
Evaluation of the Impact of Teamwork on Building Project Delivery in Ekiti State, Nigeria.

Akinola Victoria O.

Department of Building,
School of Environmental Technology,
Federal University of Technology P. M. B. 704,
Akure, Ondo State, Nigeria.
olufunkhe_holla@yahoo.com

Ayodele Femi O.

Department of Surveying and Geoinformatics,
School of Environmental Design and Technology,
Federal Polytechnics Oko,
Anambra State.

Abstract

The Nigeria construction industry faces series of challenges in terms of building project delivery such as project delay, cost overrun, project abandonment, client dissatisfaction among others. Hence, this study assesses the effects of teamwork on building project delivery. The study adopted questionnaire survey on targeted professionals within the construction industry in Ekiti State, Nigeria. The questionnaire was structured to obtain information on features of teamwork and factors affecting teamwork performance. Sixty Seven questionnaires were sent out and fifty eight were retrieved and analyzed representing 86.56%. The data collected were analyzed using descriptive and inferential statistics. The descriptive statistics entails percentage and pie chart while the inferential statistics entails mean interval score index MIS and relative important index (RII). The analyzed data shows that reveals that communication ability was ranked to be the most important features requires to achieving teamwork, with mean score 4.58, when there is openness among the team members and necessary information are communicated as possible. Followed by commitment to quality project delivery with mean score 4.53, mutual understanding 4.47, skill 4.40, leadership style 4.05, trusting each other, 3.95. Tolerance 3.84, persistence 3.69, action orientation 3.68, flexibility 3.65, creativity, while endurance 3.40 and inspiration 3.39 are the least features to the achievement of teamwork. also Inadequate basis for project, wrong person as project manager, unsupportive top management, lack of commitment to project, inadequate define tasks with a mean score of 4.47, 4.43, 4.39, 4.31 and 4.14 respectively occur very High on project delivery. The study concluded that the use of teamwork should be encouraged among construction professionals in order to ensure steady delivery of building projects; and recommended among others that construction professionals should work together as a team by tolerating and accommodating each other's professional practices and be committed to quality of project delivery.

Keyword: construction industry, project delivery, teamwork, construction professionals.

Introduction

1.0 Background to the Study

The contribution of construction industry to the growth of the Gross Domestic Product (GDP) of Nigeria is steady and improving; from about 5% in 2001 to over 13% in 2007 (Central

Bank of Nigeria - CBN, 2008). This growth is motivated by continued interest of government to reposition Nigeria's economy as one of the top 20 largest economies in the world. Interestingly, the government is responsible for about 75% of infrastructural development in Nigeria (Budget Monitoring and Price Intelligence Unit BMPIU, 2005). Evidently, there is very strong relationship between the Nigerian construction industry and other sectors, both in Nigeria and Africa at large. Thus, the government is not only keen with the development of the Real Sector of the economy but there is also critical interest for the government to improve the image of the country through the construction sector.

The construction industry in Nigeria holds out much hope in terms of growth and contribution to the nation's Gross Domestic Product (GDP). According to industry experts' prediction, the industry anticipates over 15 percent growth by 2020 when Nigeria's dream of joining the league of the largest economies of the world is supposed to materialize. The Construction activity is an important contributor to GDP in most industrialized countries and contributes significantly to global economic growth (Winch, 2002). Over the last decade, several changes have occurred in Nigeria, which has helped all sectors of the economy especially the construction sector. The construction industry has outgrown all other sectors of the Nigerian economy with double digit growth rates in the last five years (2010 – 2015). Also, there are several opportunities in the industry especially in the Information Communication Technology (ICT), education, and sub-contracting sectors (Sarker and Sahay, 2002). The contribution of the construction industry to national economic growth necessitates improved efficiency in the industry by means of cost effectiveness and timeliness, and would certainly contribute to cost savings for the country as a whole. The construction industry, due to its multidisciplinary nature makes a perfect team for any task. The professionals involved have different roles as a member of a team intending to achieve a project which needs to be harnessed to achieve a common goal. Chan and Tam (2001) defined project team in the building industry as a group of construction professionals and personnel from one or more organizations who combine to fulfill the necessary design, detailing and construction functions comprising the construction project. Winch (2002) defined team as consultants, contractors, specialists and others who come together to design, manage and construct a product. He also noted that Projects range from small informal private construction projects to multibillion government projects. The construction projects are all unique but all have one goal; give a certain planned output in the agreed time, keeping to the allowed budget and the product must meet the prerequisite specifications (South African Reserve Bank SARB 2009) . The industry is an important tool to get people employment, the industry employs a variety of people from different cultural, ethnic and racial and community backgrounds.

