction productivity (Makhubedu and Mbohwa, 2023). Hence, productivity can be enhanced through measurable goals, close supervision, and scientific task analysis (Fells, 2000; Gantt, 1919). Thus, a key challenge facing the construction industry is low productivity, which has historically been a major concern (Naoum, 2015). Low productivity has been attributed to four main components: "technical" such as a lack of efficient resource planning and a poorly designed building; "social" such as a lack of motivation among labourers; "managerial" such as the management of the project; and "contractual" such as the procurement method adopted (Bekr, 2016; Naoum, 2015; Santosh and Apte, 2014).

Organisational leaders hold the power to shape diversity management and influence the productivity of the contractor in project delivery (Baker, Ali and French, 2021). Furthermore, Marchiondo, Myers and Kopelman (2015) pointed out that leadership roles contribute to an individual's credibility as a leader, however, having a hierarchical status alone is insufficient to explain how and when organisational members perceive others as leaders. XYZ Empirical evidence revealed that in the past three decades, diversity and diversity management have become increasingly important in global construction business. However, there has been a tendency to focus too much on categorizing people into specific cultural or geographic groups and managing them according to those categories, instead of embracing the inherent uncertainty that comes with diversity (April, Ephraim and Peters, 2012; Ngobese, Pelders, Botha, Magweregwede and Schutte, 2023). Noting this, the construction industry still lacks diversity despite increased female employment (McMichael, 2020). Adding to that, workforce diversity refers to the variety of backgrounds, styles, perspectives, values, and beliefs that make up organisations (Shifnas and Sutha, 2016).

Diversity is a process that promotes equal representation of minorities within organisations, preventing their exclusion (Sang and Powell, 2013; April, Ephraim and Peters, 2012). Being inclusive means participating in the process of creating a society and organisation that can

prosper and progress for everyone, regardless of their differences (Ngobese, Pelders, Botha, Magweregwede and Schutte, 2023). Also, Barchiesi (2008) and Mihajlovi et al. (2023) added that an inclusive environment is one in which people are comfortable being themselves, contributing as their full selves contributing in all the ways that they are different from others, and respecting others without making it difficult for them to be themselves as well. Despite this, an inclusive workplace recognises and values individual differences, but it doesn't necessarily treat everyone in the same way (Sang and Powell, 2013). Therefore, inclusive leadership means finding answers to these questions that support people, groups, and organisations to maximise experiences of inclusion, regardless of their identities and social positions (Ferdman, Prime and Riggio, 2020). However, recent studies show that 85% of employees are either not engaged or actively disengaged in their workplace (Kuknor and Bhattacharya, 2020; Mariam, Olalusi and Haupt, 2021; Ruggunan, Pillay and Dayaram, 2022; Wang et al., 2020).

According to Pless and Maak (2004), construction leaders are confronted by the poor transformation of employees' quality of life at work, or the creation of a welcoming working environment. It is still possible to witness inequalities, exclusion, and discrimination in different spaces and levels (Zallio and Clarkson, 2021). Egitim (2022) uncovered that leader resist adopting inclusive workforce management due to uncertainties and risks associated with employee diversity. Hence, López-López, Guerrero and Crisol-Moya (2021) and Nguyen, Trinh and Do (2019) reveal that for contractors to achieve inclusive and equitable production, contractors must foster inclusiveness in a diverse environment and promote mutual exchange, active participation, a sense of belonging, and co-responsibility among construction employees. Jaafar, Javed, Mubarak and Saudagar (2020) stated that a significant challenge faced by leadership is psychological safety, an environment where individuals can be themselves without fear of negative consequences to their self-image, status, or career.

Against this background, this research aims to develop an effective framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province. The primary objective of leadership in a diverse and inclusive environment is to build a constructive bond between leaders and their followers and leaders can accomplish this by exhibiting proactive behavior that enhances the followers' sense of competence, uniqueness, autonomy, and belongingness (Nishii and Leroy, 2022). Adding to that, employees who work under strong project leadership can quickly solve problems, leading to timely delivery and project success (Jaafar, Javed, Mubarak and Saudagar, 2020).

1.2 Problem statement

Diversity and inclusion in the construction industry is still an unresolved problem with several leadership approaches that are not effective. Morfaki and Morfaki (2022) reveal that organisation has committed in enhancing diversity and inclusion through leadership training, however, the problem in hand still exist in the construction industry. Productivity in the construction industry has been declining due to several factors (Jimoh, Ijigah and Elegbede, 2013). According to Oladiran and Onatayo (2019), labour productivity is negatively affected by poor supervision, insufficient skills, rework, insufficient equipment, inaccurate drawings, delays, political insecurity and harsh weather. As a results, diverse, equal, and inclusive organisations have been prompted by regulatory, social, moral, and economic pressures to make commitments and adapt to their environments (Seliverstova and Pierog, 2021; Crews, Collins and Cooper, 2021; Capers, Johnson, Berlacher and Douglas, 2021). Furthermore, Chaudhry, Paquibut and Tunio (2021) and Marcelin, Manne-Goehler and Silver (2019) argue that creating an inclusive and diverse workforce is critical for organisational success. It is the site managers who are directly involved with the labour force and who are more likely to evaluate factors affecting labour productivity as they focus on site operations and technological processes. This gap highlights the need for a leadership framework that fosters diversity and inclusion to drive productivity and project success in the construction industry.

1.3 Research Question

What are the most effective leadership practices for enhancing the productivity of construction workforce through diversity and inclusion in the Western Cape Province?

1.4 Research aim

The aim of this study is to develop an effective leadership framework that enhances productivity through workforce diversity and inclusion in the Western Cape Province of South Africa.

1.5 Sub-problems, Research questions and Objectives

Table 1.1: Sub-Problems, Research Questions and Research Objectives

Sub-Problems	Research Sub-Questions	Research Objectives
SP1: Contractors are often confronted with poor leadership and subsequently fail to meet productivity objectives.	RQ1: What are the barriers to inclusive leadership in a diverse construction workforce in the construction industry?	O1: To investigate barriers that prevent contractors from adopting diverse and inclusive leadership practices in the construction industry

SP2: Construction leaders often fail to improve productivity in a diverse construction environment	RQ2: What are the characteristics of effective leadership in a diverse and inclusive construction environment?	O2: To determine the characteristics of effective leadership in a diverse and inclusive construction environment.
SP3: Contractor's low productivity is due to lack of management in a diverse and inclusive workforce.	RQ3: How do leaders manage diversity and inclusion within the construction industry?	O3: To determine the Leadership management practices of diversity and inclusion within the construction industry.
SP4: Contractors' lack of adopting employee engagement and inclusion influences individual or team performance in the construction industry.	RQ4: How does employee engagement and inclusion influence individual or team performance in the construction industry?	O4: To determine whether employee engagement and inclusion influence individual or team performance in the construction industry.

1.6 Context of the research

The study is based in Western Cape Province and focuses primarily on the diversity and inclusive approaches adopted by contractors. The investigation will be conducted on contractors registered with the cidb who are busy with a construction project or previously completed a construction project. Poor leadership in a diverse construction industry is still one of the problems faced by many developing countries.

1.7 Significance

The lack of diversity and inclusion in South Africa is a problem for all industries, not just the construction industry. According to Maurer, Choi and Hur (2021) and Karakhan et al. (2020), South Africa's construction industry is suffering from a lack of skilled leaders. If key sectors fail to address the lack of diversity in gender and minorities, there may be negative consequences for economic competitiveness (Zallio and Clarkson, 2021). Bringing together people from diverse backgrounds is essential for remaining competitive economically (Aguinis and Kraiger, 2009). Karakhan et al. (2020) suggest that having a diverse workforce enhances an organization's productivity. Improving diversity in the construction workforce not only contributes to effective project delivery but also paves the way for social mobility (Anifowose and Mohammed, 2020). An organization with a diverse workforce can bring expanded knowledge, different perspectives, and unique ways of thinking to analyze matters (Marchiondo, Myers and Kopelman, 2015). The presence of racial and ethnic diversity in the workforce of an organization contributes to attracting

and recruiting the best talent. This, in turn, leads to increased creativity and innovation in the construction industry (Anifowose and Mohammed, 2020). Organisational performance is enhanced by diversity and inclusive workforce (Karakhan, Nnaji, Gambatese and Simmons, 2023; Anifowose and Mohammed, 2020).

1.8 Research methodology

This study used a sequential mixed research approach to develop an effective leadership framework for enhancing productivity in construction workforce diversity and inclusion in the Western Cape Province. Furthermore, Creswell and Creswell (2018) as well as Pandey and Pandey (2021) demonstrate that a mixed method approach enhances the validity of the research, by covering up the shortcomings of one method and preventing bias in the data. A mixed method approach is characterized by the combining of multiple research approaches for collecting data, according to Flick (2015), Clark, Creswell, Green and Shope (2008), and Leavy (2017). Mixed method research was deemed significant for the purpose of this study.

1.9 Key assumptions

The assumptions of the research are:

- The selected contractors will avail themselves and participate in the study.
- The selected contractors will permit and provide relevant information regarding leader's practices in a diverse and inclusive environment.
- The staff employed by contractors in the Western Cape Province will provide relevant information on survey questionnaires and interviews, to achieve the aim and objectives of the study.

1.10 Limitation

Due to the sensitive nature of diversity and inclusion, this study is limited to employees of construction firms in leadership position as the main group of participants. A mixed-methods approach was used to collect data from managers, team leaders, owners, or employees who are in charge of a leadership position with the firm. South Africa's Western Cape Province is the study demarcation. Specifically, the study focused on contractors registered under cidb grades 6 to 9 in the general building (GB) category.

1.11. Division of study chapters

First Chapter: This chapter introduces the study context, problem statement, research questions, objectives, study aim, and significance, as well as research techniques.

Second Chapter: This chapter focuses on the reviews of the relevant literature on effective leadership practices for enhancing the productivity construction workforce through diversity and inclusion in the Western Cape Province. This chapter focuses on the following: what leaders, perceive as the barriers to inclusive leadership in the construction industry, characteristics of effective leadership in a diverse and inclusive construction environment, management of diversity and inclusion within the construction industry, and employee engagement and inclusion to influence individual or team performance in the construction industry.

Third Chapter: This chapter presents the design and methods used for the study's data collecting and analysis. This section also describes the techniques the study employed to get precise data. It outlines the researcher's technique and tactics, including the questionnaire design, data analysis, and population and sampling strategy employed in the investigation.

Fourth Chapter: This chapter focuses on the examination and discussion of the acquired data. It describes the procedures and strategies used for data analysis, including the statistical tools used. This chapter presents the analytical results and the discussions of findings, along with an explanation of how they relate to the study's aims or questions. It includes graphic representations of the analysed findings, such as tables, graphs, texts, and charts.

Fifth Chapter: The study's conclusions and recommendations regarding its findings and implications are emphasized in this chapter. It also offers recommendations for additional research projects that seek to get beyond these constraints and expand the body of knowledge in the area.

1.12. Chapter conclusion

The first chapter explains the research on establishing a leadership framework to improve productivity in the construction sector through workforce diversity and inclusion, with a focus on the Western Cape Province of South Africa. Given the construction industry's reliance on a heterogeneous workforce, the chapter emphasizes the crucial importance of successful diversity-embracing leadership practices. It describes the study's principal goal of finding leadership styles that can promote an inclusive work environment and increase productivity. Key research objectives are identified, with a focus on exploring transformational, servant, and inclusive leadership paradigms and their potential to address industrial concerns. The chapter also explores how the research supports sustainable business practices, improves corporate culture,

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and contributes to regional economic growth. The chapter concludes with a summary of the research structure, laying the groundwork for a more thorough examination in later chapters.

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CHAPTER TWO

LITERATURE REVIEW

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2.1. Introduction

The second chapter includes a complete overview of existing literature relevant to the study on leadership frameworks for increasing productivity through workforce diversity and inclusion in the construction sector. The purpose of this chapter is to examine and combine major ideas, models, and empirical research that contribute to our knowledge of inclusive leadership and its impact on productivity in a variety of construction settings. The literature review begins by looking at the notion of inclusive leadership, including its definition, significance, and perceived barriers in the construction industry. The research then delves into current practices for managing diversity in construction, highlighting strategies utilised by leaders to increase inclusivity. Finally, it investigates the relationship between employee engagement, inclusion, and performance, focusing on how an inclusive culture can impact both individual and team productivity.

2.2. South African construction sector

According to Ayehsabu (2020) and Alang, Stanton and Rose (2022), the South African construction industry is an essential aspect of the country's economy, contributing significantly to infrastructure development, employment generation, and general growth. However, Shikweni, Schurink and Van Wyk (2019) uncovered that the industry faces a number of issues, including economic unpredictability, skill shortages, and the need for better project management to avoid interruptions and price overruns. Furthermore, South Africa's construction industry stands out for its diversified workforce, which is formed by the country's rich cultural legacy and complex socio-political history (Ayehsabu, 2020). Diversity may be a valuable asset, encouraging creativity and innovation, but, good leadership is required to manage possible conflicts and promote a cohesive work atmosphere (Moss, 2019; Ayehsabu, 2020; Siyal, 2023). As a result, building leadership frameworks that address the particular peculiarities of the South African construction industry is critical to increasing productivity and inclusion (Siyal, 2023).

The South African construction industry also encompasses a variety of ethnic, cultural, and gender-based distinctions (Manasoe, 2016). Fujimoto and Uddin (2021) and April and Govender (2022) argue that the Broad-Based Black Economic Empowerment (B-BBEE) Act pushes businesses to be inclusive of diversity and give previously underrepresented groups more opportunities. True inclusion is still difficult to achieve, though, especially in leadership and upper management positions where diversity is frequently scarce (April and Govender, 2022).

Organisational structures and attitudes at work are still influenced by apartheid, which results in differences in professional advancement and representation (Horwitz and Jain, 2011). In order to address these problems, it is not simply necessary to adhere to diversity regulations; leadership that is really inclusive and promotes equality of opportunity and a sense of belonging for all staff members is also necessary (Manasoe, 2016).

According to Liphadzi, Aigbavboa and Thwala (2015), leaders in the South African construction industry have distinct challenges when implementing inclusive practices. Liphadzi (2015) adds that lingering racial biases, economic inequities, and a lack of training opportunities can all stymie the creation of a truly inclusive work environment. Furthermore, Emere, Aigbavboa and Thwala (2019) concours that the construction industry is generally project-driven, with tight deadlines and financial limits, making it difficult for executives to prioritize diversity and inclusion alongside productivity goals. In such a situation, leaders may require specific tactics to balance the responsibilities of effective project management with the advantages of cultivating an inclusive team culture (Liphadzi, Aigbavboa and Thwala, 2015). As the sector diversifies, there is a growing demand for executives who have both technical expertise and cultural competency to effectively manage a multifaceted workforce (Alade and Windapo, 2021).

Coetzer, Bussin and Geldenhuys (2017) and Mulenga, Bagraim and Smallwood (2011) concluded that addressing these issues and maximizing the advantages of a diverse workforce may be accomplished through the creation of an inclusive leadership framework specifically designed for the South African construction sector. With the aid of such a framework, leaders would be able to identify and remove obstacles to inclusion, encourage staff involvement, and eventually boost output (Alade, Windapo and Umeokafor, 2020). Construction leaders can foster an atmosphere where all team members feel appreciated and inspired to contribute by using leadership philosophies that prioritize empathy, flexibility, and cultural sensitivity (Alade, Windapo and Umeokafor, 2020). Thus, the examples of these philosophies include transformational, servant, and adaptive leadership (Pillay, Viviers and Mayer, 2013).

2.3. Productivity in the construction industry

Productivity in the construction business is a vital indicator that directly impacts project success, profitability, and industry growth (Shinde and Hedaoo, 2017). In the construction industry, productivity is commonly defined as the ratio of outputs (such as completed work) to inputs (such as labour, materials, and time) (Crawford and Vogl, 2006; Ghodrati, You and Wilkinson, 2018; Choudhry, 2017). Almamlook et al. (2020) reveal that high productivity in construction is critical for completing projects on time and within budget, which is especially vital in an industry defined by tight deadlines and financial constraints. However, the construction sector has particular hurdles in reaching optimal productivity, such as project complexity, labour shortages, and the necessity for good coordination among a wide range of stakeholders (Durdyev and Mbachu, 2011). According to Ghodrati, You and Wilkinson (2018), multiple factors influence the construction industry's productivity. First, the experience and skill level of the workforce are important; a skilled and trained labour force is more productive and reduces errors and rework. Effective resource management and project planning are also essential. Inadequate resource allocation or planning can result in cost overruns, delays, and disruptions that harm output (Assaad and El-Adaway, 2021). Moreover, outside variables that can cause unpredictability and decrease efficiency, such as weather, regulations, and market swings, frequently impact building projects (Naoum, 2016). Because of these considerations, construction managers need to put plans in place that not only reduce risks but also optimize operations (Shinde and Hedaoo, 2017). As a result, Almathami, Coffey and Trigunarsyah (2020) claims that leaders in the construction industry need to foster an inclusive culture where diversity is viewed as an asset in order to create cohesive teams that can work effectively and productively. Consequently, promoting inclusivity is not only an ethical imperative but also a practical strategy to increase productivity and ensure long-term success of construction projects (Loosemore, 2014). As the construction industry becomes more diverse and inclusive, productivity is expected to improve (Maqsoom et al., 2018). Diverse teams bring a variety of perspectives, which can lead to more innovative solutions and improved problem-solving capabilities (Yang *et al*., 2024).

2.4. Sustainable business performance

Sustainable business performance refers to a company's ability to achieve long-term profitability and growth while balancing environmental, social, and economic issues (Agrawal et al., 2022). Haseeb et al. (2019) uncovers that in the construction sector, sustainable business performance entails more than just completing projects it also includes operating in ways that reduce environmental effect, help local communities, and create long-term resilience. This notion is

becoming increasingly essential as stakeholders, authorities, and clients put pressure on businesses to embrace more responsible practices that benefit society while reducing environmental impact (Fernando, Jabbour and Wah, 2019; Larbi-Siaw et al., 2022).

According to Haseeb et al. (2019), sustainable business performance for construction companies entails incorporating sustainability into every facet of their operations, from waste management and material procurement to project planning and design. Xie et al. (2024) reveals that using environmentally friendly materials, putting energy-efficient building strategies into practice, and reducing resource waste during the construction process are a few examples of sustainable practices. Birkin et al. (2009) and Fernando, Jabbour and Wah (2019) pointed out that these procedures can save costs, raise project quality, improve a company's reputation, and lessen their negative effects on the environment. Furthermore, sustainable building practices can include actions like material recycling, the use of renewable energy sources, and the design of energy-efficient structures, all of which support international efforts to combat climate change (Muhmad and Muhamad, 2021). Sustainable business performance in construction also includes social factors such as promoting fair labour practices, supporting local employment, and encouraging worker diversity and inclusion (Nan and Chaiprasit, 2023). Also, Jan et al. (2019) claim that prioritising these areas allows construction companies to strengthen relationships with local communities and improve labour satisfaction, resulting in increased productivity and lower turnover. Furthermore, adopting sustainable practices can provide a competitive advantage, as clients increasingly look for partners who prioritize sustainability in their operations (Nan & Chaiprasit, 2023). As a result, construction companies that include sustainability into their business models are better positioned for long-term success by remaining adaptive to shifting market needs and positively contributing to social goals (Boons et al., 2013).

In addition to the short-term advantages of less environmental impact, sustainable practices frequently result in long-term financial gains (Nan and Chaiprasit, 2023). For instance, using green technologies and energy-efficient designs can result in significant cost savings by lowering power bills, and using sustainable materials and procedures can save costs associated with disposing of garbage (Geissdoerfer, Vladimirova and Evans, 2018; Manning, Braam and Reimsbach, 2019; Boons et al., 2013). Moreover, investors who value Environmental, Social, and Governance (ESG) criteria tend to be more interested in construction enterprises that promote sustainability, which can lead to additional funding opportunities and improved capital access (Manning, Braam and Reimsbach, 2019). Construction companies may improve their reputation, fortify their risk management, and guard against regulatory changes by incorporating these practices, all of which support long-term profitability and growth (Fernando, Jabbour and Wah, 2019).

Sustainable construction business performance also improves stakeholder relations and increases market competitiveness (Trivellas, Malindretos and Reklitis, 2020). As clients increasingly look for organisations that prioritise sustainability, construction companies that incorporate ecologically and socially responsible methods into their operations can differentiate themselves and earn a competitive advantage (Sanders and Wood, 2024). Schoenherr (2012) summarises that this strategy is also consistent with the growing trend of transparency, as many stakeholders, including investors, communities, and governments, require full reporting on sustainability activities. Contractors can demonstrate their commitment to responsible practices and develop confidence and credibility by using sustainability certifications like as LEED or Green Star, as well as reporting systems such as the Global Reporting Initiative (Sanders and Wood, 2024; Morioka, Evans and de Carvalho, 2016).

2.5. Inclusive leadership in the construction industry

Inclusive leadership in the construction sector is critical for creating a collaborative and innovative workplace (Rehman, 2020). Ding, Ren and Lin (2024) add that leaders may realize their teams' full potential by embracing diversity in all forms, including gender, race, age, and skill set. In a field where collaboration among disciplines is crucial, such as engineering, architecture, and labour, inclusive leadership ensures that all voices are heard and diverse viewpoints are integrated into problem-solving (Fu et al., 2022). Khan et al. (2020) reveal that this strategy improves teamwork, resulting in better project outputs, fewer misunderstandings, and a stronger feeling of shared purpose. In the construction sector, inclusive leadership fosters creativity and innovation in addition to enhancing teamwork (Fu et al., 2022). Because of their complexity, modern building projects frequently call for innovative solutions to problems pertaining to design, sustainability, and safety (Rogozińska-Pawełczyk, 2023). Rogozińska-Pawełczyk (2023) uncovered that leader who aggressively seek out input from every team member have access to a wealth of knowledge and expertise that can result in creative solutions that might otherwise go unnoticed. This inclusive strategy improves a company's competitive advantage in a rapidly changing sector in addition to improving a construction project's internal operations (Siyal, 2024). Furthermore, Ren and Lin (2024) pointed out that inclusive leadership is crucial for attracting and maintaining talent in the construction industry, particularly in economies like South Africa, where there are both skill shortages and a push for more inclusive economic growth. Companies that foster an inclusive culture are more likely to attract a diverse variety of potential employees, including underrepresented groups like women and minorities (Nishii and Leroy, 2020). Inclusive leaders foster a culture of belonging in which people feel valued and supported, resulting in

increased employee satisfaction and loyalty (Fu et al., 2022). Adapa and Sheridan (2017) claim this does not only addresses labour shortages but also creates a more resilient diverse workforce capable of adapting to changing industry demands.

2.6. Leadership practices for enhancing productivity

2.6.1. The barriers to inclusive leadership in the construction industry

The concept of inclusion is inherently paradoxical (Ferdman et al., 2017). There are several obstacles preventing contractors from embracing diversity and inclusion, including conscious and unconscious biases, negative stereotypes, and organisational policies and practices (Gerritsen, 2020). According to Aragon and Kim (2021), for contractors to create a climate of inclusion, diversity management is necessary for employees to feel the full potential of diversity. On the other hand, Tangen, Beutel and Carrington (2022) and Shore, Cleveland and Sanchez (2018) acknowledged that contractors are affected by social cultural beliefs, lack of equity understanding, lack of resources and infrastructure that foster the adoption of diversity and inclusive leadership. The lack of diversity in leadership positions is another obstacle to inclusive leadership in the construction industry (Gerritsen, 2020). In the construction industry, older guys with similar educational and professional backgrounds tend to hold the majority of leadership roles (Shore, Cleveland & Sanchez, 2018). Rehman (2020) and Moss (2019) reveal that a lack of diversity in leadership teams might make it difficult for them to completely comprehend or relate to the demands and experiences of a varied workforce. Moss (2019) claims that this may result in decisions being made without taking into consideration various viewpoints and priorities, which may make some groups feel excluded. It is also difficult to inspire and retain talent from underrepresented groups who might not perceive a clear path for their own growth within the sector if there aren't diverse role models in leadership (Nishii and Leroy, 2022).

Furthermore, Rehman (2020) opines that subconscious prejudices and preconceptions might undermine efforts to foster an inclusive atmosphere. In construction, unconscious prejudices may influence recruiting, work assignment, and promotion decisions, resulting in uneven chances for some groups, such as women, young professionals, and people from varied cultural backgrounds (Hickey and Cui, 2020). Aragon and Kim (2021) suggest that leadership biasness can lead to discriminatory acts, either deliberate or unintentional, that make employees feel undervalued or excluded. To overcome this, leaders must be proactive in recognizing and correcting personal prejudices, supporting diversity training, and enacting fair policies (Ferdman et al., 2017). Breaking down these barriers is critical for fostering an inclusive workplace in which everyone

feels appreciated, valued, and motivated to contribute to the success of construction projects (Hollander, 2012; Hickey and Cui, 2020).

2.6.1.1. Policy and Legal Framework

The impact of diversity and inclusion in a construction work environment with regard to changing demographics, immigration, etc, has been the main challenge to contractors as the organisations need to harness the power of diversity by adopting practices of inclusion to enhance sustainable employees' productivity (Bernstein, Crary, Bilimoria and Blancero, 2015). Furthermore, Colgan, Creegan, McKearney and Wright (2007) believes that organizational policies must consider social justice, business, and legislative compliance as drivers for effective equality and diversity actions within the organization. It is for this reason that the human resource (HR) department of an organisation is primarily responsible for implementing sustainable practices aimed at including vulnerable workers, and it is believed that HR has the primary responsibility for addressing social issues such as inclusion (Wasserman, Gallegos and Taylor, 2014), which were initially considered to be the responsibility of public policy (Kabadayi, 2023; Kersten, van Woerkom, Geuskens and Blonk, 2023). Also, leaders must communicate the value of diversity for organizations to be inclusive, in addition to diversity and inclusion (D&I) policies, guidelines and practices (Jeronimo, Henriques and Carvalho, 2021).

2.6.1.2. Representation

According to Bekdik (2017) and Bernstein et al. (2015), contractors that promote a more creative and inclusive workplace, increasing representation in the construction sector can greatly increase productivity. Javed et al. (2018) posited that teams made up of people with different backgrounds bring a variety of experiences, methods to problem-solving, and ideas to the table, which can result in more inventive and effective solutions to challenging construction problems. Moreover, Javed and Pan (2018) added that a diverse viewpoint can aid in the acceptance of new technology, enhanced project planning, and streamlined procedures in a field where innovation and adaptation are crucial. As a result of these developments, team members not only become more productive but also improve the general quality and safety of the project by sharing knowledge and experiences (Chowdhury, Adafin and Wilkinson, 2019).

Furthermore, diverse representation in construction can boost team chemistry and engagement, both of which are closely related to productivity (Javed et al., 2018). Teo et al. (2018) stressed that when employees see themselves represented at all levels, particularly in leadership, they are more likely to feel valued and driven to achieve their full potential. This sense of belonging fosters

teamwork, allowing team members to support one another and work more efficiently (Bekdik, 2017). For example, women and young professionals contribute unique talents and skills to construction, boosting teamwork and increasing communication on-site (Adebowale and Agumba, 2023). On the other side, higher levels of engagement result in higher efficiency and a more unified work environment, which translates into increased productivity and project success (Teo et al., 2018).

Construction organisations can concentrate on hiring and training practices that support diversity at all levels, from apprenticeships to management roles, in order to reap these benefits (Adebowale and Agumba, 2023). Encouraging members of underrepresented groups to succeed in their jobs can be accomplished through offering mentorship programs, leadership development, and equitable opportunities for progression (Zhan, Pan and Hao, 2022). Furthermore, Vogl and Abdel-Wahab (2015) argue that enacting laws that support inclusion and equity will foster a productive workplace environment where each team member is valued and inspired to give their utmost. In addition to addressing labour issues, the construction sector can create a more inventive, resilient, and productive future by embracing diversity representation (Bekdik, 2017).

2.6.1.3. Political interference

Political interference in the construction industry is defined as the involvement of political personalities or government officials in construction project decision-making processes, which frequently favour political objectives over industry standards, project goals, or community requirements (Batalla, Torneo and Magno, 2018; Costa, Szerman and Assunção, 2024). Costa, Szerman and Assunção (2024) add that this can involve using project approvals, contract awards, resource allocations, or regulatory compliance to benefit certain individuals, businesses, or political supporters. While government involvement is required for regulatory monitoring and public project funding, excessive or unethical political meddling can raise a slew of issues that jeopardise the integrity and productivity of construction projects (Bowen, Edwards and Cattell, 2012).

According to Woolley (2016), political influence can have serious consequences, including the possibility of corruption and poor project management, which can result in higher expenses, longer project timelines, and lower project quality. As a result, companies that do not have the necessary resources or experience, for instance, may find themselves working on projects they do have resources to finish if construction contracts are given out based on political favouritism rather than merit or competitive bidding (Klien, 2014; Javed et al., 2018). This may lead to inferior work, safety hazards, and the eventual need for expensive repairs or changes (Klien, 2014).

Furthermore, political meddling may put pressure on businesses to use particular vendors, hire particular subcontractors, or take shortcuts all of which can worsen the project's efficiency and quality (Zhuang and Everett, 2017).

2.6.1.4. Bias in the workplace

Bias can result from leaders explicit or implicit ignorance of the effects of factors such as race, ethnicity, age, religion, sex, and sexual orientation (Rouan et al., 2022). Oliveros et al. (2022) uncovered that the progress toward diversity and inclusion has been slow and assessing diversity is often biased. In the construction industry, the distribution of power within an organization can significantly impact its potential for discrimination against individuals (Daza, Wallace, Riddell, Avu and Ruiz-Graham, 2020).

Miller (2022) reveals that in the construction sector, various sorts of bias might exist in the workplace. The industry experiences an explicit bias refers to intentional and overt discrimination against persons based on their traits (Miller, 2022). This could include making inappropriate remarks, blatantly preferring specific employees, or enforcing discriminatory policies (Sa'adi et al., 2024). In contrast, implicit bias (or unconscious bias) refers to underlying prejudices that influence conduct without the individual's awareness (Daza et al., 2020). For example, management may unintentionally favour an employee who shares their interests while neglecting the abilities of others (Daza et al., 2020; Walker, 2019). Confirmation bias occurs when people prioritize information that confirms their preconceived ideas (Dash, 2022). For example, if a supervisor believes that younger employees are less responsible, they may view a younger team member's activity as reckless, even if they are not (Walker, 2019). Finally, affinity bias occurs when people prefer to associate with others who are similar to them (Houmsi et al., 2023). This frequently results in bias, with people who have characteristics with decision-makers receiving greater mentorship or funding (Houmsi et al., 2023).

