

## Stakeholders' Evaluation of Impact of Team Effectiveness on Project Performance among Building Professionals in Nigeria

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### ABSTRACT

*The impact of team effectiveness and team work on project performance cannot be overemphasized in construction project. To create and implement team effectively, management system must design to fit the team environment to enhance the productivity. The study aims to evaluate the influence of teamwork on project performance among Nigerian building professionals and also to determine the impact of team effectiveness on project performance among Nigerian building professionals. The population of the study comprises of client organizations, architects, builders, engineers and quantity surveyors in the construction industry. The study adopted random sampling techniques. A total of 55 questionnaires were distributed to the selected respondents. The population consists of architect, builders, quantity surveyors, civil engineers who are actively involved in building projects. 40 questionnaires were used for further analysis. The findings indicated that team effectiveness makes project to finish on time was ranked first with mean score of (4.55). All the factors of team-effectiveness are strongly associated with project performance. This is as a result of all the factors have mean item scores above 4.00. Also, the result of the impact of team work on project performance revealed that workload sharing is one of the way teamwork increases work productivity has the highest mean score (4.73). Other factors on the impact of team work have mean item score above 4.00. This study recommends all the stakeholders in the building industry should embrace team work so that its benefits on project performance will be feasible and to ensure that project objectives are realized.*

**Key Words:** Building, Construction, Teamwork, Team Effectiveness.

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### 1. INTRODUCTION

The Industrial Revolution saw a movement in most workplaces toward a hierarchical structure and the application of scientific management to create organizations and job descriptions, which gave rise to the concept of teamwork (Azmy, 2012). According to scientific management techniques, tasks should be made simpler so that employees can be trained to carry out their particular sequence of actions in the "optimal" way. Jobs became simpler as a result, which benefited skilled workers. The scientific management paradigm was questioned during the 1920s and 1930s, despite the fact that it worked successfully, because it had problems with how people interacted at work [1]. As a result, it was challenging to encourage employees. Changes were difficult to adopt in addition to the lack of work flexibility.

The Hawthorn Studies later found that social influences had some effects on performance. In the late 1980s, these modifications incorporated the team concept and eventually became the basis for organizations. Over the past ten years, there has been a significant improvement in the use of work teams, which are groups of people who collaborate and share duties (Waweru, 2018). According to a study by [2], teams were used by more than half of the 700 organizational units examined, and more than 40% of those had more than half of their staff working in teams. The fact that 60% of the 313 organizations analysed stated they would increase their use of teams over the next ten years is an evidence that the trend is still gaining traction. Only 3% of companies want to stop using teams. Furthermore, 85% of businesses with 100 or more employees use some kind of work teams, according to [3]. To fulfil today's worldwide competitions and raise customer demands, more firms are already utilizing cooperation. In a corporation, applying a team is a crucial component, according to Hackman [1], whose organization's restructure was centred on teams. Teamwork is now used in management, service, problem-solving, projects, and other fields in addition to manufacturing.

The need to find new ways to use teams has grown, notably in the construction industry, as a result of recent breakthroughs in teamwork and teams in companies. Since internal conflicts are reduced in highly productive teams, they have a history of developing positive working relationships and may be producing better results [4]. The main forces behind the improvements required for the construction sector to succeed are process and team integration. But merely bringing individuals together does not guarantee that they will work well together. Effective cooperation is not something that just happens. This according to [5] could be hampered by a number of problems, including a lack of organization, miscommunications, poor communications, and insufficient team member participation. Therefore, it is essential for construction project teams to develop a solution to support the integration and effective teamwork of their team members. The construction industry has long needed to assess how team effectiveness affects project performance because different specialists with varied backgrounds and competing interests are involved in construction activities. The following objectives are set for the study: to determine the impact of team effectiveness on project performance; to determine the influence of team work on project performance among Nigeria building professionals.

## **2. LITERATURE REVIEW**

Everyone is familiar with the terms "team" and "teamwork." Each individual has an own interpretation of what a team is. As a result, it is critical to define team because it might mean different things to different people. A team, according to [6], is "a small group of individuals with complementary abilities, who are devoted to a single purpose, performance goals, and methodology, and for which they hold each other accountable." Almost every team, whether it be in a small or large organization, fits into the aforementioned concept in some way. This definition emphasizes certain crucial components of a real team, including complementary abilities, dedication, shared objectives, a common method or approach, and reciprocal accountability.

Teams are described by [7] as "two or more people with different tasks, working adaptably together to achieve specified shared goals". In order to accomplish a common goal, a team is made up of two or more members who each have specific roles to play and tasks to complete. Other researchers refer to teams in organizations as "work groups" rather than just "teams." According to [8], a project team's effectiveness and productivity depend on its members' ability to communicate effectively and to work as a team. The development of self-forcing and self-correcting project controls is also facilitated by these traits, as is the improvement of team member commitment. To function well as a team, members must have certain team-related skills [4]. When difficulties happen, this will act as a buffer and provide people the resources and commitment they need to overcome them successfully.

