

## Effect of Supervision on the Performance of Building Construction Craftsmen in Ikorodu Local Government Area, Lagos State, Nigeria

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### Abstract

*The construction industry in Lagos State, Nigeria, continues to grapple with persistent challenges including project delays, cost overruns, poor workmanship, and building collapses, many of which have been associated with inadequate site supervision, alongside low craftsmen performance. This study examined the effect of supervision on the performance of building construction craftsmen in Ikorodu Local Government Area (LGA), Lagos State, Nigeria. A quantitative survey research design was adopted, and data were collected using a structured questionnaire administered to 270 construction craftsmen (120 masons, 80 carpenters, and 70 steel fabricators) randomly selected from 20 active building sites in Ikorodu LGA. The questionnaire measured supervision practices across four dimensions (i.e. technical supervision, communication and feedback, autonomy and support, and monitoring and control) and craftsmen performance across five dimensions (i.e. output rate, quality of workmanship, rework frequency, safety compliance, and efficiency). Data were analysed using descriptive statistics, Pearson correlation, multiple regression, and one-way analysis of variance (ANOVA). The findings revealed that craftsmen performance was moderate overall ( $M = 3.78$ , standard deviation  $[SD] = 0.31$ ), with only 31.1% achieving high performance levels. Supervision practices were also moderate ( $M = 3.44$ ,  $SD = 0.23$ ), characterised by high monitoring and control ( $M = 3.86$ ) but low autonomy and support ( $M = 2.72$ ). Contrary to expectations, no statistically significant correlations were found between supervision variables and performance ( $p > 0.05$ ), with regression models explaining less than 2% of performance variance. However, responses to open-ended items revealed a significant perception-practice gap, with craftsmen strongly valuing supervision ( $M = 4.12$ ) while reporting deficiencies in current practices. The study concludes that the supervision-performance relationship in the Ikorodu LGA construction context is complex and may be moderated by contextual factors including informal labour practices, economic pressures, and measurement limitations. Recommendations include supervisor training programmes, presence protocols, feedback systems, fairness mechanisms, and optimised supervision ratios.*

**Keywords:** supervision, craftsmen performance, construction supervision, participatory supervision, Ikorodu LGA

### Introduction

The construction industry stands as one of the most significant sectors driving economic development across the globe. It provides the essential infrastructure required for housing, transportation, education, healthcare, and commercial activities, thereby serving as a catalyst for national growth and urban development (Ofori, 2003; World Bank, 2005). In developing nations such as Nigeria, the construction sector assumes even greater importance due to its labour-intensive nature and its capacity to absorb a substantial portion of the workforce, thereby contributing significantly to employment generation and poverty reduction. According to National Bureau of Statistics (NBS, 2024), the construction sector in Nigeria contributed 3.18% to real Gross Domestic Product (GDP) in 2023, underscoring its relevance to the national economy. Industry estimates further suggest that construction employs over 15 million Nigerians, representing approximately 15–20% of the national workforce, a figure attributable to the sector's reliance on manual labour and artisanal skills (World Bank, 2022; Federal Mortgage Bank of Nigeria [FMBN], 2023). The construction workforce in Nigeria comprises diverse categories of personnel, ranging from professionals such as architects, engineers, and quantity surveyors to skilled craftsmen including masons, carpenters, steel fabricators, plumbers, electricians, and other manual labourers. Among

these, construction craftsmen constitute the backbone of on-site execution, as they are directly responsible for transforming design concepts into physical structures through their technical skills and manual labour (Atomen *et al.*, 2014; Haupt *et al.*, 2017; Olatunji & Oke, 2021).

The relationship between supervision and performance has been investigated in various contexts within Nigeria and internationally. In Nigeria, studies conducted in Anambra State (Emmanuel *et al.*, 2020), Abuja (Haupt *et al.*, 2017; Jimoh *et al.*, 2019), and Port Harcourt (Atomen *et al.*, 2014) have established positive correlations between supervision quality and worker output. However, these studies have largely focused on productivity as measured by output rates, with limited attention to the broader performance dimensions of quality, rework, safety, and efficiency. Furthermore, the findings from these locations cannot be generalised to Ikorodu LGA because of its distinctive socio-economic dynamics, high density of informal-sector activity, specific construction practices, and urban logistical challenges (Adewuyi & Odesola, 2022). Lagos State, as the commercial capital of Nigeria and one of the fastest-growing megacities in Africa, hosts intense construction activity. Within the state, Ikorodu LGA is characterised by a predominance of small and medium-scale private building projects, informal employment patterns, high labour turnover, traffic-induced material delays, and a general lack of formalised supervisory structures (Oluwaseyi & Adebayo, 2023; Ijigah & Olubiyi, 2025).

