Causes of Delayed Payment in Construction Project in Nigeria

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Abstract—Delay in payment to contractors and other relevant parties have caused serious problem on excellent execution of construction projects. It causes several problems to the contractor and other stakeholders. The goal of this work is to investigate the causes of delayed payments in construction project delivery. The objective of this study is to identify the causes of delayed payment. To obtain valid data, questionnaires were designed and distributed to a randomly selected sample of one hundred individuals among contractors, consultants and clients in the Nigerian construction industry. Eighty five completed questionnaires were returned and then analysed. The total mean score was used to determine the ranking of the results of the study. Client's disagreeing on the valuation of work done, slow processing of variation orders by consultants and clients and poor quality of works by the consultants at the design stage and the contractors at the construction stage were the major causes of delayed payment in the study. It was recommended that relevant parties should come together in the execution of the project to limit delays experienced in processing contractors' payment. In conclusion, if the necessary action can be enforced, the problem of delayed payment can be reduced drastically.

Index Terms—Delayed Payment, Processing, Construction.

I. INTRODUCTION

Delayed payment is a universal phenomenon, since a major problem in the construction industry is delayed payment. Reference [1] stated that delayed payment is a major cause in project delay and over bloated cost in the construction industry.

The causes of delayed payment in Nigeria are considered an important topic that has plagued stakeholders in the construction sector. These problems actually need to be examined in depth, so as to identify the causes that occur in the process of construction execution in the industry.

Delayed payment occurs in construction project and the size varies from work to work [1].

Payment is delayed when the client fails in making advance or progress payment when the required interim payment certificate (ipc) is received, to the contractor during the time specified in the construction contract.

In Nigeria, many contractors have been apprehensive about what to do to ensure they do not run out of cash during the execution of their projects to ensure positive cash flow and profitability [2].

According to [2], reasons for payment delays were uncertain cash flow, financial problems, mistakes in claims

and unaccepted valuation of work. Delayed payment of workers affects their productivity, motivation and successful execution of construction projects.

Reference [3] stated that the major reason for delayed payment is mistakes in claims submitted by the contractor, containing claims without relevant supporting documents, inaccurate claims and documents submitted without following due process.

Reference [4] stated that late payment to contractors for project done is a major factor causing delay or abandonment of construction project in developing countries.

The effectiveness of contractor has been negatively impacted due to delayed payment and as such affecting the delivery schedule of the project. The delay to pay contractors for executed project might lead to the contractor company going into bankruptcy.

There are several factors that cause delayed payment, which most times is due to the inexperience/incompetence of the clients, consultants and contractors.

Frequent problems of delayed payment happen when some required documents are left out, and to avoid delayed payment to the contractors, the quantity estimators/surveyors must ensure complete documentation.

According to [5], most times the supervising/certificate processing personnels have the tendency to withhold payment to the contractor in the hope of getting some kind of "kickback or gift" from contractors before they are paid.

When most private construction work is going on and the client defaults in its payment, it leads to delayed payment. In Nigeria, very few studies have been carried out on the causes of delayed payment on construction project delivery.

This study examined the causes of delayed payment on construction project delivery by evaluating different perspectives of the project's relevant players, including the client, the consultant and the contractor.

On this note, the study seeks to assess the causes of delayed payments in construction project delivery. The causes of delayed payment have been a lingering issue affecting the major stakeholders, who are the clients, consultants and most especially contractors.

The conclusion of this study will be vital to the clients, contractors, government and the built environment consultants by elucidating on the causes of delayed payment.

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II. LITERATURE REVIEW

Payment according to consensus is said to be the backbone of the construction sector. When there is a delay in the payment, it automatically affects the delivery time of a project.

Delayed payment is mostly caused by the client and result in poor cash flow of the contractor. The impact of delayed payment to contractors and consultants are known facts in the construction sector.

Reference [6] stated that the cause of delayed payment is when the client does not pay within the agreed period of receiving interim payment certificate in the contract.

The payment chain process includes the client, contractor and active participant in the project. The payment issue of the construction industry has a far reaching effect on all stakeholders.

When payment is delayed by one stakeholder, it might affect the whole payment chain of the construction project.

Delayed payment problem is interrelated with the flow of funds problem. According to [1], lack of access to funds, before construction leads to disqualification of emerging contractors due to their inability to meet performance bond requirement during construction.

Emerging contractors possess low fund reserves, which makes them use profit from current project to finance their up-coming project.

