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Mediated Power Influence on Relationship Strength and Supplier Performance in the South African Construction Industry

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ABSTRACT

This study investigates how mediated power affects supplier performance and relationship strength in South Africa's construction sector. A conceptual model was developed, positioning mediated power as the predictor variable, relationship strength as the mediator, and supplier performance as the outcome. Data were collected from 389 construction companies in Gauteng and KwaZulu-Natal using a validated questionnaire, and the analysis was conducted using structural equation modelling and SmartPLS. The findings reveal that coercive power positively affects relationship strength, subsequently influencing supplier quality and delivery performance. These results align with resource dependency, cognitive evaluation, and social exchange theories. The study's originality lies in its focus on mediated power to enhance supplier performance through relationship strength. Also, the results add to the sparse literature on buyer-supplier dynamics in South Africa and highlight the significance of ethical power utilisation in optimising supply chain performance. To this end, this study offers actionable insights for practitioners and policymakers aiming to enhance supply chain effectiveness.

1. Introduction

The construction industry plays a pivotal role in the growth and development of economies worldwide (Jiang et al., 2022; Xegwana et al., 2025). This struggle is exemplified by the construction industry, which is undergoing a significant decline and has seen major corporations such as Group Five and Basil Read seek firm rescue (South African Road Federation, 2019). The South African Federation of Civil Engineering Contractors (2019) states that this industry faces several difficulties, including fierce international competition, primarily from France and China, which offer better products at lower prices. In recent years, there has also been a decline in the need for

building services. According to Osunsanmi et al. (2022), demand variations describe the operating environment, which is characterised by instability and volatility. Significant pressures are currently affecting the South African economy, endangering the survival of many companies in a variety of sectors. The decrease in public infrastructure spending, which fell from R947.2 billion in the 2017–18 budget to R834.1 billion in the 2018–19 budget, reflects this. Additionally, the government's broad-based black economic empowerment (B-BBEE) initiatives have produced several black-owned companies that have won most government contracts, despite persistent doubts about their effectiveness (Nkoana, 2022). According to trends, many B-BBEE firms have struggled to deliver high-quality results, leading to a general belief that awarding them contracts is a waste of money (Kutta, 2021). Because they are losing contracts to underperforming B-BBEE firms, more established construction companies are seeing a decline.

Global dynamics have a significant impact on the construction sector, as vital resources such as skilled labour, cutting-edge technology, financial resources, and intellectual capital are becoming increasingly scarce, leading to instability (Hossain et al., 2020). Munir (2022) noted that, because many construction companies rely on inexperienced labour, the decline in the number of professional engineers in South Africa has led to poor workmanship, missed deadlines, and cost overruns. Furthermore, Chinomona and Bikissa-Macongue (2022) highlighted the South African construction industry's ongoing deficiency in efficient supply chain integration, procurement procedures, systems, and connections. While senior management focuses on high-value purchases, local firms continue to prioritise tactical procurement tactics, limiting buyers to small purchases. On the other hand, strategic sourcing is becoming more popular worldwide (Matebese-Notshulwana, 2021). According to Lee and Park (2021) and Li et al. (2022), many firms have reported having tense relationships with at least one internal or external supplier, and the low switching costs make matters worse. Dysfunctional relationships among supply chain partners worsen when providers struggle to meet the conflicting needs of rival firms (Mishra et al., 2022). Poor performance is an inevitable result of such broken connections. Furthermore, it is commonly acknowledged that social connections are essential to the dynamics of supply chain interactions (Asamoah et al., 2020).

Given the above-mentioned backdrop, the goal of this study is to determine how South Africa's construction sector can prosper by effectively leveraging social influence to improve supplier performance and build connections. A review of the literature indicates that the South African construction sector has not scientifically investigated this relationship. The current study will fill this research gap. Additionally, the study aims to offer workable solutions to the problems identified. By skillfully managing power and relational dynamics between buyers and suppliers, this strategy enhances supplier performance and supports the continuous development of supply chain management (SCM) in the construction industry.

It is evident that there are substantial gaps in the research literature regarding the role of mediated power in enhancing supplier performance in South Africa's construction sector. Although buyer-supplier relationships (BSRs) and power dynamics in general have been extensively studied, the significance of mediated power in this context has received relatively little attention (Nurhayati et al., 2021; Luo & Xie, 2021; Marques et al., 2022; Marttinen & Kækönen, 2022; Schutte et al., 2022). Most recent studies focus on broader topics, such as cooperative tactics or the impact of social power in the supply chain (He, Ghobadian & Gallear, 2021) and often ignore the implications of mediated power for supplier performance outcomes in the construction sector. Furthermore, regional dynamics—which are especially pertinent given South Africa's unique economic and regulatory environment—are largely ignored in currently accessible research (Construction Industry Development Board (CIDB), 2018). By investigating how mediated power can improve supplier performance,

this study seeks to close these gaps and advance knowledge of successful BSRs in South Africa's construction industry.

The methods and results of mediated power (coercive and reward power) in the South African construction industry remain poorly understood, despite a wealth of studies documenting non-mediated power (referent, legitimate, and expert power). The research currently in publication shows uneven coverage, with mediated power effects in building supply chains being insufficiently theorised while non-mediated power is extensively studied (Zvinowanda et al., 2025). There are presently no studies that offer a thorough comparative examination of how, in this scenario, mediated power affects relationship strength and supplier performance aspects differently from non-mediated alternatives. A fundamentally new approach to governance, mediated power has unique behavioural and psychological repercussions. Instead of internalising commitment, coercive and reward power work through external incentives, which may lead to transactional rather than cooperative partnerships. For construction companies making strategic decisions about relationship governance, it is essential to understand these differential paths, as mismatched power strategies may jeopardise long-term performance and the sustainability of supplier alliances. Current research views supplier performance as multifaceted (quality, delivery, cost, flexibility, sustainability), but it seldom investigates whether mediated power affects performance dimensions differently. Referent and legitimate power improve quality and delivery, but not cost, flexibility, or sustainability performance, according to the non-mediated power study (Zvinowanda et al., 2025). Nevertheless, no study looks at whether mediated power generates unique dimensional patterns, such as whether coercive force enhances short-term compliance measures (cost control, on-time delivery) while impairing innovation or sustainability performance. There is still no measurement for this dimensional heterogeneity. Therefore, the main objective of this study is to examine the mediated influence of power on relationship strength and supplier performance in the South African construction sector.

2. Literature Review

Theoretical review

A multitheoretical approach is used to analyse the idea of mediated power. This study investigates how mediated power affects supplier performance and relationship strength in the South African construction sector using resource dependency, cognitive evaluation, and social exchange theories.

Resource dependency theory

According to the resource dependency theory (RDT), an organisation's ability to obtain vital resources that are both valuable and difficult to duplicate in the outside world is essential to its existence (Wu et al., 2024). In this regard, RDT clarifies the tactics companies use to assert their dominance while reducing the impact of other supply chain participants (Gruchmann, 2022). According to the RDT, enterprises should rely more on providing companies to obtain external resources through buyer-supplier interactions (Marttinen & Kækönen, 2022). A key idea in RDT that describes the interdependencies in inter-organisational connections throughout the supply chain is power, defined as control over vital resources (Liu et al., 2022; Schutte et al., 2022).

Cognition evaluation theory

Deci's 1975 introduction of cognitive evaluation theory (CET) examines the connection between external stimuli and inner motivation. This theory explores the relationship between intrinsic motivation and social influences

(Gu & Zhu, 2023). CET emphasises the crucial role of psychological demands in determining an individual's fundamental motivations (Hsu, 2022). It provides a framework for distinguishing between coercive influences and reward dynamics, improving our comprehension of how they interact (Chae et al., 2017). It also examines the cooperative relationship among power, power disparities, conflict, and trust.

Social exchange theory

According to Social Exchange Theory (SET), a connection between two parties frequently involves more than just financial exchanges; it also involves a variety of social interactions (Blau, 1964). It highlights the reciprocity standards that govern relationships between partners, based on the anticipation of reciprocal benefits. Coercive power tends to decrease a supplier's willingness to share, while buyer expert power increases it (Huo et al., 2019). According to Zaher et al. (2024), reciprocal exchanges highlight the contingent nature of interpersonal or inter-organisational transactions, in which one party's actions elicit responses from another, and subsequent behaviours depend on each other's conduct. SET emphasises the significance of conflict and trust in relationships while focusing on the role of mediated power sources, such as reward and coercive power (Roy et al., 2023). Notably, reward power typically has a favourable impact on collaborative dynamics, while coercive power can impair collaborative performance. Conflict between humanitarian partners can also be sparked by the interaction of coercive and mediated power sources, which further hinders the efficacy of collaboration. In the end, reducing the detrimental effects of conflict and creating an atmosphere that supports the restoration of cooperative performance depends on trust.

Conceptual Review

Mediated power

The ability of a person or actor to affect the behaviour of others is known as power (Glover, 2020; Zhang et al., 2022). For example, the degree of resistance that actor B may display, which A may be able to overcome, characterises the power that actor A has over actor B (Karaosman et al., 2023). According to Chu and Duan (2025), those who possess mediated power utilise it consciously and purposefully, demonstrating a strategic approach rather than a random one. This type of control is frequently based on the fear of punitive actions for noncompliance or the offer of incentives and rewards (Gruchmann, 2022). One useful strategy for guaranteeing partner companies' compliance is mediated power (Park et al., 2017). As such, it includes aspects that are reward-based, manipulative, and coercive (Zaher & Marquez-Illescas, 2024).