These contextual factors create a distinctive environment in which the dynamics of supervision and performance may differ from those reported in other Nigerian cities. Despite the evident importance of supervision and the documented performance challenges in Ikorodu LGA, there remains a significant gap in the literature. No Ikorodu-specific study has quantitatively linked specific supervision styles such as participatory, directive (authoritarian), and laissez-faire to objective, trade-based, multidimensional performance metrics among construction craftsmen. Existing Lagos-based studies (Olatunji & Oke, 2021; Ijigah & Olubiyi, 2025) have relied on contractor estimates or self-reported perceptions rather than direct measurement of performance outcomes. This study seeks to address this gap by providing an empirically grounded, context-rich analysis of how supervision affects the performance of building construction craftsmen in Ikorodu LGA, with the ultimate goal of informing evidence-based improvements in supervisory practice, training, and policy. Specifically, this study addresses the following research questions: (1) What is the level of performance of construction craftsmen (masons, carpenters, and steel fabricators) in Ikorodu LGA, Lagos State, Nigeria? (2) What are the prevailing supervision styles and practices employed in supervising construction craftsmen on building sites in Ikorodu LGA? (3) Is there a significant relationship between the level/quality of supervision and the performance of construction craftsmen in Ikorodu LGA? (4) What factors can enhance supervision effectiveness and improve the performance of construction craftsmen in Ikorodu LGA construction projects?

Supervision is a fundamental management function that involves overseeing, directing, monitoring, and coordinating the activities of workers to ensure that organisational objectives are achieved efficiently and effectively. In the construction industry, supervision assumes particular significance due to the complex, dynamic, and labour-intensive nature of construction operations (Hanna *et al.*, 2008; Smallwood, 2003). In the Nigerian construction context, supervision takes on additional complexities due to the prevalence of informal labour practices, limited institutional support, and resource constraints. In Ikorodu LGA, these challenges are manifested through the dominance of small and medium-sized enterprises operating with minimal formal structures, daily or weekly hired labour without employment contracts, and supervisors who often lack formal training or clear authority (Oluwaseyi & Adebayo, 2023). The functions of construction supervision can be categorised into five principal domains: (i) technical supervision—ensuring conformance to design drawings, specifications, and building codes; (ii) quality supervision—monitoring workmanship standards and implementing quality control measures; (iii) safety supervision—enforcing occupational health and safety protocols; (iv) production supervision—planning, scheduling, and monitoring work progress; and (v) human resource supervision—managing worker motivation, conflict resolution, skill development, and team coordination (Akinlolu *et al.*, 2017; Adegun & Olusola, 2020).

Performance in the construction industry is a multidimensional concept that extends beyond the narrow economic definition of productivity, traditionally defined as the ratio of output to input or output per unit of time. While productivity remains an important indicator, performance encompasses a broader spectrum of outcomes that reflect the effectiveness, efficiency, and quality of construction operations (Neely *et al.*, 2005; Ibrahim *et al.*, 2024). According to Neely *et al.*, (2005), performance is defined as 'the efficiency and effectiveness of action,' where efficiency refers to the relationship between inputs and outputs, and effectiveness refers to the attainment of organisational goals.

For construction craftsmen specifically, performance is most appropriately conceptualised as a composite construct integrating five principal dimensions. First, output rate captures the quantity of work completed within a specified time period, measured in trade-specific units such as blocks laid per day, square metres of formwork erected per day, or kilograms of steel fixed per day (Atomen *et al.*, 2014; Haupt *et al.*, 2017). Second, quality of workmanship reflects the degree to which completed work conforms to design specifications, building codes, and industry standards, assessed through dimensional accuracy, surface finish, structural integrity, and aesthetic acceptability (Cheung *et al.*, 2004). Third, rework frequency measures the incidence of work that must be redone due to errors, non-compliance, or defects, representing both a quality failure and a productivity drain (Olatunji & Oke, 2021). Fourth, safety compliance captures the extent to which craftsmen adhere to occupational health and safety protocols, including the use of personal protective equipment, participation in safety briefings, and avoidance of hazardous behaviours (Akinlolu *et al.*, 2017). Fifth, efficiency reflects the optimal utilisation of materials, tools, and labour time, minimising waste, idle time, and unnecessary resource consumption (Adewuyi & Odesola, 2022).

Supervision styles refer to the characteristic manner in which supervisors interact with, direct, and manage their subordinates. Three dominant supervision styles have been identified in the construction context: authoritarian (directive), participatory (collaborative), and laissez-faire (delegative). Authoritarian supervision is characterised by top-down decision-making, close monitoring, explicit directives, and punitive correction. While this style may be effective in crisis situations or with inexperienced workers, prolonged application has been found to diminish worker morale, stifle initiative, reduce job satisfaction, and increase labour turnover (Aruleba, 2015; Emmanuel *et al.*, 2020).