Also emerging contractors face difficulties in getting loans from financial bodies due to the high level of bankruptcy in the industry, this requires the contractors to provide the starting capital [7].

Reference [8] identifies causes of delayed payment as client financial issues, delay in approval of work by consultant, wrong bill of quantities by consultant/contractor, insufficient documentation and information for valuation and poor workmanship by contractor.

The causes of delayed payment according to [9], are the client's bad management of finance, client withholding of payment, incorrect valuation for work done, invalid claims by contractors, slowness of valuation and initial payment certification by consultant, bottleneck in the process of honouring certificates, client's instruction of variation order being misunderstood by contractors/consultants.

Reference [10] identify causes of delayed payment as client and contractor poor handling of finances, client lacks cash to pay contractor, client withholding of payment due to misunderstanding variation orders or disagreement of fee to be paid for executed task, slowness in certification e.g. wrong assessment of task completed, bad work, given instruction are not stated in writing, inefficient communication, contract details and technical problems.

A. Delayed Payment caused by Contractors

Reference [3] showed that a major factor of delayed payment caused by contractors is mistakes in submission of claims, which includes claims lacking sufficient supporting documents, incorrect assessment of claims and all these presented without following due process. A major factor is the disagreement on valuation of work executed.

B. Delayed payment caused by client

According to [3], the main factor contributed by clients is

when they delay in terms of the contract to approve the claim and pay on time.

It may be as result of increase in claims arising out of their design and construction. Clients also withhold payment in order to receive gift, once payment is made.

C. Delayed payment caused by consultant

Reference [2] identified these factors as consultant related, they are lack of coordination of project team activities, poor estimation of project cost at the design stage, inadequate flow of information between project team, Inability of consultant to manage funds, consultant failure in treating claims and delay in certification of work done by consultant.

The reviewed literature revealed various studies in different parts of the world that have largely touched on causes of delayed payment by contractor and clients. These studies have been carried out and published.

However there is no literature available on the causes of delayed payment on construction project delivery in Lagos state, Nigeria. The study aim is to establish the causes of delayed payment by clients, contractors and consultant on construction project delivery.

III. METHODOLOGY

The study covers the construction sector in Lagos State, Nigeria. Lagos State is selected due to its status as the commercial centre of Nigeria. It is also the location of up to 70% of large-scale construction firms in Nigeria. It is home of most high rise buildings in Nigeria.

The research design was the survey design method. The survey was targeted at private and public funded construction projects. The study also looked at the opinion of these three major construction stakeholders the clients, consultants and contractor.

The sample population was chosen within the delimitation of the study. The sample of the project included the clients, contractors and consultants across some selected companies.

The sample size was calculated based on the notion that there was no data containing the actual number of property developer, contractor organization and client organisation.

In a case when the population could not be determined, the size of the sample can be gotten by calculating the lowest sample size needed for certainty in estimating proportions by taking into consideration the standard normal deviation put at 95% confidence level (1.96), percentage selecting a response ($50\% = 0.5$) and the confidence interval ($0.05 = \pm 5$).

Being a survey research, data were collected through structured questionnaire administered to the selected respondents.

The total number of questionnaires administered was one hundred (100). However, out of 100 questionnaires distributed, a total of eighty five 85 were collated and analysed using SPSS 20.

This represents 85% response rate which is very good for this kind of research. $85 \times 100 / 100 = 85\%$. For the purpose of this study the target population was the stakeholder in the construction sector.

These include: Architects, Quantity Surveyors, Builders and Engineers employed by consultancy firms, contractor and owner organisations.

The main aim of choosing this type of population was to be able to get current and past information from people who have years of experience in the sector to ascertain the causes of delayed payment on construction project delivery.

The result below contains information on the responses to causes of delayed payment and was analysed using mean score and ranking.

The mean item score was used in getting the mean of each factor and the factors were ranked in ascending order.

The factor with the highest mean was ranked first down to the factor with the lowest mean, which was ranked last.

IV. RESULT AND DISCUSSION

A. Client Related Causes

Table I shows that the first ranked cause of delayed payment under client-related was Client's disagreeing on the valuation of project executed with a mean of 4.08.

Client's withholding payment with a mean of 3.87 was ranked second. Client's bad financial sources with a mean of 3.66 was ranked third, this shows that client start a project with a poor financial base or an unreliable financial source.

Fourthly ranked is client's inadequate funds management with a mean of 3.62. Client's cumbersome administrative process was ranked fifth with a mean of (3.46). Lastly ranked were instabilities of exchange rate of currencies with a mean of 3.06.