Coercive power

Coercive power involves using punishments or threats to enforce compliance, contrasting with softer bases like reward or expert power. In supply chains, buyers may wield it by threatening to switch suppliers, while suppliers might retaliate with service disruptions (Jain et al., 2014). Coercive power often weakens relationship commitment and satisfaction indirectly by fostering relational conflict and lowering perceived buyer status(Rana & Ha-Brookshire, 2020). However, when combined with high trust or non-coercive power (e.g., expert or referent power), it can enhance commitment without eroding long-term ties (Meqdadi et al., 2019). In low-trust scenarios, it reduces internal integration but may still boost supplier integration in certain cultures (Terpend & Ashenbaum, 2012). Studies indicate coercive power can improve supplier performance in some inter-firm contexts, such as through supplier-initiated coalitions or appeals that counter buyer pressure (Whiteside & Dani, 2020). Buyer

coercive power motivates specific behaviours, such as integration, though it risks opportunism if not balanced with communication. Overall, it yields short-term compliance but may hinder sustained performance if it damages satisfaction.

Manipulative power

Manipulation power (MP) refers to the capacity to sway people's behaviour by hiding certain facts or deceiving them in various ways (Ryan, 2020). In this case, A manipulates B when, through action x, A causes B to perform action y that B would not have otherwise performed, and B is ignorant that (1) A is performing x, (2) A is doing so to stimulate B to perform y, or (3) A has a specific motive r for wanting B to perform y (Brey, 2008). It is important to recognise that there are three broad types of market manipulation: information-based manipulation, action-based manipulation, and trade-based manipulation, which involves (fictitious) purchasing or selling (Khodabandehlou et al., 2024). Gaski (2020) indicates that informational power includes elements of manipulation. Furthermore, several academics describe MP as instructive (Nicol, 2021; Makkonen et al., 2023). Information exchange is an essential component of the supply chain and has been the subject of numerous studies (Owusu Kwateng et al., 2022). This study uses the terms "information power" and "manipulative power" interchangeably to refer to the same source of influence.

Reward power

Reward power (RP) is the capacity of one party to persuade another to perform activities, including expanding firm dealings or splitting profits from cost savings (Karaosman et al., 2023). This kind of authority is based on the supplier's past evaluation of the buyer's capacity to deliver benefits (Zhang et al., 2022). Rana et al. (2020) argue that buyers' rewards validate the supplier's efficacy in augmenting the buyer's competitive advantage. Consequently, the supplier's sense of competence is strengthened by the buyer's rewards, which serve as positive reinforcement. Positive feedback can take many different forms, such as supplier awards, higher purchasing volume, and long-term contracts. These could be seen by suppliers as concrete proof of their skills (Rana et al., 2020).

Relationship strength

To gain and maintain a competitive advantage, relationship strength (RS) management and supplier performance coordination are essential (Patrucco et al., 2022; Yang et al., 2023). Strong buyer-supplier relationships (BSRs) are essential to preserving a sustained competitive edge in the construction sector. To gain and maintain a competitive advantage, relationship strength (RS) management and supplier performance coordination are critical (Patrucco et al., 2022; Yang et al., 2023). Strong buyer-supplier relationships (BSRs) are essential to preserving a sustained competitive advantage in the construction sector. Strong BSRs that optimise cost structures, boost productivity, and improve responsiveness to changing market needs are the foundation of this (Zhang et al., 2023; Kimario & Kira, 2024). In contrast to sectors that prioritise internal efficiency, the construction industry frequently relies heavily on strong supplier relationships for success, with supplier contributions accounting for more than half of expenses (Wuni & Shen, 2023). As a result, building solid connections between suppliers and buyers while striking a balance between value enhancement and cost control has become essential for project success (Loosemore et al., 2025).

In the construction sector, it is also critical to understand the implications of mediated power, which, if poorly managed, can either promote collaborative alignment or degrade partnership quality (Kissi et al., 2024). Thus,

examining how mediated power affects supplier performance in South Africa's construction sector could provide important insights into fostering strong, productive buyer-supplier relationships in this setting. Strong BSRS that optimise cost structures, boost productivity, and improve flexibility to shifting market needs form the foundation of this understanding (Zhang et al., 2023; Kimario & Kira, 2024). In contrast to sectors that prioritise internal efficiency, the construction sector often relies on strong supplier relationships for success, with supplier contributions accounting for more than half of expenses (Wuni & Shen, 2023). As a result, building solid connections between suppliers and buyers while striking a balance between value enhancement and cost control has become crucial for project success (Loosemore et al., 2025). In the construction sector, it is essential to understand the ramifications of mediated power, as, if handled improperly, it can promote cooperative alignment or degrade partnership quality (Kissi et al., 2024). Therefore, investigating how mediated power affects supplier performance in South Africa's construction sector can provide insights to foster strong, productive buyer-supplier relationships in this setting.

Supplier performance

Many academics have acknowledged the significance of performance evaluation in supply chain SCM and operations (Zakir et al., 2023). Supplier performance evaluation employs a methodical approach to evaluate the efficacy and efficiency of supply chain operations (Kozarević & Kovaňvić, 2021). This measurement considers cost, delivery, flexibility, quality, and sustainability (Singh et al., 2022). Supplier cost performance reveals supply chain vulnerabilities; selecting resilient suppliers and improving demand allocation can significantly increase resilience, reduce disruptions, and save associated costs (Bakhtiari Tavana et al., 2023). Delivery performance is a crucial statistic in the hierarchy of supply chain operations, underscoring the need for real-time, predictive delivery metrics (Yang & Xing, 2023). Additionally, supplier flexibility performance refers to a supplier's capacity to adapt to client changes in supply volumes, product design, and delivery schedules (Ojha et al., 2019; Üstávağ & Ungan, 2020). Supplier quality performance measures how well stakeholders' expectations are fulfilled (Kozarević & Kovaňvić, 2021). Additionally, supplier sustainability performance is the extent to which a supplier operates in an environmentally and socially responsible manner in accordance with the purchasing firm's sustainability criteria (Akın Ateş et al., 2019). In this context, buyer-supplier dependency is often cited as a crucial factor that could affect supplier sustainability performance. criterion for deciding which supplier relationship to establish to optimise overall performance.

Empirical literature review and hypotheses development

Coercive power and relationship strength

The detrimental impacts of coercive authority on buyer-supplier relationships have been the subject of numerous empirical investigations (Huo et al., 2019; Meqdadi et al., 2020). The CET can be utilised to examine how coercive power influences behaviour in these relationships (Chae et al., 2017). CET acknowledges the social and environmental factors that either encourage or inhibit intrinsic motivation to alter behaviour, emphasising individuals' basic needs for autonomy and competence (Chae et al., 2017). According to this theory, the need for autonomy is satisfied when individuals believe they can regulate their own behaviours, a concept known as the internal perceived locus of causality (Chae et al., 2017). External influences that foster an internal locus of control can enhance intrinsic motivation, whereas those that promote an external locus of control can undermine it (Cheng & Cao, 2024). For example, threats, coercion, and negative feedback can diminish feelings of competence

(Zhang et al., 2020). When applying CET principles to buyer-supplier relationships, it becomes evident that suppliers are intrinsically motivated to sustain or strengthen their relationships with buyers when they perceive autonomy and competence in managing these interactions over the long term. Furthermore, CET underscores the importance of intrinsic motivation in improving task performance, as it correlates with heightened interest, confidence, creativity, and self-esteem (Xu et al., 2020). Consequently, CET shows that buyer coercive power detracts from a supplier's perceived competence and autonomy, leading to the formation of the following hypothesis:

H1: In the South African construction sector, relationship strength and coercive power are significantly correlated.

Manipulative power and relationship strength

The impact of manipulative power on relationship strength can vary, according to earlier research. For example, Huo et al. (2019) proposed that buyer-supplier relationships (BSR) are likely to be weakened by manipulative power. They contended that providers and purchasers might not always see one another as competitors, but rather as partners. As a result, the effects of manipulative power on relationships can vary depending on the situation. On the other hand, Ojha et al. (2023) suggested that information sharing might improve cooperation since it is based on mutual trust and not only supports but also elevates reasonable thinking among parties. By building trust and fostering favourable attitudes toward long-term channel relationships, manipulative power can improve collaboration when participants view one another as partners rather than competitors. Conflict can also be reduced by encouraging a party to act by offering insightful and distinctive information. This tactic makes it easier to understand difficulties and key problems in the relationship and helps determine the best course of action to address them (Jääskeläinen, 2021). Furthermore, by enhancing the efficacy and efficiency of the relationship's activities, it can raise satisfaction levels and ultimately strengthen the partnership. This conversation has led to the formulation of the following hypothesis:

H2: In the South African construction sector, manipulative power and relationship strength are significantly correlated.