Workplace bias can have a lot of detrimental effects. Bias-affected workers may feel marginalized, demotivated, and alienated, which might lower their level of engagement and job satisfaction (Rouan et al., 2022). As a result, Sa'adi et al. 2024) reveal that turnover rates frequently increase as impacted workers look for more inclusive workplaces. Additionally, bias reduces diversity within the company, particularly among leaders, and fosters an atmosphere in which some viewpoints are underrepresented (Mauricio Marrufo, 2019; Miller, 2022). Employees may be reluctant to express original ideas or challenge accepted procedures in an environment where there is a lack of variety of thinking, which makes it more difficult for firms to innovate or approach problems from new perspectives (Rudolph et al., 2009). Furthermore, a contractor reputation is at stake when it

allows or ignores bias, which may make it more difficult to draw and keep top personnel (Malos, 2015).

Contractors may implement a range of awareness-raising and inclusionary tactics to lessen bias in the workplace (Braddy et al., 2020). Mauricio Marrufo (2019) uncovered that popular strategy is unconscious bias training, which assists staff members in identifying and controlling their own biases. Exercises to examine one's own presumptions and cultivate empathy for other viewpoints are frequently incorporated into this training (Rupp, Vodanovich & Crede, 006). Encouraging employees to share their experiences and recommendations for enhancing inclusivity is another crucial aspect of fostering an open culture of communication (Stephens, Rivera and Townsend, 2020). Furthermore, Walker (2019) concludes that ensuring that opportunities are based on merit can assist lessen bias in hiring, performance reviews, and promotions by developing transparent, equitable policies and procedures.

2.6.1.5. Lack of initiatives aimed at increasing representation

According to Dover, Kaiser and Major (2020) targeted recruitment initiatives are an important part of effective leadership practices in the construction industry. Construction businesses can encourage people from underrepresented groups to join the sector by collaborating with local schools, technical colleges, and community organisations (Puritty et al., 2017). Lewis et al. (2019) reveal that these groups include women, youth, and historically marginalised communities. On the other hand, Evans (2012) highlights that programme can provide apprenticeships and entry-level possibilities with hands-on training, making the industry more accessible to diversified talent and building a workforce that is representative of the Western Cape's population.

Through effective leadership, mentorship and sponsorship programmes are crucial to encourage progress and retention (Mercer-Mapstone, Islam and Reid, 2021). Construction sector leaders in the Western Cape can create mentorship programmes that pair together young or underrepresented workers with experienced workers (Puritty et al., 2017). Fenton and Busch (2016) claim that new hires can acquire skills and form important connections that will aid in their long-term professional development. It is also possible to include sponsorship, in which top leaders actively support bright workers from a variety of backgrounds, ensuring that gifted people have access to opportunities and higher-level responsibilities (Lewis et al., 2019). Hence, these initiatives support the development of a diverse workforce by providing a path for advancement and a culture that believes everyone can hold leadership roles (Griffin, 2019).

2.6.1.7. Organisational Culture and Practices

Organisational culture and practices are the common values, attitudes, behaviours, and procedures that influence how work is done in a company (Teräväinen et al., 2021). Coelho et al. (2022) posited that fostering an inclusive and supportive organisational culture in the construction sector is critical for increasing workforce diversity and productivity, particularly in locations such as South Africa's Western Cape Province. A strong contractor culture shapes how employees interact, make choices, and approach projects, influencing everything from safety protocols to collaboration and innovation (Low, Abdul-Rahman and Zakaria, 2020). When construction organisations adopt methods that support a positive culture, they can foster an environment in which employees feel appreciated, motivated, and devoted to attaining common goals (Teräväinen et al., 2021).

A dedication to safety and well-being is a crucial component of organisational culture in the construction industry (Gajendran et al., 2012). According to Coelho et al. (2022), this is especially significant considering the risks and physical demands of construction labour. Harinarain, Bornman and Botha (2013) pointed out that contractors who develop explicit safety procedures, offer frequent training, and promote employee voice regarding safety issues without fear of reprisal, companies may foster a culture of safety. Therefore, a more engaged and effective staff is also a result of placing a high priority on employee well-being through programmes like mental health support, equitable work schedules, and success recognition (Erthal and Marques, 2022). These practices show the company's commitment to the health and safety of its workers, fostering a sense of loyalty and trust among team members (Gajendran et al., 2012).

Another critical part of organisational culture is the promotion of diversity, equity, and inclusion (DEI) (Jaeger and Adair, 2013). In the construction industry, this can be accomplished by rules and procedures that promote equal hiring, training, and progression opportunities (Panuwatwanich & Nguyen, 2017). Leaders can promote inclusion by openly appreciating varied ideas and aggressively trying to eradicate biases (Badi, 2024; Jaeger & Adair, 2013). Implementing DEI focused training programs and forming employee resource groups for underrepresented populations, for example, can contribute to fostering an inclusive culture in which all employees feel valued (Badi, 2024). Rajaa and Lin (2018) argue that when a business commits to DEI, it not only increases productivity via greater collaboration and morale, but also boosts its reputation as a top employer, recruiting a wider spectrum of talent.

2.6.1.8. Lack of managerial commitment

Managerial commitment has been found negatively impacted by management job stress (Barak, Findler and Wind, 2016). Commitment refers to the level of effort and determination that a person puts in to achieve their goals, and it is based on their level of aspiration, engagement with issues that are relevant to them personally or organizationally, and the extent to which they are willing to make sacrifices to reach their objectives (Seijts and Milani, 2021). Despite this, a study by Cho and Mor Barak (2008) found that diversity characteristics, ethnicity, and age were strongly associated with organizational commitment. Effective leadership is crucial not only for managing a diverse workforce but also for successfully implementing diversity strategies and policies. These strategies can often be expensive, and without management commitment, budgetary constraints may hinder their implementation (Makhdoomi, 2018). However, Makhdoomi (2018) and Mousa (2017) argued that the biggest obstacle hindering management commitment in adopting a diverse and inclusive work environment was employee resistance to change and communication issues due to varying backgrounds, religions, languages, genders, ages, education levels, and experiences.

According to Mahfouz et al. (2019), throughout construction operations, quality and sustainability practices are also driven by a strong administrative commitment. Quality-focused managers make sure that high standards are maintained at every stage of the project, which lowers rework, boosts client happiness, and improves the company's reputation (Seijts and Milani, 2021). Likewise, Buil-Fabregà, del Mar Alonso-Almeida and Bagur-Femenías (2017) identify that in reaction to the increasing focus on environmental sustainability, environmentally conscious managers encourage eco-friendly activities such as material recycling, waste minimization, and energy-efficient building techniques. This is advantageous for the environment as well as possible cost savings and increased overall sustainability for the construction industry (Famakin and Abisuga, 2016).

Mousa (2017) highlights that managerial commitment is critical to successful project scheduling and resource management, which has a direct impact on a project's financial performance. Managers may guarantee projects are finished on schedule and under budget by focusing on extensive project planning, proactive scheduling, and periodic progress evaluations (Famakin and Abisuga, 2016; Oyewobi et al., 2019). Onyia (2019) uncovered that this dedication to financial efficiency helps to reduce cost overruns and increase profitability. Furthermore, managers who are committed to maintaining excellent stakeholder connections through open communication and regular updates lay the groundwork for repeat business and favourable word-of-mouth

referrals, which improve the company's reputation and market position in the long run (Omran and Suleiman, 2017).

2.6.2. Characteristics of effective leadership in a diverse and inclusive in construction environment

2.6.2.1. General management

Construction project planning, supervision, and coordination from start to finish are all included in general management (Hendrickson and Au, 1989; Harris, McCaffer, Baldwin and Edum-Fotwe, 2021). Van Knippenberg and van Ginkel (2022) reveal that this versatile position encompasses a wide range of duties that guarantee projects are carried out effectively, safely, and within budget. On the other hand, in the construction industry, general managers are responsible for managing teams, allocating resources, and planning projects (Hendrickson and Au, 1989). They frequently collaborate with clients, architects, engineers, and subcontractors (Sugiyama et al., 2016). Sugiyama et al. (2016) claim that diverse teams are more adaptable and innovative in addressing issues because they draw on a broader range of experiences. Moss (2019) suggests that this approach enables teams to tackle complicated construction projects more effectively, resulting in increased productivity and better project outcomes.

Safety and quality control are also impacted by a leadership style that prioritizes diversity (Rawat et al., 2021). Ferdman (2020) added that team members are more inclined to share concerns about safety or recommend changes to high-quality procedures when they believe that their opinions are being heard. An environment where workers feel empowered to take responsibility for quality and safety is created by inclusive managers that proactively solicit feedback and promote candid communication (Wuffli, 2016). Employees who may otherwise feel excluded, for instance, are more inclined to speak up if they see a possible safety risk (Rawat et al., 2021). In addition to enhancing quality and safety, managers who cultivate this degree of trust also create a more motivated staff, which boosts total project efficiency and lowers the likelihood of expensive errors or accidents (Agrawal, 2024).

Furthermore, Agrawal (2024) opines that by introducing new perspectives to budgeting and relationship-building, a diverse and inclusive approach to general management improves financial and stakeholder management. Building deeper, more respectful connections with customers, suppliers, and community stakeholders can be facilitated by inclusive managers by utilizing diverse cultural insights and communication styles (Roberson and Perry, 2022). Booysen (2020) concurs that through the inclusion of team members with varying experiences in decision-making procedures, they can investigate novel approaches to reduce expenses, recognise chances for

resource optimization, and execute innovative resolutions to obstacles. In the end, a diversity-driven strategy can lead to repeat business and a strong reputation in the industry by fostering trust with clients and stakeholders and increasing financial efficiency (Mor Barak, Luria and Brimhall, 2022).

2.6.2.2. Cultural awareness and sensitivity

Cultural sensitivity and understanding are becoming more and more crucial qualities for managers and leaders in the construction sector who want to build inclusive, effective work cultures (Ghasemi Mighani, Yazdanimoghaddam and Mohseni, 2019). Atai, Babaii and Taghipour Bazargani (2017) add that a diversified workforce comprising people from different cultural, linguistic, and ethnic origins is frequently involved in construction projects. Managers can more fully appreciate and comprehend the distinct viewpoints and requirements of their team members by exercising cultural awareness and sensitivity (Goodyear, 2018). Atai, Babaii and Taghipour Bazargani (2017) reveal that this knowledge eventually results in better teamwork and collaboration on the working site by preventing misunderstandings, lowering the likelihood of confrontations, and creating an atmosphere where everyone feels respected and understood.

Furthermore, Fathi, Anumba and Carrillo (2006) argue that cultural awareness and sensitivity are essential for developing great relationships with clients, subcontractors, and community stakeholders. Construction projects have a significant impact on local communities, and understanding cultural and social factors can lead to more courteous and successful interactions (Kirmayer, Bennegadi and Kastrup, 2016). Culturally aware managers are more inclined to connect with local norms, traditions, and community concerns, which promotes goodwill and strengthens collaborations (Dubovitskaya and Kamalova, 2020; Delgado et al., 2024). Thus, cultural awareness not only helps to acquire community support for the project but also improves the company's reputation as a responsible and respectable corporation, which can lead to long-term economic prospects and sustained success (Delgado et al., 2024).

2.6.2.3. Empathy and emotional intelligence

According to Sergey, Boris and Nadiia (2020) and Butler and Chinowsky (2006), empathy and emotional intelligence are critical leadership traits in the construction sector that have a big impact on productivity and team dynamics. Additionally, empathic leaders create a climate of trust and respect by being able to relate to and understand the struggles and experiences of their team members (Pryke, Lunic and Badi, 2015). However, Sergey, Boris and Nadiia (2020) orate that this is particularly crucial in the construction industry because the labour can be physically taxing

and occasionally dangerous. Leaders with empathy pay attention to their staff members' worries, genuinely care about their welfare, and deal with any problems that could compromise their performance personal or professional (Vetluzhskayaa et al., 2019; Konanahalli and Oyedele, 2016). Therefore, this strategy fosters a positive work atmosphere where staff members feel appreciated, which raises motivation, and job satisfaction, and eventually increases on-site productivity (Kripal and Reiter-Palmon, 2024).

Emotional intelligence, which comprises self-awareness, self-regulation, and social awareness, improves a leader's capacity to regulate their own emotions and successfully respond to the emotions of others (Konanahalli and Oyedele, 2016). Leaders with high emotional intelligence perform better under pressure, remain calm during setbacks, and set a good example (Guasp Coll et al., 2020). Akamatsu and Gherghel (2021) highlight that the emotional intelligence capacity to remain collected not only establishes a great tone for the team, but it also aids in conflict resolution and collaboration, particularly among diverse teams. Empathetic and emotionally intelligent leaders strengthen their relationships with clients, subcontractors, and community stakeholders by acknowledging and appreciating differing points of view (Juste, 2024). Therefore, empathetic and emotional intelligence results in better communication, a stronger reputation, and more effective, long-term projects that benefit everyone involved (Juste, 2024).

2.6.2.4. Open communication and active listening

Active listening and open communication are crucial behaviours in the construction business that support a more effective, collaborative, and fruitful workplace (Topornycky and Golparian, 2016). Bakhshandeh (2023) postulated that all team members can openly exchange ideas, worries, and updates through open communication, which keeps everyone informed and focused on the project's objectives. Thus, transparency is encouraged by leaders that promote open communication, and transparency is essential for resolving possible problems before they get out of hand (Rodat, 2019). In a field where accuracy and rationality are essential, transparent communication lowers mistakes, expedites project schedules, and improves on-site safety (Kitanova and Kitanov, 2018). Bakhshandeh (2023) summarised that team members are more likely to identify risks, make improved suggestions, and participate completely in their jobs when they feel safe speaking out.

2.6.2.5. Commitment to fairness and equity

Commitment to fairness and equity is essential for creating a friendly, inclusive, and productive workplace (Zhu and Cheung, 2021). According to Lim and Loosemore (2017), leaders who

promote fairness assure that all employees have equal chances, resources, and recognition, regardless of their history, role, or tenure. Loosemore and Lim (2016) reveal that this dedication promotes a culture of respect and trust in which everyone feels valued for their efforts. In industries like the construction industry with a diverse workforce, fair treatment reduces resentment and fosters a more productive team environment (Wolsink and Devilee, 2009). However, employees are more likely to feel motivated, engaged, and invested in the project's success when they see that decisions are made clearly and equitably, whether in task assignment, resource distribution, or promotion handling (Karakhan et al., 2021).

In order for contractors to achieve equity in the construction sector, obstacles that can keep some workers from succeeding must be aggressively removed (Lu, Li and Wang, 2017). To overcome these challenges such as a lack of accommodations for different requirements, training access, or language barriers leaders dedicated to equity must first acknowledge and address them (Wolsink and Devilee, 2009). Managers may level the working environment and enable all team members to give their best work by creating an egalitarian work environment (Nugent, 2017). Employees who feel supported and valued are more likely to stay with a company and be satisfied with their work environment (Lu, Li and Wang, 2017). Additionally, contractors who uphold justice and equity, are able to strengthen their bonds with stakeholders and clients, enhancing their standing as reputable, moral, and socially conscious businesses (Wolsink and Devilee, 2009; Colquitt & Rodell, 2015).

2.6.2.6. Adaptability and flexibility

According to Geraedts, Olsson and Hansen (2016) and Estaji (2017), the ability to adapt and be flexible is a critical skill for leaders and team members alike, since construction projects frequently encounter unanticipated obstacles like weather delays, supply chain disruptions, or changes in project scope. Adaptable leaders can quickly reallocate resources, adjust plans, and modify timelines as needed, assisting the team in staying on schedule and maintaining productivity (Pinder et al., 2017). As a result, this flexibility makes it possible for construction projects to proceed despite unforeseen setbacks, minimizing downtime and potentially lowering costs (De Paris et al., 2022).

Furthermore, Sánchez-Silva and Calderón-Guevara (2022) and Scuderi (2019) account that adaptability and flexibility are also required to promote innovation and improve problem-solving on building sites. Magdziak (2019) reveals that in a quickly changing construction industry, new technologies, materials, and procedures emerge on a regular basis, and leaders who are willing to explore these innovations can improve project efficiency and quality. Also, flexible teams can

collaborate more effectively because team members are frequently needed to switch duties, take on new responsibilities, or work alongside various trades (Hollander, 2020). Thus, adaptability not only improves the team's overall skill set but also promotes a culture of constant learning and progress (Aziz, Alobaydi and Salih, 2020). Construction organisations benefit from having a staff that can quickly adapt to new needs, remain competitive, and deliver successful projects in an ever-changing industry context (Heidrich et al., 2017; Andrade and Bragança, 2019; Ezeokoli, Okoye and Nkeleme, 2016).

2.6.2.7. Accountability and transparent

Accountability and transparency play critical roles in fostering an equitable work environment in the diverse and inclusive construction sector, where each team member is regarded and valued equally (Filgueiras, 2016). Zhang (2024) adds that maintaining accountability means that everyone is accountable for fostering an inclusive culture, from crew members to management. As a result, contractors who establish clear guidelines for polite conduct, treating everyone fairly, and providing equal chances for all workers, leaders may encourage this (Fox, 2018). Leaders show a commitment to diversity and inclusion that permeates the workforce by holding themselves and others accountable (Murphy and Albu, 2018). Accountability and transparency fosters an atmosphere where everyone has an equal chance to flourish and grow by reducing incidences of bias and discrimination (Pine and Mazmanian, 2015).

Transparency enhances diversity and inclusion by fostering open communication about project objectives, policies, and chances for progress (Fox, 2018). In a transparent construction workplace, leaders make information about hiring methods, promotion criteria, and project updates available to all employees, reducing any feelings of exclusion (O'Regan, King and Smith, 2022). Moreover, transparent communication also allows employees from all backgrounds to express their ideas, concerns, and viewpoints, which fosters a more collaborative environment (Wildermuth, N., 2014; Mabillard and Zumofen, 2021). Frostenson and Johnstone (2023) believe that when team members see that leaders make open decisions and consistently value everyone's opinion, they feel more connected and interested in their jobs. Hence, this openness not only promotes a more inclusive workplace atmosphere, but also boosts productivity because varied perspectives contribute to inventive problem-solving and more effective project outputs (Trussler, 2020; Meijer, 2013).

2.6.2.8. Encouragement of collaboration and teamwork

Mohamad, Ibrahim and Nekooie (2014) reveal that promoting cooperation and teamwork is crucial to maximizing the distinct viewpoints, abilities, and experiences that every team member offers. Collaboration is the first priority for leaders because they foster an environment where people from different backgrounds can work well together, share knowledge, and approach problems as a team (Akintoye and Main, 2007). Furthermore, construction managers can overcome professional and social barriers by promoting a collaborative atmosphere that encourages idea-sharing and problem-solving among all team members (Oraee et al., 2019). Inclusive strategy helps to execute projects more effectively and cohesively while also fostering creativity and innovation on the job site (Herrera et al., 2020).

Creating opportunities for cross-functional teamwork, such as team-building exercises, collaborative problem-solving sessions, and shared objectives, allows employees to gain a deeper understanding of each other's roles, experiences, and perspectives (Merschbrock and Munkvold, 2015). Liu, Van Nederveen and Hertogh (2017) pointed out that this not only boosts morale and job satisfaction but also builds a stronger, more resilient team that can adapt to challenges more competently. Hence, contractors who foster an inclusive work environment, construction leaders can establish a workplace where every person feels valued, which will ultimately result in higher engagement, increased productivity, and successful project outcomes that demonstrate the power of a cohesive, diverse team (Tseng and Yeh, 2013).

2.6.3. Leadership management

According to Freeman (2014), diversity and inclusion practitioners and leaders strive to eliminate discrimination and harmful biases from individuals, groups, and organizations. As well as promoting equity, social justice, and organizational success, they aim to work productively and effectively across differences to foster full participation and empowerment from a variety of social identities and cultures. Leaders can foster employee inclusion by emphasising everyone's value, without making distinctions that increase exclusion (Buengeler, Leroy and Stobbeleirc, 2018). A leader plays a more independent role in creating an inclusive environment for employees (Buengeler, Leroy and Stobbeleirc, 2018; Daya, 2014). Despite this, Allen (2018) stressed that one important issue for organisational leaders is workplace connectedness, both within the community and within the organization itself. Furthermore, leader has the responsibility to ensure that ethnic diversity can be a positive force in a multicultural construction industry if inter-cultural understanding and respect are built by introducing appropriate practices (Cardno, Handjani and Howse, 2018).

Therefore, creating inclusive workplaces that embrace and effectively manage diversity is a crucial part of implementing diversity (Young et al., 2018). To achieve this there is a need for combination of organisational change and innovation at all levels, both inside and outside their organizations (Young et al., 2018; Èzbilgin, 2009). In summary, shared six inclusive leadership qualities as follow: visible commitment, awareness of bias, curiosity about others, cultural intelligence and effective collaboration (Daza, Wallace, Riddell, Avu and Ruiz-Graham, 2020).

2.6.3.1. Leadership commitment

Leadership commitment is critical in the construction business for project success, safety, and employee morale (Mahfouz et al., 2019). Kerdngern and Thanitbenjasith (2017) commanded that a committed leaders set the tone for the organisation by actively demonstrating their commitment to core values such as safety, quality, and diversity. Additionally, when leaders publicly prioritize these principles, they reaffirm their relevance and inspire team members to follow suit (Limsila and Ogunlana, 2008). Construction work is physically demanding and frequently dangerous, committed leaders are critical in ensuring that safety precautions are routinely followed, quality standards are upheld, and projects are delivered on time and under budget (Nidadhavolu, 2018). Kerdngern and Thanitbenjasith (2017) stressed that this persistent devotion contributes to the development of a strong organisational culture in which every employee understands their role in ensuring the project's success.

2.6.3.2. Mentorship and sponsorship programmes

Programmes for sponsorship and mentoring are effective means of developing professional skills, promoting career advancement, and assisting in the diversity of the workforce (Nkomo and Thwala, 2014). Through mentoring programmes, less seasoned team members are paired with more seasoned professionals who can offer advice, impart industry expertise, and assist in overcoming obstacles in one's career (Agumba and Fester, 2010; Yokwana, Ndihokubwayo and Windapo, 2016). Mentors may provide helpful advice on safe procedures, efficient project management, and best practices in a field where on-the-job training is essential (Nkomo and Thwala, 2014). As a result, Otasowie and Oke (2020) uncovered that regular contacts help mentees develop the skills necessary to take on more responsibility, build useful networks, and gain confidence.

According to Nkomo, Thwala and Aigbavboa (2018), sponsorship programmes take a step further, connecting high-potential employees with executives who actively promote their professional development and success. Unlike mentors, sponsors can open doors, propose protégés for

difficult assignments, and help them advance to leadership positions (Roberts, Storm and Flynn, 2019). Furthermore, Hieker and Rushby (2020) argue that this is especially useful in encouraging diversity and inclusion in the construction sector, as sponsorship can help underrepresented groups overcome hurdles by providing awareness and access to opportunities that would otherwise be unavailable. Construction businesses that invest in mentorship and sponsorship can build a more diversified, skilled, and committed staff, bolstering both individual career paths and the organisation's long-term performance in an increasingly competitive industry (Clevenger et al., 2015; Birhan and Merso, 2021).

2.6.3.3. Inclusive policy

Gardberg et al. (2023) describe inclusive policies in the construction industry as critical aspect for promoting diversity and equity in a sector that has traditionally struggled with representation. Clarke, Michielsens and Snijders (2017) posited that contractors that employ proactive recruitment methods might actively seek to hire people from diverse backgrounds, including women, people of colour, and people with disabilities. Amakali (2017) reveals that this effort can be supplemented by establishing apprenticeship and training programs aimed at underrepresented groups, thus opening up opportunities for varied talent to enter the workforce. Such programmes not only serve to close the industry's skills gap, and also build a more inclusive workplace in which varied viewpoints contribute to innovative solutions and improved problem-solving (Fairchild, Rose and Tell, 2018).

Furthermore, Liasidou (2011) argues that inclusive policies go beyond hiring practices and include developing a welcoming work environment that recognises each person's contributions. This entails putting anti-discrimination policies into place, making sure that workplaces are accessible, and giving all staff members cultural competency training (Jiang, Zhang and Ao, 2022). Lekan, Clinton and Owolabi (2021) claim that promoting flexible work schedules can also aid in meeting the various needs of the workforce, which will increase employee retention and job satisfaction. In the end, a dedication to diversity in the construction sector not only boosts output and participation but also improves the sector's standing, attracting a wider pool of talent and encouraging a collaborative and safe atmosphere (Liasidou, 2012; Karaca et al., 2024; Assmuth and Lyytimäki, 2015).

2.6.3.4. Celebrating diversity within the organisation

Celebrating diversity within a business is an important part of creating an inclusive working culture (Formanek and Formanek, 2021). According to Blyznyuk and Sydoriv (2024) celebrating diversity

entails acknowledging and valuing each employee's unique history, viewpoints, and talents. This celebration can take many forms, including planning events to highlight various cultural traditions, establishing employee resource groups (ERGs), and raising awareness through training and workshops (Gumede, 2016; Peyton, 2017). Organisations may foster cooperation and collaboration by creating venues for open communication and shared experiences, encouraging employees to embrace their differences and learn from one another (Carolan, 2022).

2.6.3.5. Motivation

Increasing globalisation and multicultural workforce demands are major drivers of diversity management, as well as the need for innovation (Allen, 2018). Contractors in South Africa committed too quickly to a more diverse workforce, without having the necessary skills and training to meet job requirements due to political realities and necessities (Allen, 2018; Moses, 2014; Anderson and Sun, 2017). However, Pai (2020) reveal that people are no longer living and working in an insular marketplace; now they are part of a global economy with competition coming from almost every continent.

By embracing diversity and inclusion, leaders increase employment satisfaction for underrepresented employees, reducing turnover and increasing commitment to the organization (Dutton, 2018). Construction leaders attempt to improve productivity through diversity and inclusion of construction workforce (Sikandar, 2022). Effective leaders foster inclusion by promoting belongingness and uniqueness among contractors' employees (Jeronimo, Henriques and Carvalho, 2021).

2.6.4. Employees engagement and inclusion

As a result of the evolving workplace diversity, many employees experience the problem of exclusion, and even a large number of employees feel that they are not considered integral parts of the organisation (Goswami and Goswami, 2018). Worker engagement refers to the level of involvement and commitment employees have towards their organization (Jerónimo, Henriques and Carvalho, 2022; Goswami and Goswami, 2018; Brooking, 2021; Ly, 2024). Thus, in order to increase employee engagement, the workplace needs to promote safety, meaningfulness, and availability (Jeronimo, Henriques and Carvalho, 2021). Research findings have demonstrated that proactive individual work engagement has a significant impact on individual-level and organizational-level performance, among various individual employee behavioral phenomena (Anita, 2014; Gupta and Sharma, 2016; Halbesleben and Wheeler, 2008; Hakanen, Perhoniemi and Toppinen-Tanner, 2008; Makikangas, Aunola, Seppala and Hakanen, 2016; Rich, Lepine

and Crawford, 2010; Tims et al., 2013). Adaptability, flexibility and tailored responses to changing environments are essential qualities for organizations in a competitive environment (Uddin, Mahmood and Fan, 2018).

According to Bao, Xiao, Bao and Noorderhaven (2022) leadership has been identified as a crucial factor in improving employee work engagement. Hence, a unique aspect of inclusive leadership may be its emphasis on meeting employees' uniqueness and belongingness needs, which makes it distinct from existing leadership styles associated with work engagement (Rodriguez, 2018; Ferguson and Carstairs, 2007; Gupta and Gomathi, 2022). Lastly, Jha and Kumar (2016) concluded that engagement of employees involves their social, intellectual, and emotional engagement in their work and the work environment at large as presented in figure 2.1.

Social Engagement
The extent to which an employee communicates with team members and other colleagues about different work related improvements and change to work

Employee engagement

Intellectual Engagement
The extent of involvement which leads better performance and use of Intellect to improve work related skills

Emotional Engagement
The extent which one is towards emotionally connected with the work and work culture

Figure 1.1: Employee's engagement (Adopted from Jha and Kumar (2016)

It is for this reason that this study seeks to investigate employee's commitment and engagement in a diverse construction environment. Like Robertson and Cooper (2011) who pointed that

employees' commitment and citizenship are crucial for the organization's overall success, as reflected in the engagement approach.

2.6.4.1. Commitment to goals

In the context of a diversified and inclusive construction industry, adherence to goals is crucial for promoting significant change and guaranteeing that all stakeholders profit from the expansion and prosperity of the industry (Famakin and Abisuga, 2016). Salazar et al. 2022) uncover that establishing fair access to opportunities for training and development, fostering an inclusive work environment, and boosting the representation of underrepresented groups in the workforce are just a few examples of the specific, quantifiable diversity and inclusion goals that organisations need to set. Moreover, contractors may show their commitment to creating a culture that respects and values different points of view by committing to these objectives, which will eventually improve decision-making and project outcomes (Bo, 2013).

Furthermore, Leung, Yu and Chong (2016) add that this dedication should be represented in the organisation's policies, procedures, and leadership accountability. Leaders must actively promote diversity and inclusion initiatives, offering resources and support to programmes that uphold these ideals (Zhang, Li, Olanipekun and Bai, 2019). Regularly measuring progress toward defined goals and honestly reporting outcomes holds the firm accountable while also instilling trust in employees and stakeholders (Mahfouz et al., 2019). Therefore, engaging employees in the goal-setting process and encouraging their involvement can help to develop this commitment and ensure that the objectives are understood by the workforce (Famakin and Abisuga, 2016). Also, Okoye (2021) reveals that a strong commitment to diversity and inclusion in the construction industry improves operational efficiency and creativity while also contributing to a more equitable and sustainable future for all sector participants.

2.6.4.2. Sense of ownership

Within the context of a diversified and inclusive construction industry, a sense of ownership pertains to the sense of duty and responsibility that workers acquire towards their work, the organisation, and its objectives, with a specific focus on diversity and inclusion programmes (Jones et al., 2019; Dan-Cohen, 2001). Employees are more inclined to actively promote an inclusive workplace when they identify with the company and feel that their job contributes to a greater purpose (Walasek, Rakow and Matthews, 2017). Ketelaar et al. (20140 argue that employee participation in decision-making, encouragement to share ideas and viewpoints, and

acknowledgment of their efforts to advance diversity inside the company are among strategies that help foster this sense of ownership.

