

Demystifying the Effects of Final Accounts Settlement on Building Contractors in Abuja, Nigeria

Johson Abidoeye, SAIDU Ibrahim, Adamu A.D. and Alumbu Polycarp Olaku

Department of Quantity Surveying, Federal University of Technology, Minna, Nigeria

saidu.ibr@futminna.edu.ng

The final account stage of a building project is sometimes rarely settled or even being delayed by some of the project parties, thereby posing serious challenges on contractors. This research examines the effects of non-settled final accounts on contractors with a view to suggesting the best strategies for settlement of final accounts in building projects. A quantitative technique was adopted in this study. The research population constituted the major construction participants consisting of public clients, registered consultants and contractors within Abuja. The stratified random sampling method was adopted. A total of 162 structured questionnaires were administered to the participants from whom a total 119 was retrieved representing 86% response rate. The collected data were analysed using the descriptive methods and Analysis of variance. The research found that the major barriers of procurement methods that must be considered if final accounts are to be settled are: inadequate documentation of records, ambiguity of final account settlement procedure, and silence of contract conditions on final account settlement. Also, unsettled final account will have significant effects on contractors especially in the aspect of cash flow, threat to life of the contractor's business, financial hardship for the contractor, and contractor's insolvency. It was also found that the problems could be mitigated through maintaining separate escrow bank account by the client, legal and contractual provision. Based on these findings, it can be concluded that proper management of the identified factors would translate into effective settlement of final accounts in building projects. The research recommends that construction clients and consultants should employ care when selecting a procurement option to be used.

Keywords: Building projects, Contracting parties, Contractors, Final account, Procurement barriers, Settlement

Introduction

Construction contracts generally provide some mechanism for the final payment to be made to the contractor on completion of the works described in the contract (Seamus-Cooley, 2015). These payments begin from the start of a project, until its completion, through advance payments, progress payment (interim valuation) and final payment, which is the final figure of the project (Zakaria *et al.*, 2012). Thus, final account is always prepared to show the final costs of a project that has been completed by the contractors, including the cost of defect liability period, additions, alternations, deductions resulting from project changes and other related payment as stated in the contract (Zarabizam *et al.*, 2012).

Successful closing of final account is categorised as resolved at the stipulated time without any problems relating to disputes and delays. However, final accounts settlement is sometimes being delayed, because the closing process could be complicated, time consuming, and adversarial process, often resulting in disputes (Zakaria *et al.*, 2012). Shen *et al.* (2007) highlighted financial affordability to the client as one of the key requirements of any construction project. Hence, clients must practice efficient system to make sure that the contractors receive payments accordingly; as delay in the final accounts closing may cause problems to contractor in

terms of working capital and eventually lead to bankruptcy.

Moreover, Sing *et al.* (2013) noted that some construction professionals pay little attention to the impacts of procurement methods and their related risks on final accounts settlement and these pose serious challenges on the contractors. Zakaria *et al.* (2014) attributed this problem to lack comprehensive knowledge by the building participants of the forms of contract to be used, and in that, settlement of final account becomes a difficult process.

Previous studies on final account settlement focused on the important factors affecting final account settlement satisfaction for civil engineering projects (Kwok, 2009); final account closing in project management perspective (Ismail *et al.*, 2014); development of theoretical framework on the causes of final account closing in construction projects (Zakaria *et al.*, 2012); and relationship between preliminary estimate, tender sum and final account of building projects (Oseghale & Wahab, 2014).

This research aims to examine the effects of non-settled final accounts on contractors with a view to suggesting the best strategies for settlement of final accounts in building projects. The specific objectives are: to identify barriers of procurement methods as they relate to final account settlement; to examine the effect of non-settled final account on contractor; and to examine the strategies for effective settlement of final accounts.

Literature review

Barriers of procurement methods as they relate to final account settlement

The term 'procurement method' is used to describe the often complex network of relationships which are formed between clients, consultants and construction companies to enable a building project to be realised (Sarah *et al.*, 2007).