Reward power and relationship strength

According to the CET, social-contextual factors such as positive feedback, effective communication, and rewards that foster a sense of competence can significantly enhance intrinsic motivation (Chiu et al., 2023). Specifically, rewards function as symbols of success and exemplary performance, thereby boosting intrinsic motivation towards various tasks (Reiley & Jacobs, 2022). For instance, when the Universal Alloy Corporation received supplier awards from Airbus and Boeing, this recognition was explicitly communicated as a testament to its outstanding performance (Universal Alloy Corporation, 2016). In summary, through the mechanism of reward power, buyers can enhance a supplier's sense of competence, which in turn fosters self-motivation to maintain an ongoing relationship. Thus, from the perspective of CET, we propose that a buyer's reward power strengthens the supplier relationship by instilling a sense of competence and achievement. Moreover, reward power depends on providing a partner with something valuable within a collaborative framework (Vos et al., 2021). Key stakeholders may establish rewards or positive incentives to reinforce these relationships (Kumar et al., 2022). For example, a manufacturer might reward a retailer by granting preferred shelf space, contributing to advertising costs, or sharing market research insights. Consequently, recipients of these rewards are likely to

experience enhanced collaboration with the other party, leading to increased satisfaction (Hao et al., 2020; Latpate et al., 2024). These dynamics foster closer ties and strengthen the overall relationship. Furthermore, because rewards are provided for compliance, the application of reward power typically minimises conflicts between exchange parties about their goals, interests, and values, thereby reducing hostile and aggressive behaviour (Roy et al., 2023). Based on these observations, we propose the following hypothesis:

H3: In the South African construction sector, reward power and connection strength are significantly correlated.

Relationship strength and supplier cost performance

A firm must engage trustworthy trading partners and capitalise on the combined strengths of all parties involved to grow its firm networks and stay competitive (Dessaigne, 2024). To improve product quality, promote innovation, increase competitiveness, and gain market share, suppliers and buyers must strengthen their interactions. To reduce waste in their operations, buyers should improve their relationships with suppliers, according to Qian et al. (2023). However, implementing a lean mindset to cut waste and surplus inventory by working with suppliers has made firmes more dependent on one another. Many expensive governance systems, including complex legal contracts, excessive quality control and assurance procedures, ineffective communication, and redundant planning, forecasting, and replenishment efforts, can be replaced by a strong partnership (Romo et al., 2024). Consequently, a cost-cutting approach aligns with building and sustaining a strong relationship between suppliers and buyers. The following theory is put out considering this context:

H4: In the South African construction sector, relationship strength and supplier cost performance are significantly correlated.

Relationship strength and supplier delivery performance

Improving operational efficiency requires effective communication with firm partners, which is enabled by a strong connection (Xu et al., 2024). Companies' ability to reliably track and trace the flow of commodities across supply chain networks depends heavily on ongoing communication (Gao et al., 2025). In the end, this improves responsiveness and reliability in product supply, thereby increasing overall operational productivity (Li et al., 2022). Additionally, constant communication encourages suppliers and customers to discuss their production schedules, which enhances delivery coordination (Kovalevskaya et al., 2022). Suppliers can also respond more effectively to changes in demand by exchanging production schedules and demand patterns. Strong relationships are also essential to a firm's success because they enable open communication and access to key information for operational procedures, thereby prompting supply chain members to respond quickly (Bo & Xiao, 2024). These connections are acknowledged as important mediators in reducing perceived risks, enabling supply companies to function optimally (Bakhtiari Tavana et al., 2023; Bo & Xiao, 2024). Fang et al. (2025) indicate that mutual resource exchange is necessary for strong relationships and is associated with better resource maximisation. When taken as a whole, these results improve supplier delivery performance. Considering this, we put out the following hypothesis:

H5: In the South African construction sector, relationship strength and supplier delivery success are significantly correlated.

Relationship strength and supplier flexibility performance

Building strong relationships has become increasingly crucial, particularly given the growing outsourcing in international supply chains (Whiteside & Dani, 2020). Suppliers often provide valuable insights into new materials and process trends that buyers can utilise to adapt their product offerings, ultimately enhancing the firm's flexibility (Oetomo et al., 2023). A strong relationship significantly improves the quality of information exchanged, enabling buyers to anticipate market trends and respond effectively to shifts, thereby enhancing overall flexibility (Ojha et al., 2019). Initiatives that promote information sharing enhance suppliers' capabilities to introduce products quickly, reduce lead times, and improve flexibility performance (Suleiman et al., 2021). Moreover, nurturing strong relationships characterised by joint investments, collaborative improvement projects, information exchange, multiple points of contact, and shared product and production planning is expected to strengthen the competitive capabilities of all partners and improve supplier flexibility (Kędzia, 2024). A solid relationship not only enhances the exchange of information but also better equips buyers to anticipate market trends and adapt to changes, thereby increasing flexibility (Forslund & Mattsson, 2023). Consequently, the strength of the relationship serves as a crucial facilitator of improvements in supplier performance and enhanced operational flexibility (Bakhtiari Tavana et al., 2023). The following theory has been put out in this context:

H6: In the South African construction sector, relationship strength and supplier flexibility performance are significantly correlated.

Relationship strength and supplier quality performance

According to Hoque and Maalouf (2022), suppliers cannot improve their performance on their own. Improving supplier performance requires direct participation in a variety of activities. A supplier is motivated to get the best results through both short-term and long-term partnerships when their performance is regularly evaluated. Strong ties between customers and suppliers encourage better performance, including lower costs, shorter lead times, and higher-quality products. Effective product design and strengthening the sales capacities of supplier and buyer companies are two ways to achieve these improvements (Patil, 2024). When the purchasing firm participates in direct participation activities, such as sending engineering staff to the supplier's location for technical problem-solving or specialised training, these advancements are made possible (Nima et al., 2021). Building strong ties between suppliers and buyers has several benefits. These advantages were summarised by Kisinga et al. (2024), who noted prospects for joint investment, quality improvements, cost reductions, shorter lead times, decreased risks, and greater customer and supplier loyalty. Strong buyer-supplier relationships directly and favourably affect operational success, especially in terms of product quality and cost effectiveness, according to Pikos et al. (2024). Additionally, a closer link encourages greater cooperation in design and manufacturing efforts to reduce or eliminate non-value-added tasks. As demonstrated by improvements in overall product quality, well-managed supplier relationships also positively impact on the performance of the purchasing firm (Hong et al., 2020). Therefore, enhancing supplier quality requires building a solid buyer-supplier connection. The following hypothesis is put out considering these observations:

H7: In the South African construction sector, relationship strength and supplier quality performance are significantly correlated.

Relationship Strength and Supplier Sustainability Performance

Buyer-supplier relationships have become an essential component of firm processes, particularly amid the growing trend toward offshoring and outsourcing across both production and administrative functions (Li et al., 2022). These relationships play a significant role in achieving sustainability objectives (Adesanya et al., 2020). As buyers and suppliers engage in long-term collaboration, they cultivate mutual trust and respect, which enables them to recognise the unique challenges and barriers that impede their joint performance. This awareness allows them to make necessary adjustments (Dhanawade, 2024). Such collaborations can ease concerns about information sharing, empowering both parties to work towards a common vision with aligned ambitions and goals. Additionally, this partnership provides suppliers with enhanced opportunities for innovation and cost reduction (Ahmed & Shafiq, 2022). The development of creative solutions to a range of operational, social, and environmental problems can be facilitated by a dedication to building solid relationships (Meqdadi et al., 2019). Expanding on this conversation, the study proposes the following hypothesis.

H8: In the South African construction sector, relationship strength and supplier sustainability performance are significantly correlated.

The eight hypotheses outlined above can be summarised in the research model depicted in Figure 1, which will be tested in this study.