2.6.4.3. Positive attitude

According to Loosemore and Malouf (2019), a positive attitude is vital for establishing a diverse and inclusive construction sector because it establishes a collaborative and supportive workplace atmosphere. Additionally, employees who keep a cheerful attitude are more likely to welcome diversity, value other points of view, and interact with their co-workers in a courteous and constructive manner (Chang et al., 2018; Schwarz, 2007). As a result, this mindset promotes open communication and helps to break down boundaries between people of different backgrounds, establishing a sense of belonging and teamwork (Renthlei and Malsawmi, 2015; Wajcman, 2002). When team members approach difficulties with optimism and a solution-oriented perspective, they foster an environment conducive to innovation and make everyone feel appreciated for their unique contributions (Wang, Li and Wu, 2019).

2.6.4.4. Willingness to collaborate

One essential component of developing a diverse and inclusive construction sector is being open to working together (Rahman et al., 2014). Collaboration is enhanced when people with diverse experiences, viewpoints, and backgrounds work together to solve problems and innovate (Chen et al., 2022). Moreover, Gumbu (2024) coincides that team members are better able to utilize one another's talents, discuss ideas honestly, and work together to overcome obstacles when there is a collaborative culture in place. In the construction industry, where projects frequently need input from a variety of stakeholders, including engineers, architects, contractors, and clients, this collaborative spirit is especially crucial (Shaikh et al., 2020; Rahman et al., 2014). Teams can create more comprehensive solutions that better serve the requirements of all parties involved by accepting multiple points of view (Ayegba, Kamudyariwa and Root, 2018).

2.6.4.5. Equal opportunities

Equal chances in the construction sector are critical for creating a fair and inclusive workplace in which everyone, regardless of background, can prosper (Walsh, 2019; Sepper and Linntam, 2005). This includes equal access to employment, training, promotions, and resources for all, with a focus on underrepresented groups including women, people of colour, and persons with disabilities (Dawn Metcalfe and Afanassieva, 2005). Bjažić Klarin (2020) pointed out that construction companies can assist erase structural barriers that have historically disadvantaged

particular demographics by enacting equal opportunity rules. Berezhna et al. (2021) summarised that this can include open hiring processes, mentoring programmes, and focused recruitment attempts to diversify the workforce.

Furthermore, Heartfield (2017) noted that fostering an atmosphere of equal opportunity promotes a culture of justice and decency, both of which can boost staff morale and increase job satisfaction. Hence, employees are more likely to be motivated and involved in their work when they believe that their talents and contributions, rather than their background, will provide them a fair chance to succeed (Hawkins, 2012; Wajcman, 2002). Bjažić Klarin (2020) claims that by offering training and development programs that give all employees the tools they need to grow in their professions, organizations can further promote equitable chances. In the end, giving equal opportunities a top priority in the construction sector promotes diversity and inclusion, productivity, and success in general (Wajcman, 2002).

2.7. Theoretical Framework

A theoretical foundation will be developed to achieve this study's objectives. First, a literature review on leadership theory, transformational theory, and diversity theory will be conducted. In addition, a set of literary works concerning the theory and implementation of development will be examined.

According to Hogg (2001) and Andriessen and Drenth (2013), a leader who shows great ingroup preference and intragroup fairness, and presents themselves as "one of us," not only enhances their social attractiveness but also gains legitimacy. Typical leaders refrain from exerting authority to influence others and instead exhibit qualities shared by other individuals in the organisation (Andriessen and Drenth, 2013). Many attempts have been made to consolidate theories of leadership. Mango (2018) argued that all leadership theories can be grouped into six categories: charismatic, transformational, diversity, strategic, participative/shared, and trait theory. Figure 2.2 presents the theoretical framework for the study.

Leadership theory, transformational theory, and diversity theory together offer a complete framework for understanding how to promote a diverse and inclusive culture in the construction business (Northouse, 2021; Nawaz and Khan, 2016). In addition, Dugan (2024) claim that leadership theory includes a variety of models for explaining how leaders impact their teams, with a focus on personalities, behaviours, and situational situations. Effective leaders promote diversity and inclusion by being aware of their own prejudices and actively cultivating an environment that values varied viewpoints (Northouse, 2021). Thus, construction leaders can have a substantial

impact on team dynamics and project success by adopting various leadership styles and responding to their teams' specific demands (Dinh et al., 2014).

The philosophy of transformationalism emphasises leaders who can inspire and encourage their people to attain remarkable results (Yammarino and Dubinsky, 1994). Moreover, Redman-MacLaren and Mills (2015) reveal that employees are encouraged to share their special talents and ideas in a culture of trust, cooperation, and innovation that transformational leaders cultivate. These leaders have the ability to advance diversity and inclusion in the construction sector by clearly communicating a vision that inspires team members (Poutiatine, 2009). Transformational leaders can fully utilise the potential of a diverse workforce by enabling people to think creatively and take calculated risks (Yaslioglu and Erden, 2018).

Diversity theory emphasizes the importance of identifying and appreciating differences between individuals within an organisation (Marshall, 1988). This theory investigates how different origins (such as race, gender, age, and experience) influence relationships and decision-making processes (Andriessen and Drenth, 2013). In the construction business, adopting diversity theory assists organisations in identifying structural impediments that limit participation by underrepresented groups (Parekh, 2001). Prioritising diversity and inclusion allows construction firms to establish a workforce that reflects the communities they serve, improving their capacity to fulfil various client needs and driving overall company success (Parekh, 2001). Thus, integrating these theories results in a more comprehensive approach to creating an inclusive workplace conducive to invention, productivity, and cooperation as show in Figure 2.2.

Contractors Leadership | Inclusive Organisational Practices | Workgroup climate for inclusion | Minority and marginalised employees' outcomes

Contractors Leadership
- Empowering and developing people
- Humility
- Authenticity
- Interpersonal acceptance
- Providing direction
- Stewardship

Inclusive Organisational Practices
- Minority employee empowerment
- Participative practices that value otherness
- Fair and equitable practices
- Practices that reconcile fragmented identities of out-group members
- Conflict resolution mechanisms
- Practices stimulating actions for the common good

Workgroup climate for inclusion
- Need for belongingness
- Need for uniqueness

Minority and marginalised employees' outcomes
- Organisational identification
- Organisational citizenship behaviors
- Psychological well-being

Leaders' inclusiveness beliefs

Figure 2.2: Theoretical Framework for the Study (Adapted from Ferdman, Prime and Riggio, 2020)

2.7.1. Identification of research gap

The construction business has long been known for its labour-intensive nature, project-based industry, and reliance on diverse teams to achieve construction project delivery (Bourke Titus and Espedido, 2020). According to Roberson and Perry (2022) and Baker, Ali and French (2021), while leadership is widely recognised as the most important aspect influencing team performance and construction project success, much of the existing literature focuses on general leadership styles, project management, and workforce supervision without taking into account the unique opportunities and challenges presented by diverse and inclusive teams. Furthermore, Khan et al. (2020) state that the majority of research on leadership frameworks frequently focuses on

contractors' administrative efficiency and organisational control, rather than the ability of leadership to actively exploit diversity and inclusion to create productivity towards achieving construction project delivery.

In South Africa, particularly in the Western Cape Province, there is an increasing emphasis on employment fairness, transformation, and inclusive workforce policies to achieve equal representation in the construction industry (Nguyen et al., 2019). However, research into the connection of leadership, diversity, and productivity in construction is still limited, especially in the construction industry (Bardhan and Gower, 2022). Although diversity and inclusion rules are in existence, they frequently prioritise compliance above the strategic integration of inclusive practices to improve team performance (Baker, Ali and French, 2021). Furthermore, Gómez-Hurtado et al. (2021) and Sugiyama et al. (2016) stressed that while transformational leadership has been found to improve motivation and performance in a variety of industries, its use in the construction business, particularly in managing diverse site teams, remains understudied.

This gap highlights the need for a context-specific leadership guidelines that is aligned with the socioeconomic realities of the Western Cape construction industry and addresses the practicalities of managing a multicultural diverse workforce to improve productivity and achieve sustainable business performance.

2.8. Conceptual Framework

A conceptual framework is a visual representation of the relationship between variables or properties that a researcher investigates (Varpio, Paradis, Uijtdehaage and Young, 2020; Farole, Staritz and Winkler, 2014). The study's conceptual framework, represented in Figure 2.3, outlines a leadership framework for the Western Cape Province's construction industry in South Africa. The procedure consists of Barriers to the adoption of inclusive leadership in the diverse construction environment, leadership motivation to implement actions that enhance diversity and inclusiveness in the construction industry, leadership management of inclusive and diverse construction environment, and the degree of employee's involvement to influence employee's productivity.

Contractors who involve employees from diverse backgrounds in key decisions and empower them to contribute their ideas, inclusive leadership practices foster a sense of ownership and accountability, which leads to enhanced productivity and enhanced construction project delivery (Korkmaz et al., 2022; Roberson and Perry, 2022). This integrated approach links leadership theory, transformational leadership theory, and diversity theory, providing a holistic perspective on how leadership can drive productivity, inclusiveness, and sustainable success in the

construction sector (Ashikali, Groeneveld and Kuipers, 2021). The framework offers a foundation for understanding the complex dynamics of leadership in diverse construction environments, which are essential for achieving long-term project success and addressing the challenges of the ever-evolving construction industry.

Employee engagement and inclusion influence individual or team performance:
- Supportive behavior
- Ensuring justice
- Encouraging and empowering employees shares decision making

Leaders manage diversity and inclusion:
- Value diversity and recognise diversity can deliver and improve productivity
- Consider differences as strength
- Respect and value uniqueness that treating everyone alike

Barriers to inclusive leadership:
- Organisational Policy
- Employees willingness

Full participation of employees to enhance productivity

Leaders motivation to implement actions to enhance diversity and inclusion:
- Making people feel worthy for their unique character
- Improving employees productivity

Figure 2.3 Conceptual framework (Own source)

2.9. Chapter conclusion

Chapter 2 critically examines the existing body of literature on leadership practices, workforce diversity, and inclusion (D&I) in the construction industry, with a focus on how these elements influence productivity. The review further investigates the concept of workforce diversity, emphasising the value of gender, cultural, generational, and skill diversity in the construction

sector. It identifies how diverse teams contribute to problem-solving, and overall construction project success, while also addressing challenges such as discrimination, bias, and resistance to change. The chapter also explores the role of inclusion in maximizing the benefits of diversity, emphasizing inclusive practices like participative decision-making, open communication, and equitable opportunities for career advancement.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1. Introduction

The research approach used to investigate the leadership framework for increasing worker productivity in the Western Cape Province of South Africa's construction industry through inclusion and diversity of the workforce is described in this chapter. A sequential mixed-methods approach has been used. This methodology allows for a thorough analysis of the variables affecting productivity in building projects by integrating quantitative and qualitative research techniques. During the quantitative phase, a systematic survey is administered to collect data on leadership practices, diversity perceptions, and leadership effectiveness. In contrast, the qualitative phase uses semi-structured interviews to get deeper insights into construction professionals' lived experiences and perceptions on leadership and diversity dynamics. Using this mixed-methods methodology, the study attempts to not only measure correlations but also comprehend the contextual intricacies that determine leadership and diversity in the construction industry. This chapter describes the research design, data collection methods, participant selection, and data analysis procedures, laying a solid foundation for the findings provided in the following chapters.

3.2. Research Philosophy

Research philosophy refers to the fundamental beliefs and assumptions that shape a researcher's approach to knowledge creation and inquiry (Tamminen and Poucher, 2020; Williamson, 2021; Sim et al., 2018). Moreover, Tamminen and Poucher (2020) reveal that research philosophy determines how researchers view the world, determine what is true or valuable, and select appropriate procedures for investigating a research subject. Saunders, Lewis and Thornhill (2009) claim that positivism, interpretivism, and pragmatism are the three most common study theories in social science. According to Saunders and Townsend (2016) and Hughes and Sharrock (2016), positivism is consistent with a scientific approach to study, emphasising objective reality and the use of quantitative facts to identify patterns and causal linkages. On the other hand, interpretivism is based on the idea that reality is socially created, which means that researchers must investigate the subjective meanings that people assign to their experiences, frequently using qualitative methodologies (Saunders and Townsend, 2016).

Mixed-methods research is grounded in pragmatism, a research philosophy that promotes using the methods that are most suited to address particular research issues, regardless of whether

those methods are conventionally qualitative or quantitative (Heeks and Bailur, 2007). Furthermore, the concept of an ultimate truth is rejected by pragmatics, who place more emphasis on what can be applied practically to solve issues in the actual world (Williamson, 2021). Quantitative tools may assist the researcher in analysing productivity data, investigating links between diversity and productivity measures, or measuring outcomes from various leadership styles (Sim et al., 2018; Clark, Creswell, Green, and Shope, 2008). On the qualitative side, interpretivist techniques like interviews and focus groups with construction workers, project managers, and leaders can expose human perspectives on diversity and inclusion, identify obstacles, and contextualize quantitative data (Russell, 2001). This study adopted a pragmatism because it enables the researcher to build a leadership framework that is both data-driven and responsive to the social and cultural aspects of the Western Cape's construction industry (Saunders and Townsend, 2016).

The study's emphasis on workforce diversity and inclusion, which is intrinsically complicated and multidimensional, is in line with pragmatism's flexibility (Johnson, Russo and Schoonenboom, 2019). This encourages researchers to do iterative, adaptive research in which results from both quantitative and qualitative data can be combined to create a research method that takes into account a variety of viewpoints (Vaihinger and Rosenthal, 2021). Because the construction industry in the Western Cape Province faces distinct regional issues and a diversified workforce, pragmatism allows the researcher to create a framework that takes into account these specifics while yet being applicable to other construction settings (Vaihinger and Rosenthal, 2021). As a result, the leadership style advances both economic and social objectives by increasing productivity and promoting a more diverse and equal workplace.

3.3. Research Approach

3.3.1. Deductive approach

The deductive research strategy is a structured process that starts with a general theory or hypothesis and then tests its validity using specific observations or experiments (Zalaghi and Khazaei, 2016). Long (2014) posited that the deductive approach is a top-down technique that is frequently connected with quantitative research, in which researchers develop a hypothesis or questions based on existing theories before designing experiments or surveys to collect data. Chilisa (2019) contends that the primary goal is to validate or deny the initial hypothesis, resulting in particular results that may be extrapolated to a larger population.

Saunders, Lewis and Thornhill (2009) reveal that in deductive research, the steps usually follow a logical order: formulating a theory, coming up with a hypothesis, carrying out an empirical study,

and interpreting the results to make inferences. According to Creswell (2021), researchers can establish links between variables and find patterns that confirm or refute the hypothesis due to this well-organised method. Also, Studies that attempt to quantify particular outcomes or impacts in a controlled setting can find this technique very valuable, as it strongly emphasizes collecting and interpreting empirical data, improving the findings' validity and dependability (Creswell and Creswell, 2017). In the end, deductive reasoning advances the scientific method by allowing researchers to expand on previously discovered information and improve theoretical models (Creswell and Miller, 2000).

This study adopted the deductive research approach because the deductive approach enables the testing of known theories and hypotheses about leadership, diversity, and productivity. In addition, this systematic methodology not only helps to corroborate existing information, and also improves the dependability and generalizability of findings, allowing for the establishment of obvious associations between leadership practices, workforce diversity, and productivity.

3.3.2. Inductive Approaches

According to Creswell and Creswell (2017) and Sim et al. (2018), the inductive research approach is more exploratory, beginning with individual findings and progressing to bigger generalizations or theories. Levitt et al. (2018) opine that the inductive approach is a bottom-up process commonly connected with qualitative research, in which researchers gather data without a predetermined hypothesis. Hirose and Creswell (2023) added that the inductive approach includes studying patterns and themes in the acquired data, they can develop new insights and hypotheses that represent the intricacies of real-world situations.

Creswell et al. (2018) pointed out that a flexible and adaptive methodology is frequently used in inductive research, enabling researchers to adjust their strategies when new information becomes available. This flexibility helps to gain a greater grasp of context-specific concerns, which is especially useful when investigating novel or poorly known phenomena (Richey and Klein, 2014; Creswell, 2021). Even though inductive research may not yield as broadly applicable results as deductive methodologies, it can nonetheless yield valuable qualitative insights that can guide future theoretical development and research directions (Jones, 2022).

In this study, the inductive research approach was adopted because it provides an exploratory dimension that is essential for comprehending the intricacies and contextual elements that influence leadership and diversity in the construction sector. Given the Western Cape's unique social dynamics and cultural elements, qualitative approaches such as interviews and focus groups can provide valuable insights into the lived experiences of construction workers. This

method enables researchers to detect emergent themes and patterns that would not be captured by quantitative measures alone.

3.4. Research Strategy

This study adopted both quantitative and qualitative methods in an explanatory sequential mixed research approach to develop an effective leadership framework for enhancing productivity in construction workforce diversity and inclusion in the Western Cape Province. Furthermore, Creswell and Creswell (2018) as well as Pandey and Pandey (2021) demonstrate that a mixed method approach enhances the validity of the research, by covering up the shortcomings of one method and preventing bias in the data. A mixed method approach is characterized by the combining of multiple research approaches for collecting data, according to Flick (2015), Clark, Creswell, Green, & Shope (2008), and Leavy (2017). Sequential mixed-method research is deemed significant for the purpose of this study.

An explanatory sequential mixed-method design that begins with a quantitative phase and progresses to a qualitative phase offers an organised way to measure and find general trends first, then delve into more detailed explanations and interpretations (Bowen, Rose & Pilkington, 2017). Creswell and Creswell (2018) state that this method starts with the quantitative stage and gathers numerical data via surveys, tests, or pre-existing datasets in order to provide the groundwork. This makes it possible for researchers to evaluate correlations between variables, analyse trends, and gauge the frequency of particular variables (Subedi, 2016; Richey and Klein, 2014).

The qualitative phase allows the researcher to investigate the "why" and "how" of the patterns noticed in the quantitative data (Creswell et al., 2018). According to Sim et al. (2018), interviews can provide researchers with insights into participants' experiences, viewpoints, and motives, which can assist explain quantitative data. The qualitative is regarded as a follow-up is especially important when quantitative results reveal unexpected or ambiguous conclusions, since it allows for a more in-depth, contextually rich understanding than numbers alone can provide (Plano Clark, 2017).

This method works particularly well in investigations where large-scale, broadly applicable data is needed to identify preliminary associations or developments, and additional research is needed to comprehend the underlying mechanisms or individual experiences.

3.6. Time Horizons

The longitudinal time horizon was used, with a quantitative approach first, followed by a qualitative approach (Vogl, 2023). Furthermore, Leavy (2017) divulges that this methodology allows for the collection of quantifiable data over a certain length of time to discover trends and patterns in workforce diversity and its impact on productivity in the construction industry. This approach starts by evaluating this quantitative data, the researcher was able to develop a baseline understanding of the current team dynamics (Fetters, Curry and Creswell, 2013; Creswell et al., 2003). Following that, the qualitative phase involves gaining in-depth insights via interviews, allowing me to investigate the underlying causes and contextual factors impacting the observed trends (Venkatesh, Brown and Sullivan, 2016). Additionally, Neale (2021) contends that the sequential approach not only allowed for a full investigation of how productivity evolves over time in connection to diversity initiatives, but it also provided a nuanced knowledge of the complexity inherent in these relationships, thus, expanding the study's findings and implications.

3.7. Data Collection and Analysis

Sutton and Austin (2015) and Pallant (2020) and Chan, Fung and Chien (2013) and Creswell et al. (2018) describe data collection and analysis as critical components of my research, which takes a mixed-methods approach that combines quantitative and qualitative techniques. In this study quantitative data were collected using structured surveys meant to assess leadership practices to enhance labour productivity and diversity-related issues in the construction industry (Sutton and Austin, 2015). The data was then evaluated using statistical approaches such as descriptive statistics and inferential statistics to detect trends and correlations between variables. Following that, qualitative data were gathered through semi-structured interviews, in which participants shared their experiences and thoughts on how diversity affects team dynamics and productivity (Chan, Fung and Chien, 2013). The qualitative data were subjected to content analysis, which found and classified reoccurring themes and insights to supplement the quantitative results (Chan, Fung and Chien, 2013).

3.7.1. Data Collection

3.7.1.1. Population size

Population refers to the entire group from which a sample is selected (Sahu, 2013). According to Bryman (2004), the term refers to a group of people, items, or animals that the researcher considers for research purposes. Population in research varies and depends on the nature and field of study, rather than simply referring to a group of people being studied (Flick, 2015;

Taherdoost, 2016). For this study, the population considered comprises the managers, team leaders, owners, or employees who are in charge of a leadership position of the contractors registered under cidb register Grade 6 to 9 of General Building (GB) of the Western Cape Province.

According to Mansaray (2019), people in leadership positions play a critical role in establishing a corporate culture and spearheading diversity and inclusion programmes. Management viewpoints are crucial for comprehending how team relationships, output, and project success are impacted by leadership techniques (Anderson and Anderson, 2010). Piotrowski, Napiorkowski and Piotrowska (2020) opine that these team leaders are frequently in charge of putting policies and procedures into place that either support or undermine diversity. This study concentrated on this group, so the researchers could learn more about the unique obstacles and chances that they encounter when promoting an inclusive workplace.

A diverse range of leadership roles, such as construction managers, site agent, quantity surveyor, team leaders, and owners, ensures a thorough awareness of the many perspectives within the construction hierarchy within the cycle of Grades 6 to 9 of cidb GB. Each function provides unique perspectives on how leadership styles and practices influence team dynamics and project outcomes.

3.7.1.2. Sampling method

This study adopted a probability sampling technique using a random sampling technique. Sample size is a fundamental tool in research used to select inferences about a population based on sample characteristics (Pandey and Pandey, 2021; Nayak and Singh, 2021; Krejcie and Morgan, 1970; Kumar, 2002; Gupta and Gupta, 2022).

A study's sample size depends on effect size, variability, power, significance level, and type of analysis (Singh & Masuku, 2014). To achieve the objectives of this study Singh and Masuku (2014) equation was adopted (n = N.Z² p.q. (1-P) / e².(N-1)+ Z².p.q), where n is the sample size, N is the population size, Z is based on the desired confidence level (95%), e is the margin of error, p is the estimated proportion of an attribute that is present in the population, and q is 1-p. The sample size for this study was contractors registered under cidb register under GB grade 6 to 9 within the Western Cape Province. According to cidb (2024), contractors registered under cidb Grade 6 are 90, contractors registered under cidb Grade 7 are 69, contractors registered under cidb Grade 8 are 25, and contractors registered under cidb Grade 9 are 22 as presented in Table 3.1. In total overall population is 206 contractors registered under cidb Grade 6 to 9.

Table 3.1: cidb Grading (General Building)

Grade of the contractor	No. of contractors in general building (GB) (population)
Grade 6	90
Grade 7	69
Grade 8	25
Grade 9	22
Total	**206**

The sample size for the study is as follows:

$$n = \frac{N \times Z^2 \, p \times q \times (1-P)}{e^2 \times (N-1) + Z^2 \times p \times q}$$

$$\frac{206 \times (1.96)^2 \times 0.5 \times (1-0.5)}{(0.5)^2 \times (206-1) + (1.96)^2 \times 0.5 \times (1-0.5)}$$

134.32

Therefore n = **135**

The calculated minimum sample size for the study was 135 contractors. However, to improve the robustness of the findings and to account for potential non-responses or incomplete data, a total of 154 contractors were randomly selected and invited to participate in the study. This decision was also made to ensure better representation across different cidb grading categories of GB in the Western Cape Province. Selecting a sample size greater than the minimum enhances the statistical power of the analysis and provides a more reliable basis for generalizing the results to the broader population of contractors. This approach aligns with best practices in empirical research and strengthens the credibility and validity of the findings (Nayak and Singh, 2021).

With regard to qualitative data collection, establishing the sample size for interviews requires balancing depth and practicality, which is frequently influenced by the concept of data saturation (Malterud, Siersma and Guassora, 2016). Data saturation occurs when more interviews no longer produce new themes or insights, indicating that the researcher has collected the full variety of perspectives on the topic (Hennink, Kaiser and Weber, 2019; Flick, 2015). Qualitative interviews often entail 5 to 30 participants, with the exact number determined by criteria such as study scope, demographic variety, and research approach (Robinson, 2014; Vasileiou et al., 2018; Mack, 2005). This study randomly selected 5 participants from participants who took part in the survey as recommended by Vasileiou et al. (2018).

3.7.1.3. Instruments

This study adopted both survey questionnaires and semi-structured interviews to achieve the study objectives and aim. The purpose of the survey instrument is to collect quantitative data that clarifies the connections between diversity in the workforce, productivity, and leadership practices in the construction sector (Vasileiou et al., 2018). Other than that this study utilizes a combination of closed-ended questions and Likert scale ratings (Sutton and Austin, 2015). This allows for the capturing of complex attitudes and perceptions (Harpe, 2015). Respondents can clearly describe the efficacy of different leadership techniques by utilizing a Likert scale with a range of 1 to 5, and demographic data provide context for assessing trends across distinct groups (Creswell and Poth, 2016). Shrestha (2021) opine that it also provides deeper insights into how varied teams may be led effectively to increase productivity in construction projects.

Semi-structured interviews are an important qualitative research method that enables for a more in-depth study of participants' experiences and opinions, especially in the context of leadership, workforce diversity, and productivity in the construction industry (Drisko and Maschi, 2016). This interview approach combines pre-set questions with the ability to delve deeper based on participant responses, creating a conversational environment that encourages openness and a rich narrative (Creswell, 2013). According to Creswell and Creswell (2018), the interview guide usually starts with an introduction that explains the study's purpose and ensures confidentiality, followed by core questions that focus on key themes like perceptions of effective leadership, the impact of team diversity on project outcomes, and the challenges of creating an inclusive environment. The interview guide enables researchers to collect extensive, nuanced data that illustrates the complexity of leadership dynamics (Creswell, 2013).

3.7.1.4. Data collection procedure

For the purpose of obtaining reliable and valid results, both quantitative and qualitative questionnaire surveys were used. The purpose of the study was to emphasised in detail on the questionnaires. In order to achieve the objectives of this study, data was collected to support its objectives. Management team members of the contractor were given closed-ended questionnaires. Followed by interviews that provided a broad understanding of effective leadership for enhancing construction workforce diversity and inclusion in the Western Cape Province; during the interview, open-ended questions were asked to enable the interviewee to share their experiences.

According to Taherdoost (2021), a well-defined data gathering procedure is required to ensure the credibility and validity of study findings. The process begins with explicitly defining the study's

objectives and choosing the best data collection methods, whether quantitative, qualitative, or a combination of the two (Taherdoost, 2021). The objectives of this study are: to investigate what leaders, perceive as the barriers to inclusive leadership in the construction industry, to determine the characteristics of effective leadership in a diverse and inclusive construction environment, to determine how leaders manage diversity and inclusion within the construction industry, to determine whether employee engagement and inclusion influence individual or team performance in the construction industry to achieve the study objectives through the collection of in-depth personal experiences, interviews that may appropriate; for larger patterns, surveys may be more helpful. After deciding on procedures, researchers create data-gathering tools like questionnaires or interview guides (Chan, Fung and Chien, 2013). These tools should be rigorously constructed to accurately capture the relevant information, and they may be subject to expert evaluation to assure their dependability (Creswell, 2013; Creswell et al., 2003). Survey questionnaires were formed in five section were section one was the biographical information, section two was the perception of contractors' leadership regarding the barriers to inclusive leadership in the construction industry, section three was the characteristics of effective leadership in a diverse and inclusive construction environment, section four was the leaders' management practices of diversity and inclusion within the construction industry, and section five was the employee engagement and inclusion to influence individual or team performance in the construction industry. A five-point Likert scale was adopted in this study namely: 1=Never, 2 = Rarely, 3=Sometimes, 4=Often, and 5 = Always, this scale questions were adopted in section two. Section three adopted the following Likert scale: 1=Strongly disagree, 2=Disagree, 3=Indifferent, 4=Agree, and 5=Strongly agree. Section four adopted the following scale: 1=Minor, 2=Near minor, 3=Sometimes, 4=Near major, and 5=Major. Section 5 was similar to section 2. According to Joshi et al. (2013) and Emerson (2017), Likert scale questions offer respondents a range of options to indicate their degree of agreement or disagreement with a particular statement, enabling researchers to quantify subjective opinions. Likert scale is a commonly used tool in surveys and questionnaires designed to measure attitudes, opinions, or perceptions (Sullivan and Artino Jr, 2013). However, there are certain crucial factors to consider while utilizing the Likert scales. Researchers must be aware of potential response biases, such as central tendency bias (where respondents avoid extreme categories) and acquiescence bias (where respondents tend to agree with statements) (Harpe, 2015).

With regards to interview questions, the interview guide was formed of two sections, were section one was the background information of the interviewee, and section two was the leadership practices adopted by contractors to enhance workforce productivity.

3.7.1.5. Administration of survey and interview guide

The administration of the survey and interview guide is an important part of data collecting since it ensures that trustworthy and valid information is acquired to meet the study objectives (Creswell, 2013). The survey's questions are simple and short, combining closed-ended and open-ended formats to elicit a wide range of responses from contractors in the Western Cape Province (Drisko and Maschi, 2016). According to Creswell and Poth (2016), survey questionnaires can be administered through both online and printed formats, with clear instructions to encourage participation while ensuring confidentiality. In contrast, the interview guide is designed with open-ended questions to elicit detailed responses from chosen participants (Creswell, 2013). The details of each contractor were obtained from cidb contractor register. Participants had a month to complete the questionnaire and react directly to the researcher or the supervisor. In this study, interviews were planned at the convenience of the participants and conducted professionally, with written agreement secured for participation and recording. Ethical considerations, such as voluntary involvement and data confidentiality, are scrupulously upheld throughout the process of participation. This combination strategy enables the collection of quantitative and qualitative data, resulting in a full understanding of the role of leadership, diversity, and inclusion in increasing productivity in the construction sector.

3.7.2. Data Analysis

3.7.2.1. Quantitative Analysis

The study objectives were achieved through testing, tabulating, categorising, and analysing the findings (Yuvaraja & Ramya, 2019). This investigation used version 29 of the Statistical Package for Social Science (SPSS) to analyse quantitative data. Data from questionnaires was analysed using descriptive and inferential statistics.