### **2.1 Construction Project Team**

Project-based businesses are common in the construction sector. According to their professionalism, knowledge, and experience, each project demands a distinct set of employees, and they must collaborate with people from other businesses. The interaction between the team, task, individual, and leadership has always been a topic of discussion in the construction business. All that has to be said is that successful construction projects are built on a culture of teamwork, which is pervasive in the industry. The unique and exceptional characteristics of the construction industry, as well as the manner it does business, have an impact on teams and teamwork in the sector. This is particularly evident in the use of integrated project delivery methods, where teams begin to function as a single unit, resulting in quicker delivery times, lower costs, and improved working relationships for the entire project team [9]. The team comprises of the client, architect, structural engineer, quantity surveyor, main contractor and the subcontractors.

### **2.2 Team Effectiveness**

For decades, researchers have worked to develop a more accurate, comprehensive understanding of how well a team functions [10]. Globalization, technology, and the complexity of the workplace have all contributed to an increase in organizations' awareness of the significance of understanding team effectiveness in these settings since the turn of the 20th century. It's crucial that the team understands how to function as a unit once the concepts of cooperation and collaboration have been established. In order for a team to be effective, conditions must be continuously monitored. This allows team members to modify their tasks in order to better support one another and the overall objective.

To compete in global markets and fulfill customer expectations, construction enterprises have recently adopted collaborative strategies. According to [11] argument, effective teamwork must be encouraged, emphasized, and adopted by construction companies in order to produce successful project outcomes. The effectiveness of a team's efforts can be assessed using the following variables. [6] identified the following steps as the necessary order of actions for creating efficient cooperation and team synergy:

RESPECT + TRUST + OPENNESS + SYNERGY = TEAMWORK

Additionally, [12] listed twelve characteristics of effective teams, which come alive when team members act as high performing team players. The characteristics are listed in Table 2.1.

**Table 2.1: Characteristics of effective teams**

Characteristic	Description
Clear purpose	The vision, mission, goal, or task of the team has been defined and is now accepted by everyone. There is an action plan.
Informality	The climate tends to be informal, comfortable and relaxed. There are no obvious tensions or signs of boredom.
Participation	There is much discussion and everyone is encouraged to participate.
Listening	The members use effective listening techniques, such as questioning, paraphrasing, and summarizing to discuss ideas.
Civilized Disagreement	There is a disagreement, but the team is comfortable with this and shows no sign of avoiding, smoothing over, or suppressing conflict.
Consensus Decision	For important decisions, the goal is substantial but not necessarily unanimous agreement through open discussion of everyone’s ideas and avoidance of formal voting or easy compromises.
Open Communication and Trust	Team members feel free to express their opinions on the tasks as well as on the group’s operation, coupled with a high level of trust. Communication also takes place outside of meetings.
Clear roles and work assignments	There are clear expectations about the roles played by each team member. When action is taken, clear assignments are made, accepted and carried out. Work is fairly distributed among team members.
Shared leadership	Although the team has a formal leader, leadership functions shift from time-to-time, depending upon the circumstances, the needs of the group, and the skills of the members. The formal leader models the appropriate behavior and helps establish positive norms.
External relations	The team spends time developing key outside relationships, mobilizing resources, and building credibility with important players in other parts of the organization.
Style Diversity	The team has a broad spectrum of team player types, including members, who emphasize attention to task, goal setting, focus on process, and questions about how the team functions.
Self-assessment	Periodically, the team stops to examine how well it is functioning and what may be interfering with its effectiveness.

Source: Zafft *et al.* (2009)

The twelve characteristics in Table 2.1 can be utilized in a variety of forms, such as to assess its current state, to identify strengths and weaknesses of team members, and at the end of a project to analyze the project and develop further action plans to improve overall team effectiveness.

### 2.3 Project Performance

There are three stages in a typical construction project: pre-construction, construction, and post-construction. The owner's defined output and objectives are attained by a variety of actions taken during these stages. Since these activities or sub-processes are carried out throughout the building project, it is imperative for the construction project team to evaluate its performance in some capacity [2, 3, 13]. Both the process's presence and its effectiveness can be viewed as factors in a project's performance. The performance assessment or indicators chosen for the project must be understood and accepted by all team members if the project team is to be successful [10, 14-18]. The goal of project performance measurements is to assist the organization in understanding how past decision-making processes contributed to success or failure in order to make improvements in the future [2, 5, 19-21].