2.0 Literature Review

2.1 Characteristics of the Construction Industry

Construction comprises of alteration, building, decoration, demolition, erection, maintenance, relocation, renovation or repair of buildings, structures, roads, sewers, water or gas mains, pipelines, transmission lines, tunnels, bridges or canals, large scale construction is a feat of human multitasking. Normally, the job is managed by a project manager, and supervised by a construction manager, design engineer, construction engineer or project architect (Mazi, 2002). For the successful execution of a project, effective planning is essential. Involved with the design and execution of the infrastructure in question must consider the environmental impact on the job, the successful scheduling, budgeting, construction site safety, availability materials, logistics, inconvenience to the public caused by construction delays and bidding e.t.c there are three types of construction: building construction, heavy or

highway construction and industrial construction([www. Wikipedia.com](http://www.Wikipedia.com)). Construction usually is done or coordinated by general contractor, who specialize in one type of construction such as residential or commercial building (Seeley, 1996). They take full responsibility for the complete job, except for specified portions of the work that may be omitted from the general contract.

A construction project is a complex net of contracts and other legal obligations, each of which must be carefully considered (Webster, 2001). A contract is the exchange of a set of obligations between two or more parties. The time element in construction means that a delay costs money, and in cases of bottlenecks, the delay can be extremely expensive. Ajanlekoko, (2002) explained that the contracts must be designed to ensure that each side is capable of performing the obligations set out. Contracts that set out clear expectations and clear paths to accomplishing those expectations are far more likely to result in the project flowing smoothly, whereas poorly drafted contracts lead to confusion and collapse

In the modern industrialized world, construction usually involves the translation of designs into reality .a formal design team may be assembled to plan the physical proceedings, and to integrate those proceedings with the other parts. The design usually consist of drawings and specifications, prepared by a design team including surveyors, civil engineers, quantity surveyors, mechanical, structural and electrical engineers, planning consultants and architectural consultant. The design team is most commonly employed by property owner. The increasing complexities of construction projects creates the need for design professionals trained in all phase of the project's life-cycle and develop an appreciation of the building as an advanced technological system requiring close integration of many sub-system and their individual components, including sustainability. Building Engineering is an emerging discipline that attempts to meet this new challenge. Olanipekun (2009) observed that the construction industry is a group and organization involved in the production, renewal, alteration, repairs and maintenance of certain capital goods (building and civil engineering projects). These activities are however achieved through a multidisciplinary approach: multidisciplinary approach in the sense that, different professionals with different backgrounds, needs and expertise usually come together for a period of time to accomplish a task of completing a project. The involvement of more than two professionals in the accomplishment of a task makes them a team.

Building construction is procured privately or publicly utilizing various delivery methodologies, including hard bid, negotiated price, traditional, management contracting, construction management-at-risk, design & build and design-build bridging. However, all building construction projects include some elements in common - design, financial, and legal considerations. Many projects of varying sizes reach undesirable end results, such as structural collapse, cost overruns, and/or litigation reason; those with experience in the field make detailed plans and maintain careful oversight during the project to ensure a positive outcome.

(Abiola-Falemu and Ogunsemi 2009)

A building project must fit into the legal framework governing the property. These include governmental regulations on the use of property, and obligations that are created in the process of construction. Holm, (2006) opined that, the project must adhere to zoning and building code requirements. Constructing a project that fails to adhere to codes will not benefit the owner. Some legal requirements come from considerations, or the desire to prevent things that are indisputably bad - bridge collapses or explosions. Other legal requirements come from considerations, or things that are matter of custom or expectation,

such as isolating businesses Legal advisors in the beginning of a construction project seek to identify ambiguities and other potential sources of trouble in the contract structure, and to present options for preventing problems. Throughout the process of the project, they work to avoid and resolve conflicts that arise. In each case, the lawyer facilitates an exchange of obligations that matches the reality of the project. Design, finance, and legal aspects overlap and interrelate. The design must not be only structurally sound and appropriate for the use and location, but must also be financially possible to build, and legal to use.