The Joint Contracts Tribunal Limited (JCTL, 2011) highlights three main procurement options in the construction

industry, namely: traditional method, design and build method and management contracting. Kwok (2009) noted that many of the problems that existed in construction are attributed to barriers found between parties to contract. To overcome these barriers, all parties must establish a working environment based on mutual objectives, teamwork, trust and sharing of risks and rewards. The success of this setup will solely depend on memorandum of understanding which identifies responsibilities of each party to the contract.

The procurement barriers to final account settlement may include: inadequate documentation of records, ambiguity of final account settlement procedure, silence of contract conditions on final account settlement, slow decision making, poor site management, low contractors ability to fund projects, communication bureaucracy, waiting time for approval of tests and inspections, late issuance of instructions, elongated time of response from professionals, and delayed payment (Assaf & Hejji, 2006; Seamus-Cooley, 2015). Also, Achuenu *et al.* (2000) assert that the inability to maintain appropriate documentation of records especially as regards finances and procurement has been a major setback to the growth of the Nigerian construction industry. Assaf and Hejji (2006) stated that delay in client's payment can be a major factor influencing the settlement of final accounts. Also, clients' cash flow problems, variation orders, lack of incentive for contractors for early finish, lack of finance to complete the works, changes in materials type by the client, and slow decision making are key factors of the clients that may influence settlement of final accounts in building projects (Aibinu & Odeyinka, 2006; Faridi & El-Sayegh, 2006; Hemanta *et al.*, 2012).

Effect of non-settled final account on construction contractors

Regular disbursement of interim payment is a critical point for keeping contractors alive. But late payment or not being paid in the amounts certified literally means big problems to the contractors as cash flow will

be affected (Chen *et al.*, 2005). The three serious effects of late payment on contractors are: cash flow problems; stress on contractors; and financial hardship (Danuri *et al.*, 2006). Davis and Seah (2003) added that the construction payment blues have domino effects. A delayed payment by one party may affect the whole supply chain of payment of a construction project. For instance, if an employer delays in making payment to the contractor this in turn will result in contractor's delay in making payment to the sub-contractors and suppliers. According to European Payment Report (2016), 33% of businesses indicate that not getting paid for work done in time threatens the survival of the company, and many state that, if they were paid faster, they could hire more employees. Akinsiku and Ajayi (2016) emphasised that delay in paying construction contractors has impacted negatively on the effectiveness of the contractor and as such affect project delivery schedule. Failure to pay contractors for work executed might lead to the contracting firm being insolvent.

Strategies for effective settlement of final accounts in building projects

According to Ramachandra and Rotimi (2010) some of the strategies in ensuring payment of contractors include: legal and contractual provisions, standard form of contract, and administrative measures. Fischer (2008) noted that in Germany, legal provisions require the contractor to assess the enrichment of the client as a result of the building work rendered. Probably recognizing the seriousness and the extent of payment problems that have hampered the development of the construction sector in China, project owners have to provide contractors a payment security (Heong, 2006). This allows contractors to establish a legal mortgage, thereby giving contractors strong backing to prevent unfaithful owners from delaying payment (Meng, 2002). Different mitigating strategies for effective settlement of final accounts have been identified and summarized as follows: maintaining a separate escrow bank account, bond and guarantees, payment insolvency bonds, advance payment bond,

retention bonds owner's payment guarantee, payment default or insolvency insurance, build and safe security, and direct payment agreement (Heong, 2006; Fischer, 2008 Ramachandra & Rotimi, 2010;).

Research Methodology

A survey design approach was employed in this study and quantitative data were gathered from the respondents. The research population constituted the major construction participants (clients, consultants and contractors) within Abuja, the Federal Capital Territory. The selected clients for the study are public clients gotten from the ministries, Government Departments and Agencies (MDA's). These MDA's were selected on the basis of them having a unit or department responsible for procuring the construction industry's products.

The population of the registered consultants in the study geographical area comprised a total of 80 Quantity Surveying and 146 Architecture firms. These consultants were selected due to their involvement in the preparation of valuation and payment certificate. Hence, registered quantity surveying and architecture firms located within Abuja were sampled. The contractors selected for the study are those located in Abuja, who is registered with Nigeria's Federation of Construction Industry (FOCI), as this is the largest umbrella body of construction contractors. Abuja was selected for this study because it is the administrative headquarters of Nigeria; it is one of the metropolitan cities in Nigeria that has the highest population of the built environment professionals and has many ongoing construction projects (Saidu & Shakantu, 2017).

