Data Article

Survey dataset on professional’s perception on site supervision and project performance

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Abstract
Effective site supervision plays an important role in construction project delivery. This situates site supervisors in taking the responsibilities of coordinating and controlling all physical aspects of the day-to-day task in construction projects. A cross-sectional design approach was adopted by administering a well-structured questionnaire to selected built environment professionals. Descriptive statistics was performed on the data obtained and are presented on figures and tables. The data was also subjected to inferential statistics using Kruskal Wallis test to analyze the perceptions of respondents on effects of site supervision of construction works on completion time and quality respectively. The significance of the analyzed data is on identifying the effects of site supervision on project completion time and quality delivery. The analyzed data will also guide project stakeholders in selecting competent personnel in executing construction projects.

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Specifications Table

| Subject area                  | Building Construction |
|------------------------------|-----------------------|
| More specific subject area   | Construction Management |
| Type of data                 | Table, text file and figure |
| How data was acquired        | Field survey |
| Data format                  | Raw, filtered and analyzed |
| Experimental factors         | Systematic sampling of selected built environmental professionals practicing in Lagos, Nigeria |
| Experimental features        | Google online form as generated and administered to selected built environment professionals in order to get their perception on the effects of supervision on construction projects. |
| Data source location         | Lagos, Nigeria |
| Data accessibility           | All the data are contained in this data article |

Value of the data

- The data reveal cogent roles of site supervisors in construction projects towards elimination of reworks, minimization of waste and ensuring conformity to standards.
- The impacts of site supervision on project accomplishment of time and quality will be a contribution provided by the data.
- The identification of the effects of site supervision will provide basics for local construction sector to equip themselves for future selection of site supervisors.
- The data will also guide academia in fulfilling their teaching requirements hence producing competent hands that can handle construction works.

1. Data

A total of 78 online well-structured data instrument was administered to various built environment professionals comprising of Architects, Builders, Quantity Surveyors and Civil Engineers. The demographic features of the selected built environment professionals are presented in Fig. 1. The content of the designed instrument geared towards obtaining information on the perceptions of construction professionals on the effects of site supervision on construction projects. The data analysis uncovers the significant functions of site supervisors. In depth study of the data can provide insight into the roles performed by site supervisor in achieving project success of time and quality. Hypotheses were postulated which in turn lead to inferential statistics. The inferences drawn can inform the decision that inadequate site supervision can impair the timely completion and quality delivery of a construction projects. The data revealed top functions of site supervisor which include: Supervision and execution of the construction projects, Minimization of waste and elimination reworks on site, ensuring quality and standard conformity of materials and equipment, working with the purchasing procurement officer to ensure that materials are delivered in a timely manner to site to enable the contractor complete the works as scheduled and adhering to policies and procedures on site. Also possessing skills such as ability to monitor and control all assigned works, eliminating and resolving of disputes among workers and prompt reporting to the relevant project team member on the progress of and all material issues are relevant skills of site supervisor in ensuring timely completion and quality delivery of construction projects. The usefulness of this data is in its focus of project performance which has been a subject of debate among researchers and practitioners (Tables 1–5).
Table 1

| S/N | Roles                                                                                           | Mean | Std. deviation | Rank |
|-----|-------------------------------------------------------------------------------------------------|------|----------------|------|
| 1   | Supervise the execution of the construction projects                                           | 2.95 | .222           | 1    |
| 2   | Minimize waste and eliminate reworks on site                                                   | 2.90 | .347           | 2    |
| 3   | Ensure quality and standard conformity of materials equipment                                 | 2.90 | .307           | 2    |
| 4   | Work with the purchasing procurement officer to ensure that materials are delivered in a timely manner to site to enable the Contractor complete the Works as scheduled. | 2.87 | .373           | 4    |
| 5   | Adhering to policies and procedures on site                                                     | 2.87 | .373           | 4    |
| 6   | Work with the project manager during the test running and handing                             | 2.87 | .336           | 4    |
| 7   | Undertake daily inspections of the activities on site and identify any improvements to the site safety, tidiness and performance required. | 2.87 | .338           | 4    |
| 8   | Interpret working drawings regulations and codes of practice in order to direct the progress of work | 2.86 | .350           | 8    |
| 9   | Prevents fines and interruptions by complying with and enforcing all relevance code            | 2.86 | .386           | 8    |
| 10  | Ensuring quality standards of works onsite                                                     | 2.86 | .350           | 8    |
| 11  | Maintains safe secure and healthy work environment by following and enforcing standards and procedures; complying with legal regulations on safety. | 2.86 | .388           | 8    |
| 12  | Ensure promptly notification of the Project Manager of any matter coming to the site supervisor’s attention which could have a material adverse effect on the project performance | 2.85 | .397           | 12   |
| 13  | Assign works and task to different team onsite                                                | 2.85 | .363           | 12   |
| 14  | Monitor the Contractors activities on site for compliance with the technical and quality contractual requirements. | 2.85 | .458           | 12   |
| 15  | Resolve any short falls with the Contract and raise Non-Conformance reports, if required, in consultation with the project team | 2.85 | .397           | 12   |
| 16  | Input incidents into the Incident Reporting System or book and be active in investigating and closing out the incident on site | 2.85 | .397           | 12   |
2. Experimental design, materials and methods