2.2 Effects of Teamwork

Chan and Tam (2001) reveal how improved teamwork in construction projects leads to more job satisfaction for the project's participants. Effective teamwork enables teams to produce high quality products and services at the lowest possible cost with the least disruption and the highest rates of employee satisfaction. When teams function smoothly, all team members have access to the same information and work together to achieve the same goals. Team members get evaluated on the same criteria and have the same opportunities to pursue career development and contribute to process improvements. Everyone wins. This doesn't mean that the projects are without challenges. In fact, when teams confront a problem together they typically bond more closely and feel a strong sense of commitment and belonging. Effective project managers recognize that coordination enables collaboration. This ensures continuing success for everyone on the team. Webster (2001) opined that if sound processes and technique underline team building and management, team members can harness the contribution of team work. Below are the contribution outlined by Abiola Falemu and Ogunsemi (2009).

(i) Higher level of productivity from less labour input: Teams have the potential to create positive synergy. In recent years, the introduction of team work in most construction industries has been associated with cut in staff. What management has done is to use positive synergy to get the same or greater output from fewer people which translates to high productivity.

(ii) Increased motivation: Teamwork enhances involvement, making jobs more interesting, meeting member's social need and creating social pressure on slackers to exert higher level of effort in order to remain in the team's good books.

(iii) Increased workers satisfaction: Workers have a need for affiliation. Working in teams increases workers interaction and create a satisfactory condition.

(iv) Increased commitment: Team encourages individuals to allow group to override their individual goals and this results in a high unity of commitment to team goals.

(v) Improved communication: Team work creates interpersonal dependencies that require members to interact considerably more than they work on jobs alone It is fact that teamwork will have an impact on the final cost, time and standard for the project.

The first and the most important advantages of teamwork is that it increases the total productivity. You can use the very best of every member of the group and thus have quality output. The best skills of every member of the group are utilized to the maximum, and thus there is no compromise on the productivity when you are working as a group. This advantage would undoubtedly come first in the list of advantages and disadvantages of working in groups. The more members you have in a group, the more resources you have at the end of the day. This means you can meet more ends with these resources. Another way to look at it is that as the numbers of people go on increasing, the knowledge of the team also increases. All these people bring in their very own experience which adds to that of the group. This means, at the end of the day, the group has more knowledge, more experience and more resources.

When you work alone, you are automatically biased towards someone or something. You are human and this is bound to happen from the best of managers. However, when you work in group, you reduce that bias considerably. While working in a group, you need to tell everyone why you are taking a particular decision. Once you tell the entire group about your decision, even they have to agree to it so that you can execute it.

One of the greatest drawbacks of working in a team is that there is no freedom of doing as you wish. How much ever you prove your point and the rationality of applying your decision, it won't be agreed upon if the other members in the group disagree on it. Every action of yours needs approval from everyone else in the group. This becomes a bit time-consuming. Another problem is that working in a group is bound to give rise to 'groupism', which might add to the negativity in the working atmosphere and hamper the quality of work, not the quantity.

While working in a group, many people develop a competitive attitude or approach towards their work. They are constantly trying to work 'more' than the others. What they should actually focus on is working 'better' than the others. This kind of attitude reduces the quality in the overall productivity and thus the objective of working as a team is lost. If you work in a creative field, this attitude will reduce the creativity to a great extent. Losing the focus is easy when all you are worried about is winning the race. Instead of competing with other groups members, people should compete with their own self to give a better output as an individual, and eventually as a team.

These were all the advantages and disadvantages of working in groups that are not only important from the knowledge perspective but also because you need to find solutions to all the disadvantages. The benefits of working in groups undoubtedly weigh more than the disadvantages of group working. You need to focus more on the advantages of group work to gain maximum quality output, efficiently.