3.7.2.1.1. Descriptive statistics

Descriptive statistics might comprise measures of central tendency, variability, and frequency distribution, each with a specific purpose in data interpretation (Leech and Onwuegbuzie, 2007). Pallant (2020) reveals that descriptive statistics measures of central tendency, such as mean, median, and mode, provide information about the dataset's average values or most common responses. The mean provides an overall average, whereas the median represents the midway point when data is arranged, which is very important in comprehending skewed distributions (Creswell and Poth, 2016).

Pallant (2020) opine that the standard deviation is especially essential because it measures the average distance between each data point and the mean, allowing researchers to assess the level of variability in the dataset. A low standard deviation implies that the data points are closely clustered around the mean, implying uniformity in replies, whereas a high standard deviation suggests a wider spread of data, implying a variety of perspectives or experiences among participants (Reardon et al., 2017). Frequency distribution tables or graphical representations like histograms or pie charts show how responses are divided across categories.

3.7.2.1.2. Inferential statistics

This study adopted Factor Analysis (FA) to reduce large values into smaller values. McDonald (2014) argues that FA combines similar variables into factors, lowers the dimensionality of the data and facilitates the understanding of the underlying patterns by researchers. FA includes evaluating the data's eligibility for factor analysis by assessing correlations between variables to determine whether they are adequately related (Shrestha, 2021; Pallant, 2020). The Kaiser-Meyer-Olkin (KMO) test and Bartlett's sphericity test are two commonly used metrics (Kim & Mueller, 1978). Once the data is appropriate, researchers will extract factors using techniques such as principal component analysis (PCA) or common factor analysis (Pallant, 2020). To analyse the factors, look at the factor loadings, which show the intensity and direction of the correlations between the observed variables and the underlying factors (Beavers et al., 2019). This interpretation aids researchers in determining which variables clump together, exposing the hidden conceptions that underpin the observable data. According to Bandalos and Finney (2018) and Pallant (2020), the identified components can be employed in subsequent analyses, allowing for a more focused look at specific constructs. Component naming was used in this study. The process of component naming entails giving the factors found by factor analysis descriptive names (Rubertsson et al., 2015; Ogba and Tan, 2009). This process is essential because it converts the statistical data into understandable constructs for academics and other interested parties (Williams, Onsman and Brown, 2010).

To compare mean values across variables ANOVA test was adopted in this study. Analysis of Variance (ANOVA) is a statistical approach for comparing means across various groups to see if they differ significantly (Kim, 2017). ANOVA is especially effective when researchers seek to determine the effect of one or more independent factors on a dependent variable (Ogba and Tan, 2009). For example, it can assist identify whether different treatment groups in a clinical trial show

varying levels of progress or whether different demographics have different perspectives in a survey study as recommended by Pallant (2020).

3.7.2.2. Qualitative Analysis

Content analysis was employed in qualitative studies. Drisko and Maschi (2016) pointed out that textual, visual, or audio content can be analysed using content analysis, a methodical research technique that helps uncover correlations, patterns, and meanings in the data. Researchers can use content analysis to measure and analyse the frequency of specific words, themes, or concepts in a particular body of information, which makes it an invaluable tool in a variety of disciplines, such as marketing, sociology, psychology, and communication studies (Prasad, 2008; Elo and Kyngäs, 2008). Qualitative, quantitative, or mixed-methods content analysis is possible based on the objectives of the study and the type of content being examined (Neuendorf, 2017).

3.8. Validity, Reliability, and Trustworthiness

Validity and reliability are measures used to demonstrate credibility and truthfulness of findings (Pallent, 2017; Thomas, 2021). Moreover, Thomas (2021) argued that although some engineering terms make use of their own standard measuring, construction management measurements may either be tough or uniformly defined. Zangirolami-Raimundo, de Oliveira Echeimberg and Leone (2018) concurs that perfect reliability and validity are nearly impossible to achieve especially in social research since social theory can often be not directly noticeable, diffuse and ambiguous. As a result, a metric can be valid but unreliable when measuring the same construct consistently; on the other hand, a measure can be trustworthy but unreliable when tested with the exact utensil, resulting in different results. Furthermore, the Linkert-scale survey questionnaires were tested using Cronbach's alpha co-efficient to measure the internal reliability of quantitative questions ranging from 0 to 1.0, adequate reliability in Cronbach alpha co-efficient is 0.7 or greater (Cronbach, 1951; Ibikunle, Oladipo, Chukwu, Odole and Okeke, 2015). Hence, in this study, the reliability of the results was in the researcher's mind throughout the process of the study.

3.8.1. Qualitative Trustworthiness

To ensure the validity of interview findings, this study adopted a qualitative trustworthiness. According to Gunawan (2015), qualitative trustworthiness is critical in qualitative research because it assures that the findings are credible, transferable, reliable, and confirmable. Unlike quantitative research, which frequently uses statistical measures, qualitative research seeks to

provide a thorough knowledge of human experiences and societal processes (Plano Clark, 2017). Thus, to establish trustworthiness, researchers use procedures such as member checks, in which participants confirm the accuracy of findings, and triangulation, which involves using various data sources or methodologies to corroborate conclusions. Furthermore, Zangirolami-Raimundo, de Oliveira Echeimberg and Leone (2018) claim that extensive audit trails improve dependability by documenting the research process and judgments made. By practicing reflexivity, researchers can recognise and moderate their biases, hence increasing confirmability. Maintaining trustworthiness not only improves the validity of qualitative findings but also promotes ethical research methods by correctly expressing participants' voices and experiences (Connelly, 2016).

3.9. Ethical Considerations

In this research, the researcher ensured participant anonymity by protecting the names of contractors and respondents during the survey study. There were no corrupt practices, cash, or contributions to politics used in the selection of research subjects. The quality of research depended on the competence of participants and the quality of their data. Furthermore, maintaining confidentiality and anonymity is critical; researchers must take strong precautions to protect participants' identities and preserve data securely to prevent unauthorised access. Furthermore, reducing potential injury to participants is an ethical requirement, mandating extensive risk assessments to identify and mitigate any physical, psychological, or social hazards involved with the research. Addressing these ethical considerations, researchers may build trust and encourage open engagement, thereby improving the validity and societal significance of their findings while respecting the rights and dignity of all participants.

3.10. Chapter conclusion

Chapter three describes the research methods used to investigate the leadership framework for increasing productivity in the construction sector through workforce diversity and inclusion. This study uses a sequential mixed-methods strategy, combining quantitative and qualitative data collection techniques to create a thorough grasp of the research subject. While the semi-structured interviews enable a thorough examination of participants' experiences and insights, the structured survey enables the gathering of quantifiable data on perceptions of diversity and leadership effectiveness. This methodological approach is intended to provide a comprehensive understanding of the ways in which diversity and leadership influence productivity in construction teams, while also effectively addressing the research objectives.

CHAPTER FOUR
DATA ANALYSIS, INTERPRETATION AND DISCUSSIONS

4.1. Introduction

This chapter presents the results on improving productivity in the construction sector through workforce diversity and inclusion. The data was gathered using a sequential mixed methods research approach, comprising quantitative surveys followed by semi-structured interviews. The chapter is divided into sections relating to the presentation of the quantitative and qualitative data. The key issues include leadership approaches to productivity and workforce diversity. The findings aim to provide a detailed understanding of the current state of contractors in the Western Cape Province in terms of leadership practices that promote diverse and inclusive workforces for increasing workforce productivity, as well as insights to inform potential frameworks for leadership and operational improvement in the construction sector.

4.2. Response rate

The current quantitative data shows the questionnaire survey's response rate. 154 leaders of contractors participating in project delivery received questionnaires. Respondents included site agents, construction managers, and other construction professionals involved in project execution. 98 survey questionnaires were sent out to participants via email. Twenty-eight (28) of the 98 were correctly filled out and returned. A total of fifty-six (56) survey questionnaires were physically given to contractors in the Western Cape Province. Thirty-six (36) of the fifty-six (56) survey questionnaires were answered accurately by the respondents. 64 surveys were thus correctly filled out, resulting in a 41.56% response rate. According to Akintoye and Fitzgerald (2000) and Hwang et al. (2018), most construction-related studies consider a response rate of between 20–30% acceptable.

4.3. Demographic information

4.3.1. Education/ qualification of respondents

It is evident from Table 4.1 that the majority of respondents (51.6%) have a Degree qualification, followed by those with a Diploma and others (25.0% out of 64 respondents). Additionally, Table 4.3 indicates that 10.7%, 7.8%, and 4.7% of respondents had Masters, Matric, and other qualifications respectively. This shows that the majority of contractors management in operation are qualified to work in the construction sector, and the majority of respondents hold tertiary qualifications. A comprehensive foundation of formal education and specialised qualifications like

construction management, providing essential knowledge and skills for professional growth and expertise.

Table 4.1: Education/ Qualifications

Education	Frequency	Percent	Cumulative Percent
Matric	5	7.8	7.8
Diploma	16	25.0	32.8
Degree	33	51.6	84.4
Masters	7	10.9	95.3
Others	3	4.7	100.0
Total	**64**	**100.0**	

4.3.2. Occupation of the respondents

Table 4.2 makes it evident that approximately 34.4% of respondents occupy the position of construction manager, followed by team leaders accounting for a noteworthy 29.6% of respondents. Furthermore, additional participants, including directors, quantity surveyor, and others, made up 36.0% of the respondents. This suggests that construction managers or team leaders (site agent and foremen) oversee workforce productivity in construction project implementation. According to the findings, a noteworthy 64.0% of the respondents were construction managers and team leaders. Participants who currently holds a leadership position that leverages expertise and skills to drive workforce diversity and inclusion responsibilities and contribute to organisational goals.

Table 2.2: Occupation of respondents

Occupation	Frequency	Percent	Cumulative Percent
Construction manager	22	34.4	34.4
Quantity surveyor	12	18.8	53.1
Director	8	12.5	65.6
Team leader	19	29.6	95.3
Other	3	4.7	100.0
Total	**64**	**100.0**	

4.3.3. Length of time in current position

The duration of their current position is displayed in Table 4.3. Among the respondents, 37.5% have been in their current positions for 6 to 5 years, 29.7% have been in their current positions for 11 to 15 years, 18.8% have been in their current positions for 1 to 5 years, and only 14.1%

have been in their current positions for more than 15 years. According to Table 4.3, the majority of respondents appear to have adequate job experience in the construction sector.

Table 4.3: Length of time in current position

Length of time in current position	Frequency	Percent	Cumulative Percent
1-5 years	12	18.8	18.8
6-10 years	24	37.5	56.3
11-15 years	19	29.7	85.9
Above 15 years	9	14.1	100.0
Total	64	100.0	

4.3.4. Length of time in construction industry

Regarding construction-related employment experience. Table 4.4 shows that 40.6% of respondents have 11-15 years of relevant experience, 31.3% have 16-20 years of experience, and 17.2%, 6.3%, and 4.7% have worked in the industry for 6-10, 20+, and 1-5 years, respectively. A considerable proportion of responders who are directly involved in managing a diverse workforce to increase productivity had prior expertise in the construction business. Respondents who have been occupying and serving in the current position for a duration of time reflects to a sustained commitment and accumulated experience.

Table 4.4: Length of time in construction industry

Length of time in construction industry	Frequency	Percent	Cumulative Percent
1-5 years	3	4.7	4.7
6-10years	11	17.2	21.9
11-15 years	26	40.6	62.5
16-20 years	20	31.3	93.8
20 and above	4	6.3	100.0
Total	64	100.0	

4.3.5. Age group of the respondents

Table 4.5 displays the age distribution of the 64 respondents. The majority of responders 45.3% were between the ages of 46 and 55, with 29.7% falling between the ages of 36 and 55. 17.2% were between the ages of 26 and 35 years. 6.3% of respondents were above the age of 55, while only 1.6% were between the ages of one and five years. Few individuals aged 18-25 hold leadership positions. The data show that the majority of responders were over 40 years old. In terms of leadership practices, respondents are of various ages and provide a wide range of

viewpoints based on different life steps and experiences that contribute to the productivity of workers.

Table 4.5: Age group of respondents

Age group	Frequency	Percent	Cumulative Percent
18-25years	1	1.6	1.6
26-35 years	11	17.2	18.8
36-45 years	19	29.7	48.5
46-55 years	29	45.3	93.8
Above 55 years	4	6.3	100.0
Total	64	100.0	

4.3.6. Gender of respondents

Table 4.6 indicates that while construction industry is predominantly male dominated, both genders are represented among the 64 respondents, with 67.2% identifying as male and 32.8% as female. The responses reflect a variety of gender identities, which contributes to a diverse and inclusive set of opinions.

Table 4.6: Gender of respondents

Gender	Frequency	Percent	Cumulative Percent
Male	43	67.2	67.2
Female	21	32.8	100.0
Total	64	100.0	

4.3.7. Race of respondents

With regard to the race of the respondents. Table 4.7 shows that most of contractor's leadership positions are dominated by coloured race with an overwhelming 37.5% of respondents representing the coloured race, 31.3% of respondents were black or Africans, followed by 26.6% of respondents were Whites. Furthermore, only 4.7% of respondents were Indians. It should be noted that the race of respondent was collected from the Western Cape Province and cannot be generalized. The responders are from varied racial backgrounds, ensuring a diversity of cultural opinions and concepts. Furthermore, diversity improves the study goal by incorporating a variety of experiences that reflect the complexity of the community.

Table 4.7: Race of respondents

	Frequency	Percent	Cumulative Percent
Black/ African	20	31.3	31.3
White	17	26.6	57.8
Coloured	24	37.5	95.3

Indian	3	4.7	100.0
Total	64	100.0	

4.3.8. cidb Grade of the contractor

Table 4.8 shows the cidb rating for contractors where the respondents were employed. It should be mentioned that 31.3% of the contractors were rated as grade 7, while 26.6% of the enterprises were classified as grade 8. While 25.0% of contractors were in grade 6, whereas only 17.2% of enterprises were in grade 1. The majority of active contractors were in Grades 7 and 8, with 57.9% of respondents working for contractors.

Table 4.8: cidb Grade

	Frequency	Percent	Cumulative Percent
Grade 6	16	25.0	25.0
Grade 7	20	31.3	56.3
Grade 8	17	26.6	82.8
Grade 9	11	17.2	100.0
Total	64	100.0	

4.3.9. Business operation

The results from Table 4.9 number of years the contractors have been in existence. It is clear from Table 4.9 that about 40.6% of the contractors has been in existence between 31 and 40 years, followed by a notable 35.9% of contractors were in existence between 21 and 30 years. In addition, 20.3% of respondents were working for contractor who has been operating between 11 and 20 years, followed by a mere 3.1% of contractors who has been operating less than 10 years. The results indicated that the majority of the contractors has been in existing in the construction business.

Table 4.9: Business operation

	Frequency	Percent	Cumulative Percent
Less than 10 years	2	3.1	3.1
11-20 years	13	20.3	23.4
21-30 years	23	35.9	59.4
31-40 years	26	40.6	100.0
Total	64	100.0	

4.3.10: Construction knowledge

Table 4.10 present respondents' construction business knowledge. 48.4% of respondents obtained their construction knowledge through tertiary education. Not surprisingly 18.8% of respondents obtained construction knowledge through work experience, 14.1% of respondents

obtained construction knowledge through skills / Trade training. Followed by 10.9%, 4.7%, and 3.1% of respondents who obtained construction knowledge through postgraduate qualifications, contractor development programme, and others respectively as shown on Table 4.10. The respondents had varied levels of construction knowledge, which range from fundamental concepts to complex technical skills. This diversified knowledge allows for a thorough awareness of industry practices and difficulties.

Table 4.10: Construction knowledge

	Frequency	Percent	Cumulative Percent
Contractor development programme	3	4.7	4.7
Experience	12	18.8	23.4
Postgraduate qualifications	7	10.9	34.4
Skills / Trade training	9	14.1	48.4
Tertiary education	31	48.4	96.9
Others	2	3.1	100.0
Total	64	100.0	

4.3.11. Form of business

Table 4.11 shows the form of business of the contractor. It should be mentioned that 62.5% of the respondents were working for private company, while 20.3% of the respondents were working contractor formed in partnership. While 17.2% accounting for both close corporation and public company.

Table 4.11: Form of business

	Frequency	Percent	Cumulative Percent
Partnership	13	20.3	20.3
Close corporation	10	15.6	35.9
Private company	40	62.5	98.4
Public company	1	1.6	100.0
Total	64	100.0	

4.4. Reliability of the results

This study adopted Cronbach's Alpha to ensure the reliability of the research results. A popular statistic for assessing the validity of tests and scales in research initiatives is Cronbach's alpha (Taber, 2017). This is because it only needs to be administered once, making it simpler to utilize than other estimates (Tavakol and Dennick, 2011). Aboginije et al. (2021) used Cronbach Alpha to examine the reliability of their research to determine the reliability of the data. Cronbach's alpha is a crucial statistic for evaluating the validity of scales and surveys in a variety of fields, claims Taber (2018). The reliability test for the study is shown in Table 4.12, the results show the reliability of the results with an average of 0.789 indicating a moderate result. Thus, among the

excellent, strong, reliable, robust, and robust alpha values were described as excellent (0.93–0.94), strong (0.91–0.93), high (0.73–0.95), good (0.71–0.91), high (0.70– 0.77), reasonably high (0.70– 0.77), low (0.68), acceptable (0.67–0.87), adequate (0.64–0.85), moderate (0.61– 0.65), satisfactory (0.58-0.97), acceptable (0.45–0.98), sufficient (0.45–0.96), not satisfactory (0.4–0.55) and low (0.11).

Table 4.12: Reliability test

Item	No. of items	Description	Cronbach's alpha coefficient value	Rank
1	17	Barriers to inclusive leadership in the construction industry	0.748	Moderate
2	29	The characteristics of effective leadership in a diverse and inclusive construction environment	0.847	Acceptable
3	21	Leaders' management practices of diversity and inclusion within the construction industry	0.652	Adequate
4	14	Employee engagement and inclusion to influence individual or team performance in the construction industry	0.910	Strong
Sum			0.789	Moderate

4.5. Leadership framework for enhancing productivity in construction through workforce diversity and inclusion

4.5.1. Perception of contractors' leadership regarding the barriers to inclusive leadership

4.5.1.1. Policy and legal framework
The respondents were asked to indicate their perception regarding barriers affecting inclusive leadership in a diverse construction workforce in the Western Cape Province, using a 5-point scale: Never = 1, Rarely = 2, Sometime = 3, Often = 4, and Always = 5. The respondents were informed to note the unsure option.

Table 4.13 shows the perception of respondents regarding barriers affecting inclusive leadership in a diverse construction workforce. It is evident from Table 4.13 that political interference is one of the biggest barriers preventing contractors from adopting a diverse and inclusive workforce to improve workforce productivity in construction project delivery is ranked highest, with a mean value (MV) of 4.53. This is supported by the fact that 50.0% and 26.6 of respondents pointing that they are always, and often affected by political interference respectively, while some respondents believe that political interference sometimes affects them with 9.4%. Table 4.13 shows that only 3.1% of respondents have never been affected by political interference, and 10.9% of respondents were unsure regarding this factor. Awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians, and regulatory organisations was ranked second with MV= 4.42, and this was substantiated by 43.8% of respondents who were always

affected by this factor, while 40.6% of respondents were often affected. 3.1% of respondents were rarely and never affected by awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians, and regulatory organisations, a notable 7.8% of respondents were unsure. The third most ranked factor was labour law promoting equal workforce opportunities MV=4.39 and this factor was supported by 59% of respondents who are always affected by this factor from adopting inclusive leadership practices. The least ranked factor was existing policy and legal frameworks in South Africa that limit the promotion of an inclusive workforce with a MV=3.98. Overall, these factors collectively influence contractors, with an average MV of 4.26.

Table 4.13: Policy and legal framework

N = ………64 Policy and legal framework	Unsure	Never	Rarely	Sometime	Often	Always	Mean	Std.	Rank
Political interference	10.9	3.1	0.0	9.4	26.6	50.0	4.53	1.023	1
Awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians, and regulatory organisations	7.8	3.1	3.1	1.6	40.6	43.8	4.42	1.005	2
Labour law promoting equal workforce opportunities	0.0	1.6	3.1	9.4	26.6	59.4	4.39	.902	3
Availability of legal resources and assistance for individuals or groups	6.3	4.7	4.7	10.9	35.9	37.5	4.16	1.158	4
Bias in the workplace	6.3	4.7	9.4	9.4	32.8	37.5	4.08	1.238	5
Existing policy and legal frameworks in South Africa limit the promotion of an inclusive workforce	4.7	1.6	7.8	25.0	26.6	34.4	3.98	1.120	6
Valid N (listwise)							4.26		

Concerning the ANOVA test, Table 4.14 indicates the ANOVA test results. In this study ANOVA test was done to determine whether there is a consensus regarding the policy and legal framework, ANOVA test was performed to check if there is a significant difference across the different race of contractors' management team in leadership positions concerning the policy and legal framework that impact the adoption of effective leadership practices to enhance diverse and inclusive workforce and subsequently derail workforce productivity. Table 4.14 presents the ANOVA test results, and the results revealed that there are no significant differences relating to policy and legal framework in terms of the different respondents' race since the significant level is $p > 0.05$.

Table 4.14: ANOVA test for policy and legal framework

ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
Existing policy and legal frameworks in South Africa limit the promotion of an inclusive workforce	Between Groups	2.814	3	.938	.739	.533
	Within Groups	76.171	60	1.270		
	Total	78.984	63			
Availability of legal resources and assistance for individuals or groups	Between Groups	.296	3	.099	.070	.976
	Within Groups	84.141	60	1.402		
	Total	84.438	63			
Labour law promoting equal workforce opportunities	Between Groups	3.334	3	1.111	1.392	.254
	Within Groups	47.900	60	.798		
	Total	51.234	63			
Political interference	Between Groups	7.045	3	2.348	2.393	.077
	Within Groups	58.892	60	.982		
	Total	65.938	63			
Bias in the workplace	Between Groups	7.705	3	2.568	1.733	.170
	Within Groups	88.904	60	1.482		
	Total	96.609	63			
Awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians, and regulatory organisations	Between Groups	4.067	3	1.356	1.366	.262
	Within Groups	59.543	60	.992		
	Total	63.609	63			

4.5.1.2. Representation

The respondents were asked to indicate their perception regarding barriers affecting inclusive leadership in a diverse construction workforce in the Western Cape Province, using a 5-point scale: Never = 1, Rarely = 2, Sometime = 3, Often = 4, and Always = 5. The respondents were informed to note the unsure option.

It is evident from Table 4.15 that lack of representation in terms of race, gender, ethnicity, or disability is one of the most factors contributing to poor representation among workforce with MV= 4.39. This is supported by the fact that 46.9%, and of respondents pointing that they are always affected by lack of representation in terms of race, gender, ethnicity, or disability, 26.6% are often affected, while some respondents believes that lack of representation in terms of race, gender, ethnicity, or disability sometimes affect them with 14.1%. Table 4.15 shows employers does not encourage diversity and representation within their organisations is ranked second with MV= 4.34, and this was substantiated by 53.1% of respondents who were always affected by this factor, while 20.3% of respondents were often affected. 12.5% of respondents were sometimes affected. Table 4.15 present that Initiatives aimed at increasing representation is one of the factors affecting contractors diversity and inclusion with MV = 4.19. This factor is supported by 59.9% of respondents who perceive that as the significant factor, it is important to note that none of the respondents indicated that they are not adopting this initiative. The least ranked factor was the

culture of the organisation is shaped by the leadership's role in fostering inclusivity with MV=3.86 as shown in Table 4.15. Overall, these factors collectively influence contractors.

Table 4.15: Representation

N = ...64 Representation	Unsure	Never	Rarely	Sometime	Often	Always	Mean	Std.	Rank
Lack of representation in terms of race, gender, ethnicity, or disability	7.8	0.0	4.7	14.1	26.6	46.9	4.39	.986	1
Employers does not encourage diversity and representation within their organisations	6.3	3.1	4.7	12.5	20.3	53.1	4.34	1.130	2
Initiatives aimed at increasing representation	4.7	0.0	4.7	12.5	46.9	12.5	4.19	.889	3
Accessing educational and professional development opportunities	1.6	1.6	1.6	23.4	40.6	31.3	4.03	.908	4
A lack of diverse representation in leadership roles leads to obstacles to inclusion in the workplace	4.7	3.1	9.4	14.1	50.0	18.8	3.86	1.08	5
Valid N (listwise)									

Concerning the ANOVA test, Table 4.16 indicates the ANOVA test results. In this study ANOVA test was done to determine whether there is a consensus regarding the management race representation, ANOVA test was performed to check if there is a significant difference across the different races of contractors' management team in leadership positions concerning the representation that impact the adoption of effective leadership practices to enhance diverse and inclusive workforce and subsequently affects workforce productivity. Table 4.16 presents the ANOVA test results, and the results revealed that there are no significant differences relating to representation in terms of the different respondents' race since the significant level is $p > 0.05$.

Table 4.16: ANOVA test on Representation

		Sum of Squares	Df	Mean Square	F	Sig.
Lack of representation in terms of race, gender, ethnicity, or disability	Between Groups	.275	3	.092	.090	.965
	Within Groups	60.959	60	1.016		
	Total	61.234	63			
A lack of diverse representation in leadership roles leads to obstacles to inclusion in the workplace	Between Groups	2.760	3	.920	.778	.511
	Within Groups	70.974	60	1.183		
	Total	73.734	63			
Employers does not encourage diversity and representation within their organisations	Between Groups	5.055	3	1.685	1.341	.270
	Within Groups	75.382	60	1.256		
	Total	80.438	63			
Initiatives aimed at increasing representation	Between Groups	3.458	3	1.153	1.494	.225
	Within Groups	46.292	60	.772		
	Total	49.750	63			
Accessing educational and professional development opportunities	Between Groups	2.579	3	.860	1.045	.379
	Within Groups	49.359	60	.823		
	Total	51.938	63			

4.5.1.3. Organisational Culture and Practices

From Table 4.17, it is notable engagement, morale, and productivity of employees is ranked first as challenge faced by contractors in improve workforce productivity, with MV=4.33. This is indicated by the fact that an overpowering 73.5% of the respondents pointed that this factor is either often or always affects their labour productivity in construction project delivery. 12.5% of the respondents were sometimes affected by engagement, morale, and productivity of employees, and a minority of 7.8% of respondents were not sure. Also, a commitment to diversity and inclusion is ranked second, with MV=4.14, with 86.0% of respondents were often or always affected by this barrier. This factor shares a similar mean value of 4.14 with orgnisational efforts to promote equal opportunities. With regards, to orgnisational efforts to promote equal opportunities 84.4% of respondents were often or always affected by this barrier. However, a commitment to diversity and inclusion was the most factor affecting contractors in the Western Cape Province with std = 0.957 compared to 0.924 of orgnisational efforts to promote equal opportunities. Table 4.17 shows that contractors were challenged by diversity and inclusive awareness within organizational leadership or management which subsequently hinders the productivity of contractors workforce productivity and this factor have the mean value of 4.11. in support, 65.6% of respondents were often or always affected by this factor, 25.0% of respondents indicated that this only sometime affect them. It should be noted that only 1.6% of respondents are not affected by diversity and inclusive awareness within organisational leadership or management. From Table 4.17 it can be noted that the least ranked factor was the culture of the organisation is shaped by the leadership's role in fostering inclusivity with MV = 4.06. The average mean value of 4.16 indicates that these factors have a significant impact on contractors' workforce productivity.

Table 4.17: Organisational Culture and Practices

N = ...64 Organisational Culture and Practices	Unsure	Never	Rarely	Someti me	Often	Always	Mean	Std. Deviatio n	Rank
Engagement, morale, and productivity of employees	7.8	0.0	6.3	12.5	31.3	42.2	4.33	1.009	1
A commitment to diversity and inclusion	1.6	3.1	4.7	4.7	51.6	34.4	4.14	.957	2
Orgnisational efforts to promote equal opportunities	1.6	1.6	6.3	6.3	50.0	34.4	4.14	.924	2
Diversity and inclusive awareness within organizational leadership or management	4.7	1.6	3.1	25.0	28.1	37.5	4.11	1.041	4
Organisational norms	3.1	3.1	4.7	15.6	35.9	37.5	4.09	1.065	5
The culture of the organisation is shaped by the leadership's role in fostering inclusivity	4.7	1.6	7.8	14.1	40.6	31.3	4.06	1.052	6
Valid N (listwise)							4.15		

Concerning the ANOVA test, Table 4.18 indicates the ANOVA test results on organisational culture and practices. In this study ANOVA test was done to determine whether there is a consensus regarding organisational culture and practices, ANOVA test was performed to check if there is a significant difference across the different races of contractors' management team in leadership positions concerning the organisational culture and practices that impact the adoption of effective leadership practices to enhance diverse and inclusive workforce and subsequently affects workforce productivity. Table 4.18 presents the ANOVA test results, and the results revealed that there are no significant differences relating to organisational culture and practices in terms of the different respondents' races since the significant level is p > 0.05.

Table 4.18: ANOVA on Organisational culture and practices

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Organisational norms	Between Groups	1.921	3	.640	.553	.648
	Within Groups	69.516	60	1.159		
	Total	71.438	63			
Diversity and inclusive awareness within organizational leadership or management	Between Groups	5.824	3	1.941	1.866	.145
	Within Groups	62.410	60	1.040		
	Total	68.234	63			
Orgnisational efforts to promote equal opportunities	Between Groups	6.027	3	2.009	2.527	.066
	Within Groups	47.707	60	.795		
	Total	53.734	63			
Engagement, morale, and productivity of employees	Between Groups	7.447	3	2.482	2.628	.058
	Within Groups	56.663	60	.944		
	Total	64.109	63			
The culture of the organisation is shaped by the leadership's role in fostering inclusivity	Between Groups	6.746	3	2.249	2.141	.104
	Within Groups	63.004	60	1.050		
	Total	69.750	63			
A commitment to diversity and inclusion	Between Groups	5.299	3	1.766	2.021	.121
	Within Groups	52.435	60	.874		
	Total	57.734	63			

4.5.2. Characteristics of effective leadership in a diverse and inclusive construction environment

4.5.2.1. General Management

Table 4.19 shows the results for the contractor's general management to enhance workforce productivity through diverse and inclusive leadership. The respondents were asked to indicate the level of agreement with regard to general management as a key characteristic of effective leadership in the construction industry, using a 5-point scale: Strongly Disagree = (1); Disagree = (2); Indifferent = (3); Agree = (4); and Strongly Agree = (5).