The collected data was based on the survey of selected construction practitioner’s perception on the effects of site supervision on project completion time and quality delivery. Several literatures have reported similar accounts of the subject matter and can be found in [1–10]. The population of the data

Table 1
(continued)

| S/N | Roles                                                                 | Mean | Std. deviation | Rank |
|-----|-----------------------------------------------------------------------|------|----------------|------|
| 17  | Provide on-site supervision of contractors and or subcontractor including the issuing of contract instructions to give direction, within delegated limits, as required. | 2.83 | .375           | 17   |
| 18  | Estimate and allocate resources required for the progress of the work  | 2.83 | .441           | 17   |
| 19  | Identifying construction management system improvements and communicate such to the project manager | 2.83 | .441           | 17   |
| 20  | Identify work practices methods and activities that can be altered or improved on site | 2.83 | .413           | 17   |
| 21  | Ensure that adequate project records are maintained including, but not limited to, site diaries, contract instructions, incident reports etc. | 2.82 | .448           | 21   |
| 22  | Ensure that the contractors/subcontractors receive store and use supplied/issued materials in accordance with the contractual agreement | 2.81 | .457           | 22   |
| 23  | Report frequently to the relevant Project team member on the progress of the project and all material issues regarding the assigned projects. | 2.81 | .457           | 22   |
| 24  | Monitor and organize assigned work on site  | 2.79 | .543           | 24   |
| 25  | Resolve design construction and relational problems on site  | 2.79 | .519           | 24   |
| 26  | Ensuring adequate communication of job expectations through planning, monitoring and appraising job contributions | 2.78 | .474           | 26   |
| 27  | Evaluate communicate and implement change alteration orders  | 2.77 | .535           | 27   |
| 28  | Recommending compensation actions as the need arises  | 2.76 | .539           | 28   |
| 29  | Meet construction budget by monitoring project expenditure identifying variances; implementing corrective action and capital budget information | 2.73 | .574           | 29   |
| 30  | Help to achieve project goals and objectives  | 1.85 | .941           | 30   |

Table 2
Effects of adequate site supervision on project completion time.

