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## Effect of Bid Shopping on Public Building Project Delivery in Bauchi Metropolis

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### Abstract

The menace of the unethical practice in which a contractor discloses the bid price of one contractor or subcontractor to another, in order to obtain a lower bid price, otherwise known as bid shopping has been a major bane of the construction industry. This blight is responsible for a myriad of problems for the industry. This study examines these practices and their effects on the public sector of the construction industry. Thirty-six (36) questionnaires were administered to experts in the area of construction to understand their perspectives on the anomaly and its effect on project delivery in Bauchi metropolis, Nigeria. Findings of the study showed that some that 25.0 % of the respondents were Architects, 36.1 % quantity surveyors, 22.2 % were builders, 11.1 % project managers and 5.6 % were structural engineers. The highest educational qualification of respondents in the quantity surveying profession observed were, 41.7% of the respondents had earned B.sc, 27.8 % had HND, and 8.3 % had PGD, while 22.2 %, had MSc. In terms of experience 47.2 % had 5-10 years of experience, 30.6 % had less than 5 years of experience, 19.4 % have 11-15 years of experience and 2.8 % have 16-20 years of experience. 36.1 % of the respondents were consultants, 38.9 % were contractors while 25.0% were clients. Findings further some of the techniques used for bid shopping include post-award bid shopping technique ranked first, pre-award bid shopping technique was ranked second and bidding via an electronic reverse auction technique was ranked third. Effect of bid shopping on project delivery shows that “Promotes lower work quality was ranked first, Delays project completion was ranked second, creates an adverse work environment was ranked third, Increased life costs on a project was ranked third and General inefficient prosecution of work was ranked fifth”. Possible implications of bid shopping indicates that vulnerability to frequent maintenance work was ranked first, High maintenance cost was ranked second, poor workmanship was ranked third, poor value for money was ranked forth, poor aesthetics value was ranked fifth and Collapse of buildings was ranked sixth. Penalties that should be taken against contractors who practice bid shopping, the respondents observed that imposing liquidated damages or fines was ranked first, disqualifying winning bidders who are immediately found guilty of bid shopping was ranked second, no any action was ranked third, suspension of licenses or permit was ranked fourth and eventual punishment by lack of competitive bidding was ranked fifth.

**Keywords:** bidding, competitive bidding, peddling, shopping, pre-award, subcontractor, aesthetics.

### 1. Introduction

Bid shopping is an unethical practice in which a contractor discloses the bid price of one subcontractor to another in an attempt to obtain a lower bid price (Deneckere, Quint, 2022).

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Included in bid shopping is “bid peddling”, in which subcontractors themselves offer to undercut the known bid of another subcontractor (Nawaz, Ikram, 2013). Bid shopping can occur both before and after the project owner awards the prime contract to the contractor (Arditi, 2016; Maseko, 2018). Bid shopping is an unethical practice that hinders progress in construction and hurts the construction industry (Reginato, Alves, 2012).

All construction players must be monitored to generate a standard scheme to measure the quality of work achieved by contractors (Adnan et al., 2012). Consultants should exercise their duty of care in performing their works and not resort to unethical behavior for approving any sub-standard (Rofifah, 2020; The White House, 2021). The contractors should not earn profit in unethical ways. Construction parties should always be alert and try to avoid any unethical behavior among the construction players from happening (Omotayo et al., 2022).

Bid shopping currently is not illegal, but it certainly is unethical (Smith Currie, 2013). Organizations such as the Associated General Contractors of America (AGC), Falls Management Institute (FMI) and the American Subcontractors Association (ASA) have had much influence in raising the image of the constructor to a position of near professionalism (Motaleb, Kishk, 2010).

Bid shopping is currently not illegal but certainly unethical which can hurt business reputations and those of its employees, especially key personnel such as estimators, contract administrators and project managers (Faculty, E-mail, 2021). The aim of the study is to determine the effect of bid shopping on public building project delivery in Bauchi metropolis with the view of reducing bid shopping from occurrence.

## **2. Materials and methods**

### **Research Design**

This study was conducted through Surveys, an oriented methodology used to investigate populations by selecting samples to analyze and discover occurrences. The design provides numeric descriptions of some part of the population. It was adopted in this study because it considers issues such as economy of design, rapid data collection and ability to understand a population from a part of it.

### **Study Area**

The study covers selected contractors, consulting firms and clients in Bauchi metropolis.

### **Target population**

For the purpose of this study, the populations were clients, consultants and contractors operating within the capital city of Bauchi. The client is the employer of all other parties in the building industry.

### **Sampling techniques**

The technique used for this study was simple random sampling. This technique selects a sample without bias from the target/accessible population.