It is evident from Table 4.19 that patience is ranked highest, with a mean value of 4.83. This is reinforced by the fact that 96.9% of respondents agreed that patience is one of the key leadership characteristics, while 1.6% were indifferent and 1.6% of respondents disagreed with this general management practice that enhances inclusive leadership. Table 4.8 also indicates that there were no respondents who strongly disagreed with this statement. Effective risk management is ranked second, with a MV = 4.52, as shown in Table 4.19. It is also notable that 84.4% of the respondents agreed that effective risk management enhances workforce productivity in construction project delivery, followed by 10.9% of respondents who were indifferent to this factor, and 1.6% of respondents disagreed with this mineral management factor. Humility and lead by example with a share mean value of 4.34 were ranked third, however, humility was most important characteristic with std = 0.761 compared to 1.027 of lead by example. 89.1% of respondents agreed that humility is a significant characteristic of inclusive leadership in construction industry, 6.3% of respondents were indifferent. 76.6% of respondents agreed that lead by example is one of the characteristics of inclusive leadership, 12.5% of respondents were indifferent. The least ranked general management factor, according to Table 4.19, is effective collaborative leadership style, with MV of 3.77. However, it is important to highlight that all MVs are above 3.00 which indicates that the factors are significant in terms of influencing inclusive workforce productivity in construction project delivery.

Table 4.19: General management

N = ……………………….……64 General Management	1 Unsure		2	3	4	5	Mean	Std.	Rank
Patience	0.0	0.0	1.6	1.6	9.4	87.5	4.83	.521	1
Effective risk management	3.1	0.0	1.6	10.9	25.0	59.4	4.52	.797	2
Humility	1.6	0.0	3.1	6.3	45.3	43.8	4.34	.761	3
Lead by example	4.7	1.6	4.7	12.5	25.0	51.6	4.34	1.027	3
Effective stakeholder engagement	1.6	0.0	3.1	18.8	37.5	39.1	4.17	.865	5
Effective strategic planning	1.6	1.6	4.7	14.1	40.6	37.5	4.13	.951	6
Effective cultural competence	7.8	1.6	7.8	14.1	42.2	26.6	4.08	1.088	7
Resilience	4.7	1.6	14.1	12.5	25.0	42.2	4.06	1.207	8
Courage to address biases and discrimination	1.6	3.1	7.8	10.9	40.6	35.9	4.03	1.069	9
Understanding and appreciating different perspectives	0.0	0.0	0.0	21.9	60.9	17.2	3.95	.628	10
Effective collaborative leadership style	4.7	4.7	7.8	21.9	42.2	18.8	3.77	1.137	11
Valid N (listwise)									

4.5.2.2. Workforce productivity leadership characteristics

Table 4.20 presents the findings related to workforce productivity leadership characteristics that can that improve a diverse and inclusive workforce productivity in construction project delivery. A

5-point scale was adopted where: Strongly Disagree = (1); Disagree = (2); Indifferent = (3); Agree = (4); and Strongly Agree = (5).

From Table 4.20, it is notable that inclusive decision-making is ranked first, with an MV of 4.84. This is also corroborated by the fact that an overwhelming 96.9% of the respondents agreed that inclusive decision-making is an important characteristic of workforce productivity leadership to enhance diverse and inclusive workforce productivity in construction project delivery. However, a notable 1.6% of respondents disagreed with factor, and 1.6% of the respondents were unsure with is factor. 92.2% of the respondents agreed that proactive diversity Initiatives to empower the workforce is a major factor contributing workforce productivity to enable construction project success, with second highest MV = 4.64. Nevertheless, 3.1% of the respondents were indifferent with this factor. Problem-solving skills is ranked third with an overwhelming MV = 4.58 as the most important factor contributing to diverse and inclusive workforce productivity in construction project delivery. 93.8% of respondents agreed that this workforce productivity characteristic contribute to construction project success. Followed by a mere 3.1% of respondents who were indifferent with this factor. Table 4.20 present celebration of success and achievement of the workforce as the least ranked factor inclusive workforce productivity characteristic leading to construction project success, with MV = 3.94. The average mean value for all factors relative to diverse and inclusive workforce productivity in construction project delivery would assist contractors in enhancing sustainable construction project delivery.

Table 4.20: Workforce productivity leadership characteristics

N = ...64 Workforce productivity leadership characteristics	Unsure	1	2	3	4	5	Mean	Std.	Rank
Inclusive decision-making	1.6	0.0	1.6	0.0	12.5	84.4	4.84	.511	1
Proactive diversity Initiatives to empower the workforce	3.1	0.0	1.6	3.1	28.1	64.1	4.64	.675	2
Problem-solving skills	3.1	0.0	0.0	3.1	39.1	54.7	4.58	.612	3
Open-mindedness	0.0	0.0	1.6	1.6	40.6	56.3	4.52	.617	4
Conflict resolution skills	3.1	0.0	1.6	3.1	42.2	50.0	4.50	.690	5
Respect for diverse workforce group	3.1	0.0	0.0	7.8	37.5	51.6	4.50	.690	5
Emotional intelligence to empower the workforce	12.5	3.1	3.1	6.3	29.7	45.3	4.48	1.098	6
Continuous learning and development	6.3	1.6	1.6	14.1	21.9	54.7	4.45	.975	7
Recognition and rewards when due	3.1	1.6	3.1	9.4	25.0	57.0	4.44	.941	8
Performance related feedback	0.0	0.0	0.0	14.1	29.7	56.3	4.42	.730	9
Flexibility and adaptability	1.6	0.0	3.1	14.1	26.6	54.7	4.38	.864	10
Effective delegation	6.3	1.6	6.3	7.8	35.9	42.2	4.30	1.034	11
Dedicated to equity and fairness among the workforce	1.6	0.0	1.6	4.7	57.8	34.4	4.30	.659	11
Team building skills	6.3	0.0	3.1	10.9	48.4	31.3	4.27	.859	12
Skills including workforce creativity	1.6	0.0	1.6	14.1	43.8	39.1	4.25	.777	13
Accountability	1.6	3.1	1.6	12.5	37.5	43.8	4.22	.967	14
Effective communication skills empathy	1.6	4.7	9.4	10.9	37.5	35.9	3.95	1.161	15

Celebration of success and achievement of the workforce	7.8	9.4	10.9	9.4	25.0	37.5	3.94	1.446	16
Valid N (listwise)									

4.5.2.2.1. Underlying factors relation to workforce productivity leadership

Concerning factor analysis (FA), the most important workforce productivity leadership characteristics are identified through factor analysis to achieve diverse and inclusive workforce productivity that promote construction project success. To identify the most crucial workforce productivity leadership characteristics, a total of 18 workforce productivity leadership characteristics were examined. Additionally, workforce productivity leadership characteristics that promote construction project delivery were categorized and reduced using factor analysis (FA). Table 4.21 shows KMO score of 0.874 which is higher than the minimum of 0.60. Watkins (2021) asserts that a KMO score below 0.6 denotes inadequate sampling and necessitates remedial action.

Additionally, the Bartlett's test sphericity's chi-sqaure was 371.152 at a significance level of 0.000, which is less than p<0.005. According to Hinton, McMurray and Brownlow (2014), the findings satisfy the fundamental requirements for factor analysis. After variables have been determined to be significant, factor extraction was the next step. Shrestha (2021) and Pallant (2020) identified popular factor extraction methodologies, including the Kaiser-Meyer-Olkin criterion, Cattell's scree test, retaining all factors above the elbow. To ensure workforce productivity leadership characteristics that enables inclusive workforce productivity and construction project success, this study employed principal components assessment. Table 4.22 displays the eigenvalue of a square matrix that contains the four (4) recovered components; 2.105, 1.922, 1.740, and 1.098. Table 4.22 shows that the most significant workforce productivity leadership characteristics retrieved accounted for 11.695% of the variance, followed by the second component at 10.680%, the third component at 9.666%, and the fourth components at 9.059%. However, the total extracted components account for 41.099% of the variance, and they are particularly important for diverse and inclusive workforce productivity in the Western Cape Province. Table 4.22 shows that all variables have values greater than 0.30, while those less than 0.30 were suppressed. Additionally, the workforce productivity leadership characteristics are identified. The variable that represents component 1 coverage is "*celebration of success and achievement of the workforce*", component 2 was on "*problem-solving skills*", component 3 was on "*conflict resolution skills*", and component 4 was on "*emotional intelligence to empower the workforce*".

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.874
Bartlett's Test of Sphericity	Approx. Chi-Square	371.152
	Df	153
	Sig.	.000

Table 4.22: Component Matrix[a] for Workforce productivity leadership characteristics

Workforce productivity leadership characteristics	Component			
	1	2	3	4
Celebration of success and achievement of the workforce	.691			
Proactive diversity Initiatives to empower the workforce	.596			
Accountability	.479			
Inclusive decision-making	.359			
Continuous learning and development	.329			
Recognition and rewards when due	.306			
Problem-solving skills		.582		
Open-mindedness		.494		
Performance related feedback		.338		
Team building skills		.311		
Conflict resolution skills			.666	
Flexibility and adaptability			.442	
Dedicated to equity and fairness among the workforce			.346	
Skills including workforce creativity			.341	
Emotional intelligence to empower the workforce				.541
Effective communication skills empathy				.341
Respect for diverse workforce group				.305
Effective delegation				.302
Eigen value	2.105	1.922	1.740	1.098
Proportion of variance (%)	11.695	10.680	9.666	9.059
Cumulative variance (%)	11.695	22.375	32.040	41.099
Extraction Method: Principal Component Analysis.				
a. 4 components extracted.				

4.5.3. Leaders' management practices of diversity and inclusion within the construction industry

4.5.3.1. Leadership commitment

With an MV of 4.58, it is evident from Table 4.23 that the most leadership commitment practice for enhancing workforce productivity through diverse and inclusive workshops is demonstrating behavior when engaging the workforce and this commitment is rated first. This is further supported by the fact that a resounding 92.2% of respondents concurred that leadership commitment is achieved through demonstrating behavior when engaging the workforce. 89.0% of respondents believe that accountability is the second most significant leadership commitment for improving diverse and inclusive workforce productivity in the Western Cape Province with MV = 4.45. Followed by 7.8% of respondents who believe that this commitment only sometimes improves workforce productivity in the construction industry. With the third highest MV of 4.33 and a ranking of third, 79.7% of respondents concurred that commitment to organisational goals key leadership

commitment for enhancing construction project success through diverse and inclusive workforce productivity. However, 4.7% of the respondents disagreed with this technique, and 6.3% of the respondents were unsure.

Table 4.23 present MV=3.81, commitment to fostering diversity and inclusion to improve workforce productivity is the least ranked element. Adopting and putting into practice the practices will help contractors in South Africa achieve construction project success through workforce diversity and inclusion, as indicated by the average mean value of 4.25 for all elements related to leadership commitment.

Table 4.23: Leadership commitment

N = ...64 Leadership commitment	Unsure	Minor	Near minor	Someti mes	Near major	Major	Mean	Std.	Rank
Demonstrating behavior when engaging the workforce	1.6	0.0	0.0	6.3	31.3	60.9	4.58	.638	1
Accountability	1.6	0.0	1.6	7.8	35.9	53.1	4.45	.733	2
Commitment to organisational goal	4.7	0.0	6.3	9.4	34.4	45.3	4.33	.944	3
Championing diversity and inclusion initiative	3.1	1.6	4.7	10.9	42.2	37.5	4.19	.957	4
Communicating the importance of diversity and inclusion	4.7	3.1	1.6	17.2	42.2	31.3	4.11	1.010	5
Commitment to fostering diversity and inclusion to improve workforce productivity	0.0	7.8	10.9	15.6	23.4	42.2	3.81	1.308	6
Valid N (listwise)							4.25		

4.5.3.2. Mentorship and sponsorship programmes

The respondents were asked to indicate the level of contribution of mentorship and sponsorship programmes as the leadership practices adopted by construction leaders to enhance a diverse and inclusive workforce productivity in the construction industry, using a 5-point scale where: Minor = (1); Near minor = (2); Sometimes = (3); Near major = (4); and Major = (5).

Table 4.24 makes it obvious that the mentorship programme to support workforce career development was given the highest ranking (MV=4.42). This is corroborated by the fact that the majority of respondents (87.5%) believe that this leadership management practices of a diverse and inclusive workforce contribute to an improvement of productivity and enhance business sustainability, whereas 7.8% respondents indicates that this mentorship prgramme only sometimes contributes and 3.1% were indicate that this factor has a minor contribution. With a mean value of 4.27, accessibility of mentorship programmes to all employees come in second. Notably, 78.2% of respondents concurred that accessibility of mentorship programmes to all employees is a mentorship and sponsorship programmed used by contractor in order to improve a productivity through workforce diversity and. Just 17.2% of respondents indicates that this only

sometime contributes, while 4/.7% of respondents were unsure regarding this leadership practice. The respondents indicates that mentorship programmes are adopted to ensure the retention and advancement of diverse workforce in the Western Cape Province with MV = 4.19, this is recognised by 79.7% of respondents reveal that that factor contributes to construction project success. 10.9% of respondents highlight that this has the minor impact, while 9.4% of respondents indicates that this sometimes contributes. Ensuring that mentorship programmes are communicated with the employee has the lowest recognition rate (MV=4.03). The combined mentorship and sponsorship programmes' MV = 4.23 are noteworthy. These results suggest that mentorship and sponsorship programmes have the significant leadership practices that contribute in construction project delivery in the Western Cape Province, through diverse workforce inclusion.

Table 4.24: Mentorship and sponsorship programmes

N = ………………………..……64 Mentorship and sponsorship programmes	Unsure	Minor	Near minor	Someti mes	Near major	Major	Mean	Std.	Rank
Mentorship programme to support workforce career development	1.6	0.0	3.1	7.8	34.4	53.1	4.42	.793	1
Accessibility of mentorship programmes to all employees	4.7	0.0	0.0	17.2	43.8	34.4	4.27	.802	2
Mentorship programmes are adopted to ensure the retention and advancement of diverse workforce	0.0	0.0	10.9	9.4	29.7	50.0	4.19	1.006	3
Ensuring that mentorship programmes are communicated with the employee	1.6	1.6	9.4	18.8	26.6	42.2	4.03	1.098	4
Valid N (listwise)							4.23		

4.5.3.3. Inclusive policy

Table 4.25 present inclusive policy that can be adopted by contractors to enhance inclusive workforce productivity. The respondents were asked to indicate contribution of inclusive leadership policy to enhance a diverse and inclusive workforce productivity in the construction industry, using a 5-point scale where: Minor = (1); Near minor = (2); Sometimes = (3); Near major = (4); and Major = (5).

Table 4.25 makes it clear that, with MV=4.47, feedback-oriented policy is listed at the top as the most significant practice influencing contractors workforce productivity. The fact that 84.4% of respondents concurred that, feedback-oriented policy contributes significantly in construction project delivery. 6.3% of respondents believes that this leadership practice only sometimes donates to project success, while 1.6% and 4.7% of respondents were believes that this has a minor impact and unsure respectively. With MV=4.45, the clear and explicit policy articulated organisational commitment to diversity equity and inclusion comes in second. It is evident that

84.4% of the participants concurred that a key leadership practice contributes to construction project success. Nonetheless, Table 4.25 shows that none of the respondents indicate minor contribution, and 9.4% of the respondents were understand that this inclusive policy contributes to construction project success. Proactive and preventative measures highlighted in the policy with MV = 4.31 is ranked third with 78.2% believes that this inclusive policy is mostly significant, 12.5% highlighted that this sometimes contribute to construction project success. Table 4.25 present flexibility and adaptability of organistional policy as the least ranked inclusive policy that influences workforce productivity. The combined Inclusive policy leadership practices with MV = 4.30 are noteworthy

Table 4.25: Inclusive policy

N = ...64 Inclusive policy	Unsure	Minor	Near minor	Someti mes	Near major	Major	Mean	Std.	Rank
Feedback oriented policy	4.7	1.6	3.1	6.3	29.7	54.7	4.47	.925	1
The clear and explicit policy articulated organisational commitment to diversity equity and inclusion	6.3	0.0	0.0	9.4	42.2	42.2	4.45	.754	2
Proactive and preventative measures highlighted in the policy	4.7	0.0	4.7	12.5	34.4	43.8	4.31	.924	3
Accessibility of policy to all employees	3.1	1.6	4.7	14.1	28.1	48.4	4.27	1.011	4
Flexibility and adaptability of organisational policy	3.1	4.7	9.4	10.9	35.9	35.9	3.98	1.188	5
Valid N (listwise)							4.30		

4.5.3.4. Celebrating diversity within the organisation

With an MV of 4.56, it is evident from Table 4.26 that the most significant leadership practices indicating the celebration of diversity within the organisation is diversity and inclusion awards is rated first. This is further supported by the fact that a resounding 82.8% of respondents concurred that leadership practice is important. 89.0% of respondents believes that employee's spotlight is the second most significant celebrating diversity within the organisation for improving diverse and inclusive workforce productivity in the Western Cape Province with MV = 4.52. Followed by 12.5% of respondents who believes that this factor only sometimes improves workforce productivity in construction industry. With the third highest MV of 4.42 for diverse cultural event and community partnership are of third. However, diverse cultural event was ranked highest with std = 1.051, compared to std = .773 for community partnership. 85.9% of respondents concurred that community partnership is key leadership commitment for enhancing construction project success through diverse and inclusive workforce productivity. However, 9.4% of the respondents indicates that community partnership sometimes influences contractors project delivery.

Table 4.26 present MV= 4.19, celebrating diversity within the organisation to fostering diversity and inclusion to improve workforce productivity is the least ranked element. Adopting and putting into practice the practices will help contractors in South Africa achieve construction project success through workforce diversity and inclusion, as indicated by the average mean value of 4.42 for all elements related to leadership practices.

Table 4.26: Celebrating diversity within the organisation

N = ...64 Celebrating diversity within the organization	Unsure	Minor	Near minor	Someti mes	Near major	Major	Mean	Std.	Rank
Diversity and inclusion awards	6.3	0.0	4.7	6.3	23.4	59.4	4.56	.889	1
Employee's spotlight	4.7	0.0	0.0	12.5	28.1	54.7	4.52	.776	2
Diverse cultural event	4.7	3.1	3.1	9.4	21.9	57.8	4.42	1.051	3
Community partnership	3.1	0.0	1.6	9.4	37.5	48.4	4.42	.773	3
Diverse training and workshops	10.9	0.0	4.7	15.6	26.6	42.2	4.39	1.033	4
Cross cultural competency programmes	1.6	0.0	1.6	14.1	50.0	32.8	4.19	.753	5
Valid N (listwise)							4.42		

4.5.4 Employee engagement and inclusion to influence individual or team performance in the construction industry

4.5.4.1. Employee engagement and inclusion

The respondents were asked to indicate how often employee engagement and inclusion influence individual or team performance in the construction industry in the Western Cape Province, using a 5-point scale: Never = 1, Rarely = 2, Sometime = 3, Often = 4, and Always = 5, the respondents were informed to note the unsure option.

Table 4.27 shows the employee engagement and inclusion influence individual or team performance in the construction industry. It is evident from Table 4.27 that employee engagement and inclusion to influence individual or team performance in the construction industry to improve workforce productivity in construction project delivery is ranked highest, with a mean value (MV) of 4.59. This is supported by the fact that 79.7% of respondents pointing that they always, and often adopt employee engagement and inclusion, while some respondents only adopt this leadership practice sometimes 9.4%. Furthermore, only 7.8% of respondents were unsure regarding this inclusive leadership practice. Leadership engagement and visibility were ranked second with MV= 4.51, and this was substantiated by 53.1% of respondents who always adopt this practice, while 26.6% of respondents often adopt this but do not always use leadership engagement and visibility. 14% of respondents sometimes adopt this practice, and a notable 6.3% of respondents were unsure. The third most ranked employee engagement and inclusion

leadership practice was exposing employees to skills for addressing conflicts, together with promoting a sense of ownership among employees, as well as the accessibility of physical and digital tools/ resources to all employees to promote inclusion and these practices were supported by MV=4.47 as shown on Table 4.27. It is evident from Table 4.27 that exposing employee to skills for addressing conflicts was most significant with STD = 0.835, followed by promoting a sense of ownership among employees with STD = 0.854, and accessibility of physical and digital tools/ resources to all employees to promote inclusion SDT = 0.642. Table 4.25 shows that 57.8%, 45.3%, and 53.1% of respondents always adopt exposing employees to skills for addressing conflicts, promoting a sense of ownership among employees, and accessibility of physical and digital tools/ resources to all employees to promote inclusion respectively. Followed by, 23.4%, 34.4%, and 42.2% of respondents who often adopt these practices as indicated in Table 4.27. The least ranked employee engagement and inclusion was prioritised employee's well-being with MV = 3.91. Overall, these factors collectively influence contractors performance and productivity.

Table 4.27: Employee engagement and inclusion

N = ...64 Employee engagement and inclusion	Unsure	Never	Rarely	Someti mes	Often	Always	Mean	Std.	Rank
Enable peer support	7.8	0.0	3.1	9.4	20.3	59.4	4.59	.886	1
Leadership engagement and visibility	6.3	0.0	0.0	14.1	26.6	53.1	4.51	.816	2
Exposing employees to skills for addressing conflicts	3.1	0.0	1.6	14.1	23.4	57.8	4.47	.835	3
Promoting a sense of ownership among employees	7.8	0.0	1.6	10.9	34.4	45.3	4.47	.854	3
Accessibility of physical and digital tools/ resources to all employees to promote inclusion	0.0	0.0	1.6	3.1	42.2	53.1	4.47	.642	3
Promoting transparent decision-making to foster employees' trust	15.6	1.6	7.8	6.3	31.3	37.5	4.42	1.166	6
Fair hiring process that promotes a sense of belonging	3.1	0.0	0.0	9.4	42.2	45.3	4.42	.708	6
Regular checkout meetings with employees	6.3	3.1	1.6	9.4	29.7	50.0	4.41	1.019	8
Cultural awareness training	3.1	0.0	1.6	9.4	39.1	46.9	4.41	.771	8
Clear employee role and expectations	4.7	0.0	1.6	10.9	39.1	43.8	4.39	.809	10
Encouraging employees to participate in community engagement	3.1	3.1	3.1	12.5	37.5	40.6	4.19	1.022	11
Provide a support service for personal and professional challenges faced by employees	6.3	1.6	9.4	10.9	39.1	32.8	4.11	1.100	12
Involve employees in decision-making	1.6	7.8	6.3	9.4	35.9	39.1	3.97	1.234	13
Prioritise employee's well-being	0.0	1.6	3.1	21.9	50.0	23.4	3.91	.849	14
Valid N (listwise)									

4.5.4.1.1. Underlying factors related to employee engagement and inclusion

This study adopted factor analysis to determine the most significant employee engagement and inclusion adopted by construction leaders to enhance workforce productivity. Factor analysis (FA)

is used to identify the most essential employee engagement and inclusion practices in order to create diverse and inclusive workforce productivity, which promotes construction project success. To determine the most important employee engagement and inclusion, 14 workforce productivity leadership traits were analysed. Factor analysis was also used to identify employee engagement and inclusion adopted by construction leaders to enhance workforce productivity. Table 4.28 reveals a KMO score of 0.796, which exceeds the minimum of 0.60. Watkins (2021) claims that a KMO score of less than 0.6 indicates insufficient sampling and requires corrective action.

A significance level of 0.001, which is less than p<0.005, and the Bartlett's test sphericity was 226.547. According to Hinton, McMurray, and Brownlow (2014), the findings meet the essential conditions of factor analysis. After variables were found to be significant, factor extraction was the next stage. Shrestha (2021) and Pallant (2020) highlighted prominent factor extraction approaches, such as the Kaiser-Meyer-Olkin criterion, Cattell's scree test, preserving all factors above the elbow, Horn's parallel analysis, and comparing eigenvalues to randomly produced data of equal size. To assure essential employee engagement and inclusion practices adopted by construction leaders, this study used principle components analysis.

Table 4.29 shows the eigenvalues of a square matrix with five (5) recovered components: 2.382, 1.826, 1.376, 1.269, and 1.140. Table 4.29 demonstrates that the most significant employee engagement and inclusion practices adopted by construction leaders retrieved accounted for 17.017% of the variation, followed by the second component at 13.045%, the third component at 9.831%, and the fourth components at 9.061%, and the fifths component at 8.140%. The total extracted components account for 57.094% of the variance, making them especially essential for varied and inclusive workforce productivity in the Western Cape Province. Table 4.29 demonstrates that all variables have values greater than 0.30, with those less than 0.30 suppressed. In addition, leadership attributes that improve labour productivity are discovered. The variable that represents component 1 coverage is "*cultural awareness training*", component 2 was on "*promoting a sense of ownership among employees*", component 3 was on "*encouraging employees to participate in community engagement*", component was on "*leadership engagement and visibility*" and component 4 was on "*prioritise employee's well-being*"

Table 4.28: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.796
Bartlett's Test of Sphericity	Approx. Chi-Square	226.547
	Df	91
	Sig.	.001

Table 4.29: Component Matrix^a on Employee engagement and inclusion

	Component				
	1	2	3	4	5
Cultural awareness training	.740				
A fair hiring process that promotes a sense of belonging	.710				
Provide a support service for personal and professional challenges faced by employees	.709				
Promoting a sense of ownership among employees		.682			
Accessibility of physical and digital tools/ resources to all employees to promote inclusion		.609			
Promoting transparent decision-making to foster employees' trust		.562			
Regular checkout meetings with employees		.462			
Encouraging employees to participate in community engagement			.802		
Enable peer support			.454		
Leadership engagement and visibility				.697	
Involve employees in decision-making				.602	
Exposing employees to skills for addressing conflicts				.357	
Prioritise employee's well-being					.685
Clear employee role and expectations					.437
Eigen value	2.382	1.826	1.376	1.269	1.140
Proportion of variance (%)	17.017	13.045	9.831	9.061	8.140
Cumulative variance (%)	17.017	30.062	39.893	48.954	57.094
Extraction Method: Principal Component Analysis.					
a. 5 components extracted.					

4.5.5. Qualitative interview results

In this study semi-structured interviews were conducted to gather the thoughts, experiences, and opinions from research participants with regard to leadership practices for enhancing productivity in construction through workforce diversity and inclusion. Semi-structured interviews seek to understand the "why" and "how" of actions, attitudes to provide the researchers with a in-depth knowledge regarding the research topic that a quantitative data may not fully represent. The construction manager, site agent, director, and site foreman were among the targeted persons for the interview conducted with contractors around the Western Cape Province. The participants were given a detailed explanation of the study's purpose and research topic prior to the interview. All of the interviewees' thoughts were recorded using a recording device. In the case of e-interviews, the respondents received an email with the interview questions and study background information. Table 4.30 shows the biographic information of the interview participants, the first interview was conducted with the construction manager referred to as *participant 1* **(P1)** in this study, the construction manager has 11 years' experience in the construction industry, and the participant works for the contractor registered under cidb Grade 8 of GB. The interview with *P1* was conducted at Parow on the 19 November 2024 at 11:20 am, the interview lasted for 35minutes, the interview was conducted in contractors head office. The second interview was

conducted with the site agent at Bellville on the 19 November 2024 at 15:20 pm. **P2** has a BTech construction management qualification and has work in the construction for 19 years, worked for a contractor registered under cidb Grade 7. The interview lasted for 39 minutes; the interview was conducted in contractors head office. The third interview was conducted with foreman in Cape Town CBD (construction site), the foreman has the diploma qualification relevant to the construction industry and worked for a contractor registered under cidb Grade 9, the foreman has 8 years' experience in the construction industry. The interview with **P3** was conducted on 25 November 2024 at 9:00 am. The fourth interview was conducted on the 25 November 2024 at 13:00 pm during the lunch time with the director of the contractor, registered under cidb Grade 9 of GB. The director possess a master's qualification in construction management and has work in the construction industry for 22 years and has been involved in business management for 11 years referred to as **P4**, and the interview lasted for 52 minutes. The fifth interview was conducted with the site agent on 29 November 2024 at 10:00 am. P5 works for the contractor registered under cidb Grade 8. **P5** posses a ND Building qualification and has 16 years' experience in the construction industry and the interview was conducted in Cape Town CBD and lasted for 45 minutes.

Table 4. 30: Background information of participants

Type of interview	Date of the interview	Place	Qualification	Profession	Years of experience
PARTICIPANT 1 (P1)	19/11/2024	Parow	BTech: Construction management	Construction manager	11 years
PARTICIPANT 2 (P2)	25/11/2024	Cape Town CBD	Diploma	Foreman	8 years
PARTICIPANT 3 (P3)	19/11/2024	Bellville	B-Tech: Construction management	Site agent	19
PARTICIPANT 4 (P4)	29/11/2024	Airport Cape Town	ND: Building	Site agent	16 years
PARTICIPANT 5 (P5)	25/11/2024	Cape Town CBD	Master: Construction management	Director	22 years

4.5.5.1. barriers that prevent contractors from adopting diverse and inclusive leadership practices

With respect to barriers prevent contractors from adopting diverse and inclusive leadership practices, **P1**: pointed that the contractor is affected by employee's culture differences, **P1** highlighted those cultural differences from employees makes it difficult for employees to share their experience and that eventually hinders employees productivity. The respondent stressed that employees believe differences influence their performance during project delivery, where each race group does not engage with other race. **P1** lastly highlighted that the adoption of diverse

and inclusive leadership practices is affected by employees age differences that prevent the share of knowledge and the cultural believes from different race that segregate employees by age groups.

P2: highlighted that according to his opinion the barrier from adopting diverse and inclusive leadership practices is orginasational culture preventing adequate leadership practices. Furthermore, *P2* reveal that from contractors point of view budget limitations is one of the key aspects affecting contractors from adopting inclusive leadership. Client expectations is regarded as one of the challenges affecting contractors from adopting inclusive leadership, as the project differs. Also, lack of awareness from construction leaders with regard to the benefits of inclusive leadership towards enhancement of project productivity in the Western Cape Province.

P3 reveal that company business model-companies preferring to employ workers from preferred races, gender, beliefs and political affiliation etc affects the adoption of inclusive leadership practices in the construction sector. Contractor's lack of cultural understanding and awareness is a significant challenge hindering the adoption of inclusive leadership. *P3* further point that deficient or non-existent company values is a significant challenge. Also, *P3* reveal that resistance to change lack of communication and poor leadership are the key factors hammering the success of inclusive leader in construction project success.