### 3. METHODOLOGY

This study mostly used quantitative research design with the questionnaire method and descriptive survey methodologies. Construction sector professionals who work in the building industry make up the study's population. The population was acquired from the Federation of Construction Industry (FOCI) and the relevant professional institutes of the professions, and the sample size was calculated using the Krejcie Morgan formulas. This study's participants are professionals working in the building sector, including companies that manage building systems in Lagos State, Nigeria. 64 people made up the sample. This is because people involved in the study's subject area are relatively new to Nigeria. For the aim of gathering data, the questionnaires were created utilizing the responses from the focus environment and the group of construction industry professionals. The practitioners in Lagos State's building business made up the survey's respondents. This technique of data gathering is significant since it aids in gathering first-hand information from the direct personnel involved in the implementation of a building management system. The questionnaire is divided into two sections: the first section asks questions about respondents' backgrounds, experience, and relevance to the study; the second section asks questions concerning the impact of teamwork and team effectiveness on project outcomes. Using five point Likert scale questionnaire survey, the respondents were asked to indicate their perceived relative degree of effect for each of the identified challenges by selecting any of the five evaluation scales; 5=very high influence, 4=high influence, 3=moderate influence, 2=low influence, and 1=no influence. For the second objective, respondents were asked to rate the impact of team work on project performance. The five evaluation scales used was; 5=very high impact, 4=high impact, 3=moderate impact, 2=low impact, and 1=no impact. The data collected from the survey were analyzed using Statistical Package for Social Science (IBM SPSS version 22) and the analyzed data was presented using descriptive statistics and mean item score.

### 4. RESULTS

#### 4.1 Demographic details of the respondents

The demographic information shows that the respondents comprises of client's organization (20%), consulting (57.5%), contracting (22.5%). 30% of respondents are architects, 22.5% are quantity surveyors, 22.5% are civil engineers while 25% are builders. 20% are HND holders, 47.5% are B.Sc. holders, 27.5% are M.Sc. while 5% are PhD holders. On the professional qualifications of the respondents, 20% are COREN registered, 25% are ARCON registered, and 17.5% are registered with QSRBN while 25% are registered with CORBON. On the number of project executed by the respondents, 45% has executed 11-15 projects, 27.5% has executed 6-10 projects, and 15% has executed 21 and above projects while 12.5% has executed 1-5 projects. On the working experience of the respondents, 22.5% has worked for 1-5 years, 32.5% has worked for 6-10 years, and 40.0% has worked for 11-15 years while 5.0% has worked for 16-20 years.

#### 4.2 Analysis of Research Objectives

##### 4.2.1 Impact of team effectiveness on project performance

Table 4.1 shows the impact of team effectiveness of project performance among building professionals in Nigeria. From the Table, team effectiveness makes project to finish on time was ranked first with mean (4.55). Team effectiveness makes project to finish within budget was ranked second with mean (4.47), high effective team are to consistently hit their objectives was equally ranked second with mean (4.47). Other factors have mean item scores greater than (4.00) which indicates that the respondents believed that team effectiveness is highly essential if a considerable progress is to be made on site.

##### 4.2.2 Influence of Team Work on Project Performance

Table 4.2 shows the influence of team work on project performance among building professionals in Nigeria. From the table, "workload sharing is one of the way teamwork increases work productivity" was ranked first with mean (4.73). This is followed by "teamwork brings together complementary strengths" was ranked second with mean (4.53). The teams in construction projects must work cohesively with high level of cooperation to achieve the company goals and objectives was ranked third with mean (4.45). Other factors on influence of team work on project performance have high mean item scores which indicates that there is need for team work in the construction industry to enhance productivity to ensure project objectives are met

**Table 4.1 Impact of team effectiveness on project performance**

Factors	Client	Consulting	Contracting	Group Mean	Rank
Team effectiveness makes project to finish on time	4.52	4.60	4.53	4.55	1 <sup>st</sup>
Team effectiveness makes project to finish within budget	4.38	4.49	4.54	4.47	2 <sup>nd</sup>
High effective team are to consistently hit their objectives	4.23	4.18	4.40	4.27	3 <sup>rd</sup>
Team effectiveness can help an organization achieve incredible results	4.21	4.31	4.23	4.25	4 <sup>th</sup>
Team effectiveness brings about desired quality in project	4.18	4.21	4.36	4.25	4 <sup>th</sup>
Team effectiveness promotes resilience and Vitality	4.23	4.28	4.09	4.20	6 <sup>th</sup>
Team effectiveness earn more job for a construction firm	4.33	4.15	4.12	4.20	6 <sup>th</sup>
Team effectiveness impact health and Safety in construction	4.16	4.10	4.28	4.18	8 <sup>th</sup>
Team effectiveness helps to sustain team performance	3.99	4.12	4.12	4.08	9 <sup>th</sup>
to continuously generate positive results					
Team effectiveness impact the environment	3.89	4.02	4.12	4.01	10 <sup>th</sup>