In order to guarantee equal representation for each of the identified groups/strata in the population, stratified random sampling method was adopted. The respondents were first categorised into 3 different strata (government clients, consultants and contractor) before they were selected and randomly sampled accordingly.

The sample frame included: 24 government clients, 121 consultants (73 Architects and 48 Quantity surveyors) and 25 contractors, making up a total of 170 respondents. This value (170) was subjected to Krejcie and Morgan (1970): formula for determining the minimum sample size value in the population.

$$S = \frac{X^2NP(1-P)}{d^2(N-1)+X^2P(1-P)}$$

Where S = Required Sample size; X = Z value (e.g. 1.96 to 95% confidence level); N = Population Size; P = Population proportion; and d = Degree of accuracy

(5%), expressed as a proportion (.05); It is the margin of error. The value was reduced to a minimum of 118 at 95% confidence level and at 5% limit of error; showing that 118 is the minimum number of questionnaires that can be administered within the population.

Table 1 shows that 170 respondents were identified within the research population, from which a total of 146 structured questionnaires, were administered to, and 119 were retrieved with all fully answered and valid for analysis, representing 86% response rate.

Table 1: Sample frame of the study

Respondents	Population Size	Questionnaires administered	Questionnaires retrieved and valid for analysis	Percentage rate
Clients (government ministries and agencies)	24	23	21	14.4%
Consultants (Architect and Quantity Surveying Firms)	121	102	82	58.9%
Contractors	25	21	16	12.3%
Total	170	146	119	86%

Source: Researchers' survey, 2017.

The collected data were analysed by using the descriptive methods (percentile, Mean Item Score {MIS}, and Relative Importance Index {RII}) and the inferential method (Analysis of Variance {ANOVA} and one-way sample t-test). Data processing was done with the aid of Statistical Package for the Social Sciences (SPSS) software.

The RII was adopted to determine the importance of the identified measures for mitigating the non-settlement of final account. The MIS was used to determine the weighted mean average of the identified measures and the premise of decision for the ranking is that the factor with the highest MIS is ranked 1st and others in such subsequent descending order.

In order to determine the differences between the mean of the various groups of respondents (contractors, consultants and clients), the ANOVA test was employed to analyse the differences. The significance level attached to the possible effects of non-

settled final accounts on contractors was ascertained using the one-sample t-test.

Results and Discussion

Barriers of procurement methods as they relate to final account settlement

The result in Table 2 reveals that, according to the clients, three barriers are crucial and they were rank first. These barriers are: ambiguity of final account settlement procedure, silence of contract conditions on final account settlement, and inspection delay and absenteeism. These barriers were ranked as third, fourth and fifth by the consultant, and second, fourth and eighth by the contractors. The most ranked barriers by the consultants are: inadequate documentation of records, inadequate experience of consultant on agreed procurement process, and ambiguity of final account settlement procedure. These barriers were however ranked as fifth, first and seventh by the clients, and first, fifth and second by the contractors.

From the view of the contractor, the most critical barriers are: inadequate documentation of records, ambiguity of final account settlement procedure, and late issuance of instructions. These barriers were ranked fifth, first and ninth by the clients, and first, third and fifth by the contractors. Despite these disparities in the ranking of these identified barriers by the three categories of respondents, result from the ANOVA test shows that at 95% confidence level, there is no statistically significant difference in the mean value of the identified barriers. A significant p-value of above 0.05 was derived for all the three top rated factors selected by each of the categories of respondents.

Considering the Likert scale adopted, a cursory look at the Table 2 shows that all the assessed barriers have an overall mean of above average of 3.0. This means that the respondents agreed that the listed barriers all have the tendency to affect the settlement of final account. However, the most ranked barrier amongst them are: inadequate documentation of records, ambiguity of final account settlement procedure, and silence of contract conditions on final account settlement with mean values of 4.18, 4.13 and 4.02 respectively.

ANOVA analysis also shows that at 95% confidence level, there is no statistical

significant in the mean value of these top three barriers as rated by the three categories of respondents, as a significant p-value of above 0.05 was derived for all three barriers. The least ranked barrier is waiting time for approval of tests and inspections with and overall means value of 3.20 and a significant p-value of 0.635.