| S/N | Effects                                                                 | Mean | Std. deviation | Rank |
|-----|-----------------------------------------------------------------------|------|----------------|------|
| 1   | Adequate monitoring and organizing of all assigned work on site to ensure progression as planned | 4.41 | .673           | 1    |
| 2   | Works are carried out to design, specifications and standards.         | 4.41 | .813           | 1    |
| 3   | Eliminate dispute among the workers on site                           | 4.35 | .680           | 3    |
| 4   | Prompt materials delivery to site for the work to proceeds as planned | 4.33 | .816           | 4    |
| 5   | Prompt reporting to the relevant Project team member on the progress of; and all material issues regarding the assigned projects | 4.32 | .712           | 5    |
| 6   | Prompt response to complaints, queries or alterations                  | 4.31 | .827           | 6    |
| 7   | Eliminate misunderstanding and misinterpretation of the construction documents. | 4.29 | .791           | 7    |
| 8   | Avoidance of delay in any aspect of the project                       | 4.29 | .808           | 7    |
| 9   | Ensuring that the site is safe for all workers                         | 4.29 | .841           | 7    |
| 10  | Prompt estimating and allocating of resources required for the progress of the work | 4.28 | .754           | 10   |
| 11  | Prevention of fines and interruptions from the regulatory bodies by complying with and enforcing relevance laws and codes. | 4.27 | .912           | 11   |
| 12  | Effective on-site supervision of contractors and /or subcontractors including the issuing of Contract Instructions to give direction, within delegated limits, as required. | 4.27 | .878           | 11   |
| 13  | Adequate monitoring and controlling of the project time performance   | 4.26 | .801           | 13   |
| 14  | Avoid plants and equipment total break-down that could jeopardize the progress of the works. | 4.23 | .755           | 14   |
| 15  | Prompt resolution of design, construction and relational problems on site | 4.19 | .884           | 15   |
| 16  | Reduce or eliminate reworks                                           | 4.16 | .796           | 16   |
are built environment professions practicing in Lagos State, Nigeria as obtained from their respective membership directory. Lagos State was selected because of her unprecedented commercial, economic and huge construction activities in Nigeria. The population are members of professional bodies of the state chapters of Nigerian Institute of Building (NIOB), Nigeria Institute of Architects (NIA), Nigerian Institute of Quantity Surveying (NIQS) and Nigerian Society of Engineers (NSE) (Civil Engineers). Systematic sampling technique was used in selecting 300 respondents from the population wherein the instrument was administered and returned via online google form. A total of 86 (28.7%) online questionnaires were returned out of which 8 were invalid. Evidence from literatures show that studies [11–14] have utilized survey design in assessing the impact of site supervision on construction projects. The responses were rated on a five-point Likert scale (1 = strongly disagreed, 2 = disagreed, 3 = uncertain, 4 = agreed and 5 = strongly agreed) for effects of site supervision of construction

### Table 3

**Effects of adequate site supervision on project quality delivery.**

| S/N | Effects                                                                 | Mean  | Std. deviation | Rank |
|-----|-------------------------------------------------------------------------|-------|----------------|------|
| 1   | Proper management of sub-contractors by locating, evaluating, and selecting sub-contractors; monitoring and controlling performance. | 4.33  | .767           | 1    |
| 2   | Usage of quality and standard materials                                 | 4.29  | .913           | 2    |
| 3   | Compliance with construction documents                                  | 4.26  | .865           | 3    |
| 4   | Provision of right tools for to carry out construction activities       | 4.22  | .921           | 4    |
| 5   | Effective on-site supervision of contractors and /or subcontractors including the issuing of Contract Instructions to give direction, within delegated limits, as required | 4.22  | .892           | 4    |
| 6   | Eliminate misunderstanding and misinterpretation of the construction documents | 4.22  | .949           | 4    |
| 7   | Enforcement of total quality control on site                            | 4.21  | 1.00           | 7    |
| 8   | Monitor the Contractor’s activities on site and compliance with the technical and quality contractual requirements. | 4.21  | .888           | 7    |
| 9   | Compliance with construction documents                                  | 4.19  | .848           | 9    |
| 10  | Prompt and proper quality testing and inspection of various construction materials | 4.19  | .898           | 9    |
| 11  | Evaluating and implementing change orders                               | 4.18  | .936           | 11   |
| 12  | Eliminate reworks                                                       | 4.13  | .985           | 12   |
| 13  | Ensures quality functioning and standard conformity of materials, equipment and system | 4.10  | .948           | 13   |
| 14  | Engaging experienced workers in carrying out construction activity       | 4.10  | .831           | 13   |
| 15  | Adhering to policies and procedures on site                            | 4.06  | .978           | 15   |