P4, was similar to *P1* and stressed that a diverse and inclusive leadership practices is affected by communication barrier that makes it difficult for construction leader to engage with employees. Furthermore, *P4* add that adopting a new approach or a new way of doing conventional practices makes it verry difficult for leader to adopt inclusive leadership styles. Als, lack of training to both construction management team and workforce makes it impossible to adopt inclusive leadership practices and contractors need to find ways to have regular trainings.

P5: highlight, language proficiency especially English is the most challenging point in achieving a diverse and inclusive leadership to enhance inclusive and diverse workforce productivity. *P5* stressed that the impact of cultural backgrounds of different employees and its effect in communication and the way leaders has to conduct and manage themselves in construction workplace.

P1: pointed out that to achieve diverse and inclusive leader, contractors need to employ a leader that is willing to supports and provides coaching where required to employees in order to achieve construction project success through workforce inclusion. **P1** was resolute that for construction leader to successful complete construction project a leader that communicates effectively with all employees and stakeholders involved in a construction project. Furthermore, **P1** recommend that a leader that communicates their expectation to employees effectively in order to provide clear project scope and goals to employees. **P1** also, note that construction leader need to motivates employees innovatively in order to get the best out of employees. Lastly, the participant pointed that in order to achieve employee's productivity a leader that has empathy towards employee's personal development and challenges. According to **P1** leadership need to ensure consistence performance feedback to improve employee's performance.

P2: Reveal that a construction leader needs to possess adaptability practices and not to stack in a traditional way of workforce management. An effective leader needs to be open to diversity and be able to work with a diverse construction workforce. The leader in construction industry need to respect employees irrespective of their position as they are the key role players in construction project delivery. Understanding others perspective is the key leadership characteristics to gain knowledge and experience from others. **P2** also heighted the importance of fairness and Strong communication skills to enable workforce productivity.

According to **P3**: leadership characteristics can be seen from displays company core values, openly communicates information to all employees. **P3** believes that contractors who encourages an inclusive decision making is significant to improve employee's willingness. It is worth noting that P3 reveal that a leader that take accountability and responsibility for their actions as well as hold subordinates accountable for theirs. **P3** highlighted that effective leader need to adapt to change and also deal with conflict that comes from each project. **P3** reveal the importance of a decisive thinkers that makes significant decision making.

P4: Reveal that in order to achieve productivity through workforce diversity and inclusion, the construction leader need to possess respecting all employees' views and ideas. This stimulates employee's performance in construction project delivery according to **P4**. Construction project

delivery can be achieved if a construction leader possesses a cultural intelligence to understand different cultures involved in the organisation. *P4* also pointed out that a construction leader must ensure the honest and integrity to improve trust from employees.

P5: opines that effective leadership characteristics includes leaders open mind to ensure the success of diverse and inclusive workforce productivity in the construction project delivery. *P5* adds that a construction leader needs to be able to adapt to changes. Patient is an important aspect of effective leadership, as some employees might be difficult to manage.

4.5.5.3. Construction leaders' management practices of diversity and inclusion adopted

P1: uncovers that the organisation has a flat line management practice which provides a platform to enable employees engagement productivity for using people strengths to best meet the companies' goals and objectives. Moreover, the contractor adopts the use of line management to allow for skills transfer between employees. The contractor adopts this practice to allows for an inclusive recruitment based on the diverse candidate pools because of the flat line management practice.

P2: Uncovers that leadership management adopted by the contractor includes mentorship programmes developed by contractor to improve workforce productivity. *P2* highlighted that the contractor adopts performance reviews and reward employees for their performance. The contractor adopts a diverse recruitment to promote diversity and inclusion in terms of race and disability. *P2* pointed out that the contractor is very strict policy against discrimination and harassment as a modality to improve employees' performance and feel belonging to the organisation.

P3: Effective leaders management practices adopted by the contractor include encourage diverse teams to promote a diverse and inclusive workforce productivity. The contractor encourages on the job mentorship to improve workforce skill and competencies. The contractor recognises the importance of confront bias when it arise and deal with it accordingly. *P3* reveal that the contractor encourages the remove communication barriers to enable workforce productivity. *P3* highlighted that the contractor is very strict when it comes to holding workers accountable.

P4: uncovers that effective leadership practices adopted by the contractor includes the adoption of independent thinking from both workforce and the management team to enable employees to

showcase their respective skills. The contractor that *P4* works for promotes the allowance of self-management. Furthermore, *P4* reveals that contractors need to adhere and commitment to creating a safe inclusive environment to improve employees beliefs and trust.

P5: effective leadership practices include effective communication which is one of the barriers that contractors are faced with. Championing communication related challenges contractors can be able to achieve productivity and sustainable project success. *P5* further indicate that recruiting across all race groups is mostly important in promoting diversity and inclusion in the construction industry.

4.5.5.4. Employee engagement and inclusion practices adopted by your organisation to influence individual or team performance

According to *P1*: cross functional & collaboration and knowledge sharing is the main influence in teams performance to promote sustainable construction project delivery. *P1* add that the contractor adopt collaborative leadership, and this engagement is consistent and provides effective support to ensure the team meets the companies goals and objectives. The contractor adopt, professional development and career advancement is also a great driving force in individual performance within the orginasastion as employees are consistently encouraged to attend training courses and rewarded with career advancements where the personal development has reached an expected output. The contractor promotes effective coaching by direct management on specific task.

P2, reveal that the contractor adopt effective communication employee engagement and inclusion practices to improve workforce productivity. The contractor recognise employees for their performance and reward employees when its due. According to *P2* the contractor promotes involvement of employees in decision making to ensure inclusiveness. Furthermore, the contractor adopts team building to improve the relations between employees/ labours and project leaders. *P2* stressed that in order to achieve employee engagement and inclusion practices to improve workforce productivity there must be respect culture of all employees.

P3 acknowledges that creating open culture to improve collaboratives between labours and construction leaders is a very significant aspect of involving workforce to improve productivity. *P3* pointed out that listen to employees gives employees confidence to perform to their limits. In effort

to improve productivity the contractor have a workforce communication platform to ensure effective share of information. **P3** reveal contractors that wants to remain sustainable need to continuously do a feedback survey from workforce. Foster a culture where everyone feels valued is the core of workforce productivity in the construction industry.

According to **P4**, inclusive training is the key element of employee engagement and inclusion practices to improve workforce productivity. **P4** also, indicated that diverse leadership represented is a very key aspect of employee engagement to improve workforce willingness to collaborate with construction leaders. Furthermore, contractors should promote continuous professional development to be encouraged and to be made available to all employees.

P5: only highlighted the significance of team building that a contractor can adopt to build collaboratives among construction leaders and employees. This strategy has been adopted by **P5** to enhance workforce inclusion in construction project delivery.

4.5.5.5. Summary of Qualitative results

Table 31 presents the summary of qualitative results. As shown in Table 31 this study revealed several critical barriers hindering the adoption of diverse and inclusive leadership practices to enhance workforce productivity in the construction industry. Cultural and language differences among employees, age-related knowledge sharing gaps, and organisational culture were identified as significant obstacles that affects workforce productivity. Table 31 uncovered that contractors budget constraints, client expectations, and a general lack of awareness about the benefits of inclusive leadership further exacerbate these challenges. Moreover, resistance to change, poor communication, and insufficient training limit contractors' ability to implement inclusive practices effectively and result into contractors low productivity As shown in Table 31. Contractors' business models favouring specific races, genders, and political affiliations, along with deficient core values and accountability structures, were also highlighted as factors preventing inclusive leadership adoption and leading to contractors poor project delivery as a result of low productivity workforce.

As presented in Table 31 this study presents that contractors effective leadership characteristics and management practices can significantly enhance workforce productivity through diversity and inclusion. Key leadership traits include adaptability, effective communication, empathy, cultural intelligence, and accountability. Table 31 shows contractors management practices such as mentorship programmes, performance reviews, inclusive recruitment, and fostering independent

thinking contribute to a supportive work environment in an effort to achieve sustainable business performance through workforce productivity. Contractors employee engagement practices like cross-functional collaboration, professional development, inclusive decision-making, and team-building activities were also found to motivate employees and improve productivity as shown in Table 31. Creating an open, respectful culture where employees feel valued and included was highlighted as essential for achieving sustainable construction project success through workforce productivity.

Table 4.31: Summary of qualitative results

Themes	Description	Sub-themes
Theme 1: Barriers	To investigate barriers that prevent contractors from adopting diverse and inclusive leadership practices in the construction industry	• Cultural and racial differences • Age diversity and generational gaps • Organisational culture and resistance to change • Budget constraints and client expectations • Lack of awareness and training • Language and communication barriers • Discriminatory hiring practices and business models • Poor leadership and lack of company values
Theme 2: characteristics	To determine the characteristics of effective leadership in a diverse and inclusive construction environment.	• Effective communication skills • Employee support and coaching • Adaptability and flexibility • Empathy and emotional intelligence • Integrity and accountability • Motivational and innovative leadership • Fairness and patience • Inclusive decision-making
Theme 3: management practices	To determine the Leadership management practices of diversity and inclusion within the construction industry.	• Flat line management structure • Mentorship and skills development • Performance reviews and reward systems • Inclusive recruitment practices • Bias confrontation and accountability • Encouraging independent thinking • Commitment to a safe and inclusive environment • Effective communication strategies • Diverse team formation
Theme 4: employee engagement	To determine whether employee engagement and inclusion influence individual or team performance in the construction industry.	• Cross-functional collaboration and knowledge sharing • Professional development and career advancement • Effective communication and feedback • Inclusive decision-making • Recognition and reward systems • Team building activities • Respect for cultural diversity • Fostering a valued and open culture • Coaching and direct support from management

4.6. Discussion of findings

The main aim of the study is to propose an effective leadership framework that enhances productivity through workforce diversity and inclusion in the Western Cape Province of South Africa as indicated in Chapter One (1). This section of chapter four (4) discusses t leaders, perceived as the barriers to inclusive leadership in the construction industry, the characteristics of effective leadership in a diverse and inclusive construction environment, how leaders manage diversity and inclusion within the construction industry, and employee engagement and inclusion to influence individual or team performance in the construction industry.

4.6.1. Perception of contractors' leadership regarding the barriers to inclusive leadership in the construction industry

4.6.1.1. Policy and legal framework

It is evident from the quantitative results in Table 4.13 that political interference is one of the most barriers preventing contractors from adopting a diverse and inclusive workforce to improve workforce productivity in construction project delivery is ranked highest MV = 4.53. this barrier is in aligns with Madikizela (2022) political influence is a significant factor affecting the inclusivity leadership in the construction sector, frequently undercutting attempts to promote diversity and equity inside the contractor. According to Tau Ogunbayo and Aigbavboa (2024), contractors led by politicians influence leadership appointments, qualified executives who do not support these political agendas may be marginalised and be dragged out of the contractor. Pless, N. and Maak, T., 2004) add that political interference reduces contractors an opportunity for various opinions to be heard and reduces the representation of marginalized groups in leadership positions. Furthermore, Irfan et al. (2022) and Madikizela (2022) outline that political favoritism can foster an environment in which decisions are made primarily on relationships rather than qualifications, inhibiting inclusive practices and sustaining existing inequalities.

The results from Table 4.13 shows awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians, and regulatory organisations was ranked second with MV= 4.42. according to Eagly (2016), awareness and awareness of diversity and inclusion issues among policy makers, legislators, and regulatory bodies is mostly significant in structuring the success of construction businesses through successful policies that address systemic barriers in the construction industry. However, inconsistencies in management knowledge and involvement might result in poorly targeted initiatives that fail to promote genuine inclusivity, stifling progress toward a more equal industry (Georgiou and Zaborowski, 2017).

Labour law promoting equal workforce opportunities is ranked as the third most barriers affecting the adoption of a diverse and inclusive leadership practices in the construction industry as shown on Table 4.13. this finding aligns with French and Strachan (2015) who highlight that labour laws supporting equal employment opportunities are critical for ensuring a fair treatment, diversity, and inclusivity in the workplace towards the enhancement of workforce productivity in the construction industry. The Employment Equity Act and the Broad-Based Black Economic Empowerment (BBBEE) Act are a framework developed to support fair workforce possibilities and opportunities (Rubery, 2017). The Employment Equity Act requires enterprises to establish affirmative action policies that benefit historically disadvantaged groups, but the BBBEE Act encourages businesses to promote Black South African presence and engagement across all occupational levels of the contractor (Kabeer, 2021; Rubery, 2017).

4.6.1.2. Representation

Among the barriers to inclusive leadership in the construction industry, contractors are mostly affected by lack of representation. As presented in Table 4.13, the quantitative findings indicate lack of representation in terms of race, gender, ethnicity, or disability was ranked as one of the barriers preventing construction leaders from adopting diverse and inclusive practices. This finding is concurred by Sleeter and Grant (2017) and Kabeer (2021) who posited that a lack of representation in leadership positions based on race, gender, ethnicity, or handicap is a major issue in South Africa's construction industry, which is still dominated by men. This underrepresentation prevents diverse voices and leadership opinions from participating to decision making processes within the contractor, and this led to limited approach to problem solving and ideas (Frederick & Shifrer, 2019). Furthermore, Samuels (2014) pointed out that a lack of visible role models from diverse backgrounds can discourage workforce from entering or advancing in the construction business and personal development through the contractor channels, perpetuating the cycle of exclusion.

The findings from Table 4.13 shows eemployers does not encourage diversity and representation within their organisations as the second most factors affecting leadership practices in a diverse construction environment. Hunt, Layton and Prince (2015) divulge employers who fail to encourage a diversity and representation within their construction business frequently end up with a homogeneous workforce with a lack of diverse perspectives, innovation, and flexibility. Kiradoo (2022) adds that Individuals from underrepresented groups may feel alienated or undervalued in such circumstances, resulting in fewer contributions during construction project delivery, reduced workforce morale, and increased turnover rates.

Furthermore, initiatives aimed at increasing representation is ranked third highest with MV = 4.19 evidence from the findings in Table 4.13. In support Hemal et al. (2021) highlighted that contractor who adopt Initiatives to improve representative in their employees within the construction sector frequently involve diversity recruitment programmes to enable construction mentorship opportunities, and inclusive leadership training promoting diversity and inclusion. Dover, Kaiser and Major (2020) suggest that contractors may build a more inclusive and talented workforce through contractors' policy that promotes the hiring of individuals from underrepresented backgrounds and provides mentorship to help them grow through the company.

4.6.1.3. Organisational culture and practices

The quantitative findings revealed that engagement, morale, and productivity of employees is one of the organisational culture and practices affecting contractors from adopting diverse and inclusive leadership practices to improve workforce productivity in the construction industry. According to Preet and Chahal (2025), employee engagement, morale, and productivity are all have the direct impactor on contractors' business sustainability and success. Contractors' with a very good level of employees involvement in project delivery allow workforce to feel belonging at their respective worksites, which enables the contractor to enhances workforce morale by instilling a sense of purpose and belonging within the team (Hunt, Layton and Prince, 2015). A good construction environment, in turn, boosts workforce productivity since motivated individuals are more inclined to go beyond their expectations, resulting in better performance and outcomes, and quality for the contractor (Dash and Mohanty, 2019).

The quantitative findings reveal commitment to diversity and inclusion is ranked second, with MV=4.14, sharing similar MV with orgnisational efforts to promote equal opportunities. This finding is supported by the literature from Barak, Findler and Wind (2016) who claims that establishing a workplace where everyone feels appreciated, respected, and encouraged to contribute requires the contractor to be more committed to diversity and inclusion. This commitment entails putting in place guidance through contractors regulations and policies that the diversity and inclusion of the construction workforce and this process enhances equity, prevent biases from the management in leadership positions, and provides representation at all levels of contractors management team (Moreno et al., 2024). Regarding orgnisational efforts to promote equal opportunities, contractors who supports equal chances are able to create welcoming work environment to new employees joining the contractor and are able to attract more employees from outside with required skills by the contractor (Muthuswamy, 2023; Frederick and Shifrer, 2019). Contractors who adopt orgnisational efforts to promote equal opportunities initiatives frequently involve putting in place

diversity and inclusion training, creating open hiring and promotion processes, and granting equal access to resources and professional development opportunities to all employees irrespective of the race and position (Muthuswamy, 2023).

Diversity and inclusive awareness within organisational leadership or management is rated as the ranked third highest factor affecting leadership practices. According to Nishii and Leroy (2022), diversity and inclusive understanding among contractors management team in leadership position are critical for establishing organisational culture that recognizes and respects all employees involved in contractors business operation. Furthermore, Sleeter and Grant (2017) reveals that construction leaders that understand diversity and inclusion are mostly able to minimize bias, offer equitable opportunities, and promote open communication among construction diverse construction workforce groups.

4.6.2. The characteristics of effective leadership in a diverse and inclusive construction environment

4.6.2.1. General Management

Among the general management competencies as the characteristics of effective leadership in a diverse and inclusive construction environment, patience is one of the most significant characteristics of effective leadership practices that enhances construction productive through diverse workforce and inclusion. As presented in Table 4.17, the quantitative findings indicate that the patience is one of the most significant general managements adopted by contractors, with MV=4.83. Fusari et al. (2021) and Gordon et al. (2015) regards patience as one of the most important leadership competencies, patience assists the manager in terms of managing diversity and inclusion of workforce in the construction industry to enhance workforce productivity. Patience improves communication, fosters trust, help the contractor with change management, encourages sustainable construction business initiatives, and encouragements in dispute resolution (Lusiani and Langley, 2019).

The findings from Table 4.17 reveal effective risk management with MV = 4.52 as the second most significant characteristic of leadership practices adopted by contractors in a diverse construction environment to promote workforce productivity in the Western Cape Province. This finding is encouraged by Borkovskaya (2018) outline that effective risk management in construction is an important aspect not only in leadership practices, but everyone involved in construction project, risk management systematically detect, assess, and mitigate risks throughout the project delivery and improve workforce productivity. Romero et al. (2019) and Suresh, Oduoza and Renukappa (2018) pointed out that contractors who adopt a proactive risk

management strategy, leaders may reduce any construction project delays that may arise during project implementation, ensure safety, and improve construction project success, resulting in enhanced efficiency and cost savings.

The quantitative findings from Table 4.17 divulge humility and lead by example with bother leadership characteristics sharing MV = 4.34, these leadership characteristics plays an important role in influencing workforce productivity in a diverse and inclusive construction environment. Nielsen and Marrone (2018) reveal that humility in leadership encourages an inclusive workforce culture and improve productivity through the adoption of humility in which diversity is celebrated and each team member feels appreciated and empowered. Furthermore, humility leadership approach enhances workforce morals, enabling collaboration, and improve overall performance in the construction business (Kelemen et al., 2023). Concerning lead by example, Wu, Li and Fang (2017) supported this by pointing out that leading by example is a powerful process to leadership, particularly in sectors like construction where actions can speak louder than words. It means that leaders exemplify the standards, habits, and work ethic they want to see in their team (Wilkinson & Kemmis, 2018).

4.6.2.2. Workforce productivity leadership characteristics

The quantitative results revealed that contractors adopt inclusive decision-making as workforce productivity leadership characteristics with MV = 4.84 and this finding was ranked first.

According to Stonewall et al. (2019), inclusive decision-making is a leadership practices adopted by contractors to ensure that a diverse construction workforce provides their opinions in the decision-making process. Furthermore, Lusiani and Langley (2019) uncover that this leadership approach is especially useful in a construction setting, as diverse construction workforce teams contribute a wide range of talents, backgrounds, and perspectives.

The quantitative findings shows that proactive diversity Initiatives to empower the workforce was ranked second most practice with MV = 4.64. This finding was supported by Yan, Sunindijo and Wang (2024) who opine that proactive diversity initiatives, comprising a regular diversity and inclusion training, to empower construction workforce in understanding and appreciating diverse cultural opinions, establishing a respectful workplace atmosphere in construction worksites and enhances workforce productivity. Mentorship and sponsorship programmes connect diverse employees with experienced mentors, fostering professional development and creating new opportunities for all employees in the construction industry (Chin, Desormeaux and Sawyer, 2016). Furthermore, Vohra et al. (2015) reveal that contractors who adopts diverse hiring and

promotion processes in their organisation are able to achieve inclusive company, allowing employees of all backgrounds to contribute fully.

Problem-solving skills was ranked as the third hight workforce productivity leadership characteristics adopted by contractor to ensure the sustainability of construction project delivery in the Western Cape Province with MV = 4.58. Simmons, McCall and Clegorne (2020) concurred that problem-solving skills are most important in any construction industry, particularly in construction, where quick and effective judgments have a direct impact on project outcomes. Therefore, Visone (2018) summarised that those strong problem-solving skills entail effectively identifying problems, analysing feasible solutions, and implementing strategies that address both immediate concerns and long-term goals.

Concerning factor analysis, factor analysis identified four components as the most significant leadership characteristics for enhancing workforce productivity in the Western Cape construction industry.

Component 1: Celebration of success and achievement of the workforce

The first component comprises of five (5) features, namely celebration of success and achievement of the workforce (0.691), proactive diversity initiatives to empower the workforce (0.596), accountability (0.479), inclusive decision-making (0.359), and continuous learning and development (0.329) as shown in table 4.20. these findings are consistence with normative literature from Zeb-Obipi and Agada (2018) who state that celebrating success and accomplishments in the workplace is very important for contractors who seeks to improve workforce morale, motivation, and maintaining a positive work environment that enables workforce to showcase their skills in the construction industry. Recognising team members' successes, whether through official awards, team shout-outs, or milestone celebrations, expresses gratitude for their efforts and dedication, this effort enables employee to perform to their limit (Dhiman, Modi & Kumar, 2019). Hence, these celebrations not only build individual confidence, but also improve team togetherness, inspiring everyone to keep striving for excellence, and with this effort contractor are able to retain their employees and achieve sustainable construction business performance through workforce productivity (Demie, 2019).

Component 2: Problem-solving skills

The second component includes four (4) features, namely problem-solving skills (0.582), open-mindedness (0.494), performance related feedback (0.338) and team building skills (0.311) as presented in (table 4.20). this finding was constant with the findings on table 4.18.

Component 3: Conflict resolution skills

This component consists of three (3) components, and these components accounts for 32.04% of the variance overall, namely conflict resolution skills (0.666), flexibility and adaptability (0.442), and dedicated to equity and fairness among the workforce (0.346). This components is constant with the literature review from Grubaugh and Flynn (2018) who posited that for contractors to ensure togetherness in their workforce and productive, leadership conflict resolution abilities are essential, particularly in high-stakes settings like construction where a diverse construction workforce come to work together in a construction project. This requires an active listening, empathy, and objectivity from the side of construction leader, and these skills are necessary for effective conflict resolution because they allow leaders to comprehend all viewpoints from workforce and mediate just solutions (Saeed et al., 2014). Therefore, Alnajjar and Abou Hashish (2022) believes that a strong ability in this area promote an atmosphere where team members feel valued and can work together productively by preventing misunderstandings during the implementation of construction project.

Component 4: Emotional intelligence to empower the workforce

The fourth component comprises of three (3) features, Emotional intelligence to empower the workforce (0.541), Effective communication skills empathy (0.341), and Respect for diverse workforce group as shown in table 4.20. This component is supported by Alotaibi, Amin and Winterton (2020) and Karimi et al. (2021) who reveal that emotional intelligence is the most significant practice adopted by contractors for empowering construction workforce as it improves leaders' capacity to connect with and understand their team members and operational workforce. Therefore, leaders with high emotional intelligence are skilled at detecting and controlling their own emotions while empathising with others, resulting in a supportive workplace in which people feel valued and driven (Aydogmus, 2019).

4.6.3. Leaders' management practices of diversity and inclusion within the construction industry

4.6.3.1. Leadership commitment

The most significant Leadership commitment practices **is** demonstrating behavior when engaging the workforce. As presented in Table 4.21, the quantitative findings indicate demonstrating behavior when engaging the workforce is supported by the fact that a resounding 92.2% of respondents concurred that leadership commitment is achieved through demonstrating behavior when engaging the workforce. A literature from Schneider et al. (2018) uncovers that positive behavior when engaging the workforce is very critical when a construction leader develop trust, respect, and motivation among construction operation team including workforce to improve

workforce productivity. According to Osborne and Hammoud (2017), leaders should set an example of honesty, dependability, and professionalism in a diverse and inclusive construction environment, encouraging workforce to take responsibilities. Moreover, construction leaders foster an inclusive workplace in which workforce feel at ease and motivated to contribute their best efforts by being personable, actively listening, and appreciating each individual's context (Burnett and Lisk, 2021).

The findings from Table 4.21 shows accountability (MV = 4.45) as the most important leadership practices adopted by contractors in a diverse and inclusive construction workforce. According to Melo, Martins and Pereira (2020), accountability is a first step that can be adopted by contractors who seek to fosters trust, openness among construction workforce, and responsibility in a team. Furthermore, Ghanem and Castelli (2019) outline that in a construction industry within the Western Cape Province, accountability entails leaders and team members taking ownership of their tasks, admitting mistakes, and working proactively to fix them.

Commitment to organisational goal with MV = 4.33 I ranked as the third most significant leadership commitment practices adopted by contractors in the Western Cape Province. This finding is further supported by Haque, Fernando and Caputi (2019) pointed out that commitment to organisational goals is critical for achieving success and ensuring that all team members share a same vision. Cilek (2019) opines that when leaders exhibit a strong commitment to these goals, it motivates employees to coordinate their efforts and prioritize tasks that contribute to the contractor's goals. Commitment in organisational goal consist of shared commitment that generates a collaborative environment, promotes accountability, and increases overall productivity, resulting in better outcomes and a stronger company culture (Amtu et al., 2021).

4.6.3.2. Mentorship and sponsorship programmes
The findings from Table 4.22 presents mentorship programme to support workforce career development with MV = 4.42 and this was the most recognised mentorship and sponsorship programme adopted by contractors. This finding is consistent with normative literature from Burgess, van Diggele and Mellis (2018) who state that a mentorship programme developed by contractors enhance workforce career development in a skill that is in demand within the contractor experienced professionals with less experienced employees to promote growth and learning. Such programmes offer mentees (workforce) assistance, support, and insight into industry practices, allowing them to successfully navigate their career development path and this practice is used as an effort to improve construction workforce productivity.

Furthermore, the findings from Table 4.22 reveals that accessibility of mentorship programmes to all employees with MV = 4.27 is the third most recognised mentorship and sponsorship programme adopted by contractors. This finding is endorsed by Day (2000) and Korb and Bornman (2021) who reveal that contractors who strive to achieve sustainable construction business performance in the Western Cape need to ensure that mentorship programmes are accessible to all employees and this approach is crucial for encouraging equity and creating an inclusive workplace. Clutterbuck (2014) uncovers that for contractors to accomplish this, contractors should make mentorship opportunities available to employees at all levels, across departments, and with different experiences and backgrounds to ensure equal opportunities that promote workforce productivity in the construction industry.

Mentorship programmes are adopted to ensure the retention and advancement of diverse workforce with MV = 4.19 was the third most ranked leadership factors enhancing workforce productivity in a diverse construction environment. According to Dwyer and Azevedo (2016) mentorship programmes assist contractors to retain and advance a diverse workforce by giving specialized assistance and direction to underrepresented individuals. On the other hand, Naim and Lenka (2018) opines those contractors can assist diverse mentees with experienced mentors in navigating problems, developing skills, and construction professional networks that would otherwise be inaccessible.

4.6.3.3. Inclusive policy

Among Inclusive policy for enhancing leadership practices in a diverse and inclusive workforce towards achieving construction project delivery, feedback-oriented policy. As indicated in Table 4.23, the quantitative analysis signpost that feedback-oriented policy, with MV=4.47, is the most practices adopted in a contractors inclusive policy. A literature from Moss et al. (2020) who pointed that a feedback-oriented policy is a contractors practice that promote regular feedback, both positive and constructive, to improve performance, development, and communication at all levels of the workforce irrespective of gender and race to ensure equal treatment of construction workforce. Furthermore, Nash and Winstone (2017) claims that this strategy promotes open communication between leaders and employees by offering regular opportunity for feedback through performance reviews, team meetings, and informal communication between construction leaders and workforce.

Table 4.23 reveal the clear and explicit policy articulated organisational commitment to diversity equity and inclusion ranked second as the most significant inclusive policy strategy adopted by construction leader to enhance workforce productivity. This finding is in line with the literature

from Seijts and Milani (2022) who highlighted that a clear and unambiguous contractors' policy that articulates the organisation's commitment to diversity, equity, and inclusion (DEI) serves as the foundation for creating a supportive workplace culture that promote inclusive workforce. As a results, Nishii and Leroy (2022) summarised that contractors policy describes the organisation's principles about DEI, establishes specific goals, and details concrete tactics for achieving those goals to ensure sustainable construction business performance.

In addition, Table 4.23 shows proactive and preventative measures highlighted in the policy with MV = 4.31 is the third most ranked factor leadership practice adopted by contractors. This is supported by Chang (2015) who posited that proactive and preventative actions in a diverse and inclusive policy must be actively implemented in leadership practices to ensure equality. Furthermore, Voegtlin (2016) and Melo, Martins and Pereira (2020) reveal that leaders that embody these concepts foster a culture of inclusion, participation, and equity, resulting in corporate success and a diverse workforce toward the enhancement of workforce productivity in construction project delivery.

4.6.3.4. Celebrating diversity within the organisation

The findings from Table 4.24 present diversity and inclusion awards as the practice adopted by construction leaders to celebrating diversity within the organisation, this this finding is supported by an overwhelming MV of 4.56. This finding aligns with Gould et al. (2020) who reveal that diversity and inclusion awards are programmes that recognize and acknowledge contractors employees and management team involved in leadership positions, teams, or organisations who have demonstrated a strong commitment to creating an inclusive workplace and encouraging diversity. Diversity and workforce inclusion awards serve a several reasons, including raising awareness of diverse and inclusion of contraction workforce activities, pushing others to participate in similar efforts, and highlighting best practices that promote workforce productivity in the construction industry (Sweeney and Bothwick, 2016).