These results imply that to a large extent, the issue of inadequate documentation of records as related to most procurement method tends to have huge effect at the end of the project when the final account is to be settled. The ambiguity of final account settlement procedure can also be a huge barrier as regards settling of final account. This may be as a result of procurement methods not stating explicitly when and how the final account should be settled. Especially in the contract conditions, settlement of final account would most likely become an issue. These findings corroborate the results Assaf and Hejji (2006) and Seamus-Cooley (2015) as stated in the section 2 of this research. The result corroborates Achuen *et al.* (2000) who assert that the inability to maintain appropriate documentation of records especially as regards finances and procurement, has been a major setback to the growth the Nigerian construction industry.

Table 2: Barriers of procurement methods as they relate to final account settlement

Barriers	Client		Consultant		Contractor		Overall		ANOVA	
	MIS	Rk	MIS	Rk	MIS	Rk	MIS	Rk	F-Stat	Sig.
Inadequate documentation of records	4.00	5	4.19	1	4.33	1	4.18	1	0.901	0.409
Ambiguity of final account settlement procedure	4.38	1	4.03	3	4.07	2	4.13	2	1.938	0.149
Silence of contract conditions on final account settlement	4.38	1	3.86	4	4.00	4	4.02	3	2.177	0.118
Inadequate experience of consultant on agreed procurement process	3.86	7	4.10	2	3.89	5	3.99	4	0.938	0.394
Inspection delay and absenteeism	4.38	1	3.78	6	3.74	8	3.92	5	4.747	0.010**
Communication bureaucracy	4.17	4	3.78	6	3.74	8	3.87	6	1.300	0.276
Late issuance of instructions	3.72	9	3.79	5	4.07	2	3.84	7	0.548	0.579
Delayed payment	3.86	7	3.52	8	3.81	6	3.67	8	2.078	0.130
Low contractors ability to fund projects	3.90	6	3.43	10	3.41	10	3.54	9	2.068	0.131
Poor site management	3.41	11	3.46	9	3.81	6	3.53	10	1.301	0.276
Slow decision making	3.59	10	3.38	11	3.37	12	3.43	11	0.364	0.696
Elongated time of response from professionals	3.24	13	3.37	12	3.41	10	3.34	12	0.311	0.733
Waiting time for approval of tests and inspections	3.31	12	3.11	13	3.30	13	3.20	13	0.46	0.64

Note: MIS = Mean Item Score, Rk = Rank ** Significant at $p < 0.05$.

Effect of non-settled final account on contractors

Result in Table 3 shows these perceived effects of non-settled final accounts and their respective significant value. Using a test value of 3.0 which is the midpoint for the Likert scale employed for the study. The result reveals that, at 95% confidence level, the respondents considered all the possible effects to be significant. A significant p-value of 0.000 was derived for all the assessed factors, and this is less than the 0.05 threshold set for the study.

The results in Table 4 shows the ranking of these possible effects as perceived by the three categories of respondents and their associated f-statistics and significant p-value gotten from ANOVA. The result shows that the client believed the non-settlement of final account would have more effect on the contractor in terms of: contractor’s insolvency, cash flow issues and threat to the life of the contractor’s business. The consultants are of the opinion that the highest impact will be felt in terms of cash flow issue, financial hardship and threat to the life of the business. The contractors however, stated that a non-settled final account is a huge threat to the existence of their business and their cash flow, and it is also a source of stress for them.

On the overall, all the assessed possible effects have their mean value to be well average of 3.0, which implies that they all have the tendency to occur if the final accounts are not settled. The top ranked of

them are: cash flow problem, threat to life of the contractor’s business, financial hardship for the contractor and contractor’s insolvency, with overall mean values of 4.21, 4.18, 4.13, and 4.03 respectively. ANOVA test shows that at 95% confidence level, there is no significant difference in the mean value of the assessed effects as rated by the three categories of respondents. A significant p-value of above 0.05 was derived for all the assessed possible effects.