Participatory supervision is characterised by worker involvement in decision-making, open communication, mutual problem-solving, regular feedback, and recognition of good work. The supervisor acts as a facilitator rather than a director, encouraging craftsmen to contribute ideas and take ownership of quality outcomes. Research consistently links participatory supervision to enhanced performance across multiple dimensions. Emmanuel *et al.*, (2020) found that masons under participatory supervision in Anambra State averaged 165 blocks per day compared to 130 under authoritarian styles, with 35% less rework. Jimoh *et al.*, (2019) reported that craftsmen on sites with consistent, participatory supervision achieved 18–25% higher output across trades in Abuja. Laissez-faire supervision is characterised by minimal intervention, maximum worker autonomy, and delegation of decision-making authority to craftsmen. While this style may empower highly skilled, self-motivated craftsmen in stable environments, it is generally ill-suited to construction where tasks are interdependent, safety risks are significant, and coordination is essential. In Lagos, where material supply unreliability, informal labour practices, and rapid workforce turnover create constant coordination challenges, laissez-faire supervision is likely to result in quality lapses, safety risks, and workflow disruptions (Oluwaseyi & Adebayo, 2023).

Three theories provide the theoretical grounding for this study. The Socio-Technical Systems Theory, developed by Trist and Bamforth (1951) and elaborated by Emery and Trist (1960), posits that organisational performance is optimised when the social system (people, relationships, values, management practices) and the technical system (tools, tasks, materials, workflows) are jointly designed and aligned. In the construction context, this implies that craftsmen performance cannot be improved by focusing exclusively on either technical or social factors; rather, supervision must integrate both dimensions by

ensuring workers have relational support and material resources (Ijigah & Olubiyi, 2025; Adewuyi & Odesola, 2022). Performance Management Theory (Armstrong, 2006) identifies four key processes through which performance is managed: performance planning (setting objectives and standards), performance monitoring (observing and measuring progress), performance development (providing feedback, coaching, and training), and performance evaluation (assessing results and making decisions). This framework is particularly applicable to the Ikorodu LGA context because it highlights the systemic nature of supervisory failure: supervisors may lack clear job descriptions (planning failure), experience poor coordination with procurement teams (monitoring failure), provide delayed feedback that allows errors to cascade (development failure), and omit worker involvement in evaluation (evaluation failure) (Emmanuel *et al.*, 2020; Olatunji & Oke, 2021; Oluwaseyi & Adebayo, 2023).

Leader-Member Exchange (LMX) Theory (Graen & Uhl-Bien, 1995) focuses on the dyadic relationship between leaders and individual members, proposing that supervisors develop different quality relationships ranging from high-quality exchanges (mutual trust, respect, obligation) to low-quality exchanges (formal, contractual interactions). In the construction context, craftsmen who enjoy high-quality exchanges with their supervisors are likely to demonstrate higher output, better quality, fewer errors, and stronger safety compliance. However, informal employment patterns and high labour turnover in Lagos may prevent the development of high-quality exchanges, suggesting that even in temporary employment contexts, supervisors who invest in relationship-building can elicit superior performance (Zakari & Sani, 2015).

Empirical studies on craftsmen performance in Nigeria have documented consistently suboptimal outcomes. Atomen *et al.*, (2014) established that Nigerian masons lay between 120 and 180 sandcrete blocks per day, significantly below the 250+ benchmark in South Africa and Malaysia. Haupt *et al.*, (2017) reported that steel fabricators in Abuja average 25–50 kilograms of reinforcement fixed per day, while carpenters erect 8–15 square metres of formwork daily. Ijigah and Olubiyi (2025) documented similar ranges for Lagos craftsmen: masons averaging 140 blocks per day, carpenters 10 square metres of formwork, and steel fabricators 35 kilograms of steel the only Lagos-specific output benchmarks currently available, though derived from contractor perception rather than direct measurement. Regarding rework, Olatunji and Oke (2021) found that over 40% of craftsmen in Lagos engage in weekly rework, spending up to 25% of scheduled work time correcting errors due to misinterpretation of drawings and absence of immediate supervisory feedback. Emmanuel *et al.*, (2020) confirmed similar patterns in Anambra State, attributing rework primarily to unclear instructions and weak quality oversight. Eze and Idiake (2018) conducted regression analysis attributing 46.6% of cost overruns to poor supervision, primarily through rework and delays. Safety compliance has been investigated primarily through incident rates. Akinlolu *et al.*, (2017) found that 18% of Nigerian craftsmen experience at least one safety incident in six months, with carpenters and steel fabricators most affected.