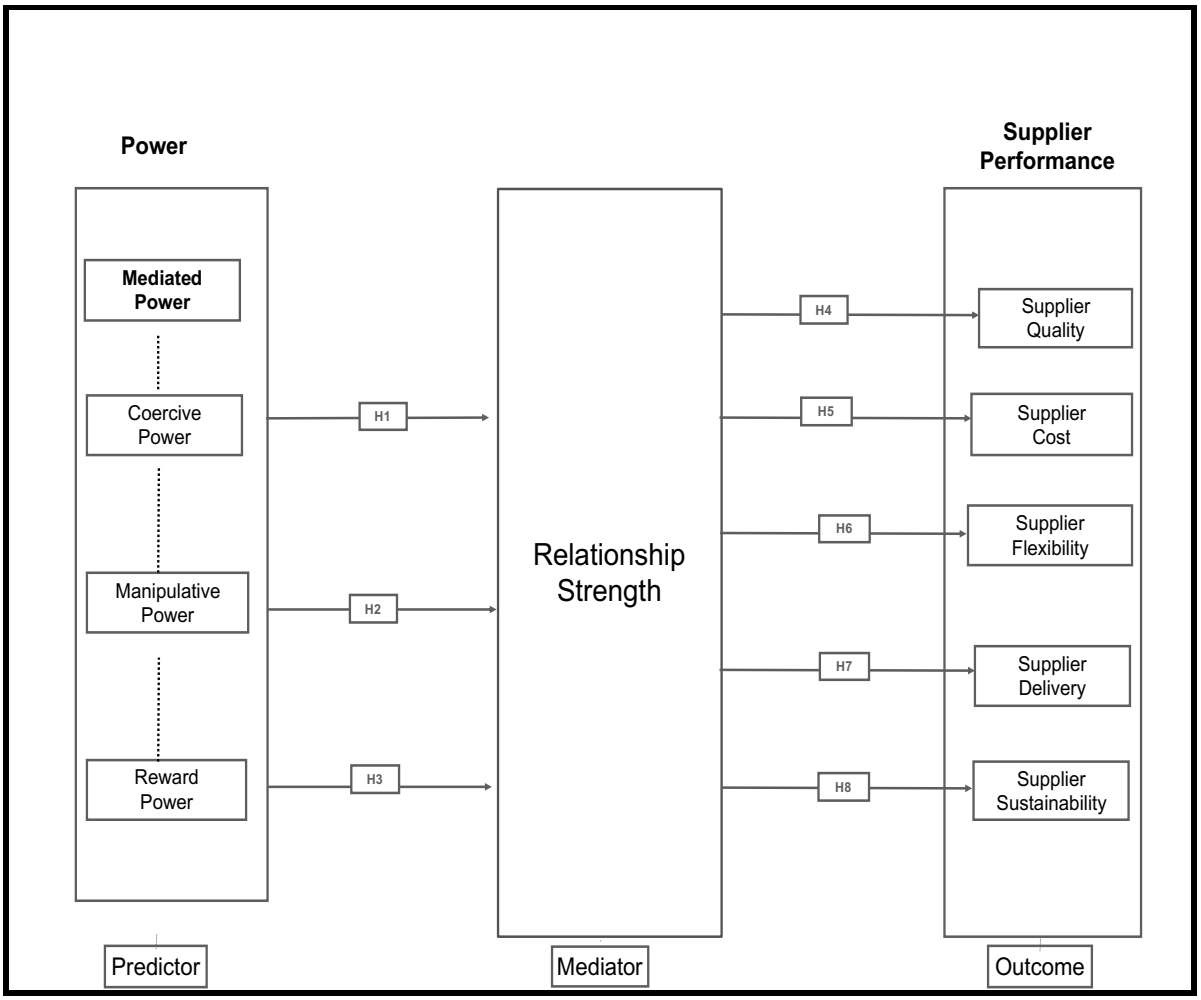

Figure 1. Mediated power, relationship strength and supplier performance.

3. Research Methods

The current study investigated the impact of mediated power on relationship strength and supplier performance in the South African construction sector using a positivist paradigm. To examine and elucidate the connections between the different research constructs, a quantitative method was used. Conducting comprehensive quantitative analysis requires the use of logical techniques, such as hypothesis testing.

Sampling design

This study used a non-probability sampling technique since it may be difficult to find operations and supply chain experts; the researcher had to make that decision. The research utilised a positivist paradigm to investigate the impact of mediated power on relationship strength and supplier performance within the South African construction industry. A quantitative methodology was adopted to analyse and clarify the relationships among the research constructs. The application of deductive methods, including hypothesis testing, is crucial for carrying out quantitative analyses. Additionally, non-probability sampling was considered suitable due to its cost-effectiveness and efficiency compared to probabilistic sampling, as it requires fewer resources. Only companies in the Gauteng and KZN regions that expressed a willingness to participate were selected from a pool of 500 construction firms listed in the CIDB database. The sample size for this study was set at 500, making this methodology viable. The questionnaire included 60 items, and the measurement scales used in this study were modified from earlier research. Fifteen items from Terpend et al. (2012) and Benton and Maloni (2005) make up mediated power; five items from Yang et al. (2017) make up relationship strength; and thirty items from Mayer et al. (1995), Kwon & Suh (2004), Ashenbaum & Maltz (2017), and Maestrini et al. (2018) make up supplier performance.

Instrumentation

A closed-ended survey questionnaire was used in the study. A closed-ended survey questionnaire was used in the study. The questionnaire was disseminated by the researcher by email, drop-and-collect, and SurveyMonkey (web-based surveys). For respondents spread across two provinces—Gauteng and KwaZulu-Natal—the email distribution method proved practical and economical. By using SurveyMonkey, data gathering was expedited, and errors in manual data entry were reduced.

Three sections made up the questionnaire. The respondents' demographic data were gathered in Section A. The organisational profile in South Africa was the main topic of Section B. Three mediated power practices—coercive power (CP), manipulative power (MP), and reward power (RP)—were evaluated using the questions in Section C. Finally, Section D asked questions about supplier performance metrics such supplier cost (SC), supplier delivery (SD), supplier flexibility (SF), supplier quality (SQ), and supplier sustainability (SS) to assess relationship strength (RS). As shown in Table 1, the measuring scales were modified from earlier validated investigations. The questionnaire was disseminated by the researcher by email, drop-and-collect, and SurveyMonkey (web-based). Given that the respondents were dispersed throughout two provinces (KwaZulu-Natal and Gauteng), the email distribution approach seemed practical and economical. SurveyMonkey reduced human data entry errors and expedited data collection. Three sections made up the questionnaire. The demographic profiles of the respondents were gathered in Section A. Questions concerning the organisation's profile in South Africa were included in Section B. Three mediated power practices—coercive power (CP), manipulative power (MP), and reward power (RP)—were measured using the questions in Section C. Relationship strength (RS) metrics were the subject of questions in Section D. Questions on supplier performance

metrics, such as supplier cost (SC), supplier delivery (SD), supplier flexibility (SF), supplier quality (SQ), and supplier sustainability (SS), were the main focus of Section D. As indicated in Table 1, measurement scales were modified from validated prior research.

Table 1. Constructs and measurement items

Constructs	**No. of items**	**Description**	**Source**
CP	4	CP1: Our firm makes it very clear that failing to comply with our requests would result in fines. CP2: We might cause problems for our suppliers if they reject our suggestions. CP3: Should our suppliers fail to follow our directives, they can expect a lack of favorable treatment from us. CP4: If our suppliers choose not to align with our suggestions, we may retract certain essential services or resources.	Brown et al. (1995); Benton and Maloni (2005); Terpend et al. (2012)
MP	5	MP1: Our firm has continuously given suppliers a truthful account of its operations. MP2: There have been instances where our firm needed to adjust certain facts to achieve its objectives. MP3: Our firm holds the belief that complete honesty may not always be beneficial in dealings with suppliers. MP4: Our firm has occasionally given suppliers information that presents the firm in a favourable light. MP5: Occasionally, our firm has misrepresented certain details to this supplier to safeguard its interests.	Terpend *et al.* (2012:76)
RP	4	RP1: Suppliers who do not adhere to our firm's requests may not receive favorable treatment. RP2: Our suppliers believe that by complying with our requests, they will be favored later. RP3: By completing our demands, our suppliers have avoided the challenges that others face. RP4: Our firm frequently rewards suppliers to encourage them to align with our expectations.	Terpend *et al.* (2012); Benton and Maloni (2005)
RS	5	RS3: Our firm cultivates partnerships with its suppliers that are mutually beneficial. RS4: We communicate openly with our major suppliers on opportunities, threats, and information. RS5: Our firm is dedicated to establishing enduring relationships with its main suppliers.	Yang *et al.* (2017)
SC	4	SC1: We can create goods at lower costs thanks to our firm's relationships with suppliers.	Teng and Tsinopoulos (2021)

		SC2: We can keep inventory costs low because of our firm's relationship with suppliers. SC3: Our firm's collaborations with suppliers help to reduce production-related overhead expenses. SC4: We can offer pricing that is more competitive than those of our competitors because of our firm's partnerships with suppliers.	
SD	5	SD1: The timely delivery of our orders has been improved by our firm 's connections with important suppliers. SD2: The flexibility of order deliveries has been enhanced by our firm's ties with suppliers. SD3: The accuracy of our delivery of orders has improved due to our firm 's ties with suppliers. SD4: Our capacity to expedite rush orders has been strengthened by our firm's excellent partnerships with major suppliers. SD5: Our firm's connections with important suppliers have improved the dependability of their delivery schedules.	Ashenbaum and Maltz (2017)
SF	5	SF1: Frequent deliveries are made possible by our firm's solid partnerships with major suppliers. SF2: These connections enable suppliers to change quantities without appreciably increasing expenses. SF3: They also enable quantity changes without significantly lengthening lead times. SF4: Because of our collaborations, suppliers can modify delivery dates to meet evolving needs. SF5: These connections also enable suppliers to alter items to better suit our requirements.	Oetomo et al. (2023
SQ	3	SQ1: Our firm's relationships with major suppliers have enhanced the supply of products that meet specifications. SQ2: Our firm's relationships with major suppliers have increased product reliability. SQ3: Our firm's relationships with major suppliers have improved the delivery of durable products.	Maestrini, *et al.* (2018)
SS	3	SS1: Our firm's performance in terms of environmental sustainability has improved thanks to its connections with significant suppliers. SS2: Our firm's performance in terms of social sustainability has been reinforced by its partnerships with suppliers. SS3: Our firm's connections with suppliers have enhanced their ability to deliver products with low environmental impact.	Maestrini et al. (2018)

The dynamics of mediated power and its effects on supplier performance and relationship strength in South Africa's construction sector are captured by these measuring scale components. A five-point Likert scale, with 1 denoting strongly disagree and 5 denoting strongly agree, was used to convey the response possibilities.This measurement scale's components capture the dynamics of mediated power and how it affects supplier performance and relationship strength in South Africa's construction sector. A five-point Likert scale, with 1 denoting strongly disagree and 5 denoting strongly agree, was used to provide response alternatives. Data collecting took place after one and two weeks to increase the response rate. A 55% response rate was obtained using this strategy. To increase the response rate, data was gathered after one and two weeks.