These results imply that non-settlement of final account on a project is bound to affect the cash flow of the contractor and this will deter him from handling other projects effectively. Not only that, the life of the business of the contractor is at risk when cash is not coming in as expected. This is more severe in cases whereby the contractor has spent most of his available fund on completing the project. With this, financial hardship kicks in, and contractor becomes insolvent. This could lead to downsizing of staff within the contractors’ organisation, just to reduce overhead and increase chances of survival. Thus it can be said that the non-settlement of final account can have a ripple effect on the contractor and his workers. These findings are in line with research of Aibinu and Odeyinka (2006), Faridi and El-Sayegh (2006), and Hemanta *et al.* (2012) that clients’ cash flow problems, variation orders, lack of incentive for contractors for early finish, lack of finance to complete the works as the key-clients’ factors that contributes the non-settlement of final accounts.

Table 3: One-sample t-test on possible effects of non-settled final accounts on contractors

Factors	Test Value = 3.0					
	t	df	Sig. (2-tailed)	Mean difference	Lower	Upper
Cash flow problem	16.929	118	0.000	1.210	1.069	1.352
Stress on contractors	8.748	118	0.000	0.891	0.689	1.092
Financial hardship on contractors	12.437	118	0.000	1.126	0.947	1.305
Threat to the life of the business	11.955	118	0.000	1.185	0.989	1.381
Unemployment	9.389	118	0.000	0.983	0.776	1.191
Contractors ineffectiveness	5.555	118	0.000	0.622	0.400	0.844
Insolvency	12.883	118	0.000	1.025	0.868	1.183
Bankruptcy	5.828	118	0.000	0.697	0.460	0.934
Contractual disputes	8.747	118	0.000	0.723	0.559	0.886
Conflicts with sub-contractors	4.94	118	0.000	0.50	0.30	0.70

Table 4: Effect of non-settled final account on contractor

Factors	Client		Consultant		Contractor		Overall		ANOVA	
	MIS	Rank	MIS	Rank	MIS	Rank	MIS	Rank	F-Stat	Sig.
Cash flow problem	4.28	2	4.24	1	4.07	2	4.21	1	0.550	0.578
Threat to the life of the business	4.14	3	4.17	3	4.26	1	4.18	2	0.093	0.912
Financial hardship	4.07	4	4.21	2	4.00	5	4.13	3	0.472	0.625
Insolvency	4.34	1	3.87	5	4.04	4	4.03	4	3.038	0.052
Unemployment	4.03	5	4.10	4	3.67	7	3.98	5	1.378	0.256
Stress on contractors	4.00	6	3.76	6	4.07	3	3.89	6	0.931	0.397
Contractual disputes	3.79	8	3.63	7	3.85	6	3.72	7	0.661	0.518
Bankruptcy	4.00	6	3.60	8	3.59	8	3.70	8	1.031	0.360
Contractors ineffectiveness	3.76	9	3.57	9	3.59	8	3.62	9	0.240	0.787
Conflicts with sub-contractors	3.62	10	3.41	10	3.56	10	3.50	10	0.41	0.67

Source: Research Field Survey, 2017

Strategies for effective settlement of final accounts in building projects

The result in Table 5 shows the Relative Importance Index (RII) of each of the identified strategies and their respective f-statistics and significant p-value derived from ANOVA test. A quick look at Table 5 shows that all the assessed strategies have a significant p-value of above 0.05. This implies that at 95% confidence level, there is no statistically significant difference in the RII value of these strategies as perceived by these respondents.

The results reveal that the clients believe that maintaining separate escrow bank account, payment of interest by client, and legal and contractual provision are the most important strategies. These factors were however ranked as first, fifth and second by the client, and second, fourth and third by the contractors. The consultants ranked maintaining separate escrow bank account, legal and contractual provision, and provision of owner's payment guarantee from inception, as the top three mitigating measures. These measures were ranked as first, third and seventh by the clients, and second, third and first by the contractors. The contractors however, were of the opinion that the most important strategy is provision of owner's payment guarantee from inception, maintaining separate escrow bank account, and legal and contractual provision.

On the overall ranking, the results reveal that all the assessed strategies had an RII value of well above average of 0.5, which implies that their adoption can to a considerable level reduce the issue of non-settlement of final accounts on construction projects. Chief of these strategies are maintaining separate escrow bank account, legal and contractual provision, provision of owner's payment guarantees from inception, and payment of interest by the client with overall RII values of 0.807, 0.785, 0.782, and 0.770 respectively.