The study demonstrated that supervisors who conduct daily safety talks reduce incident rates by 40%, establishing safety leadership as a core supervisory function. Efficiency in resource utilisation has been addressed through studies of idle time and material waste. Adewuyi and Odesola (2022) documented that traffic-induced material delays in Lagos cause up to 30% idle time on construction sites. Ijigah and Olubiyi (2025) attributed up to 30% performance loss in Lagos to weak supervision and poor coordination. Studies on supervision practices have identified consistent patterns. Emmanuel *et al.*, (2020) found that participatory supervision leads to 22% higher output and 35% less rework compared to authoritarian styles in Anambra State. Jimoh *et al.*, (2019) established that daily supervisor presence correlates strongly with higher productivity in Abuja. Oluwaseyi and Adebayo (2023) found that 60% of supervisors in Lagos lack formal training, 40% visit sites less than twice a week, and most operate without clear job descriptions. Ijigah and Olubiyi (2025) documented that poor coordination between supervisors and procurement teams leads to material delays and idle time. Adegun and Olusola (2020) found that sites where supervisors give clear instructions and provide timely feedback report 28% less rework. Despite this growing body of evidence, critical gaps remain. No Lagos-specific study has tested the supervision-performance relationship

using multiple regression analysis with multidimensional performance outcomes. Existing studies employ descriptive statistics, simple correlations, or Relative Importance Index analysis. No study has quantified the prevalence of the three supervision styles specifically in Lagos or linked them to multidimensional performance metrics. This study addresses these gaps by providing empirical, Lagos-specific evidence on the relationship between supervision styles, practices, and multidimensional craftsmen performance.

## **Materials and Methods**

This study adopted a quantitative survey research design. The survey design was selected because it allows for the collection of numerical data from a large sample, enabling statistical analysis of relationships between variables (Bryman, 2016). The study is descriptive in nature, seeking to describe the current state of supervision practices and craftsmen performance in Ikorodu LGA. It is also correlational, examining the relationships between supervision quality and performance dimensions. Additionally, it has explanatory elements, seeking to determine the extent to which supervision predicts performance outcomes. The cross-sectional design involves data collection at a single point in time, which is practical given resource constraints and the temporary nature of construction workforces, but limits causal inference. The target population comprised building construction craftsmen actively involved in residential and commercial building projects in Ikorodu LGA, Lagos State, Nigeria.

Based on field reconnaissance across 50 active construction sites and review of the official artisan registry maintained by the Lagos State Chapter of the National Board for Technical Education, the estimated population of the three target trades in Ikorodu LGA is approximately 2,700 craftsmen, comprising 1,200 masons (44.4%), 800 carpenters (29.6%), and 700 steel fabricators (25.9%). The sample size was determined using Krejcie and Morgan's (1970) table: for a population of approximately 2,700 at 95% confidence with 5% margin of error, the minimum sample size is 291. Due to practical constraints, an adjusted sample size of 270 was adopted (Saunders *et al.*, 2019), proportionally allocated across trades: 120 masons, 80 carpenters, and 70 steel fabricators. A two-stage simple random sampling technique was employed: 20 active sites were randomly selected from 50 identified sites, and eligible craftsmen were randomly selected from each trade group at each sampled site. The primary instrument was a structured questionnaire comprising closed-ended questions. Section A collected demographic information. Section B measured supervision practices using 20 items on a 5-point Likert scale (Always = 5 to Never = 1), covering instruction clarity, quality checks, feedback provision, safety talks, material coordination, task assignment, teamwork encouragement, recognition, fairness, and supervisor presence. Section C measured factors enhancing supervision effectiveness using 20 items on a 5-point Likert scale (Very High = 5 to None = 1). Section D measured craftsmen performance across five dimensions: output rate (self-reported daily output by trade), rework frequency, safety compliance, quality of workmanship, and efficiency.

Validity was ensured through content validity (expert review by three academics in construction management), construct validity (pilot testing with exploratory factor analysis), and face validity (feedback from pilot respondents). Reliability was established through a pilot study with 30 craftsmen, yielding Cronbach's alpha coefficients of 0.84 for Section B, 0.81 for Section C, and 0.79 for Section D, all exceeding the 0.70 threshold (Nunnally & Bernstein, 1994). Data were collected by two trained enumerators through face-to-face interviews over an eight-week period (April to May 2026), with strict adherence to ethical protocols including informed consent, confidentiality, anonymity, and voluntary participation. Data were analysed using SPSS version 26. Descriptive statistics (frequencies, percentages, means, standard deviations, Relative Importance Index) summarised demographic characteristics, supervision practices, enablers, and performance levels. Inferential statistics included Pearson's product-moment correlation coefficient to test linear relationships between supervision quality and each performance dimension; multiple linear regression to determine predictive power; and one-way analysis of variance (ANOVA) with post-hoc Tukey's honestly significant difference (HSD) tests to compare performance across supervision styles. The significance level was set at  $p < 0.05$  for all inferential tests. Because the sample was drawn

solely from Ikorodu LGA, findings are interpreted as local evidence and are not generalised to the other 19 LGAs in Lagos State.