TABLE I: CLIENT-RELATED CAUSES

Client Related Causes	Mean	Rank
Client's disagreeing on the valuation of project executed	4.08	1
Client's withholding payment	3.87	2
Clients' bad financial sources	3.66	3
Client's inadequate fund management	3.62	4
Client's cumbersome administrative process	3.46	5
Instabilities of exchange rate of currencies	3.06	6

B. Consultant-Related Causes

Table II shows that the first ranked factor is the delay in certification by the consultant with a mean of 4.14. The analysis shows that delay in certification by consultant is a major reason for delayed payment.

Slow processing of variation order was also ranked first with a mean of 4.14. It shows that the respondents agree that when there is a delay in processing of variation order, it leads to delayed payment.

Inaccuracy of valuation for work done was ranked third with a mean of 3.99, while Disagreement among involved parties the project was ranked fourth with a mean of 3.81.

Lastly ranked was inaccurate bill of quantities with a mean of 3.12.

TABLE II: CONSULTANT-RELATED CAUSES

Consultant-Related Causes	Mean	Rank
Slow processing of variation orders	4.14	1.5
Delay in certification by consultant	4.14	1.5
Inaccuracy of valuation for work done	3.99	3
Disagreement among involved parties in the project	3.81	4
Inadequate flow of information among project team members	3.59	5
Errors in drawings and specifications	3.42	6
Inaccurate bill of quantities	3.12	7

C. Contractor-Related Causes

Table III shows that firstly ranked causes are the poor quality of work by contractor with a mean of 4.34 as primary reason for delayed payment in the industry.

Respondent agree that poor quality of work on site result in payment being delayed until the work is rework with high quality before payment is made.

Contractor's invalid claim was ranked second with a mean of 4.09. It also shows that most contractors make claim to payment that are not valid.

Secondly ranked is also contractor's disagreement with the valuation of work with a mean of 4.09. Fourthly ranked is delay in submitting claims and other necessary information concerning payment with a mean of 3.93.

Contractor's failure to do work based on bill of quantities was ranked fifth with a mean of 3.47.

Lastly ranked was willingness to receive wrong payment conditions from clients as a result to challenges in getting project, respondents agree that this factor is less likely to cause delayed payment.

TABLE III: CONTRACTOR-RELATED CAUSES

Contractor-related Causes	Mean	Rank
Poor quality of work	4.34	1
Contractor's invalid claim	4.09	2.5
Contractors' disagreement with the valuation of work on site	4.09	2.5
Delay in submitting claims and other necessary information concerning payment	3.93	4
Contractor's failure to do work based on bill of quantities	3.47	5
Contractor's failure to understand the contract agreement	3.32	6
Willingness to receive wrong payment conditions from clients as a result to challenges in getting projects	3.09	7

D. The Perspectives of Contractors/Sub-contractors, Consultants, Private Client and Public Client on the various Related causes of Delayed Payment.

Table IV shows that under client-related causes, Client's disagreeing on the valuation of project executed had the highest total mean of 4.22. Instabilities of exchange rate of currencies had the lowest total mean of 3.06.

Consultant view client's withholding of payment as the highest with a mean of 4.67. Contractors and private clients view client's disagreeing on the valuation of work done as the highest with a mean of 4.00 and 4.18. Public client identify client poor financial sources as the highest with a mean of 4.22.

Table IV shows the causes that are significant with the group. Withholding of payment by the client was significant because it had a significant value of .009.

Clients' bad financial sources were significant because it had a significant value of .040. Instabilities of exchange rate of currencies were significant because it had a significant value of .050.

Table IV shows that under consultant-related causes, delay in certification by consultant has the highest total mean of 4.14. Inaccurate bill of quantities had the lowest total mean of 3.12.

Consultant, contractors and private client view slow processing of variation order as the highest with a mean of 4.56, 4.15 and 4.18. Public client identify delay in

certification by consultant as the highest with a mean of 4.67.

Table IV shows that under contractor-related causes, poor quality of work has the highest total mean of 4.34. Consultant, contractor and public client view poor quality of work as the highest with a mean of 4.67, 4.21 and 4.78.

Private client identify contractor's disagreement with the valuation of work on site as the highest with a mean of 4.32. Willingness to receive wrong payment conditions from clients as a result to challenges in getting project has the lowest total mean.