Data analysis

Quantitative data analysis involves the systematic collection and evaluation of measurable and verifiable information (Ali, 2021). Initially, the data was organised. The study was conducted following the necessary approvals for data collection from relevant authorities in the South African construction industry. Participants were informed of their voluntary participation in the study and their right to withdraw at any time without repercussions. Anonymity was strictly maintained, and confidentiality was assured by keeping respondents' identities confidential throughout the research. Furthermore, participants did not receive any financial compensation for their participation. in a Microsoft Excel spreadsheet to facilitate data cleansing, which helped identify any missing entries. The analysis was then performed using a combination of the Statistical Package for the Social Sciences (SPSS, version 27.0) and SmartPLS (PLS, version 4.0). This analysis included both descriptive statistics and structural equation modelling (SEM). The study utilised a static panel data model to investigate mediated power as a multidimensional predictor variable, with sub-constructs such as CP, MP, and RP influencing SR and supplier performance. The outcome variable, supplier performance, is ultimately impacted by this mediation. In the context of South Africa's construction sector, supplier performance is a multifaceted concept that encompasses quality, cost, innovation, delivery, sustainability, and flexibility.

Ethical considerations

The study was carried out after obtaining the necessary approvals for data collection from relevant authorities in the South African construction industry. Participants were informed that their participation in the study was voluntary and that they could withdraw without consequences. Anonymity was upheld, and confidentiality was ensured by keeping respondents' identities undisclosed throughout the research. Additionally, participants did not receive any financial compensation for their involvement.

4. Results and Discussion

This study employed structural equation modelling (SEM) with Partial Least Squares (PLS) to examine the impact of mediated power on relationship strength and supplier performance in the South African construction industry, in line with the proposed research model. The SEM approach was deemed more appropriate given the established and validated factor structures of the constructs utilised in this research, as demonstrated by previous studies (Hair et al., 2017).

Demographics of Respondents

Table 2 presents the demographic profile of 389 study participants, including gender, age, race, highest level of education, years of employment, and work experience.

Table 2. Demographic Profile of the Respondents

Category	Frequency (n)	Percentage (%)
Gender		
Male	246	63.2
Female	143	36.3
Total	n= 389	100
Age		
25 years and below	8	2.1
26-33 years	108	26.5
34-41 years	141	36.2
42-49 years	112	28.8
50 years and above	25	6.4
Total	n= 389	100
Race		
Black	337	73.3
White	33	20.1
Indian	12	2.7
Mixed Race	7	3.9
Other	0	0
Total	n= 389	100
highest level of qualification		
Matric	137	35.2
Diploma	111	28.5
Degree	104	26.7
Masters	37	9.5
Other	0	0
Total	n= 389	100
Years Employed		
Not more than a year	26	6.7
1-2 years	19	4.9
3-5 years	81	20.8
6-9 years	74	19.0
Ten years and above	189	48.6
Total	n= 389	100
Job Experience		
Less than one year	23	5.9
1-2 years	25	6.4
3-5 years	106	27.2
6-9 years	113	29.0

Construct reliability and validity

According to Kubai (2019), construct dependability is the degree to which measures can be reliably repeated across people, events, circumstances, and tools used to evaluate the same construct or skill. The dependability of the measurement scales was assessed in this study, utilising Composite Reliability (Rho_a and Rho_c) and Cronbach's alpha. The findings show the precision of the measurement scale, as shown in Table 2. According to Cronbach's alpha, CP, RP, SC, SD, SF, SQ, and SS are reliable because their alphas are greater than 0.5. Nevertheless, MP's rho_a of 0.392 is notably low and raises questions about potential issues, including a data entry error or a problematic item that may affect this estimate.

Table 2. Measures of scale reliability

Constructs	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CP	**0.730**	**0.770**	**0.825**	**0.617**
MP	0.853	**0.392**	0.849	0.590
RP	0.636	3.685	0.771	0.646
RS	0.749	0.777	0.830	**0.498**
SC	0.809	1.149	0.873	0.699
SD	0.814	0.834	0.871	0.576
SF	0.836	0.868	0.875	0.585
SQ	0.844	0.860	0.905	0.761
SS	0.835	0.588	0.842	0.646

Convergent validity

The degree to which a research tool or instrument assesses the intended construct is known as construct validity (Heale & Twycross, 2015). The development of appropriate operational measures and conceptual models for the phenomenon being studied is necessary for constructing validity. Each construct's Average Variance Extracted (AVE) statistic is considered to verify convergent validity, and it should be ≥0.5 (Prasojo et al., 2016). The scales only partially satisfy the criteria for convergent validity, as seen by Table 2's results, which display the constructors' lowest AVE score of 0.498. Additionally, to verify convergent validity, each measurement item's loading must be greater than 0.5. According to Heale and Twycross (2015), construct validity evaluates how well a research tool measures the desired construct. Developing appropriate operational metrics and conceptual models for the phenomenon under study is necessary to achieve construct validity. Each construct's Average Variance Extracted (AVE) statistic is analysed to assess convergent validity, with a threshold expectation of ≥0.5 (Prasojo et al., 2016). The lowest AVE among the structures is 0.498, according to Table 2, indicating that the scales only partially meet the requirements for convergent validity. Additionally, each measurement item's outer loadings must be greater than 0.5 to verify convergent validity. This requirement is satisfied, as shown in Figure 2, where the lowest outer-loading score across all measurement items is 0.613 (MP2), confirming the presence of correlations among all anticipated measurements. This condition is met, though, in Figure 2, where the lowest outer loading score for all measurement items is 0.613 (MP2), further demonstrating that all measurements had the anticipated correlations.

Discriminant validity

Constructs that are supposed to be unrelated but really show a degree of correlation are evaluated using discriminant validity, also known as divergent validity (Taherdoost, 2016). As advised by Hair et al. (2014), discriminant validity was evaluated in this study using the Fornell-Larcker criterion. Using this procedure, the highest shared variance is compared with the average variance extracted (AVE). Table 3 presents the outcomes for the Fornell-Larcker criterion.

Table 3. Discriminant validity analysis: Fornell Larcker

Construct	**CP**	**MP**	**RP**	**RS**	**SC**	**SD**	**SF**	**SQ**	**SS**
CP	**0.785**								
MP	0.342	**0.768**							
RP	0.136	0.120	**0.804**						
RS	0.278	0.147	0.113	**0.08**					
SC	0.112	0.238	0.361	0.121	**0.836**				
SD	0.163	0.146	0.104	0.464	0.261	**0.759**			
SF	0.187	0.271	0.257	0.158	0.735	0.251	**0.765**		
SQ	0.213	0.068	0.154	0.345	0.475	0.383	0.448	**0.872**	
SS	0.107	0.183	0.264	0.111	0.362	0.142	0.284	0.409	**0.802**

As all square roots of the Average Variance Extracted (AVE) values exceeded the appropriate correlation coefficients, the results shown in Table 3 show that the Fornell and Larcker criterion was satisfied in this investigation. This confirms that the requirements for discriminant validity have been satisfied. Additionally, we assessed discriminant validity using the HTMT ratio. Unlike the Fornell-Larcker approach, which can sometimes overlook potential problems, HTMT is more sensitive and effective in identifying construct overlap. The HTMT analysis adhered to established guidelines, indicating that the correlation matrix is expected to remain below 0.9 for all relationships, thereby affirming discriminant validity (Hair et al., 2017). The results of the HTMT ratio analysis are detailed in Table 4.

Table 4. Heterotrait-monotrait ratio (HTMT)

Correlation	**HTMT**
MP <-> CP	0.342
RP <-> CP	0.136
RP <-> MP	0.120
RS <-> CP	0.278
RS <-> MP	0.147
RS <-> RP	0.113
SC <-> CP	0.112
SC <-> MP	0.238
SC <-> RP	0.361
SC <-> RS	0.121

SD <-> CP	0.163
SD <-> MP	0.146
SD <-> RP	0.104
SD <-> RS	0.464
SD <-> SC	0.261
SF <-> CP	0.187
SF <-> MP	0.271
SF <-> RP	0.257
SF <-> RS	0.158
SF <-> SC	**0.735**
SF <-> SD	0.251
SQ <-> CP	0.213
SQ <-> MP	0.068
SQ <-> RP	0.154
SQ <-> RS	0.345
SQ <-> SC	0.475
SQ <-> SD	0.383
SQ <-> SF	0.448
SS <-> CP	**0.107**
SS <-> MP	0.183
SS <-> RP	0.264
SS <-> RS	0,111
SS <-> SC	0,362
SS <-> SD	0.142
SS <-> SF	0.284
SS <-> SQ	0.409

Table 4 shows that the HTMT ratios ranged from 0.107 to 0.735 across the different associations among constructs in the study. This finding confirms that discriminant validity is satisfactory, as all ratios fall below the maximum recommended threshold of 0.90. This indicates that the constructions are statistically distinct and assess different concepts.