## Results and Discussion

### Socio-Demographic Characteristics

**Table 1:** Socio-demographic characteristics of respondents

| Characteristic | Category             | Frequency | Percentage (%) |
|----------------|----------------------|-----------|----------------|
| Gender         | Male                 | 247       | 91.5           |
|                | Female               | 23        | 8.5            |
| Age            | 18–25 years          | —         | 18.9           |
|                | 26–35 years          | —         | 27.0           |
|                | 36–45 years          | —         | 29.6           |
|                | 46–55 years          | —         | 16.7           |
|                | 56 years and above   | —         | 7.8            |
| Craft          | Masonry              | 120       | 44.4           |
|                | Carpentry            | 80        | 29.6           |
|                | Steel fabrication    | 70        | 25.9           |
| Experience     | 1–10 years           | —         | 64.1           |
|                | 6–10 years           | —         | 33.0           |
| Education      | Secondary education  | —         | 42.2           |
|                | Vocational/technical | —         | 26.7           |
|                | Primary education    | —         | 11.1           |
|                | No formal education  | —         | 10.0           |
| Employment     | Contract             | —         | 56.3           |
|                | Full-time            | —         | 27.0           |
|                | Casual               | —         | 16.7           |

Table 1 presents the socio-demographic characteristics of the respondents. A total of 270 questionnaires were administered and returned, representing a 100% response rate. The gender distribution revealed significant male dominance: 247 respondents (91.5%) were male and 23 (8.5%) were female. The age distribution comprised 18–25 years (18.9%), 26–35 years (27.0%), 36–45 years (29.6%), 46–55 years (16.7%), and 56 years and above (7.8%). The respondents were drawn from three craft categories: masonry (44.4%), carpentry (29.6%), and steel fabrication (25.9%). The experience categories reported in Table 1 were 1–10 years (64.1%) and 6–10 years (33.0%). Regarding educational attainment, 42.2% had secondary education, 26.7% had vocational/technical education, 11.1% had primary education, and 10.0% had no formal education. The employment distribution showed 56.3% on contract employment, 27.0% in full-time employment, and 16.7% in casual employment, reflecting the prevalent project-based hiring practice in the Nigerian construction industry.

## Performance Levels of Construction Craftsmen

**Table 2:** Performance levels and group differences among construction craftsmen

| Indicator                       | Mean / statistic | SD    | p-value / interpretation |
|---------------------------------|------------------|-------|--------------------------|
| Overall performance             | 3.784            | 0.307 | Moderate                 |
| High performance ( $\geq 4.0$ ) | —                | —     | 31.1%                    |
| Moderate performance (3.5–3.99) | —                | —     | 56.3%                    |
| Fair performance (3.0–3.49)     | —                | —     | 11.9%                    |
| Low performance ( $< 3.0$ )     | —                | —     | 0.7%                     |
| Craft type ANOVA                | F = 4.289        | —     | 0.015                    |
| Masonry                         | 3.82             | 0.29  | —                        |
| Carpentry                       | 3.81             | 0.31  | —                        |
| Steel fabrication               | 3.69             | 0.31  | —                        |
| Experience ANOVA                | F = 0.893        | —     | 0.468                    |
| Education ANOVA                 | F = 1.819        | —     | 0.125                    |
| Employment ANOVA                | F = 0.286        | —     | 0.751                    |

Table 2 presents the performance levels and group differences among the sampled construction craftsmen. The performance of construction craftsmen was assessed using eight items measured on a 5-point Likert scale. The overall mean performance score was 3.784 (standard deviation [SD] = 0.307), indicating a moderate level of performance. When categorised, 31.1% achieved high performance ( $\geq 4.0$ ), 56.3% demonstrated moderate performance (3.5–3.99), 11.9% showed fair performance (3.0–3.49), and only 0.7% exhibited low performance ( $< 3.0$ ). One-way analysis of variance (ANOVA) revealed a statistically significant difference in performance across craft types (F = 4.289,  $p = 0.015$ ). Post-hoc analysis indicated that steel fabricators recorded significantly lower performance (M = 3.69, SD = 0.31) compared to carpentry (M = 3.81, SD = 0.31) and masonry (M = 3.82, SD = 0.29). However, no statistically significant differences were found across experience levels (F = 0.893,  $p = 0.468$ ), educational levels (F = 1.819,  $p = 0.125$ ), or employment status (F = 0.286,  $p = 0.751$ ). This unexpected finding suggests that years of experience and formal education alone do not guarantee higher performance, highlighting the importance of quality supervision and continuous skill development. The moderate performance level aligns with findings by Dada and Jagboro (2012) and Ogunsemi (2016), who reported similar performance levels among Nigerian construction workers.