These results show that to ensure effective settlement of final account, clients can maintain a separate account dedicated for that particular project, in order to avoid issues that may have to do with client's financial incapability. Also, the mode of settlement of final account should be stated clearly within the conditions of contract, and this should have a legal backing which clearly states the penalty for defaulting. These findings are similar to the submission of Fischer (2008) that legal provisions require the contractor to assess the enrichment of the client as a result of the building work rendered. It is in tandem with Ramachandra and Rotimi (2010) assertion that strategies for non-payment to contractors include; maintaining a separate escrow bank account, bond and guarantees, payment insolvency bonds, advance.

Table 5: Strategies for effective settlement of final accounts in building projects

Measures	Client		Consultant		Contractor		Overall		ANOVA	
	RII	Rk	RII	Rk	RII	Rk	RII	Rk	F-Stat	Sig.
Maintaining separate escrow bank account	0.82	1	0.80	1	0.793	2	0.80	1	0.158	0.85
Legal and contractual provision	0.77	3	0.78	2	0.785	3	0.78	2	0.015	0.98
Provision of owner's payment guarantee from inception	0.73	7	0.77	3	0.837	1	0.78	3	1.571	0.21
Payment of interest by client	0.78	2	0.76	5	0.770	4	0.77	4	0.183	0.83
Bond and agreement	0.75	5	0.73	6	0.763	8	0.74	5	0.167	0.84
Direct payment to contractor	0.69	8	0.76	4	0.704	8	0.73	6	1.225	0.29
Building safe security of payment scheme	0.75	4	0.72	8	0.719	7	0.72	7	0.456	0.63
Registration and prequalification of contract parties	0.69	9	0.73	7	0.748	6	0.72	8	0.547	0.58
Payment default or insolvency insurance	0.74	6	0.71	9	0.689	9	0.71	9	0.582	0.56

Source: Research Field Survey, 2017

Conclusion and Recommendations

The final account stage of a building project is sometimes rarely settled or even being delayed by some of the project parties, and thereby posing serious challenges on contractors. Hence this research examines the effects of non-settled final accounts on contractors with a view to suggesting the best strategies for settlement of final accounts in building projects. The research concluded that the major barriers of procurement methods that must be considered if final accounts are to be settled are: inadequate documentation of records, ambiguity of final account settlement procedure, and silence of contract conditions on final account settlement. It is also concluded from the findings that unsettled final account will have significant effects on contractors especially in the aspect of cash flow, threat to life of the contractor's business, financial hardship for the contractor, and contractor's insolvency. These issues could be mitigated through maintaining separate escrow bank account by the client, legal and contractual provision, provision of owner's payment guarantees from inception, and payment of interest by the client. The research recommends that construction clients and consultants should employ care when selecting a procurement option to be used.

References

- Achuenu, E. Izam, Y.D. & Bustani, S.A. (2000). Investigating the activities of indigenous contractors in the Nigerian construction. *Nigeria Journal of Construction Technology and Management*, 3, 91–103.
- Aibinu, A. A. & Odeyinka, H. A. (2006). Construction delays and their causative factors in Nigeria. *Journal of Construction Engineering and Management*, 132, 667–677.
- Akinsiku, O. E. & Ajayi, M. O. (2016). *Effects of delayed payment of contractors on construction project delivery in Nigeria*. A paper presentation at Faculty of Environmental Sciences, University of Lagos, Akoka, Lagos, Nigeria
- Assaf, S. A. & Al-Hejji, S. (2006). Causes of delay in large construction projects. *International Journal of Project Management*, 24(4), 349–357.
- Azhar, N., Farooqui, R. U. & Ahmed, S. M. (2008). Cost overrun factors in construction industry of Pakistan, in *Proceedings of the 1st International Conference on Construction in Developing Countries (ICCIDC-I)*
- Chen, H. L., O'Brien, W. J & Herbsman, Z. J. (2005). Assessing the Accuracy of Cash Flow Models: The Significance