TABLE IV: THE VIEWS OF CONSULTANTS, CONTRACTORS/SUBCONTRACTORS, PRIVATE CLIENTS AND PUBLIC CLIENTS

Causes of Delayed Payment	Total		Consultant		Con/Sub-Con		Public Client		Private Client		F	Sig
	Mean	R	Mean	R	Mean	R	Mean	R	Mean	R		
Client-related causes												
Client's disagreeing on the valuation of project executed	4.22	1	4.08	2	4.00	1	4.00	2	4.18	1	.252	.860
Client's withholding payment	3.87	2	4.67	1	3.87	2	3.89	3	3.61	2	4.137	.009*
Clients' bad financial sources	3.66	3	3.00	5	3.85	3	4.22	1	3.43	4	2.901	.040*
Client's inadequate fund management	3.62	4	4.00	3	3.74	4	3.67	4	3.32	5	1.301	.280
Client's cumbersome administrative process	3.46	5	3.67	4	3.49	5	3.11	6	3.46	3	.445	.722
Instabilities of exchange rate of currencies	3.06	6	2.33	6	3.28	6	3.56	5	2.82	6	2.715	.050*
Consultant-related causes												
Delay in certification by consultants	4.14	1	4.00	2.5	4.08	2	4.67	1	4.11	2	1.144	.336
Slow processing of variation orders	4.14	2	4.56	1	4.15	1	3.56	5	4.18	1	2.049	.113
Inaccuracy of valuation for work done	3.99	3	4.00	2.5	4.03	3	4.11	2.5	3.89	3	.271	.846
Disagreement among involved parties in the project	3.81	4	3.89	4	3.90	4	4.11	2.5	3.57	4	1.282	.286
Inadequate flow of information among project team members	3.59	5	3.56	5	3.62	5	3.89	4	3.46	5	.764	.517
Errors in drawings and specifications	3.42	6	3.22	6	3.56	6	3.44	6	3.29	6	.739	.532
Inaccurate bill of quantities	3.12	7	3.11	7	3.33	7	2.44	7	3.04	7	1.456	.233
Contractor-related causes												
Poor quality of work	4.34	1	4.67	1	4.21	1	4.78	1	4.29	2	1.574	.202
Contractor's invalid claim	4.09	2	4.44	2	3.95	2.5	4.00	4	4.21	3	1.233	.303
Contractors' disagreement with the valuation of work on site	4.09	3	4.00	4	3.95	2.5	4.11	3	4.32	1	1.249	.298
Delay in submitting claims and other necessary information concerning payment	3.93	4	4.11	3	3.87	4	4.33	2	3.82	4	.918	.436
Contractors' failure to do work based on bill of quantities	3.47	5	3.44	5	3.41	5	3.78	5.5	3.46	5	.292	.831
Contractors' failure to understand the contract agreement	3.32	6	3.11	7	3.36	6	3.78	5.5	3.18	6	.837	.478
Willingness to receive wrong payment conditions from clients as a result to challenges in getting project	3.09	7	3.33	6	3.00	7	3.44	7	3.04	7	.721	.542

*Significant at $p < 0.05$

E. Discussion

The causes of delayed payment were divided into three groups; they are client-associated causes, consultant-related causes and contractor-related causes.

It shows that under client-related causes, Client's disagreeing on the valuation of project executed was the major cause of delayed payment, followed by Client's withholding payment.

It corresponds to Reference [9] which states that one major cause of delayed payment is withholding of payment by the client.

It shows that under consultant-related causes the major causes of delayed payment was slow processing of variation orders and delay in certification by the consultants.

This is in support of a similar study done by Reference [1] stating that delay processing of variation orders and delay in certification by consultant.

It also shows that under contractor-related causes the two ranked causes were poor quality of works and contractor's invalid claim.

In similar study [9], agree that under contractor-related causes were contractor invalid claim, errors in contractor's claims and poor quality of work.

V. CONCLUSION

The study shows that causes of delayed payment were divided into three groups, client-related causes, consultant-related causes and contractor-related causes.

From the results we can conclude that all participants in the industry contribute one way or the other to the causes of delayed payment in construction project delivery.

The research results indicate causes of delayed payment as a major hindrance on the successful delivery of a construction project. It corresponds with other research done by other authors on this topic.

Causes of delayed payment point out a fault in the payment structure of any project. A project where there are signs of time or cost overrun shows that there is delayed payment in that project.

Those causes or signs could be client's withholding payment, inaccuracy of valuation for work done and contractor's invalid claims.

A contractor who is low in funds will not have enough funds to execute and deliver the project on time. This will surely affect the program and the delivery date of the project.

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