## Supervision Styles and Practices

**Table 3:** Descriptive statistics for supervision practices

| Supervision dimension      | Mean  | SD    | Position      |
|----------------------------|-------|-------|---------------|
| Overall supervision        | 3.444 | 0.225 | Moderate      |
| Monitoring and Control     | 3.86  | 0.36  | Highest       |
| Communication and Feedback | 3.56  | 0.45  | Second        |
| Technical Supervision      | 3.18  | 0.55  | Second-lowest |
| Autonomy and Support       | 2.72  | 0.55  | Lowest        |

Table 3 presents the descriptive statistics for supervision practices. Supervision styles and practices were assessed through 16 items organised into four sub-dimensions. The overall supervision practice mean score was 3.444 (SD = 0.225), indicating a moderate level of supervision practice. However, significant variation

existed across dimensions. Monitoring and Control was the highest-rated dimension ( $M = 3.86$ ,  $SD = 0.36$ ), suggesting that supervisors are more focused on monitoring and controlling work than on supportive practices. Communication and Feedback showed moderate levels ( $M = 3.56$ ,  $SD = 0.45$ ). Technical Supervision recorded the second-lowest score ( $M = 3.18$ ,  $SD = 0.55$ ), indicating that supervisors may lack technical competence or fail to provide adequate technical guidance. Autonomy and Support was the lowest-rated dimension ( $M = 2.72$ ,  $SD = 0.55$ ), indicating significant deficiencies in how supervisors support and empower craftsmen. The findings reveal an imbalanced supervision approach characterised by high monitoring and control but low autonomy and support. This pattern is consistent with what Hersey and Blanchard (1977) describe as a 'telling' or 'directing' leadership style, where supervisors focus on task completion through close oversight rather than empowering workers. The low score on autonomy and support is particularly concerning, as self-determination theory emphasises that autonomy support is critical for intrinsic motivation and performance (Deci & Ryan, 2000).

### Relationship between Supervision and Performance

**Table 4:** Correlation and regression results for supervision and craftsmen performance

| Variable / model           | Statistic               | p-value | Result                   |
|----------------------------|-------------------------|---------|--------------------------|
| Technical Supervision      | $r = -0.025$            | 0.680   | Not significant          |
| Communication and Feedback | $r = 0.036$             | 0.556   | Not significant          |
| Autonomy and Support       | $r = 0.078$             | 0.199   | Not significant          |
| Monitoring and Control     | $r = -0.102$            | 0.093   | Not significant          |
| Overall Supervision Style  | $r = -0.019$            | 0.752   | Not significant          |
| Supervision Quality        | $r = -0.024$            | 0.690   | Not significant          |
| Full regression model      | $R^2 = 0.0186$          | —       | F-test not significant   |
| Adjusted full model        | Adjusted $R^2 = 0.0038$ | —       | 0.38% variance explained |
| Technical Supervision      | $\beta = -0.022$        | —       | Full model               |
| Communication and Feedback | $\beta = 0.022$         | —       | Full model               |
| Autonomy and Support       | $\beta = 0.044$         | —       | Full model               |
| Monitoring and Control     | $\beta = -0.085$        | —       | Full model               |
| Second model               | $R^2 = 0.0040$          | —       | 0.40% variance explained |

Table 4 shows that none of the measured supervision variables had a statistically significant relationship with craftsmen performance. Pearson correlation analysis revealed no statistically significant correlations between any supervision variable and performance (all  $p > 0.05$ ). Technical Supervision versus Performance yielded  $r = -0.025$  ( $p = 0.680$ ), Communication and Feedback versus Performance yielded  $r = 0.036$  ( $p = 0.556$ ), Autonomy and Support versus Performance yielded  $r = 0.078$  ( $p = 0.199$ ), and Monitoring and Control versus Performance yielded  $r = -0.102$  ( $p = 0.093$ ). Overall Supervision Style versus Performance yielded  $r = -0.019$  ( $p = 0.752$ ), and Supervision Quality versus Performance yielded  $r = -0.024$  ( $p = 0.690$ ). Multiple regression analysis produced an  $R^2$  of 0.0186 (1.86%) and an adjusted  $R^2$  of 0.0038 (0.38%) for the full model, with the F-statistic not significant. The regression coefficients were: Technical Supervision  $\beta = -0.022$ , Communication and Feedback  $\beta = 0.022$ , Autonomy and Support  $\beta = 0.044$ , and Monitoring and Control  $\beta = -0.085$ . A second model including Effectiveness Factors and Relationship Impact produced an  $R^2$  of 0.0040 (0.40%). To further explore the relationship, respondents were divided into quartiles based on supervision quality scores. The mean performance scores across quartiles were: Q1 (Low Supervision)  $M = 3.78$  ( $SD = 0.33$ ), Q2  $M = 3.75$  ( $SD = 0.31$ ), Q3  $M = 3.86$  ( $SD = 0.28$ ), and Q4 (High Supervision)  $M = 3.74$  ( $SD = 0.30$ ). No clear linear pattern emerged, and ANOVA across quartiles was not statistically significant. The absence of significant correlations between supervision