*Source: Field Survey, December, 2021*

**Table 4.2 Influence of Team Work on Project Performance**

Factors	Client	Consulting	Contracting	Group Mean	Rank
Workload sharing is one of the way team work increases work productivity	4.88	4.66	4.65	4.73	1 <sup>st</sup>
Teamwork brings together complementary strengths	4.47	4.64	4.42	4.51	2 <sup>nd</sup>
The teams in construction projects must work cohesively with high level of cooperation to achieve the company goals and objectives	4.48	4.49	4.44	4.47	3 <sup>rd</sup>
High effective team are to consistently hit their objectives	4.42	4.14	4.40	4.32	4 <sup>th</sup>
With each team members contributing unique ideas, they can acquire more effective strategies for completing the project	4.14	4.31	4.39	4.28	5 <sup>th</sup>
achieve incredible results					
When team members work closely together on a project, they have a better chance of completing it	4.18	4.21	4.36	4.25	6 <sup>th</sup>
Good teamwork can contribute to economizing, more successful projects outcomes and ultimately higher profit	4.26	4.30	4.10	4.22	7 <sup>th</sup>
Team work is an enabler for Smooth running of projects	4.18	4.10	4.05	4.11	8 <sup>th</sup>



Team work enhances division of labor and promotes Specialization	4.10	4.04	4.07	4.07	9 <sup>th</sup>
Workload sharing is one of the way teamwork increases work productivity	4.08	4.01	4.00	4.03	10 <sup>th</sup>
Teamwork brings together complementary strengths	4.09	3.93	4.01	4.01	11 <sup>th</sup>

Source: Field Survey, December, 2021

### 4.3 Discussion of Findings

The study investigates how project success among Nigerian building professionals is impacted by team effectiveness. The study's main goals were to ascertain the impact of team effectiveness on project performance and the impact of teamwork on project performance among Nigerian building professionals. Table 4.1 shows the impact of team effectiveness of project performance among building professionals in Nigeria. From the Table, team effectiveness makes project to finish on time was ranked first with mean (4.55). Team effectiveness makes project to finish within budget was ranked second with mean (4.47), high effective team are to consistently hit their objectives was equally ranked second with mean (4.47). Other factors have mean item scores greater than (4.00) which indicates that the respondents believed that team effectiveness is highly essential if a considerable progress is to be made on site. This result agrees with the studies of [3] and [7]. These previous studies posited that team effectiveness have significant impact on project performance.

Table 4.2 shows the influence of team work on project performance among building professionals in Nigeria. From the table, “workload sharing is one of the way teamwork increases work productivity” was ranked first with mean (4.73). This is followed by “teamwork brings together complementary strengths” was ranked second with mean (4.53). The teams in construction projects must work cohesively with high level of cooperation to achieve the company goals and objectives was ranked third with mean (4.45). Other factors on influence of team work on project performance have high mean item scores which indicates that there is need for team work in the construction industry to enhance productivity to ensure project objectives are met. These results agree and confirmed the earlier work of [16], [17], [11] and [18]. All the previous studies were of the view that team work has influence on project performance.

## 5.0 CONCLUSION AND RECOMMENDATION

The following conclusions were drawn and recommendations made in the paper.

### 5.1 Conclusions

From the findings of the research, team effectiveness has been shown to be an effective method of obtaining good project performance among construction experts. Team effectiveness should be the basis upon which organizations should benchmark their performance so that project objectives (cost, time, quality, safety and environment) will be achieved. Team members must commit to the project goals when working on a construction project. They must be well-versed on the project's objectives and ensure that the team's values are aligned with the goals set. To minimize duplication of work, project leaders must define clear roles and responsibilities for each team member.

The study's findings lead to the conclusion that team effectiveness has an influence on project success.

### 5.2 Recommendations

Based on the results and findings in this research and the analytical tests carried out, it was among other things recommended the followings to construction companies, contractors and relevant parastatals in order to maximize project performance through proper team effectiveness;

1. Stakeholders must have clearly defined and realistic objectives, roles, and duties, as well as adequate leadership, in order to successfully complete construction projects.
2. Team members and other personnel should be directed by the project's objectives and goals, which should be elaborate, succinct, and attainable.
3. There should be more advocacy for team work among the workers in the informal sector of the building industry to ensure project objectives are met.
4. Employees and all other participants must be encouraged to work as a team and in various sub-teams developed for short-term goals by the project leadership.
5. Team members should treat and support each other honestly, sincerely and with respect.

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