Model fit analysis

Before proceeding with the final analysis, it is essential to verify the model fit. "Model fit" refers to a statistical assessment of how well a set of observations aligns with theoretical expectations (Le-roy et al., 2020). In this study, model fit was evaluated using the Standardised Root Mean Square Residual (SRMR) and the normed fit index (NFI), along with specific fit criteria (i.e., d_ULS and d_G). A summary of the model fit is presented in Table 5.

Table 5. Model Fit Summary

	Saturated model	**Estimated model**
SRMR	0.079	0.136
d_ULS	3.480	10.411
d_G	0.967	1.185
Chi-square	2175.137	2551.947
NFI	0.645	0.584

The results indicate that SRMR falls within the acceptable range of 0.08 to 0.10, indicating a good fit (Pavlov et al., 2021). Thus, the SRMR of 0.136 looks too high, highlighting a poor fit**.** d_ULS (Unweighted Least Squares discrepancy has no strict cutoff, but lower is better. Hence, the d_ULS values of 3.480 and 10.411 may be too high and require improvement. Similarly, a lower Chi-square value is better; non-significant is preferred (but rarely achieved with a large sample). Thus, the results above show larger values of 2175,137 and 2175,137, indicating a lower fit quality in the estimated model**.** NFI (Normed Fit Index) has a threshold **>** 0.90 = good fit, **>** 0.80 = acceptable. The results reveal NFI of 0.645 and 0.584; both are below 0.90, even 0.80, so not a great fit.

Path Analysis results

The route analysis method based on partial least squares (PLS) was used to test the study's hypotheses. The total correlation coefficient is divided into direct and indirect effects using path analysis. It assesses each causal factor's relative significance separately (Verma & Biradar, 2021). The t and p statistics, which demonstrate the significance of the association; the beta, which is the path coefficient, which represents the association between two constructs; and R-square, a statistical measure that evaluates a model's ability to explain and predict future results, are among the significant statistics (Ijomah & Azubuike, 2019). Additionally, outer loadings are displayed, highlighting the relationships between each construct and its indicators. Figure 2 displays the findings of the path analysis.

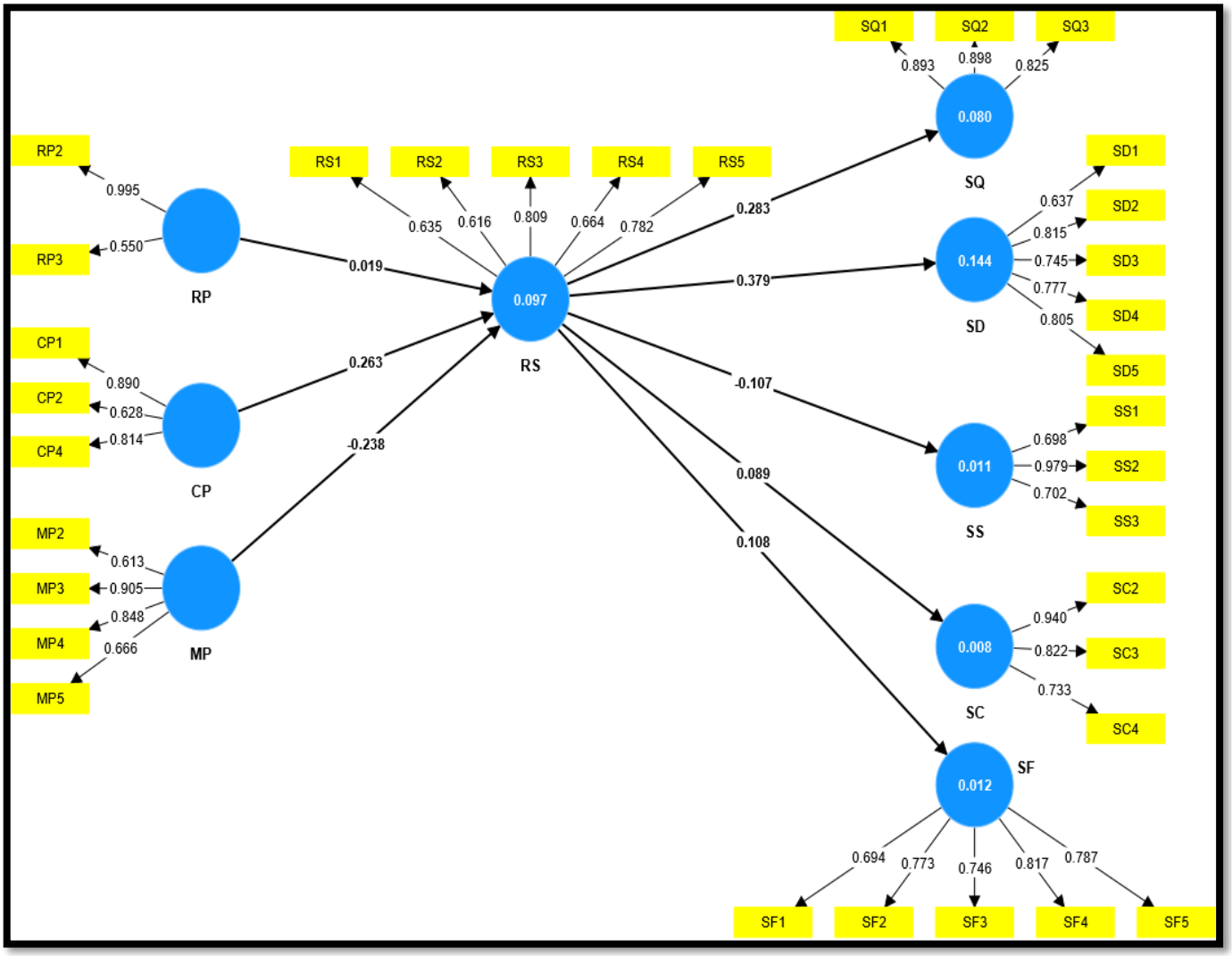

Figure 2. Structural model

The results depicted in Figure 2 showcase the path coefficients for the mediated power constructs: RS, SQ, SD, SS, SC, and SF. Initially, RP demonstrates a beta (β) value of 0.019 on RS, indicating a weak positive influence. Meanwhile, CP exhibits a β value of 0.263 on RS, suggesting a modest positive impact. In contrast, MP reflects a β value of -0.238 on CP, highlighting a weak negative effect on RS. Furthermore, RS reveals a β value of 0.283 on SQ, indicating a weak influence on SQ. It shows a β value of 0.379 on SD, signifying a moderate positive effect. Conversely, RS has a β value of -0.108 on SS, representing a weak negative influence. Additionally, RS shows β values of 0.089 on SC and 0.108 on SF, suggesting weak positive influences. The R-squared values for RP, CP, and MP relative to RS are 0.097, indicating that these three predictors account for 9.7% of the variance in RS. Regarding RS's influence on the other constructs, the R-squared values are as follows: 0.008 for SC, 0.144 for SD, 0.012 for SF, 0.008 for SQ, and 0.011 for SS. This shows that RS explains 0.8%, 14.4%, 1.2%, 0.8%, and 1.1% of the variance in each variable, respectively.

Discussions of results

The current study investigated the relationships among mediated power practices, SCR and RS, and supplier performance indicators, namely SQ, SD, SS, SC, and SF, in selected South African construction firms. Table 7

presents a summary of the hypotheses tested in the study, showing the path coefficient (β), t-statistics (t), and p-values (p) for the hypothesised path. Then, the results are discussed after the summary of the hypotheses (H)

Table 7. Results of Structural Equation Model Analysis

Path	Hypothesis	Path Coefficient (β)	T-Statistics (t)	Significance (p)	Decision
CP → RS	H1	0,263	5.508	**0.000**	Supported and important
MP → RS	H2	-0,238	1.692	0.091	Not important and not supported
RP → RS	H3	0,019	0.284	0.777	Unsupported and unimportant
RS → SC	H4	0,089	1.062	0.288	Not important and not supported.
RS → SD	H5	0,379	8.059	**0.000**	Supported and important
RS → SF	H6	0,108	1.413	0.158	Not important and not supported.
RS → SQ	H7	0,283	5.942	**0.000**	Supported and important
RS → SS	H8	-0,107	1.095	0.274	Not important and not supported.

Coercive power and relationship strength

Hypothesis 1 (H1) predicts that in the South African construction sector, relationship strength and coercive power are significantly correlated. The regression results reveal that coercive power (CP) and relationship strength (RS) have significantly positively correlated (β = 0.263, t = 5.508, p = 0.000). The results of the study show that in the South African construction firm, coercive power significantly affects relationship strength. Both the RDT and the CET are supported by these findings. This implies that buyer-supplier relationships can be strengthened by implementing compliance measures, such as fines or control measures. Supporting studies, including those by Chae et al. (2017) and Xu et al. (2020), have shown comparable results across a range of industries, demonstrating that coercive power, even when perceived as a more aggressive strategy, can improve stability and dependability in partnerships.