variables and performance is a noteworthy finding that requires careful interpretation. Several explanations are plausible. First, a ceiling effect may be present: the performance scores were concentrated in the moderate-to-high range ( $M = 3.78$ ,  $SD = 0.31$ ), with limited variability, which may have attenuated correlations. Second, multicollinearity and measurement issues may exist: the supervision dimensions may not have been measured with sufficient precision to detect relationships. Third, contextual factors in the Ikorodu LGA construction context, including economic pressures, material availability, and informal labour practices, may exert stronger influences on performance than supervision practices alone. Fourth, the relationship may be non-linear, following an inverted-U pattern where both too little and too much supervision negatively affects performance (Amabile & Kramer, 2011). Fifth, a time lag may exist: the effect of supervision on performance may not be immediate but requires sustained quality supervision over time to manifest. These findings contrast with some international studies (e.g., Liao *et al.*, 2019) that found positive supervision-performance relationships, suggesting that context-specific factors in the Nigerian construction industry may moderate these relationships.

### Factors Enhancing Supervision Effectiveness

**Table 5:** Factors enhancing supervision effectiveness and qualitative themes

| Factor / theme                                       | Mean  | SD / percentage |
|------------------------------------------------------|-------|-----------------|
| Overall effectiveness factors                        | 3.973 | 0.308           |
| Supervisor competence and fair treatment             | 4.03  | —               |
| Supervisor performance evaluation                    | 4.00  | —               |
| Perceived relationship impact                        | 4.117 | 0.273           |
| Clear instructions and greater supervisor presence   | —     | 18.4%           |
| Regular constructive feedback and task demonstration | —     | 18.3%           |
| Poor communication and favoritism                    | —     | 17.7%           |
| Supervisor absence and lack of technical knowledge   | —     | 15.6%           |
| Better supervisor training programmes                | —     | 15.1%           |
| Modern tools and improved supervision ratios         | —     | 15.1%           |

Table 5 summarises factors that can enhance supervision effectiveness and the qualitative themes identified from the open-ended responses. Section D assessed factors that can enhance supervision effectiveness, with all eight items recording moderate-to-high mean scores. The overall mean for effectiveness factors was 3.973 ( $SD = 0.308$ ). Items recording the highest scores were supervisor competence and fair treatment ( $M = 4.03$ ) and supervisor performance evaluation ( $M = 4.00$ ), suggesting that craftsmen particularly value supervisor competence and fair treatment. Section E examined the perceived impact of supervision on various work outcomes, with all ten items recording high mean scores ( $\geq 4.0$ ). The overall mean for relationship impact was 4.117 ( $SD = 0.273$ ), the highest among all constructs measured. This indicates that craftsmen strongly believe supervision affects their work outcomes, despite the lack of statistical correlation in the quantitative analysis. Analysis of 810 open-ended responses (three per respondent) revealed six major themes. The most frequent suggestion was to 'give clear instructions and be more present on site' (18.4%), reflecting craftsmen's dissatisfaction with supervisor absenteeism and ambiguous communication. The second most frequent theme was to 'provide regular constructive feedback and demonstrate tasks' (18.3%), indicating a preference for hands-on, coaching-oriented supervision. The third theme identified 'poor communication and favoritism' as a major problem (17.7%). Other themes included supervisor absence and lack of technical knowledge (15.6%), better training programmes for supervisors (15.1%), and use of modern tools and improved supervision ratios (15.1%). The high scores on relationship impact items ( $M = 4.12$ ) contrast with the low scores on actual supervision practices ( $M = 3.44$ ), creating a perception-practice

gap. Craftsmen clearly value good supervision and believe it impacts their work, but current practices fall short of expectations. The emphasis on supervisor presence aligns with findings by Tucker *et al.*, (2012), who found that supervisor visibility is a key predictor of safety and performance on construction sites. The call for constructive feedback supports the coaching leadership model (Bass & Riggio, 2006). The concern about supervisor technical knowledge supports the need for 'craft-supervisors' who have practical experience in the trades they supervise (Dainty *et al.*, 2004). The identification of favoritism as a problem highlights the importance of procedural justice in supervision (Colquitt *et al.*, 2001).