3.0 Research Methodology

The study adopted both descriptive and inferential statistical tools. The descriptive statistics include the use of tables, percentages and frequency. The inferential statistics entails mean scores and relative importance index.

The research population comprises of stakeholders within the construction and consultant industry which comprises of representative of the employer basically government Parastatals, Architect, Quantity Surveyor, Engineer, and Builder. Questionnaires were administered to the professionals in private establishment and professionals in government ministry in Ekiti State. A total number of Sixty (67) questionnaires were administered to various categories of respondent within the targeted population and fifty-eight (58) were duly completed and returned representing 86.57% of response rate.

4.0 Data Presentation, Analysis and Discussion

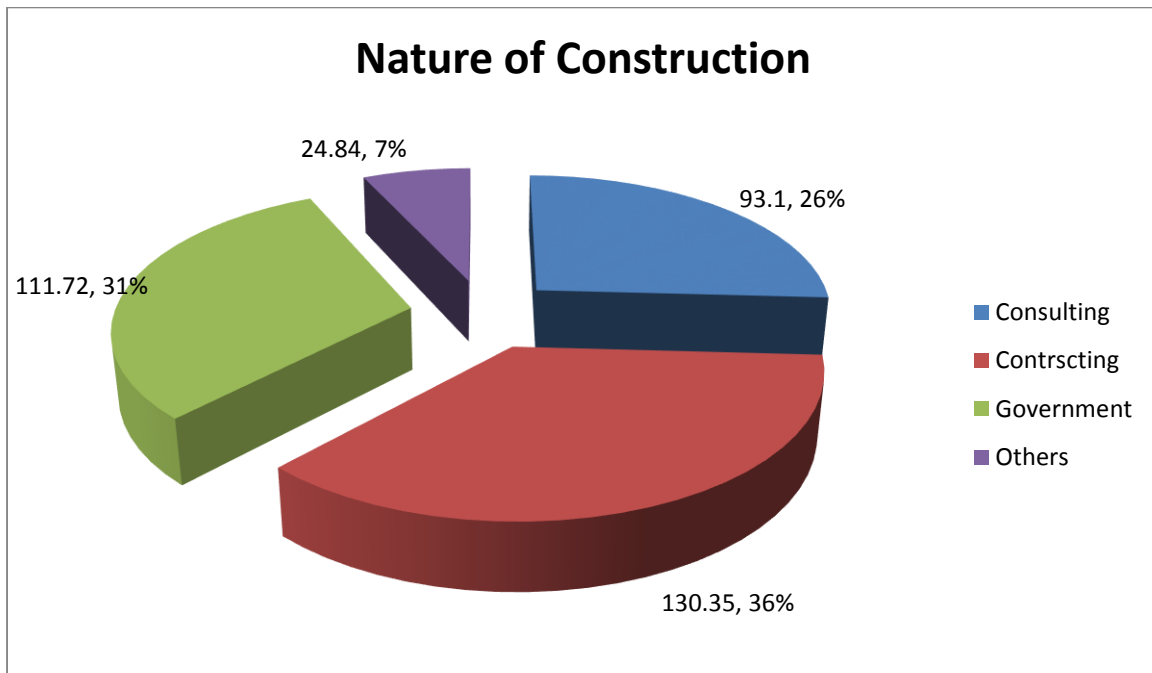


Figure 4.1 Nature of Construction

Majority of the organization 36.21% polled is contracting organizations, 25.86% are consulting firms while 31.03% are government owned organizations while others polled for 6.90%.