Employee's spotlight with MV of 4.52 is regarded as the second most practice adopted by construction leaders to enhance workforce productivity, evidence from Table 4.24. According to Székely and Knirsch (2005) and Dwyer and Azevedo (2016), contractors adopt employee spotlights as a recognition tool to showcase each person's accomplishments, contributions, and special attributes including the success in project delivery, innovation to problem solving, completing construction project on time and etc. It's a powerful method to honour and highlight staff members or employee (workforce) who exemplify the contractors' principles and make a substantial contribution to its success (Dirani et al., 2020).

The findings from Table 4.24 present diverse cultural events together with community partnerships with both factors sharing similar MV = 4.42 as the third most important leadership practice adopted by contractors to improve workforce productivity through celebrating diversity within the organisation. According to Witt and Stahl (2016), a diverse cultural event adopted by the contractor is the leadership initiative that is developed by the contractor to celebrate and highlights the various cultures, customs, and perspectives found within an organisation or community. Besides, Stahl et al. (2017) and Sweeney and Bothwick (2016) uncover that these events encourage inclusivity, understanding of different employees' backgrounds and beliefs, and a sense of belonging among diverse communities. With regards to community partnership, Valli, Stefanski and Jacobson (2018) highlight that contractor who values community partnerships are critical for establishing an inclusive, engaged, and socially responsible culture both within and outside of the construction business. However, Boothroyd et al. (2017) argues that management teams involved in leadership positions who value diversity and inclusion can use community relationships to demonstrate their commitment to social justice while also boosting marginalized populations to improve their confidence which at the later stage become an enable to workforce productivity.

4.6.4. Employee engagement and inclusion to influence individual or team performance in the construction industry

4.6.4.1. Employee engagement and inclusion

The quantitative findings revealed enable peer support is the most important factor that is always or often adopted by contractors as employee engagement or inclusion to influence individual or team performance with an overwhelming MV of 4.59. This finding is consistent with Thompson and Doran (2024) who claim that implementing peer support in construction teams enhances workforce collaboration, skill sharing, and mutual encouragement, so improving both individual and team performance towards achieving workforce productivity and project success. Furthermore, Reeves et al. (2024) and Worton (2020) add that daily meetings, friend systems, and mentorship programmes enables workforce to feel supported and valued, resulting in increased morale and workforce productivity.

The quantitative results from Table 4.25 reveal leadership engagement and visibility as the most significant leadership practices adopted by contractors to stimulate workforce productivity. According to Wu, Li and Fang (2017), leadership engagement and visibility are crucial for developing a motivated, cohesive workforce, particularly in the construction industry. Additionally, Yunpeng and Zaman (2024) reveal that when construction leaders are actively involved and

visible on-site, by adopting this leadership practice leaders foster trust, express commitment, and create a culture in which the construction workforce feels appreciated and heard.

Exposing employees to skills for addressing conflicts, promoting a sense of ownership among employees, and accessibility of physical and digital tools/ resources to all employees to promote inclusion all three (3) leadership practices account for MV = 4.47. Contractors who provide employees with conflict management skills are able to enhance a critical approach for sustaining a harmonious and effective workplace (Berman et al., 2021). Furthermore, Mittal and Dhar (2015) opine that construction employees who receive conflict resolution training, such as active listening, empathy, and constructive feedback, are better equipped to handle disagreements professionally and productively in construction project delivery. with regards to promoting a sense of ownership among employees, the normative literature from Stander and Coxen (2017) posited that promoting a sense of ownership among employees as a way of workforce motivation, accountability, and job satisfaction creates sustainable productivity in construction project delivery. Thus, Zhang et al. (2023) reveal that contractors who allow the workforce to be proactive in decision-making autonomy, involving them in goal-setting, and acknowledging their contributions make them feel valued and accountable for the results. Concerning accessibility of physical and digital tools/ resources to all employees to promote inclusion, this finding is supported by Shore, Cleveland and Sanchez (2018) uncovered that promoting an inclusive workplace where all employees can contribute productively requires contractors to provide access to all workforce with both digital and physical tools. According to Antonacopoulou and Georgiadou (2021) and Vohra et al. (2015), organisations foster an atmosphere where workers of all abilities may access resources without hindrance by offering ergonomic equipment, adaptable technology, and digital platforms that are universally constructed.

Regarding factor analysis, factor analysis identified five (5) components namely cultural awareness training, promoting a sense of ownership among employees, encouraging employees to participate in community engagement, leadership engagement and visibility, and prioritise employee's well-being as the most significant employee engagement and inclusion to influence individual or team performance in the construction industry.

Component 1, the underlying three component accounting for 17.017% of the variance overall, namely cultural awareness training (0.740), a fair hiring process that promotes a sense of belonging (0.710) and provides a support service for personal and professional challenges faced

by employees (0.709). This component is encouraged by Tabassi et al. (2016) who concluded that cultural awareness training adopted by contractors should incorporate interactive exercises like as role-playing and scenario discussions to ensure that employees can apply principles in real-world scenarios to ensure the understanding of inclusive workforce in the construction industry that promote productivity in construction project delivery. Thus, employees' continuous learning opportunities, feedback mechanisms, and leadership involvement are critical for establishing a sustainable culture of inclusion (Wu et al., 2016).

Component 2 Promoting a sense of ownership among employees

The second component includes four (4) features, namely promoting a sense of ownership among employees (0.682), accessibility of physical and digital tools/ resources to all employees to promote inclusion (0.609), promoting transparent decision-making to foster employees' trust (0.562) and regular checkout meetings with employees (0.462) as presented in (Table 4.27). This component was consistent with quantitative results.

Component 3 Encouraging employees to participate in community engagement

the underlying two component accounting for 17.017% of the variance overall, namely Encouraging employees to participate in community engagement (0.802) and Enable peer support (0.454). according to Wu, Li and Fang (2017), contractors who encourage employees to participate in community service promote a sense of purpose and responsibility for both the workplace and the larger community by impacting communities with a set of skills gained by the workforce in project delivery. In addition, Loosemore and Lim (2018) highlight that contractors are able to improve employee morale and teamwork by promoting volunteer programmes, sponsoring company-sponsored events, and rewarding community involvement. Thus, Loosemore and Lim (2018) conclude that this approach involvement not only increases neighborhood links but also improves the company's brand and fosters a culture of social responsibility.

Component 4 Leadership engagement and visibility

The fourth component includes three (3) features, namely leadership engagement and visibility (0.697), involve employees in decision-making (0.602), and exposing employees to skills for addressing conflicts (0.357) as presented in (table 4.27). This component was consistent with quantitative results.

Component 5 Prioritise employee's well-being

The fifth component includes two (2) features, namely prioritise employee's well-being (0.685), and clear employee role and expectations (0.437) as presented in (table 4.27). This component is consistent with the Kowalski and Loretto (2017) who reveal that prioritizing employee well-being is critical for contractors to improve workforce productive, engaged, and loyal team that focusses on productivity. Furthermore, organisations demonstrate their commitment to their employees' overall health and happiness by providing mental health support, flexible working arrangements, and promoting work-life balance to improve workforce commitment in project delivery (Søvold et al., 2021).

4.6.5. Qualitative findings

This research adopted a qualitative data collection to capture detailed leadership opinions regarding different leadership practices adopted by the contractor in a dynamics and inclusion efforts, which numbers alone may not represent. Furthermore, qualitative insights might uncover unexpected obstacles or elements that quantitative metrics may miss, resulting in a more complete knowledge of complicated topics related to leadership strategies adopted by contractors to enhance productivity through workforce diversity and inclusion. Therefore, using qualitative data, researchers is adopted to improve the validity of the study findings, resulting into a robust conclusion.

4.6.5.1. Barriers to inclusive leadership in the construction industry
The qualitative finding reveals that contractors are affected by cultural differences from adopting a diverse and inclusive leadership practices, this finding is highlighted by *P1*. According to Fisher (2021), a diverse workforce cultural differences has a significant impact on leadership practices because leaders must traverse diverse beliefs, communication styles, and work habits shaped by their employees' cultural backgrounds which subsequently impact workforce productivity. Moreover, cultural differences include values, practices, language preferences, and attitudes toward authority, all of which influence how workforce interact, respond to feedback, and perceive collaboration within teams towards achieving a sustainable project delivery through workforce productivity (Abramson & Moran, 2017). *P1* further state that contractors are affected by employees age differences, as the age group among employees become a barrier to leaders. This finding is similar to Vaughan-Johnston et al. (2021) and Rudolph, Rauvola and Zacher (2018) who posited that employee age differences in the construction industry can have a significant impact on leadership practices as construction leader have the responsibility to balance different

workforce opinions, job preferences, and beliefs that are frequently associated with generational diversity.

The qualitative findings further reveal orginasational culture preventing adequate leadership practices and this barrier is highlighted by *P2*. This finding is alluded by the literature from Belias and Koustelios (2014) who pointed out that organisational culture is mostly significant in shaping leadership practices in a diverse construction environment because it includes common beliefs, conventions, and practices that drive employee behaviour and impact how leaders engage with their respective teams and workforce to achieve workforce productivity. Also, Maamari and Saheb (2018) adds that in the construction industry, organisational culture can influence everything from communication and decision-making to safety standards and team collaboration. *P2* further highlight that diverse and inclusive leadership practices are affected by budget limitations and prevent contractors from achieving sustainable contraction project success. According to Junita et al. (2018) and Kohlmeyer et al. (2014), construction leaders of a diverse workforce must also make sure that financial constraints don't unfairly disadvantage particular groups or compromise initiatives to create a welcoming and encouraging work environment that enables construction employees to work to their level best without having financial challenges. *P2*, pointed out that majority of construction firms are affected by lack of awareness and client experience from adopting inclusive leadership practices. This finding is similar to Wilson et al. (2020) who state that in a construction setting, leadership methods can be greatly impacted by lack awareness and client experience, particularly when overseeing a variety of projects with distinct client requirements that drastically change contractors planning. The complexity of project timeframes, budgeting, regulatory requirements, and technical standards may be difficult for clients with little construction knowledge or experience to comprehend, which subsequently affect workforce productivity in a delivery of construction project (Dwivedi et al., 2021).

The finding from *P3* reveal that company business model-companies preferring to employ workers from preferred races, gender, beliefs and political affiliation, etc affects the adoption of inclusive leadership practices in the construction sector. According to Shermon (2017), company business model-companies preference led to a homogeneous workforce that lacks the different opinion required to innovate and adapt to a global construction market to enhance workforce productivity. Thus, Maréchal, MacKinnon and Dheere (2020) adds that contractors who limit a diversity in recruitment based on such preferences limits the company's access to a wider range of applicants, lowering the possibility for creative problem-solving, adaptability, and improved decision-making that come with a diverse workplace that proves to be the construction wheel

towards contractors' sustainable business performance. The findings from **P3** further states that contractors diversity and inclusive leadership practices are affected by Petrides, Jimes and Karaglani (2014) who posited that contractors who do not poses a clearly defined values, contractors may be confronted with several challenges that harm leadership practices, employee morale, and overall organisational effectiveness. **P3** also, reveal that contractors diverse and inclusive leadership practices are affected by resistance to change lack of communication and poor leadership. This finding is consistent with Banutu-Gomez and Banutu-Gomez (2007) who reveals that resistance to change, a lack of communication, and poor leadership can all significantly impact contractors' business performance and workforce productivity, resulting in misunderstandings, delays, and disengaged workforce. Moreover, Ngang Tang (2019) claims that construction leadership, effective communication, and a proactive approach to change management are critical for creating a cohesive and productive work environment, particularly in a diverse context which improves construction workforce productivity in the construction industry. The finding from **P4** reveal that contractors are challenged by adopting a new approach or a new way of doing conventional practices which makes it impossible for contractors to adopt diverse and inclusive leadership practices. According to Erhan, Uzunbacak and Aydin (2022), this leadership practice requires construction leaders to possess an excellent communication, and a willingness to confront workforce who are resistant to change while ensuring that new practices are aligned with organisational goals and the various requirements of employees. **P4** Further state that contractor is confronted by lack of training to both construction management team and workforce. This finding is consistent with quantitative findings as indicated in Table4.15 which refers to accessing educational and professional development opportunities.

The qualitative findings reveal that contractors are affected by language proficiency especially English is the most challenging point in achieving a diverse and inclusive leadership to enhance inclusive and diverse workforce productivity evidence from **P5**. According to Baldwin (2021), management team involved in leadership position should ensure that that all team members, regardless of language proficiency, have access to clear instructions, safety protocols, and activity specification. Lindsey et al. (2018) stressed that this could include providing language mentorship programmes, visual aids, or training on regularly used industrial phrases that enable workforces to understand construction project scope. **P5** also state that contractors are affected by cultural backgrounds of different employees and its effect in communication and the way leaders has to conduct and manage themselves in construction workplace, and this finding is similar to that one of **P1**.

4.6.5.2. The characteristics of effective leadership in a diverse and inclusive construction environment

The finding from qualitative interviews regarding the characteristics of effective leadership in a diverse and inclusive construction environment for improvising workforce productivity. *P1* pointed out that to achieve diverse and inclusive leader, contractors need to employ a leader that is willing to supports and provides coaching where required to employees in order to achieve construction project success through workforce inclusion. This finding is consistent with that one of quantitative results in Table 4.21, commitment to fostering diversity and inclusion to improve workforce productivity. *P1* reveal that leader that communicates their expectation to employees effectively. This practice is supported by Jensen, Moynihan and Salomonsen (2018) who uncovers that effective communication of construction project goals and expectations manager in a leadership position assist workforce to understand goals, roles, and duties, which is crucial for sustaining alignment and productivity. The findings from P1 further highlight that contractor perceives that construction leader need to motivates employees innovatively in order to get the best out of employees, empathy towards employee's personal development and challenges, and consistence performance feedback to improve employee's performance. These findings from qualitative results were consistent with the quantitative results.

The qualitative findings from *P2* uncovers that the participant believes that a construction leader needs to possess adaptability practices and not to stack in a traditional way of workforce management. The literature from Uhl-Bien and Arena (2018) who suggested that construction leaders who value adaptation promote flexibility, innovation, and the readiness to change strategy in response to new difficulties or unexpected circumstances that arises during construction project delivery, are able to respond to project challenges and complete the project within the budget. The finding from qualitative results reveal that contractors believes that leader in construction industry need to respect employees irrespective of their position and this finding is consistent with quantitative findings, and construction leaders need to have fairness and Strong communication skills to enable workforce productivity which is similar to the findings from *P1*.

P3 reveals that a displays company core values, openly communicates information to all employees is most significant in leadership practices, and contractors who encourages an inclusive decision making is significant to improve employee's willingness. These finding is similar to that one of *P1, P2*, and quantitative findings. *P3* further state that a construction diverse and inclusive construction leader is a decisive thinker that makes significant decision making. According to Davila (2019), decisive thinkers in leadership make constructive decisions quickly

and confidently, taking into account both short-term and long-term implications for the construction business sustainability.

The qualitative findings from *P4* reveal that the characteristics of constructure leaders practices are construction leader need to possess respecting all employees' views and ideas, construction leader possesses a cultural intelligence to understand different cultures involved in the organisation, and construction leader must ensure the honest and integrity to improve trust from employees. It should be noted that these leadership characteristics are consistent with the finding from quantitative results.

With regards to *P5*. *P5* pointed out that leaders open mind to ensure the success of diverse and inclusive workforce productivity in the construction project delivery, leader needs to be able to adapt to changes, and patient is an important aspect of effective leadership. These findings support the findings from both quantitative and other participants from qualitative findings.

4.6.5.3. Leaders' management practices of diversity and inclusion within the construction industry

According to the findings from *P1*, organisation has a flat line management practice which provides a platform to enable employees engagement and productivity for using people strengths to best meet the companies' goals and objectives. This practice is adopted by a contractor as a diverse and inclusive leadership practices that promote workforce productivity in the construction industry. Jaramillo and Richardson (2016) argue that contractors' regular one-on-one meetings between managers and their direct workforce are an example of a line management practice that fosters employee engagement to improve productivity through constructive feedback to employees. Cavallone and Palumbo (2022) add that contractors who adopts these meetings provide an opportunity for open discourse in which employees can express issues, give growth within the organisation.

The qualitative findings from *P2* also highlights that contractor's mentorship programmes developed by contractor to improve workforce productivity, and contractor adopts performance reviews and reward employees for their performance, this practice is consistent with that one of quantitative findings. *P2* further reveal that contractor adopts a diverse recruitment to promote diversity and inclusion in terms of race and disability. This finding aligns with Chin, Desormeaux and Sawyer (2016) who claim that contractor who shows a dedication to develop a more inclusive workforce that represents the wide range of skills and opinions available when it implements a diverse recruitment strategy to encourage diversity and inclusion in terms of race and disability to improve employees share of experience and

knowledge from different backgrounds to enhance sustainable inclusive project delivery. *P2* also reveal that a strict policy against discrimination and harassment as a modality to improve employees' performance and feel belonging to the organisation. This finding is endorsed by Miller and Ewest (2015) who uncovered that contractor who adopts a strict anti-discrimination and anti-harassment policies are an essential tool for raising employee performance and creating a feeling of community within a company, and by adopting this policy contractors are able to achieve the maximum use of available limited human resources.

The findings from *P3* reveals that contractors encourage diverse teams to promote a diverse and inclusive workforce productivity, job mentorship to improve workforce skill and competencies, contractor recognises the importance of confront bias when it arises and deal with it accordingly, contractor encourages the remove communication barriers to enable workforce productivity, and contractor is very strict when it comes to holding workers accountable. These findings align with the quantitative findings.

The qualitative findings from *P4* reveals that contractors adopt independent thinking from both workforce and the management team to enable employees to showcase their respective skills as a diverse and inclusive leadership practices. According to Roberson and Perry (2022), contractors who encouraging workforce to work independent, contractors are able to foster critical thinking among both the workforce and the management team develops an environment of creativity and empowerment, allowing individuals to demonstrate their abilities and contribute significantly to the construction business success. Furthermore, *P4* pointed out that contractors promote the allowance of self-management among employees as a diverse and inclusive leadership practices adopted by contractors. In support, Boehm and Dwertmann (2015) uncovers that allowing self-management in the construction industry enables workforce to be responsible for their respective activities, make decisions, and manage their own time and resources, resulting in enhanced accountability and job satisfaction.

Regarding the findings from *P5*, *P5*: effective leadership practices include effective communication which is one of the barriers that contractors are faced with. Championing communication related challenges contractors can be able to achieve productivity and sustainable project success. *P5* further indicate that recruiting across all race groups is mostly important in promoting diversity and inclusion in the construction industry. These findings from P5 aligns with the finding from quantitative findings and that one of qualitative findings.

The qualitative findings from P1 reveal that cross functional & collaboration and knowledge sharing is the main influence in teams' performance to promote sustainable construction project delivery. according to Musa (2019) and Cheng et al. (2023), construction leaders can guarantee that construction workforce works as a team by encouraging cross-functional collaboration, which brings together different skills to tackle difficult construction activities. On the other hand, Santos, Goldman and De Souza (2015) knowledge sharing is equally vital since it allows team members to exchange valuable experiences, skills, and best practices, ensuring that long-term solutions are incorporated throughout the construction project. P1 adds that collaborative leadership, and this engagement is consistent, and provides effective support to ensure the team meets the companies goals and objectives, professional development and career advancement is also a great driving force in individual performance within the organisation as employees are consistently encouraged to attend training courses and rewarded with career advancements where the personal development has reached a expected output, and that contractor promotes effective coaching by direct management on specific task. These findings align with that one of the quantitative findings.

The findings from *P2* and *P3* were consistent with that of quantitative findings.

The findings from *P4* reveal that inclusive training is the key element of employee engagement and inclusion practices to improve workforce productivity. This finding is supported by Jerónimo, Henriques and Carvalho (2022) who contend that in the construction industry inclusive training enables workforce to develop the skills needed to contribute to sustainable practices and innovate in their roles, aligning with the organisation's long term business sustainability. The findings from P4 also reveals that diverse leadership represented is a very key aspect of employee's engagement to improve workforce willingness to collaborate with construction leaders, and contractors should promote continuous professional development to be encouraged and to be made available to all employees. These findings align with both quantitative and qualitative findings.

The findings from P5 uncovers that contractor adopts team building as a diverse and inclusive leadership practices adopted by contractors to enhance workforce productivity in the Western Cape Province. According to Ashikali, Groeneveld and Kuipers (2021) and Roberson and Perry (2022), in the construction industry contractors who recognise the importance of team building, as a diverse and inclusive leadership strategy for enhancing cohesive and high-performing workforce by encouraging collaboration, trust, and mutual respect among construction

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workforce from all backgrounds, gender and disability. Thus, construction leaders that stress inclusive team-building strategies make certain that all team members, regardless of race, gender, culture, or any other attribute, feel appreciated and included and improve productivity during construction project delivery (Shore and Chung, 2022).

4.7. Chapter conclusion

Chapter four (4) shows the analysis, interpretation presentation of results, discussions of findings obtained from the results related to leadership framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province of South Africa. This study adopted Statistical Package for the Social Sciences version 28 (SPSS) to analyse descriptive and inferential statistics. Descriptive data was analysed using mean ranking and both factor analysis and ANOVA test was used in this study for inferential statistics.

The results were ranked hierarchically using the mean value to determine the most significant effective leadership framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province of South Africa. Concerning policy and legal framework the most significant factors affecting the adoption of diverse and inclusive leadership practices was political interference, awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians, and regulatory organisations, and labour law promoting equal workforce opportunities as show on Table 4.13. With regards to ANOVA test there were no significant differences among the variables. Regarding representation as a practice hindering inclusive and diverse leadership are lack of representation in terms of race, gender, ethnicity, or disability, employers does not encourage diversity and representation within their organisations, and initiatives aimed at increasing representation as presented in Table 4.14. Concerning organisational culture and practices the most significant factors affecting the adoption of diverse and inclusive leadership practices are engagement, morale, and productivity of employees, a commitment to diversity and inclusion, orgnisational efforts to promote equal opportunities, and diversity and inclusive awareness within organisational leadership or management. These findings suggest that contractors need to revise organisational policies to align with the adoption of inclusive and diverse leadership practices that is workforce centric.

The qualitative findings in this chapter reveals that contractors are mostly affected by employee's culture differences, employees age differences that prevent the share of knowledge and the cultural believes from different race that segregate employees by age groups, budget limitations, deficient or non-existent company values, communication barrier, and lack of training to both construction management team and workforce.

Regarding characteristics of effective leadership in a diverse and inclusive construction environment both general management and workforce productivity leadership characteristics. with respect to general management the following characteristics were identified as general management namely patience, effective risk management, humility, and lead by example as shown in Table 4.17. Regarding workforce productivity leadership characteristics the findings reveal the following practices namely inclusive decision-making, proactive diversity initiatives to empower the workforce, and problem-solving skills. Factor analysis was performed on workforce productivity leadership characteristics and the most significant four (4) components are celebration of success and achievement of the workforce, problem-solving skills, conflict resolution skills, and emotional intelligence to empower the workforce.

The qualitative findings in this chapter reveal the following inclusive and diverse leadership characteristics as leader that is willing to supports and provides coaching where required, leader that communicates effectively, leader must ensure the honest and integrity to improve trust from employees, and effective leader need to adapt to change and also deal with conflict.

With regard to. leaders' management practices of diversity and inclusion within the construction industry. The following leadership commitment findings were noted in this study on table 4.21, demonstrating behavior when engaging the workforce, accountability, and commitment to organisational goal. This chapter presented the findings on mentorship and sponsorship programmes comprising mentorship programme to support workforce career development, accessibility of mentorship programmes to all employees, and mentorship programmes are adopted to ensure the retention and advancement of diverse workforce as presented on Table 4.22. Concerning inclusive policy the findings from this chapter includes feedback oriented policy, the clear and explicit policy articulated organisational commitment to diversity equity and inclusion, and proactive and preventative measures highlighted in the policy. This chapter presented the findings on celebrating diversity within the organisation comprising of diversity and inclusion awards, employee's spotlight, diverse cultural event, and community partnership.

The qualitative findings reveal the following leadership practices, inclusive recruitment based on the diverse candidate pools, performance reviews and reward employees, and adhere and commitment to creating a safe inclusive environment.

 Furthermore, the findings from chapter 4 present employee engagement and inclusion to influence individual or team performance in the construction industry. Chapter 4 shows the following findings namely enable peer support, leadership engagement and visibility, exposing employees to skills for addressing conflicts, promoting a sense of ownership among employees, and accessibility of physical and digital tools/ resources to all employees to promote inclusion.

With regards, to factor analysis the following components were regarded as most significant namely cultural awareness training, promoting a sense of ownership among employees, encouraging employees to participate in community engagement, leadership engagement and visibility, and prioritise employee's well-being.

The qualitative results in this chapter reveal that contractors adopts, collaborative leadership, and this engagement is consistent and provides effective support, effective communication employee engagement and inclusion practices, and team building.

Thus, the finding from this chapter aligns with normative literature regarding the leadership framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province of South Africa.

CHAPTER FIVE

CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS FOR FURTHER RESEARCH

5.1. Introduction

Chapter five discusses the conclusions of the research, identifies limitations involved in this research study, and provides recommendations relevant to the study including areas for future research regarding leadership framework for enhancing productivity in construction through workforce diversity and inclusion. The preceding chapters: revealed more details with regard to the aim and objectives of the study. The aim of this study is to propose an effective leadership framework that enhances productivity through workforce diversity and inclusion in the Western Cape Province of South Africa. In an effort to achieve the study aim, the following study objectives were developed to enable the development of leadership framework for enhancing productivity in construction through workforce diversity and inclusion:

- To investigate what leaders, perceive as the barriers to inclusive leadership in the construction industry.
- To determine the characteristics of effective leadership in a diverse and inclusive construction environment.
- To determine how leaders manage diversity and inclusion within the construction industry.
- To determine whether employee engagement and inclusion influence individual or team performance in the construction industry.

To achieve the above-mentioned study objectives a sequential mixed method comprising both quantitative and qualitative research approach, aided by administering questionnaire surveys as well as semi-structured interviews, was used to gather related to leadership framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province of South Africa. A summary of the findings with respect to the leadership framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province of South Africa is presented in Table 5.1.

Table 5.1: Summary of Key Findings

Research Objective		Quantitative Key Findings	Qualitative Key Findings	Implications
To investigate barriers that prevent contractors from adopting diverse and inclusive leadership practices in the construction industry.	Policy and legal framework	Political interference	• Employee's culture differences • Employees age differences • Non-existent company values • Communication barrier • Lack of training to both construction management team and workforce • Budget limitations	overcoming these barriers to inclusive leadership requires a proactive approach, including training, resource allocation, cultural change initiatives, and ongoing communication. Embracing these strategies can help leaders foster a more inclusive and supportive environment, ultimately benefiting project outcomes, employee satisfaction, and organisational resilience.
		Awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians		
		Regulatory organisations, and labour law promoting equal workforce opportunities		
	Representation	Lack of representation in terms of race, gender, ethnicity, or disability		
		Employers does not encourage diversity and representation within their organisations		
		Initiatives aimed at increasing representation		
	Organisational culture and practices	Engagement, morale, and productivity of employees		
		Commitment to diversity and inclusion		
		Orgnisational efforts to promote equal opportunities		
		Awareness within organisational leadership or management		
To determine the characteristics of effective leadership in a diverse and inclusive construction environment.	General management	Patience	• Willing to supports and provides coaching • Leader that communicates effectively • Honest and integrity to improve trust from employees • Adapt to change and also deal with conflict	The characteristics of effective leadership in a diverse and inclusive construction environment lay the groundwork for improved team performance, innovation, and organizational development. Leaders that exhibit these characteristics not only increase project outcomes, but also foster a good, inclusive culture that attracts and keeps people, thereby increasing the organization's competitive edge.
		Effective risk management		
		Humility		
		Lead by example		
	Workforce productivity leadership characteristics	Inclusive decision-making		
		Proactive diversity initiatives to empower the workforce		
		Problem-solving skills		
		Celebration of success and achievement of the workforce		
		Conflict resolution skills		
		Emotional intelligence to empower the workforce		
To determine the Leadership management practices of diversity and inclusion within the construction industry.	Leadership commitment	Demonstrating behavior when engaging the workforce	• Inclusive recruitment based on the diverse candidate pools	Managing diversity and inclusion within the construction industry demands a combination of clear strategy, consistent action, and
		Accountability		
		Commitment to organisational goal		

	Mentorship and sponsorship programmes	Mentorship programme to support workforce career development	• Performance reviews and reward employees • Adhere and commitment to creating a safe inclusive environment	authentic commitment from leaders. Contractors who adopt these leadership approaches, leaders create a more dynamic, respectful, and productive workplace, enabling all employees to contribute to their fullest potential.
		Accessibility of mentorship programmes to all employees		
		Mentorship programmes are adopted to ensure the retention and advancement		
	Inclusive policy	Feedback oriented policy		
		The clear and explicit policy articulated organisational commitment to diversity equity and inclusion		
		Proactive and preventative measures highlighted in the policy		
	Celebrating diversity within the organization	Diversity and inclusion awards		
		Employee's spotlight		
		Diverse cultural event		
		Community partnership		
To determine whether employee engagement and inclusion influence individual or team performance in the construction industry.	Employee engagement and inclusion influence individual or team performance	Enable peer support	• Collaborative leadership • Effective communication • Team building	Employee engagement and inclusion are essential drivers of both individual and team performance in the construction industry. Leaders who prioritise these factors foster an environment where employees are motivated, feel respected, and are empowered to perform at their best. As a result, projects are more likely to be completed on time, within budget, and with high-quality outcomes, while also promoting a positive and sustainable work culture.
		Leadership engagement and visibility		
		Exposing employees to skills for addressing conflicts		
		Promoting a sense of ownership among employees		
		Accessibility of physical and digital tools/ resources to all employees to promote inclusion		
		Cultural awareness training		
		Encouraging employees to participate in community engagement		
		Leadership engagement and visibility		
		Prioritise employee's well-being		

5.2. Conclusions relative to leadership framework for enhancing productivity in construction through workforce diversity and inclusion

5.2.1. Barriers to inclusive leadership in the construction industry

To determine the barriers to inclusive leadership in the construction industry towards the enhancement of effective leadership framework. To achieve the study's objective, this study conducted a literature review and administered survey questionnaires to construction management teams involved in leadership positions and interviewed selected team members who took part in the survey questionnaires. Based on the quantitative analysis, factors affecting diverse and inclusive construction leadership practices in the construction industry related to policy and legal framework include political interference (MV = 4.53), awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians, and regulatory organisations (MV = 4.42), and labour law promoting equal workforce opportunities (MV = 4.39).