Manipulative power and relationship strength

Hypothesis 2 (H2) predicts that in the South African construction sector, manipulative power and relationship strength are significantly correlated. The regression analysis revealed a negative, statistically insignificant relationship (β = -0.238; t = 1.692; p = 0.091), which refuted the hypothesis (H2) that manipulative power (MP) affects relationship strength (RS). According to this research, relationships may be weakened by the employment of manipulative strategies that undermine collaboration and trust, such as fabricating facts or concealing information. Manipulative power weakens relationships, according to studies by Ojha et al. (2023) and Zhang et al. (2022) in a variety of industries. As a result, South African construction firms can improve the longevity of their supplier relationships by prioritising ethical communication and openness over deceptive tactics.

Reward power and relationship strength

Hypothesis 3 (H3) predicts that in the South African construction sector, reward power and connection strength are significantly correlated. However, reward power (RP) did not significantly affect relationship strength (RS) in the South African construction firm (β = 0.019; t = 0.284; p = 0.777), contrary to expectations, according to the analysis of H3. The tenets of social exchange theory (SET) are at odds with these results. Chen & Chen (2019) found a positive correlation between reward power and connection strength in other regions, in contrast to this. Reward-based systems are less effective at building trust and motivation in South Africa due to bribery and corruption. Additionally, the construction mafia's problems have further damaged trust in incentive programs, reducing RP's ability to improve supplier-buyer ties.

Relationship strength and supplier cost performance

Hypothesis 4 (H4) indicates that in the South African construction sector, relationship strength and supplier cost performance are significantly correlated. The results indicate that relationship strength and supplier cost performance are slightly positively associated, but this association is not statistically significant, according to the study. H4 is rejected since the data indicate that RS has little effect on SC, with a β of 0.089, t of 1.62, and a p-value of 0.288. These results go counter to prior research by Kimario (2021) and a later study by Li et al. (2022), which showed that strong buyer-supplier relationships had a beneficial impact on manufacturing industry cost reductions. The complexity of projects in the South African construction industry, which are affected by several factors, such as rising labour and raw material costs and regulatory requirements, may be the reason for their lack of importance (San Cristóbal et al., 2018). These factors frequently make it more difficult for relationship strength to directly improve supplier cost performance. Consistent cost reductions might also be hampered by market factors such as increased supplier rivalry, shifting labour and material costs, economic restructuring, and rising fuel prices (Jraisat et al., 2016). Realising the cost-saving advantages of solid partnerships is made more difficult by the length and complexity of supply chains in the construction sector, as well as contractual frameworks such as fixed-price contracts (Selviaridis & Spring, 2018). Strong relationships remain necessary to promote cooperation and reduce risks in the construction supply chain, but the industry's specific challenges may make it difficult to achieve meaningful cost savings.

Relationship strength and supply delivery performance

Hypothesis 5 (H5) predicts that in the South African construction sector, relationship strength and supplier delivery success are significantly correlated. The regression analysis revealed a positive path coefficient (β = 0.379, t = 7.943, p = 0.000). This result supports the hypothesis by confirming that the path coefficient is statistically significant. Stronger ties improve supplier delivery performance in the South African construction sector, according to the findings. As a result, hypothesis H5 is maintained. These results are corroborated by numerous earlier studies. For example, a study by Kimario et al. (2021) that focused on manufacturing firms in Tanzania and a survey by Poku (2022) that involved twenty firms in Ghana's Ashanti Region both found that supplier relationship management greatly enhances delivery performance. To improve supplier delivery performance in the South African construction supply chain, this study emphasises the significance of relationship strength. Delivery performance improves as construction companies strengthen their ties with suppliers, leading to better adherence to deadlines and timely order fulfilment. Effective delivery of necessary supplies to clients is enabled by strong relationships, which promote a more reliable supply of goods (Cherian et al., 2023). By prioritising and investing in developing strong relationships with their suppliers, construction

companies can leverage these insights. They can improve supplier delivery performance, which will ultimately improve project schedules and operational efficiency, by fostering trust, communication, and cooperation. Improved ties with suppliers can also help shorten order lead times, thereby improving project performance. A firm's capacity to reliably detect and trace the movement of items via supply chain networks depends on several important variables, including efficient communication between enterprises (Wang & Zhou, 2024). Consequently, this improves overall operational productivity by increasing product dependability and timely delivery (Cherian et al., 2023). To enable prompt and effective project delivery, companies in the construction sector need to create ongoing communication strategies.

Relationship strength and supplier flexibility performance

Hypothesis 6 (H6) predicts that in the South African construction sector, relationship strength and supplier flexibility performance are significantly correlated. The regression results reveal that the strength of the relationship has a somewhat beneficial impact on SF ($\beta = 0.108$), as shown in Table 7. Although relationship strength has a slight impact on supplier costs, route analysis and t-tests indicate that this association is not statistically significant. The path coefficient is not statistically significant, as indicated by the regression analysis's t-value of 1.413 ($t < 1.96$) and p-value of 0.166 ($p > 0.05$). We may therefore conclude that supply chain dynamics in the South African construction industry are not greatly affected by the strength of the relationship. As a result, these results refute Hypothesis H6. This finding suggests that although there appears to be a good relationship between suppliers and customers in the South African construction sector, supplier flexibility is not improved by this relationship. Compared to earlier studies, there is a different link between supplier flexibility and relationship strength. For instance, research on the UK automotive sector by Üstávağ and Ungan (2020) indicates that supplier flexibility is positively correlated with stronger partnerships. The construction industry's strict contractual frameworks and rules, which limit suppliers' flexibility, may be the main cause of the lack of a substantial association between relationship strength and supplier flexibility.

A study by Raza et al. (2023) argues that building projects are typically regulated by comprehensive plans and specifications, which limit providers' ability to quickly adapt to changing needs. Further limiting suppliers' ability to modify their products is the fact that building projects frequently require lengthy lead times and intricate coordination between numerous stakeholders (Broft & Koskela, 2018). Additionally, the construction supply chain is dispersed, with many subcontractors and speciality suppliers (Studer & Mello, 2021), which makes network coordination and alignment difficult. Additionally, expenditures meant to increase supplier flexibility may be hampered by the financial and resource limitations specific to the construction sector (Kim & Nguyen, 2018). Stronger relationships between buyers and suppliers can benefit other industries, but the specifics of the construction supply chain may limit how much stronger relationships translate into greater supplier flexibility.

Relationship strength and supplier quality performance

Hypothesis (H7) indicates that in the South African construction sector, relationship strength and supplier quality performance are significantly correlated. The results show that these constructions have a significant positive connection ($\beta = 0.283$; $t = 5.845$; $p = 0.000$). The substantial t-value and p-value indicate that relationship strength has a beneficial impact on supplier quality performance, as confirmed by the path coefficient. According to this research, South African construction firms believe that improving supplier quality in their sector depends heavily on the strength of their relationships. The validity of hypothesis H7 is thus supported by these findings. This result shows that stronger partnerships have improved supplier quality performance, helping South African

construction firms. This result is consistent with Lees et al.'s (2020) findings that supplier product quality in New Zealand's food supply chains is positively affected by improved relationship quality. Furthermore, supply chain collaboration activities improve quality performance, according to research by Teng et al. (2021), which involved 56 UK service firms. This suggests that building supply chains greatly enhances supplier quality performance when they prioritise and foster relationships with suppliers. To raise the calibre of their projects and products, construction companies should focus on building strong relationships and fostering collaboration with their suppliers. Buyers can implement effective quality interventions to improve product quality performance by strengthening these connections. Construction firms should emphasise relationship strength by highlighting crucial elements, such as regular communication, to achieve this. This strategy pushes suppliers to improve their performance in response to consumer expectations and makes integration with distribution channels easier. Furthermore, as Jain et al. (2014) point out, establishing relationships amongst stakeholders is essential because these interactions greatly lower perceived risks for enterprises. As a result, providers can make their best efforts and produce higher-quality work. According to research, trust between suppliers and customers is crucial for encouraging firms to participate in cooperative decision-making (Kotcharin et al., 2024). The construction sector can enhance cooperation and facilitate collaborative decision-making on product requirements, dependability, and durability by highlighting trust as a catalyst for relationship-building.

Relationship strength and supplier sustainability performance

Hypothesis (H8) predicts that in the South African construction sector, relationship strength and supplier sustainability performance are significantly correlated. Nevertheless, the results showed that the two variables had a weak, nonsignificant negative connection ($\beta = -0.107$; $t = 1.095$; $p = 0.289$). Relationship strength (RS) and supplier sustainability (SS) were negatively correlated, as indicated by a path coefficient, with a t-value of less than 1.96 and a p-value of less than 0.05. This implies that the supplier sustainability performance of South African construction companies is not significantly impacted by relationship strength. Collaborative buyer-supplier interactions have a good impact on supplier social sustainability, according to research on supply chain practitioners in South Africa by Bag et al. (2022) and Carrim et al. (2020).

Mediation analysis

When a mediator (M) serves as a bridge between an independent variable (X) and a dependent variable (Y), mediation occurs. To determine the importance of changes in relationship strength (RS) between each mediated power construct and the five distinct supplier performance dimensions, we used mediation analysis. Because it helped identify possible indirect effects between the predictor and outcome constructs, this study was essential. Table 8 summarises the results of the mediation analysis. With a coefficient (β) of 0.100, a t-value of 4.653, and a p-value of 0.000, the findings showed that RS mediated the association between supplier development (SD) and customer relationship management practices (CRP). Furthermore, with a coefficient of 0.075, a t-value of 4.005, and a p-value of 0.0000, RS moderated the association between coercive power (CP) and service quality (SQ). According to these mediated results, RS mediated the influence of CP on service satisfaction quality (SSQ) by 7.5% and increased the effect of CP on supplier capabilities (SC) by 10%.