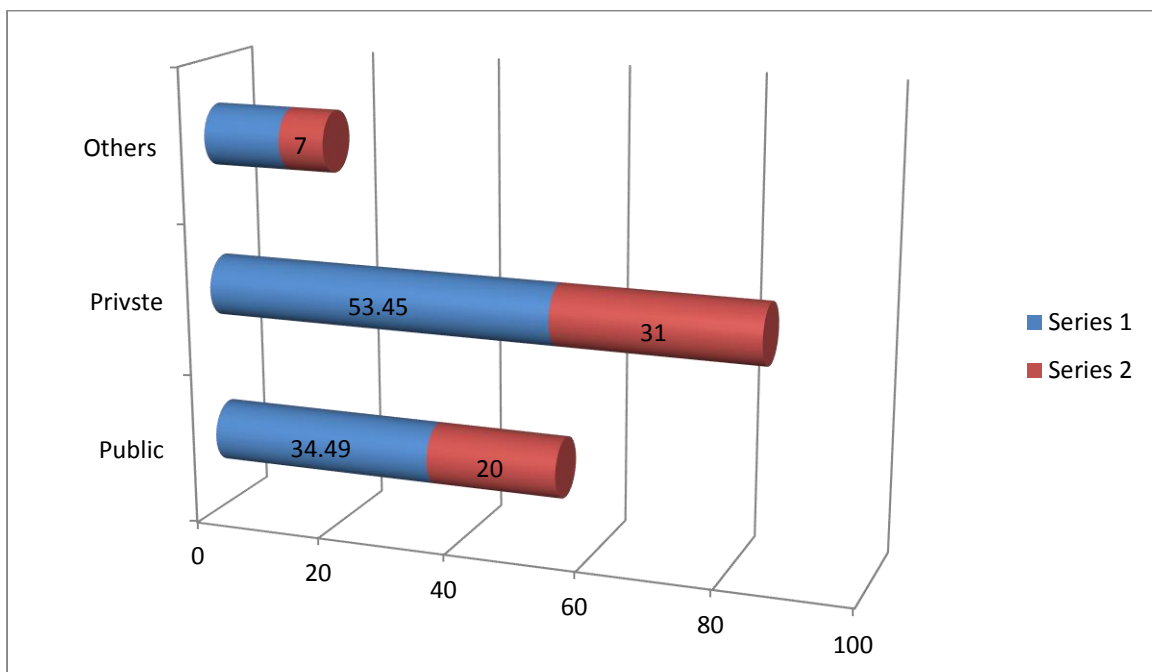


Figure 4.2 Sector of the Organization

The sector of the organization, 53.45% firms are private organization while 34.48% firms are public organization and others 12.07%.