### Table 4

**Kruskal Wallis Test (Effects of site supervision on project completion time).**

| S/N | Effects                                                                 | Chi-Square | Df | Sig. |
|-----|-------------------------------------------------------------------------|------------|----|-----|
| 1   | Works are carried out to design specifications and standards            | .641       | 2  | .726|
| 2   | Reduce or eliminate reworks                                            | 5.262      | 2  | .072|
| 3   | Eliminate misunderstanding and misinterpretation of the construction   | .445       | 2  | .801|
| 4   | Eliminate dispute among the workers on site                            | .155       | 2  | .925|
| 5   | Prompt materials delivery to site for the work to proceed as planned    | 2.145      | 2  | .342|
| 6   | Avoidance of delay in any aspect of the project                        | .522       | 2  | .770|
| 7   | Prompt response to complaints queries or alterations                    | 1.058      | 2  | .589|
| 8   | Prompt resolution of design construction and relational problem        | 2.162      | 2  | .339|
| 9   | Prompt reporting to the relevant Project team member on the prog       | .713       | 2  | .700|
| 10  | Effective on-site supervision of contractors and or subcontract        | .355       | 2  | .837|
| 11  | Adequate monitoring and organizing of all assigned work onsite         | .295       | 2  | .863|
| 12  | Adequate monitoring and controlling of the project time performance     | 4.811      | 2  | .090|
| 13  | Prompt estimating and allocating of resources required for the p        | .665       | 2  | .717|
| 14  | Prevention of fines and interruptions from the regulatory bodies        | 1.414      | 2  | .493|
| 15  | Avoid plants and equipment total breakdown that could jeopardize        | 1.193      | 2  | .551|
| 16  | Ensuring that the site is safe for all workers                          | .295       | 2  | .863|

a. Kruskal Wallis Test.
b. Grouping Variable: Years of working experience in the construction industry.

are built environment professions practicing in Lagos State, Nigeria as obtained from their respective membership directory. Lagos State was selected because of her unprecedented commercial, economic and huge construction activities in Nigeria. The population are members of professional bodies of the state chapters of Nigerian Institute of Building (NIOB), Nigeria Institute of Architects (NIA), Nigerian Institute of Quantity Surveying (NIQS) and Nigerian Society of Engineers (NSE) (Civil Engineers). Systematic sampling technique was used in selecting 300 respondents from the population wherein the instrument was administered and returned via online google form. A total of 86 (28.7%) online questionnaires were returned out of which 8 were invalid. Evidence from literatures show that studies [11–14] have utilized survey design in assessing the impact of site supervision on construction projects. The responses were rated on a five-point Likert scale (1 = strongly disagreed, 2 = disagreed, 3 = uncertain, 4 = agreed and 5 = strongly agreed) for effects of site supervision of construction projects.
works on completion time while a three-point Likert scale (1 = no, 2 = rarely, 3 = yes) was used for roles of site supervisors. The data collected were coded and entered into the Statistical Package for Social Sciences (SPSS) IBM 21 for analysis. Descriptive statistical tools such as frequency, percentage, mean and ranking and Kruskal-Wallis test tool (inferential tool) were used to present the data. These data are elemental part of the factors leading to project success or failure. Further studies could be conducted on comparing the effects of site supervision of construction projects delivery: a case of indigenous and foreign (multi-national) contractors.

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Transparency document. Supplementary material

Transparency document associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2018.04.099.

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Table 5
Kruskal Wallis Test (Effects of site supervision on project quality delivery).

| Effects                                                                 | Chi-Square | Df | Sig. |
|------------------------------------------------------------------------|------------|----|-----|
| Engaging experienced workers in carrying out construction activities    | 4.521      | 2  | .104|
| Eliminate reworks                                                      | 7.413      | 2  | .025|
| Eliminate misunderstanding and misinterpretation of the construction   | 6.624      | 2  | .036|
| Usage of quality and standard materials                                | 3.425      | 2  | .180|
| Proper management of subcontractors by locating, evaluating and        | 3.325      | 2  | .190|
| Compliance with construction documents                                 | 7.266      | 2  | .026|
| Compliance with construction documents                                  | 3.951      | 2  | .139|
| Provision of right tools for to carry out construction activities       | 2.051      | 2  | .359|
| Effective on-site supervision of contractor and subcontract            | 2.236      | 2  | .327|
| Ensures quality functioning and standard conformity of material         | 1.032      | 2  | .597|
| Monitor the Contractors activities and compliance with                 | 5.666      | 2  | .059|
| Adhering to policies and procedures onsite                             | 0.496      | 2  | .723|
| Evaluating and implementing change orders                              | 2.218      | 2  | .330|
| Prompt and proper quality testing and inspection of various construction works | 2.003      | 2  | .367|
| Enforcement of total quality control on site                           | .177       | 2  | .915|

a. Kruskal Wallis Test
b. Grouping Variable: Years of working experience in the construction industry.
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