- of Payment Conditions. *Journal of Construction Engineering and Management*, 6, 669-676.
- Danuri, M. M., Munaaim, M. C., Rahman, H. A., & Hanid, M. (2006). Late and non-payment issues in the Malaysian Construction Industry-Contractor's perspective. *In International Conference on Construction, Culture, Innovation and Management*. 613-623.
- Davis L. & Seah (2003). Collstruclioll Payment Btuee-Wily Tlutt Domino Effect. *Executive Sunnnarics for the Practitioner*. 3(3), 1-10.
- Designing Building limited (2017). Construction contract conditions Retrieved from: <https://www.designingbuildings.co.uk/wiki/>
- European Payment Report (2016). Survey conducted simultaneously in 29 European countries between February and April 2016.
- Faridi, A. S. & El-Sayegh, S. M., (2006). Significant factors causing delay in the UAE construction industry. *Journal of Construction Management and Economics*, 24(11): 1167–1176.
- Fischer, C.F (2008), New Act Aims to remedy contractors' financial losses: *International journal of Project Management*, 30(4), 479 – 489.
- Hemanta, D., Anil, S., Iyer, K. C., & Sameer, R. 2012, *Analysing factors affecting delays in Indian construction projects*. *International journal of Project Management*, 30(4), 479 – 489.
- Heong, H.K (2006), Non-payment of contractors. International law office. [Retrieved from: <http://www.internationallawoffice.com> July 18, 2017]
- Ismail, S., Zakaria, Z., & Md.Yusof, A. (2014). Construction: Final Account Closing in Project Management Perspective. Feature Article. *Jurutera*, 2(4),16-19.
- Krejcie, R.V. & Morgan, D.W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610.
- Kwok, C. K. (2009). Study of Important Factors Affecting Final Account Settlement Satisfaction of Hong Kong Civil Engineering Projects: Contractor's Perspective. Degree of Engineering Doctorate, City University of Hong Kong.
- Meng, X. (2002). Guarantees for Contractor's Performance and Owner's Payment in China. *Journal of construction engineering and management*, 128(3), 232-237.
- Odeyinka, H. A. (2007). Modelling risk impacts on the budgeted cost of traditionally procured building projects. *Proceedings of the 23rd Annual ARCOM Conference*, Belfast, 755-763
- Oseghale, G.E & Wahab, A. B. (2014). Analysis of relationship between preliminary estimate, tender sum and final accounts (a case study of selected building projects in Edo State, Nigeria): *Journal of Civil and Environmental Research*, 6(6), 76-86.
- Public Procurement (Goods and Works) Regulations (2007). *Federal Republic of Nigeria Official Gazette*, The Federal Government Printer, Lagos, Nigeria.
- Rammchandra, T. & Rotimi, J. O. (2010). Review of Methods for Mitigating Payment Risks in Construction. *International Research Conference on Sustainability in Built Environment*. Colombo, Sri Lanka: 198-207.
- Saidu I. & Shakantu, M.W. (2017). An investigation into cost overruns for ongoing building projects in Abuja, Nigeria. *Acta Structilia*, 24(1), 53-72
- Sarah, L. Stanley, C. & Hugh. C. (2007). Which contract? Choosing the appropriate building contract. UK. RIBA publishing
- Seamus-cooley (2015). The Chattered Quantity Surveyors and final account: Accessed from <http://www.scquantitysurveyors.com/final-accounts>
- Shen, L., Hao, J. L., Tam, V.W. & Yao, H. (2007). A checklist for assessing

- sustainability performance of construction projects. *Journal of Civil Engineering and Management*, 13(4), 273-281
- Sing, C., Love, P. E. D., Smith, J. & Tam, C (2013, September). Factors influencing final account settlement in construction projects. Paper presented at RICS Cobra 2013, New Delhi, India.
- The Joint Contract Tribunal (2011). *Design and Build Contract*. Sweet and Maxwell, London.
- Zakaria, Z., Ismail, S., & Yusof, A. M. (2012). The closing of final account in Malaysia construction industry: An overview on the cause and impact of dispute and delay. *Proceedings of the 19th. International Business Information Management Association*.
- Zarabizan Z. I., Syuhaida, I. & Aminah, Y. (2012). Cause and Impact of Dispute and Delay the Closing of Final Account in Malaysia Construction Industry. *Journal of Southeast Asian Research*, 2012, 12-24.