Table 8. Mediation analysis of the research constructs

Relationship	Mediating effect	T statistics (t)	Significance (p-value)	Decision
CP -> RS -> SC	0.023	1.037	0.300	No mediation
CP -> RS -> SD	0.100	4.653	**0.000**	Full mediation
MP -> RS -> SC	-0.021	0.874	0.382	No mediation
CP -> RS -> SF	0.028	1.346	0.178	No mediation
MP -> RS -> SD	-0.090	1.671	0.095	No mediation
RP -> RS -> SC	0.002	0.212	0.832	No mediation
CP -> RS -> SQ	0.075	4.005	**0.000**	Full mediation
MP -> RS -> SF	-0.026	1.041	0.298	No mediation
RP -> RS -> SD	0.007	0.279	0.780	No mediation
CP -> RS -> SS	-0.028	1.067	0.286	No mediation
MP -> RS -> SQ	-0.067	1.590	0.112	No mediation
RP -> RS -> SF	0.002	0.215	0.830	No mediation
MP -> RS -> SS	0.025	0.914	0.361	No mediation
RP -> RS -> SQ	0.005	0.278	0.781	No mediation
RP -> RS -> SS	-0.002	0.213	0.831	No mediation

5. Conclusion

This study looked at how mediated power affected supplier performance and relationship strength in the building sector. The goal of this study was to offer strategic insights to help construction companies enhance their overall performance and supplier relationships, thereby boosting the competitiveness of the South African construction sector. A questionnaire based on validated constructions from the literature was used to collect data from 389 construction professionals in the provinces of Gauteng and KwaZulu-Natal. To investigate the relationships among mediated power, relationship strength, and supplier performance, the data were analysed using structural equation modelling and SmartPLS.

The results showed that mediated power, particularly coercive power, had a major impact on relationship strength, which in turn improved supplier performance, notably in terms of quality and delivery efficiency. The study did not discover any significant impact of mediated power on supplier cost, flexibility, or sustainability performance. Relationship strength, a key mediator, has been shown to have a favourable impact on supplier performance through its mediating role. These results improve our understanding of power dynamics in the South African construction supply chain and highlight the importance of strategically leveraging power in buyer-supplier relationships. According to our empirical findings, relationship strength in construction supply chains is not substantially affected by any type of mediated power. Using coercive power to strengthen buyer-supplier relationships (BSR) should be done carefully because it has a discernible impact.

This study highlights the need for further research by presenting unexpected conclusions about the roles of reward and manipulation power in influencing relationship strength and subsequent supplier performance, contradicting previous literature. In line with academic discourse, these contradictory results highlight the significance of a complex understanding of power dynamics within the building supply chain. Furthermore, it is crucial to remember that supplier success in terms of cost, flexibility, or sustainability is not always correlated with a solid buyer-supplier relationship. These difficulties cast doubt on widely held beliefs about the connection between supplier performance and strength. In the construction firm, a good relationship can improve supplier quality and delivery performance, but it has little effect on supplier pricing, flexibility, or sustainability. The full realisation of the connection strength's influence on cost and flexibility outcomes is hampered by intrinsic industry constraints, such as fixed pricing, variable costs, and resource limitations (Jiwa et al., 2020; Raza et al., 2023). Therefore, the best way to improve quality and delivery performance in the construction firm is to foster strong buyer-supplier partnerships.

6. Managerial Implications

This study emphasises how important mediated power is to developing solid supplier-buyer relationships in the construction sector. Construction companies can enhance their supplier selection and management procedures by comprehending the consequences of mediated power. This will lead to better project results, including on-time delivery, improved quality, and increased efficiency. According to the research, supply chain managers should intentionally employ coercive authority to foster stronger connections and improve supplier performance by fostering trust, facilitating discussions, and resolving disputes. It highlights how crucial trust-building programs and fair authority distribution are to creating enduring relationships. Additionally, suppliers are encouraged to improve their performance by matching expectations, setting clear performance metrics, and fostering trust with customers, all of which are important managerial implications of this study. Suppliers can strategically increase their bargaining power by comprehending the effects of different social power sources. Furthermore, the study suggests that regulatory organisations like the CIDB enact laws that support sustainability, equity, and openness in the building supply chain. By addressing these problems, the sector may move toward more egalitarian and sustainable practices, ultimately benefiting both suppliers and consumers. The results have important ramifications for regulatory agencies, especially the CIDB, in promoting sustainability, equity, and openness in South Africa's building supply chain.

The findings emphasise the need for uniform rules to ensure the moral and equitable treatment of all supply chain players, shielding smaller suppliers from imbalances of power. It is possible to improve industrial performance and foster community involvement by implementing policies that support openness, fair procedures, and incentive schemes for firms that prioritise teamwork. Additionally, the study shows that relationship strength and suppliers' sustainability performance are not clearly related, providing the CIDB with an opportunity to promote sustainable practices through improved norms and regulations. CIDB can reduce the industry's environmental impact while increasing the marketability of conforming suppliers by supporting eco-friendly practices such as recycling, green building techniques, and efficient resource use. The CIDB might improve its green building certification procedures to further promote sustainability by removing financial barriers, enhancing accessibility, and ensuring efficient monitoring and flexibility. This strategy would promote the wider use of environmentally friendly techniques in the building industry.

7. Limitations and Avenues for Future Research

This study's limited scope and generalisability, which are impacted by regional and industry-specific characteristics, are its main limitations. The research focuses on South African building supply chains, particularly in the regions of KwaZulu-Natal and Gauteng. They might not be applicable to other industries with distinct relational dynamics or operational environments. The conclusions' applicability outside the construction sector is further limited by variations in the dimensions of mediated power, which are influenced by factors such as organisational size and cultural or legal contexts. To gain a deeper understanding of the connections between mediated power, relationship strength, and supplier performance, future studies should expand their scope to include a variety of industries and geographic areas, such as manufacturing and healthcare. Richer insights into the development of these dynamics can be obtained by combining primary and secondary data and using longitudinal research methods. Furthermore, qualitative methods such as case studies and interviews could offer a more nuanced understanding of the difficulties encountered. Future research should examine the moderating effects of variables such as firm size, the state of the economy, and technological developments, particularly as digitalisation transforms the construction sector. By examining these factors, firms can better adapt and reduce risks. Furthermore, given the surprising findings on reward power in the building supply chain, it is imperative to investigate how sustainable practices and regulatory frameworks shape these relationships. Such studies may provide fresh perspectives on how power dynamics are impacted by sustainable practices and regulations, thereby improving supplier performance. Finally, this study provides insights into the complex power dynamics of construction supply networks and the sector. It questions accepted wisdom and offers new insights into how different power sources and interpersonal strength affect the construction supply chain. This innovative study highlights the importance of understanding mediated power systems to enhance suppliers' performance and the effectiveness of relationships. Building a robust supply chain and ensuring long-term viability depend on these elements. This study's limited scope and generalisability, which are impacted by regional and industry-specific characteristics, are its main limitations. The results may not apply to other industries with different operational settings or relational dynamics because they concentrate on building supply chains in South Africa, particularly in the provinces of Gauteng and KwaZulu-Natal. The conclusions' applicability outside of the construction industry is further limited by variations in the dimensions of mediated power, which are impacted by elements like organisational size, cultural differences, and regulatory settings.

To gain a deeper knowledge of the relationship between mediated power, relationship strength, and supplier performance, future research should widen its focus to encompass a variety of geographic regions and industries, such as manufacturing and healthcare. Richer insights into how these dynamics change may be obtained by combining primary and secondary data and using longitudinal study approaches. Furthermore, qualitative methods like case studies and interviews could provide a more complex picture of the difficulties encountered. Future research should look at the moderating impacts of variables including firm size, the state of the economy, and technical developments, particularly as digitalisation transforms the construction sector. Companies can adjust better and reduce risks by looking into these factors. Examining how sustainable practices and legal frameworks affect these connections is also crucial, especially considering surprising discoveries about reward power in the construction supply chain. Such studies may provide fresh perspectives on how sustainable practices and regulations affect power relations, thereby improving supplier performance. Finally, this study sheds light on the complex power aspects of construction supply networks and industry at large. It questions accepted wisdom and offers new insights into how different power sources and interpersonal strength affect the construction supply chain. This innovative study highlights how crucial it is to comprehend mediated power

dynamics to enhance supplier performance and relationship efficacy. These elements are essential for creating effective and long-lasting supply chains. To create effective supply chains that are advantageous to all stakeholders, the study invites scholars and practitioners in the building sector to investigate these aspects further. This study encourages scholars and building industry experts to explore these aspects and create effective supply chains that benefit all stakeholders.

AI Declaration

The authors declare that this work was prepared independently and that no AI-based applications or tools were used to generate any part of the manuscript. However, Grammarly was used to assist with language editing and improving clarity. The authors take full responsibility for the content of the manuscript.

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