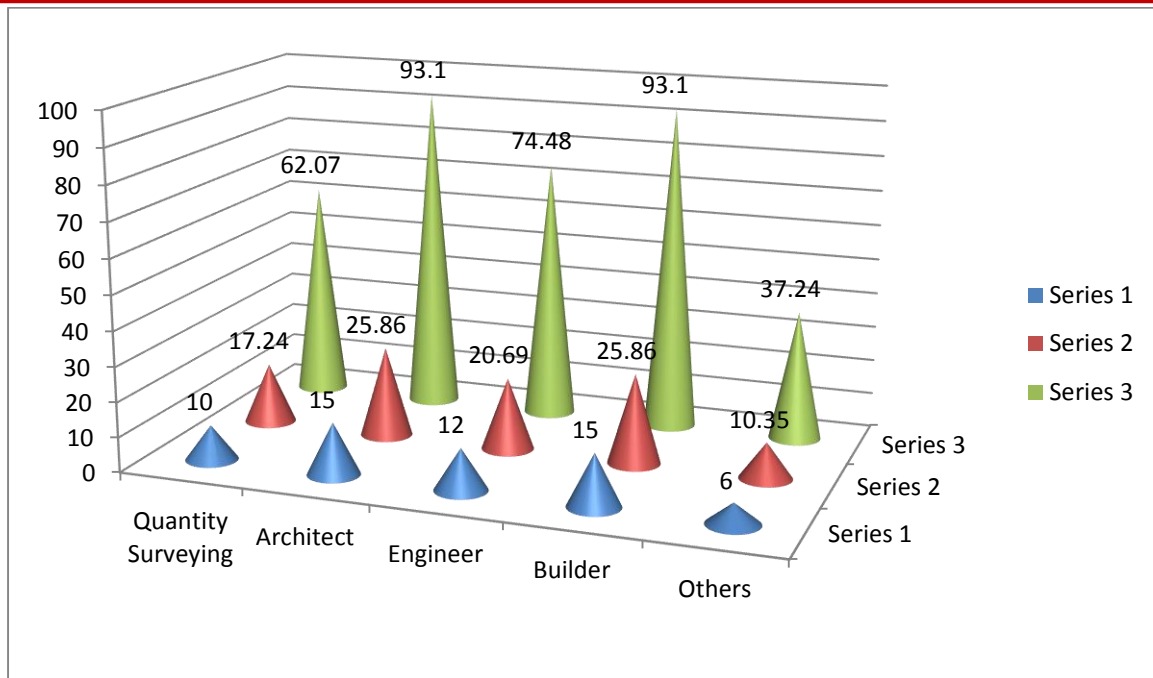


Figure 4.3 Professional Designation

The professional designation of respondent, 20.69% of the respondents are Engineers, 25.86% of the respondents polled are Architect, followed by Quantity Surveyors 17.24%, next to that are builders with 25.86%, while others are 10.35%, the working experience of the professionals who are respondents as far as this research is concerned. The experience of the professionals is good enough to provide answer to the research question 30.2% of the respondents are PGD holders, 25.6% are M.Sc/M.Tech holders, 20.9% are B.Sc/B.Tech, while 14% of respondents are missing, HND and PhD holders are 4.7% respectively. This was collected in order to know whether the respondents are qualified or competent enough to answer the question

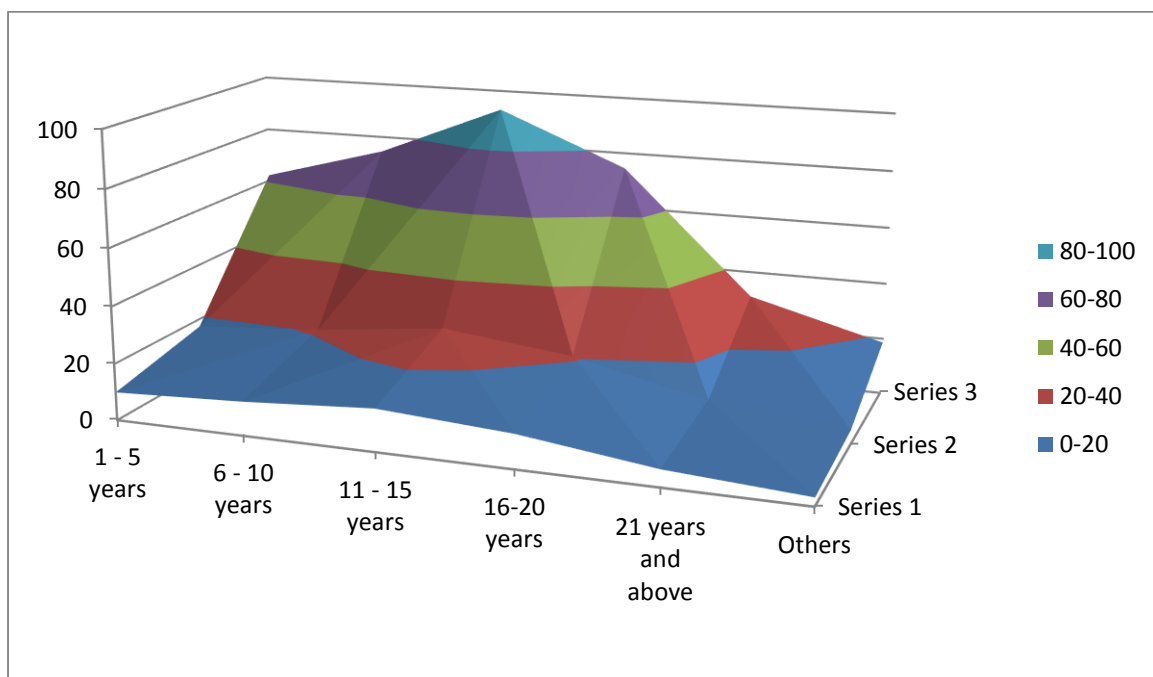


Figure 4.4: Years of Firms Practice

Figure 4.4 reflects the years of firm's practice, 17.24% firms have practiced for 1-5 years, while 20.69% firms have practiced for 6-10 years, 25.86% firms have practiced for 11-15 years and above, while 20.69% firms have practiced for 16-20 years and 8.62% firms have practiced for 20 years and above while 5.17% practiced for others. This is to know whether the organizations have gained experience capable enough to answer the questions.