Concerning representation factors preventing the adoption of inclusive leadership practices in the construction industry, the findings from this study reveal the following factors: lack of representation in terms of race, gender, ethnicity, or disability (MV = 4.39), employers does not encourage diversity and representation within their organisations (MV = 4.34), and lack of initiatives aimed at increasing representation (MV = 4.19).

The findings from this research reveal the following organisational culture and practices related factors affecting inclusive and diverse leadership practices for enhancing workforce productivity in the construction industry includes, engagement, morale, and productivity of employees (MV =4.33), a commitment to diversity and inclusion (MV = 4.14), orgnisational efforts to promote equal opportunities (MV = 4.14), and diversity and inclusive awareness within organizational leadership or management (MV = 4.11).

The qualitative results reveals the following factors affecting contractors from adopting diverse and inclusive leadership practices to achieve workforce productivity in the construction industry, comprising a leader that is willing to support and provides coaching where required, the leader that communicates effectively, the leader must ensure the honest and integrity to improve trust from employees, and effective leader need to adapt to change and also deal with conflict.

In summary the findings from this study reveals, political interference, lack of diversity in terms of race, gender, ethnicity, and disability, employee engagement, morale, and communication are critical factors that influence performance in the construction industry. Moreover the findings from this study reveal political interference can disrupt fair project execution, leading

to inefficiencies, corruption, and delays, while a lack of representation in leadership roles limits diverse perspectives and reduces team cohesion. The majority of contractors are affected by low engagement and poor morale negatively affects productivity, as disengaged employees are less likely to be motivated or committed to project success, increasing turnover and errors. Additionally, ineffective communication creates misunderstandings, delays, and mistakes, undermining teamwork and overall project outcomes.

5.2.2. Characteristics of effective leadership in a diverse and inclusive construction environment

In the objectives of this study, the second objective was to determine the characteristics of effective leadership in a diverse and inclusive construction environment. Among general management characteristics, the quantitative findings reveal the following characteristics of diverse and inclusive leadership practices including patience (MV =4.83), effective risk management (MV = 4.52), humility (MV = 4.34), and lead by example (MV =4.34).

Regarding workforce productivity leadership characteristics, the quantitative findings reveal that contractors adopt the following leadership characteristics to enhance workforce productivity namely inclusive decision-making (MV = 4.84), proactive diversity initiatives to empower the workforce (MV = 4.64), and problem-solving skills (MV = 4.58).

This study adopted factor analysis to reduce the data into smaller cases. Factor analysis identified the following underlying components namely celebration of success and achievement of the workforce (0.691), problem-solving skills (0.582), conflict resolution skills (0.666), and emotional intelligence to empower the workforce (0.541).

The qualitative findings from semi-structured interviews reveal the following leadership characteristics leading to diverse and inclusive leadership practices adopted by contractors to achieve workforce productivity in the Western Cape Province. This finding includes willing to supports and provides coaching where required, leader that communicates effectively, leader must ensure the honest and integrity to improve trust from employees, and effective leader need to adapt to change and also deal with conflict.

In conclusion effective leaders demonstrate patience, allowing for the time needed to understand and support the diverse needs of their teams. Furthermore, the findings from this study indicates that inclusive decision-making ensures that all voices are heard, promoting a sense of belonging and collaboration, which leads to better team outcomes. Construction leaders must also possess conflict resolution skills to address disputes swiftly and

constructively, preventing disruption and maintaining team harmony. Celebrating the successes and achievements of the workforce boosts morale and fosters a sense of appreciation and motivation. Effective leaders are also willing to support and coach employees when needed, helping them grow professionally. Clear and effective communication is essential, as it ensures transparency and alignment across teams, enhancing collaboration. Leaders must also lead with honesty and integrity, which builds trust and respect from employees, creating a reliable foundation for team performance. Finally, an effective leader must be adaptable to change and able to manage conflicts, ensuring that the team remains resilient and can respond effectively to challenges, thus improving overall organisational success.

5.2.3. Leaders' management practices of diversity and inclusion within the construction industry

In the evaluation of leaders' management practices of diversity and inclusion within the construction industry, the literature was reviewed and both quantitative and qualitative research methods were adopted to evaluate the leaders' management practices of diversity and inclusion within the construction industry adopted by contractors to improve workforce productivity. Based on quantitative results related to leadership commitment, the following leadership practices were considered most significant: demonstrating behavior when engaging the workforce (MV = 4.58), accountability (MV = 4.45), and commitment to organisational goal (MV =4.19). With regards to mentorship and sponsorship programmes this study found the following leadership practices most important namely mentorship programme to support workforce career development (MV =4.42), accessibility of mentorship programmes to all employees (MV =4.27), and mentorship programmes are adopted to ensure the retention and advancement of diverse workforce (MV =4.19). Concerning inclusive policy this study found the following leadership practices for enhancing workforce productivity include feedback-oriented policy (MV =4.47), the clear and explicit policy articulated organisational commitment to diversity equity and inclusion (MV = 4.45), and proactive and preventative measures highlighted in the policy (MV = 4.31). Regarding celebrating diversity within the organisation this study findings reveal that contractors adopt diversity and inclusion awards (MV =4.56), employee's spotlight (MV =4.52), diverse cultural event (MV = 4.42), and community partnership (MV = 4.42).

The qualitative findings reveal that contractors adopt the following leadership practices, inclusive recruitment based on the diverse candidate pools, performance reviews and reward employees, and adherence and commitment to creating a safe inclusive environment.

In summary, this study reveals that construction leaders demonstrating positive behaviour when engaging the workforce is crucial for fostering a culture of respect and collaboration, encouraging employees to be proactive and committed. To achieve that construction leaders should be Implementing a mentorship program to helps support career development, allowing employees to gain valuable insights and grow within the organization. in order to achieve continuous improvement contractors need to adopt a feedback-oriented policy that promotes continuous improvement, enabling employees to receive constructive input and enhance their performance. Thus, diversity and inclusion awards recognise and celebrate efforts toward creating an inclusive environment, motivating the workforce to embrace diversity and contribute to a more equitable workplace.

5.2.4. Employee engagement and inclusion to influence individual or team performance in the construction industry

Based on the quantitative analysis, the most significant employee engagement and inclusion to influence individual or team performance adopted by construction leaders to achieve diverse and inclusive workforce productivity includes enable peer support (MV =4.59), leadership engagement and visibility (MV =4.51), exposing employees to skills for addressing conflicts (MV = 4.47), promoting a sense of ownership among employees (MV = 4.47), and accessibility of physical and digital tools/ resources to all employees to promote inclusion (MV = 4.47).

Regarding factor analysis the findings from this study reveal the following components namely cultural awareness training (0.740), promoting a sense of ownership among employees (0.682), encouraging employees to participate in community engagement (0.802), leadership engagement and visibility (0.697), and prioritise employee's well-being (0.685).

In conclusion contractors that promotes enabling peer support fosters camaraderie and trust, helping employees feel valued and supported by their colleagues to improve productivity in contraction project delivery. also, a cultural awareness training equips employees with the skills to understand and appreciate diverse backgrounds, creating a more inclusive workplace. Encouraging a sense of ownership and community engagement inspires employees to take pride in their work and contribute positively both to the company and the

community. As a results leadership engagement, visibility, and prioritizing employee well-being demonstrate a genuine commitment to employees' health and happiness, improving morale and strengthening loyalty across the organisation and improves workforce productivity.

5.3. The contribution of the study

This study makes a significant contribution to both theory and practice within the South African construction industry by developing a context-specific leadership framework tailored to the unique challenges and opportunities of managing diversity in the Western Cape Province. Theoretically, the study bridges leadership theory, transformational leadership theory, and diversity theory to provide a comprehensive understanding of how inclusive leadership can influence team engagement, innovation, and productivity. It expands the existing body of knowledge by contextualizing these theories within the dynamic and multicultural environment of South Africa's construction industry, an area where empirical research remains limited. Practically, the study offers a structured model for industry leaders, construction managers, and policymakers to identify barriers to inclusive leadership, cultivate motivation to implement inclusive practices, and manage diverse teams effectively.

5.4. Operational leadership Framework for enhancing productivity in construction through workforce diversity and inclusion

Figure 5.1 shows operational framework for effective leadership practices to enhance productivity through diversity and workforce inclusion. Effective leadership practices are crucial for fostering workforce diversity and inclusion, which directly influence sustainable productivity in the construction industry. Additionally, construction leaders who demonstrate emotional intelligence, adaptability, and inclusive decision-making create an environment where employees feel valued and empowered. Contractors who adopt proactive diversity management practices such as mentorship programmes, inclusive recruitment, and bias mitigation contractors can cultivate a supportive and innovative workforce. Moreover, in Figure 5.1 contractors' leadership characteristics not only improve employee engagement during construction project delivery but also enhance collaboration, creativity, and problem-solving, all of which are mostly significant for effective construction project delivery in the dynamic construction industry.

Conversely, barriers such as political interference, cultural resistance, and discriminatory practices affects effective implementation of diversity and inclusion initiatives in the

construction business. Contractors who able to address such problems require strong leadership commitment to fostering an inclusive culture through continuous training, recognition of diverse contributions, and equitable opportunities for contractor's workforce development. Thus, engaging employees through professional development, community involvement, and feedback-driven practices enhances morale and productivity. Ultimately, integrating inclusive leadership practices and employee engagement practices creates a pathway for contractors to achieve sustainable productivity, innovation, and Sustainable construction business success.

The operational framework serves as a practical guide for contractors, project managers, and industry stakeholders to implement effective leadership practices that promote workforce diversity and inclusion, ultimately enhancing productivity in construction projects. It outlines how key leadership attributes such as emotional intelligence, adaptability, and inclusive decision-making can be leveraged to foster a supportive and engaging work environment. By following this framework, users can identify and apply specific strategies like mentorship programmes, inclusive hiring, and bias mitigation to address common barriers such as discrimination and resistance to change. The framework also emphasizes the importance of continuous professional development, feedback mechanisms, and equitable opportunities, showing how these elements contribute to improved teamwork, innovation, and sustainable project outcomes. In essence, it offers a step-by-step pathway for creating inclusive construction sites that are not only productive but also resilient and future-ready.

Barriers
- Political interference
- Awareness and understanding of diversity and inclusion
- Labour law
- Lack of representation
- Employers does not encourage diversity and representation
- Engagement, morale, and productivity of employees
- A commitment to diversity and inclusion
- Cultural and racial differences
- Age diversity and generational gaps
- Organisational culture and resistance to change
- Budget constraints and client expectations
- Lack of awareness and training
- Language and communication barriers
- Discriminatory hiring practices and business models
- Poor leadership and lack of company values

Contractors Leadership practices

Characteristics of effective leadership
- Patience
- Effective risk management
- Humility
- Lead by example
- *Celebration of success and achievement of the workforce Problem-solving skills*
- *Conflict resolution skills*
- *Emotional intelligence to empower the workforce*
- Effective communication skills
- Employee support and coaching
- Adaptability and flexibility
- Empathy and emotional intelligence
- Integrity and accountability
- Motivational and innovative leadership
- Fairness and patience
- Inclusive decision-making

Leadership management practices of diversity and inclusion
- Demonstrating behavior when engaging the workforce
- Accountability
- Commitment to organisational goal
- Mentorship programme to support workforce career development
- Accessibility of mentorship programmes to all employees
- Mentorship programmes are adopted to ensure the retention and advancement of diverse workforce
- Feedback oriented policy
- The clear and explicit policy articulated organisational commitment to diversity equity and inclusion
- Proactive and preventative measures highlighted in the policy
- Diversity and inclusion awards
- Employee's spotlight
- Diverse cultural evenT
- Flat line management structure
- Mentorship and skills development
- Performance reviews and reward systems
- Inclusive recruitment practices
- Bias confrontation and accountability
- Encouraging independent thinking
- Commitment to a safe and inclusive environment
- Effective communication strategies
- Diverse team formation

Employee engagement and inclusion
- *Cultural awareness training*
- *Promoting a sense of ownership among employees*
- *Encouraging employees to participate in community engagement*
- *Leadership engagement and visibility*
- *Prioritise employee's well-being*
- Enable peer support
- Cross-functional collaboration and knowledge sharing
- Professional development and career advancement
- Effective communication and feedback
- Inclusive decision-making
- Recognition and reward systems
- Team building activities
- Respect for cultural diversity
- Fostering a valued and open culture
- Coaching and direct support from management

Sustainable productivity in construction through workforce diversity and inclusion

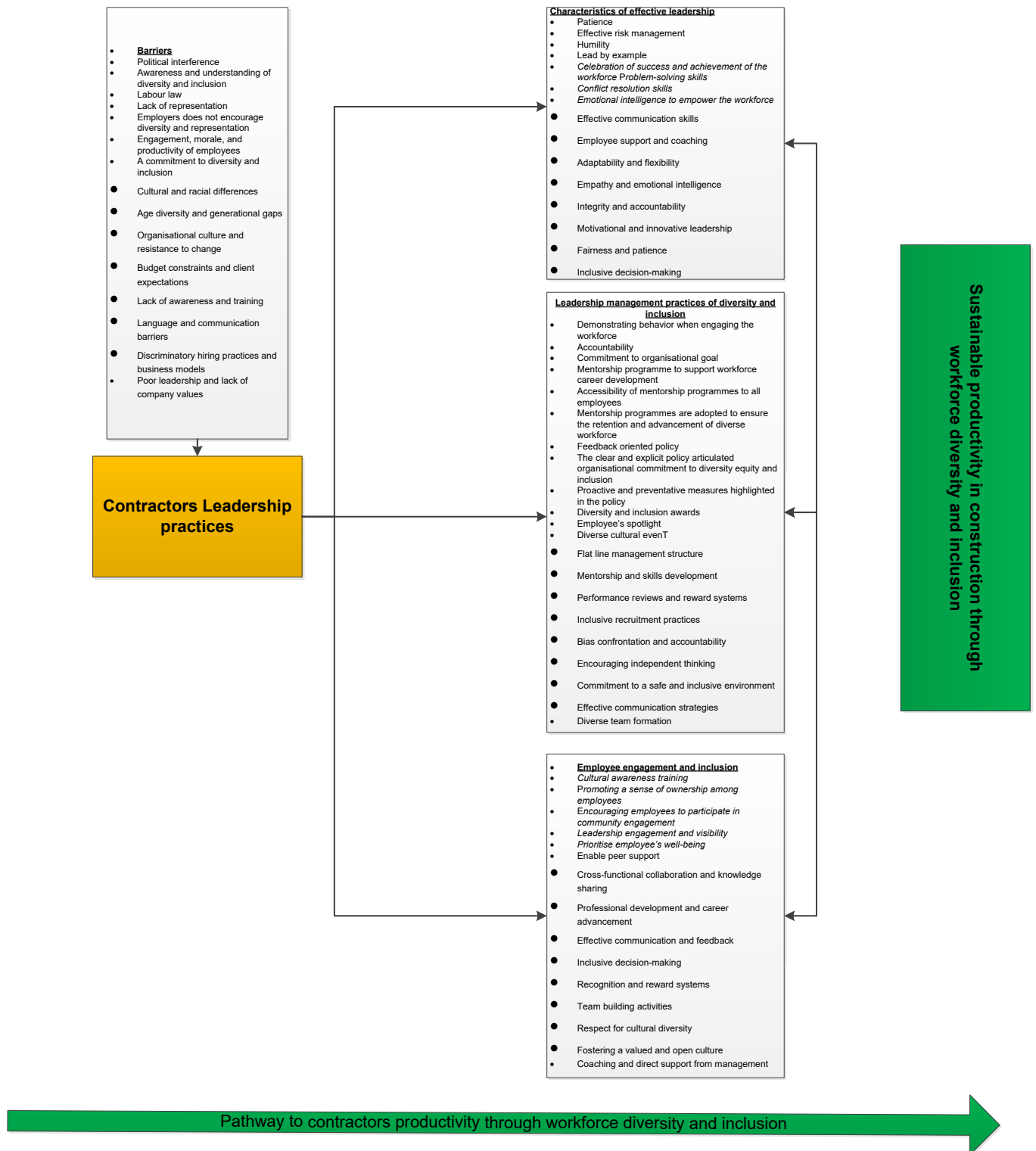Pathway to contractors productivity through workforce diversity and inclusion

Figure 2.1: Operational leadership Framework for enhancing productivity

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5.5. Recommendations to the study

Contractors should foster a more inclusive and effective workplace, while construction sector executives should emphasize behaviours that promote employee involvement, respect, and collaboration to enhance workforce productivity. Furthermore, Contractors should implement structured mentorship programs to help employees develop their skills and advance their careers. Contractors should adopt a feedback-oriented approach encourages continual improvement by providing employees with regular constructive feedback to help them improve their skills. This feedback helps contractors minimize rework costs and prevent construction delays. Contractors should recognise workforce productivity through diversity and inclusion awards, reinforcing the organisation's commitment to inclusivity and encouraging employees to uphold these values. Contractors should establish peer support networks and cultural awareness training to foster a respectful and inclusive workplace. This study recommends that contractors should encourage a sense of ownership and engagement in community initiatives can enhance employee pride and loyalty, creating a more cohesive workforce that focuses on productivity in project delivery. this study recommends that construction leaders should advised to increase their visibility and involvement with employees to develop trust and morale within the organisation. Finally, Construction leaders should prioritise employee well-being by implementing supportive policies and health initiatives, promoting a healthy work-life balance. This approach enhances job satisfaction, retention, and workforce productivity, contributing to sustainable business performance in the Western Cape construction industry.

5.6. Further research areas

The literature indicates that there is little research conducted on the impact of health and safety on diverse and inclusive leadership practices to enhance workforce productivity. Therefore, one specific gap for future research should be on the impact of inclusive leadership practices on safety outcomes that influence workforce productivity. While there is qualitative evidence suggesting that inclusive leadership can improve team cohesion and morale, there is limited research quantifying how these practices influence safety compliance, incident rates, and overall project safety performance.

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SURVEY: LEADERSHIP FRAMEWORK FOR ENHANCING PRODUCTIVITY IN CONSTRUCTION THROUGH WORKFORCE DIVERSITY AND INCLUSION IN THE WESTERN CAPE PROVINCE OF SOUTH AFRICA

SECTION 1: BIOGRAPHICAL INFORMATION

1. Please record your level of education/qualification(s):

   _____

2. Please record your occupation:

   _____

3. Please record the length of time you have worked on your current project:

   _____ Years _____ Months

4. Please record the length of time you have worked in construction:

   _____ Years _____ Months

5. Please record your age:

   _____ Years _____ Months

6. Please record your gender:

Female	Male

7. Please record your race:

   _____

8. Please record your contractor's cidb Grade:

cidb Grade	6	7	8	9
Tick one box				

9. Please record the number of years and months your business has been operating in the construction industry:

   _____ Years _____ Months

10. How did you acquire your construction-related knowledge **(Please mark all that apply)**?

Contractor development programme	Experience	Postgraduate qualifications	Skills / Trade training	Tertiary education	Other

If **'Other'**, please record: _____

11. Please identify the form of your business:

Form of business	Yes
Sole proprietorship (owner)	
Partnership	
Close corporation	
Private company	
Public company	
Other	

If **'Other'**, please record: _____

SECTION 2: PERCEPTION OF CONTRACTORS' LEADERSHIP REGARDING THE BARRIERS TO INCLUSIVE LEADERSHIP IN THE CONSTRUCTION INDUSTRY

12. On a scale of **Never** to **Always**, how do you perceive the following barriers affecting inclusive leadership in a diverse construction workforce **(Please note the 'unsure')?**

Leadership perception on barriers	Unsure	Never	Rarely	Sometimes	Often	Always
Policy and Legal Frameworks						
Existing policy and legal frameworks in South Africa limit the promotion of an inclusive workforce	U	N	R	S	O	A
Availability of legal resources and assistance for individuals or groups	U	N	R	S	O	A
Labour law promoting equal workforce opportunities	U	N	R	S	O	A
Political interference	U	N	R	S	O	A
Bias in the workplace	U	N	R	S	O	A
Awareness and understanding of diversity and inclusion concerns among politicians, parliamentarians, and regulatory organisations	U	N	R	S	O	A
Representation						
Lack of representation in terms of race, gender, ethnicity, or disability	U	N	R	S	O	A

	U	N	R	S	O	A
A lack of diverse representation in leadership roles leads to obstacles to inclusion in the workplace	U	N	R	S	O	A
Employers does not encourage diversity and representation within their organisations	U	N	R	S	O	A
Initiatives aimed at increasing representation	U	N	R	S	O	A
Accessing educational and professional development opportunities	U	N	R	S	O	A
Organisational Culture and Practices						
Organisational norms	U	N	R	S	O	A
Diversity and inclusive awareness within organizational leadership or management	U	N	R	S	O	A
Orgnisational efforts to promote equal opportunities	U	N	R	S	O	A
Engagement, morale, and productivity of employees	U	N	R	S	O	A
The culture of the organisation is shaped by the leadership's role in fostering inclusivity	U	N	R	S	O	A
A commitment to diversity and inclusion	U	N	R	S	O	A

SECTION 3: THE CHARACTERISTICS OF EFFECTIVE LEADERSHIP IN A DIVERSE AND INCLUSIVE CONSTRUCTION ENVIRONMENT

13. The following are the characteristics of effective leadership in a diverse and inclusive construction environment. Kindly use the scale below to rate your level of agreement. Effective leadership characteristics will enable productivity in a diverse and inclusive construction environment. Note: **Strongly disagree =1, Disagree =2, Indifferent =3, Agree =4, Strongly agree = 5(please note the 'unsure' response) Unsure= U.**

	Unsure	Strongly disagree…............… Strongly Agree				
General Management	**U**	**1**	**2**	**3**	**4**	**5**
Effective cultural competence	U	1	2	3	4	5
Effective collaborative leadership style	U	1	2	3	4	5
Understanding and appreciating different perspectives	U	1	2	3	4	5
Patience	U	1	2	3	4	5
Resilience	U	1	2	3	4	5
Humility	U	1	2	3	4	5
Lead by example	U	1	2	3	4	5
Courage to address biases and discrimination	U	1	2	3	4	5
Effective stakeholder engagement	U	1	2	3	4	5
Effective strategic planning	U	1	2	3	4	5
Effective risk management	U	1	2	3	4	5
Workforce productivity leadership characteristics						
Dedicated to equity and fairness among the workforce	U	1	2	3	4	5
Celebration of success and achievement of the workforce	U	1	2	3	4	5
Proactive diversity Initiatives to empower the workforce	U	1	2	3	4	5
Flexibility and adaptability	U	1	2	3	4	5
Inclusive decision-making	U	1	2	3	4	5
Accountability	U	1	2	3	4	5
Team building skills	U	1	2	3	4	5
Continuous learning and development	U	1	2	3	4	5

	Unsure	1	2	3	4	5
Conflict resolution skills	U	1	2	3	4	5
Skills including workforce creativity	U	1	2	3	4	5
Effective communication skills empathy	U	1	2	3	4	5
Open-mindedness	U	1	2	3	4	5
Respect for diverse workforce group	U	1	2	3	4	5
Problem-solving skills	U	1	2	3	4	5
emotional intelligence to empower the workforce	U	1	2	3	4	5
Performance related feedback	U	1	2	3	4	5
Effective delegation	U	1	2	3	4	5
Recognition and rewards when due	U	1	2	3	4	5

SECTION 4: THE LEADERS' MANAGEMENT PRACTICES OF DIVERSITY AND INCLUSION WITHIN THE CONSTRUCTION INDUSTRY

14. On a scale of **1 (minor)** to **5 (major),** to what extent could the following leadership management practices of a diverse and inclusive workforce contribute to an improvement of productivity and enhance business sustainability in your organisation **(please note the 'unsure' options)**?

Leadership commitment	Unsure	Minor……………………………………………..… Major				
		1	2	3	4	5
Championing diversity and inclusion initiative	U	1	2	3	4	5
Communicating the importance of diversity and inclusion	U	1	2	3	4	5
Demonstrating behavior when engaging the workforce	U	1	2	3	4	5
Commitment to organizational goal	U	1	2	3	4	5
Accountability	U	1	2	3	4	5
Commitment to fostering diversity and inclusion to improve workforce productivity	U	1	2	3	4	5
Mentorship and sponsorship programmes	U	1	2	3	4	5
Mentorship programme to support workforce career development	U	1	2	3	4	5
Ensuring that mentorship programmes are communicated with the employee	U	1	2	3	4	5
Accessibility of mentorship programmes to all employees	U	1	2	3	4	5
Mentorship programmes are adopted to ensure the retention and advancement of diverse workforce	U	1	2	3	4	5
Inclusive policy	U	1	2	3	4	5
The clear and explicit policy articulated organizational commitment to diversity equity and inclusion	U	1	2	3	4	5
Accessibility of policy to all employees	U	1	2	3	4	5
Flexibility and adaptability of organistional policy	U	1	2	3	4	5
Proactive and preventative measures highlighted in the policy	U	1	2	3	4	5
Feedback oriented policy	U	1	2	3	4	5
Celebrating diversity within the organisation	U	1	2	3	4	5
Diverse cultural event	U	1	2	3	4	5
Diverse training and workshops	U	1	2	3	4	5
Community partnership	U	1	2	3	4	5
Cross cultural competency programmes	U	1	2	3	4	5
Diversity and inclusion awards	U	1	2	3	4	5
Employee's spotlight	U	1	2	3	4	5

SECTION 5: EMPLOYEE ENGAGEMENT AND INCLUSION TO INFLUENCE INDIVIDUAL OR TEAM PERFORMANCE IN THE CONSTRUCTION INDUSTRY

15. On a scale of **Never** to **Always**, how frequently do the following **employee engagement practices** influence individual or team performance and enhance productivity in your construction project delivery? **(Please note the 'unsure').**

Employee engagement and inclusion	Unsure	Never	Rarely	Sometimes	Often	Always
Clear employee role and expectations	U	N	R	S	O	A
Accessibility of physical and digital tools/ resources to all employees to promote inclusion	U	N	R	S	O	A
Leadership engagement and visibility	U	N	R	S	O	A
Promoting a sense of ownership among employees	U	N	R	S	O	A
Enable peer support	U	N	R	S	O	A
Regular checkout meetings with employees	U	N	R	S	O	A
Promoting transparent decision-making to foster employees' trust	U	N	R	S	O	A
Exposing employees to skills for addressing conflicts	U	N	R	S	O	A
Encouraging employees to participate in community engagement.	U	N	R	S	O	A
A fair hiring process that promotes a sense of belonging	U	N	R	S	O	A
Prioritise employee's well-being	U	N	R	S	O	A
Cultural awareness training	U	N	R	S	O	A
Provide a support service for personal and professional challenges faced by employees	U	N	R	S	O	A
Involve employees in decision-making	U	N	R	S	O	A

16. Do you have any additional comments in general regarding leadership practices to enhance productivity through workforce diversity and inclusion?

……

……

……

……

……

Thank you for your efforts to contribute to developing a leadership framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province of South Africa'.

ANNEXURE B: INTERVIEW GUIDE

INTERVIEW QUESTIONS: LEADERSHIP FRAMEWORK FOR ENHANCING PRODUCTIVITY IN CONSTRUCTION THROUGH WORKFORCE DIVERSITY AND INCLUSION IN THE WESTERN CAPE PROVINCE OF SOUTH AFRICA

SECTION A: BACKROUND INFORMATION OF INTERVIEWEE

1. What is your current role or position in the company?

2. How long have you worked in the construction industry?

3. What is your highest level of educational qualification?

4. What is your company's cidb grade?

SECTION B: LEADERSHIP PRACTICES ADOPTED BY CONTRACTORS to enhance workforce productivity

1. What barriers prevent contractors from adopting diverse and inclusive leadership practices?
2. What are the characteristics of effective leadership in a diverse and inclusive construction environment?
3. What are the construction leaders' management practices of diversity and inclusion adopted by your organisation?
4. What are the employee engagement and inclusion practices adopted by your organisation to influence individual or team performance?
5. What leadership practices in a diverse and inclusive construction environment would you recommend to contractors to promote workforce productivity?

ANNEXURE C: ETHICAL CLEARANCE CERTIFICATE

Cape Peninsula
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FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

The Faculty of Engineering and the Built Environment Ethics Committee of the Cape Peninsula University of Technology now grants ethics approval to **Mr Musa Conrad** student number **198054378** for research activities related to his research proposal that first served at the FREC meeting on **7 May 2024**.

Title of proposal	Leadership framework for enhancing productivity in construction through workforce diversity and inclusion in the Western Cape Province South Africa

Comments:

Data collection permission is required.

	2 October 2024
Prof Veruscha Fester Assistant Dean: Research, Technology, Innovation & Partnerships (RTIP) Faculty of Engineering and the Built Environment	Date

2024FEBEFREC-STD-40

Assessing leadership practices influencing workforce engagement, and inclusion to enhance team and individual productivity in construction project delivery in the Western Cape Province, SA

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Abstract

Purpose: The purpose of this research is to examine the extent to which leadership practices influencing workforce engagement, and inclusion to enhance team and individual productivity in construction project delivery in the Western Cape Province.
Design/Methodology/Approach: The research methodology used in this study was quantitative. Survey questions were used to gather the data (64). Version 29 of the Statistical Package for Social Sciences (SPSS) was used to analyse the data. To reduce a large set of variables to a smaller set of uncorrelated variables, principal component analysis (PCA) was adopted. The internal consistency of the constructs was also evaluated using the Cronbach's Alpha test.
Findings: The findings revealed the following factors influence workforce engagement and inclusion on team and individual productivity comprising enabling peer support, leadership engagement and visibility, exposing employees to skills for addressing conflicts, promoting a sense of ownership among employees, and accessibility of physical and digital tools/ resources to all employees to promote inclusion. PCA reveals the following components influencing workforce productivity namely cultural awareness training, promoting a sense of ownership among employees, encouraging employees to participate in community engagement, leadership engagement and visibility, and prioritise employee's well-being.
Implications/Research Limitations: The study underscores the importance of engagement and inclusion for enhancing workforce productivity, and it provides practical guidance for construction managers on how to promote inclusive work cultures. This study is limited to the Western Cape Province; hence the results may not be applicable to other regions or sectors.
Originality/Value: This study adds to the limited research on the relationship between workforce engagement, inclusion, and productivity in the construction industry, specifically in the Western Cape Province.

Keywords: Inclusion, diversity in construction, team productivity, Project delivery, and workforce engagement