### Integrated Discussion

This study set out to examine the effect of supervision on the performance of building construction craftsmen in Ikorodu LGA, Lagos State, Nigeria. The findings reveal several important insights for construction supervision theory and practice in developing economies. The moderate performance level observed ( $M = 3.78$ ) aligns with findings by Dada and Jagboro (2012) and Ogunsemi (2016), who reported similar performance levels among Nigerian construction workers. The significant difference across craft types, with steel fabricators recording lower performance, may reflect the specialised nature of these trades, which require different supervision approaches. The absence of significant differences by experience and education is particularly noteworthy: it suggests that performance in construction craftsmanship is more influenced by on-the-job factors such as supervision quality, motivation, and work environment than by demographic characteristics alone. These findings challenge assumptions that experience and formal education are primary determinants of craftsmen performance and underscores the need for context-specific supervisory interventions. The imbalanced supervision approach high monitoring and control ( $M = 3.86$ ) but low autonomy and support ( $M = 2.72$ ) is consistent with the 'telling' leadership style described by Hersey and Blanchard (1977). This control-oriented approach may be a rational response to the high-risk, resource-constrained environment of Ikorodu LGA construction sites, where supervisors face pressure to ensure compliance and prevent errors.

However, the deficiency in autonomy and support is concerning from the perspective of self-determination theory (Deci & Ryan, 2000), which posits that autonomy, competence, and relatedness are fundamental psychological needs that, when satisfied, enhance intrinsic motivation and performance. The moderate technical supervision score ( $M = 3.18$ ) further compounds this problem: supervisors who lack technical competence cannot effectively guide craftsmen, nor can they earn the respect necessary for high-quality LMX relationships (Graen & Uhl-Bien, 1995). The most striking finding is the absence of statistically significant correlations between supervision variables and performance. This contradicts the hypotheses and much of the existing literature, including Haupt *et al.*, (2017), Jimoh *et al.*, (2019), and Emmanuel *et al.*, (2020), who reported positive supervision-performance relationships in Nigerian and international contexts. Several contextual factors may explain this divergence. The informal labour practices prevalent in Ikorodu LGA daily hiring, absence of employment contracts, and high turnover—may prevent the development of stable supervisor-craftsman relationships necessary for supervision to influence performance. Economic pressures, including post-COVID disruptions, fuel subsidy removal, and naira devaluation, may create performance constraints that supervision cannot overcome. Material supply unreliability and traffic-induced delays may exert stronger influences on output than supervisory practices. Furthermore, the self-reported nature of both supervision and performance measures may introduce common method bias that attenuates true relationships.

The perception-practice gap, reflected in craftsmen strongly valuing supervision ( $M = 4.12$ ) while reporting deficiencies in current practices ( $M = 3.44$ ), is a critical finding with practical implications. It suggests that improving supervision quality could yield meaningful performance benefits, even if the quantitative relationship is not immediately detectable. The qualitative themes identified by craftsmen presence, feedback, technical competence, fairness, and training—provide a clear roadmap for supervisory improvement. These themes align with the three theoretical frameworks employed in this study: Socio-Technical Systems Theory (supervision must integrate social and technical support), Performance

Management Theory (supervision must encompass planning, monitoring, development, and evaluation), and LMX Theory (high-quality relationships require trust, respect, and mutual obligation).

From a theoretical perspective, the findings suggest that the supervision-performance relationship in informal-sector, developing-economy construction contexts may be more complex than linear models assume. Contextual moderators including labour market informality, economic volatility, infrastructure deficits, and cultural norms may attenuate or redirect the effects of supervision on performance. Future theoretical development should incorporate these contextual factors into models of construction workforce management, moving beyond universalist assumptions toward contingent frameworks that specify when, how, and for whom supervision enhances performance. Because the empirical evidence in this study comes solely from Ikorodu LGA, however, these theoretical and practical implications should not be generalised to the other 19 LGAs of Lagos State without further multi-LGA evidence.

## Conclusion

This study examined supervision and the performance of building construction craftsmen in Ikorodu LGA, Lagos State, using survey data from 270 craftsmen. Overall craftsmen performance was moderate ( $M = 3.78$ ,  $SD = 0.31$ ), while supervision practices were also moderate ( $M = 3.44$ ,  $SD = 0.23$ ), with monitoring and control rated highest, whereas autonomy and support were rated lowest. Although the study found no statistically significant linear relationship between the measured supervision variables and craftsmen performance ( $p > 0.05$ ), craftsmen reported a strong perceived impact of supervision on work outcomes ( $M = 4.12$ ), indicating a clear perception-practice gap. These findings should be interpreted as evidence from Ikorodu LGA rather than as representative evidence for all of Lagos State. The findings indicate the need for supervision practices that combine technical competence and effective monitoring with clear communication, constructive feedback, fair treatment, supervisor presence, and appropriate autonomy support. Supervisor training, structured presence protocols, institutionalised feedback systems, fairness mechanisms, and appropriate supervision ratios are therefore recommended. Future studies should use longitudinal designs, objective directly observed performance measures, and multi-LGA sampling to examine possible time-lag and non-linear effects and to determine whether the patterns observed in Ikorodu LGA hold across Lagos State.

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