Table 4.1: Qualities of team member

Qualities of Teamwork	MIS	Rank
Communication ability	4.58	1
Commitment to quality Project delivery	4.53	2
Mutual understanding	4.47	3
Skill	4.40	4
Years of experience	4.29	5
Leadership style	4.05	6
Trusting each other	3.95	7
Tolerance	3.84	8
Persistence	3.69	9
Action orientation	3.68	10
Flexibility	3.65	11
Creativity	3.40	12
Endurance	3.40	13
Inspiration	3.39	14

Source: Researcher's work (2016)

Table 4.1 reveals that communication ability was ranked to be the most important features requires to achieving teamwork, when there is openness among the team members and necessary information are communicated as possible. Followed by commitment to quality project delivery, mutual understanding, skill, leadership style, trusting each other, tolerance, persistence, action orientation, flexibility, creativity, while endurance and inspiration are the least parameters to the achievement of teamwork.

Table 4.2 Variables/Components of Major Teamwork Factors

S/n	Major factors	Teamwork	Variables of major teamwork factors	Mean value	Interpretation				
					Very High	High	Average	Low	Very Low
(a)	Project Management Level		Inadequate basis for project	4.65	Very High				
			Wrong person as project manager	4.58	Very High				
			Unsupportive top management	4.51	Very High				
			Lack of commitment to project	4.49	Very High				
			Inadequate defined tasks	4.47		High			
(b)	Construction Level		Delay in progress payment by owner	4.37		High			
			Shortage of labours	4.26		High			
			Low labour productivity	4.19					
			Delay in material delivery	4.19					
(c)	Personnel Performance		Lack of experience	3.79		High			
			Site Supervision	3.77		High			
			Appropriate skills and knowledge	3.56		High			

Source: Researcher`s work (2016)

4.2.1. Project Management Level

Inadequate basis for project with a mean score of 4.65 was prominent among the variables that constitute Project Management Level while inadequate defined tasks with a mean score of 4.47 were ranked least. This implied that inadequate defined tasks affect the teamwork this can impede contractor performance.

4.2.2 Construction Level

Delay in progress by owner with a mean score of 4.37 was prominent among the variables that constitute Construction Level while change order negotiation with a mean score of 3.56 was the least. This implied that Delay in progress by owner out of contractual relationship among the parties to the contract constitute a major teamwork factors.

4.2.3. Personnel Performance

Lack of experience with a mean score of 3.79 was prominent among the variables that constitute Personnel Performance while appropriate skills and knowledge with a mean score of 3.56 was the least. This implied that lack of experience in the construction programme of work could constitute a major teamwork factor.

5.0 Summary of Findings, Conclusion and Recommendation

5.1 Findings

From the analyses of data generated for this work, the following findings were summarized:

- I. That the communication ability of each member of the team is significant parameters in achieving effective teamwork when there is transparency among the team members, it increases trust and reduce conflicts as there will be proper dissemination of information.
- II. Also, that quality of production are the most important variables that really prove the effectiveness of teamwork in building project delivery because team member are more committed to their goals which prevent material wastage and unnecessary cost during construction stage.

5.2 Conclusion

The study was carried out with an intention to evaluate the impact of teamwork on building project delivery in Ekiti State, Nigeria. In conclusion having carefully and technically evaluated the subject matter, Communication among team members, commitment to quality project delivery, mutual understanding, and skill are important part of parameters of teamwork. Final costs, quality of production, communication and completion time are highly contributed to the effects of teamwork on building project. Building projects can be evaluated by project performer's indicators, such as project cost management and project quality management. The use of teamwork has a great impact on the productivity of construction project. Lack of commitment to project delivery, lack of experience and inadequate defined tasks are the highest factor that affects the relationship between teamwork and building project delivery.

5.3 Recommendations

Having, considered the impact of teamwork on building project delivery in Ekiti State, Nigeria. I hereby recommend the following which will be useful for building industry in Ekiti State, Nigeria so as to achieve their goal.

- I. Transparency, openness, commitment and accountability should be maintained among the Professionals.
- II. Effective use of teamwork should be introduced in order to perfect the final contract sum as original contract duration and final contract duration.

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