### **Method of Data collection**

#### **Primary Sources**

This is the raw and unprocessed data which was received directly from the target respondents where structured response questionnaire such as Likert Scale, was used and the format used was basically ticking of the appropriate options to make ease of response.

#### **Questionnaire Survey**

A questionnaire survey was undertaken to assess the effect of bid shopping, various techniques, possible implications, penalties legislation should be taken. The questionnaire was divided in to two parts:

First part captures the relevant information from the respondents. While the second part focused on the effect of bid shopping, implications, penalties legislation should be taken. The respondents were asked to highlight their recommendations through a close-ended matrix form questions which ranges from 1-5 Likert scale. Respondents were asked to indicate their views on the degree of importance of the listed effect, implications and etc.

5 = Strongly agreed

4 = Agreed

3 = Undecided

2 = Disagreed

1 = Strongly disagreed

**Secondary Sources**

These include textbooks, journals, magazines, newspapers, etc.

In using the technique, all documents related to the issue under study were carefully reviewed.

**Method of Data Analysis**

The first set of data collated was nominal in nature as such; frequencies and simple percentages were used in analyzing them. Subsequently, they were presented in tables. However, the second set of the collated data was ordinal in nature which justified the use of the following technique, Relative Importance Index.

**Analysis**

The Formulae used in carrying the analysis is given below,

$$RII = \frac{\sum W/A \times N}{N}$$

Where:

W = weighting given to each factor by the respondents (ranging from 1 to 5).

A = highest weight (that is 5 in this case).

N = total number of questionnaires returned.

The Microsoft Excel word Package program was used to analyze all sections and assisted in the presentation and layout. The respondents' data was finally presented using descriptive methods for easy interpretation and to enable comparisons.

**3. Results**

**Table 1.** Profession of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Architect	9	25.0	25.0	25.0
	Quantity surveyor	13	36.1	36.1	61.1
	Builder	8	22.2	22.2	83.3
	project manager	4	11.1	11.1	94.4
	Structural engineer	2	5.6	5.6	100.0
Total		36	100.0	100.0	

Table 1 shows that 25.0 % of the respondents are Architects, 36.1 % are quantity surveyors, 22.2 % are Builders, 11.1 % are Project Managers and 5.6 % are Structural Engineers.

**Table 2.** Qualification of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	HND	10	27.8	27.8	27.8
	BSc	15	41.7	41.7	69.5
	PGD	3	8.3	8.3	77.8

	MSc	8	22.2	22.2	100.0
	Total	36	100.0	100.0	

Table 2 above provides information relating to the qualifications of the respondents in the quantity surveying profession. As shown in this Table, 41.7 % of the respondents had earned B.sc, 27.8 % had HND, and 8.3 % had PGD, and 22.2 %, had MSc.

**Table 3.** Experience of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than 5 years	11	30.6	30.6	30.6
	5-10 years	17	47.2	47.2	77.8
	11-15 years	7	19.4	19.4	97.2
	16-20 years	1	2.8	2.8	100.0
	Total	36	100.0	100.0	

Table 3 shows the experience of respondents 47.2 % have 5-10 years of experience, 30.6 % have less than 5 years of experience, 19.4 % have 11-15 years of experience and 2.8 % have 16-20 years of experience.

**Table 4.** Type of Organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Client	9	25.0	25.0	25.0
	Consultant	13	36.1	36.1	61.1
	Contractor	14	38.9	38.9	100.0
	Total	36	100.0	100.0	

Table 4 shows the type of organization, 36.1 % of the respondents are consultant, 38.9 % of the respondents are contractor and 25.0 % are clients.

**Table 5.** Techniques used in bid shopping

S/N	Techniques used in bid shopping	SA	A	U	D	SD	$\Sigma W$	A×N	RII Index	RANK
1.	Pre-Award Bid Shopping techniques	19	12	3	2	0	156	180	0.86	2
2.	Post-Award Bid Shopping techniques	27	8	0	1	0	169	180	0.94	1
3.	bidding via an electronic reverse auction technique	13	13	5	2	3	139	180	0.77	3

The table above indicates that post-award bid shopping technique was ranked first, pre-award bid shopping technique was ranked second and bidding via an electronic reverse auction technique was ranked third.

**Table 6.** Effects of bid shopping on public building project delivery

S/N	Effects of bid shopping on public building project delivery	SA	A	U	D	SD	$\Sigma W$	A×N	RII Index	RANK
1	Promotes lower work quality	26	9	1	0	0	169	180	0.94	1
2	Delays project completion	22	10	2	2	0	160	180	0.88	2
3	Creates an adverse work environment	14	12	5	1	4	139	180	0.77	3
4	General-inefficient prosecution work	5	8	4	8	11	96	180	0.53	5
5	Increased life costs on a project	10	12	4	5	5	125	180	0.69	4

The table above indicated that “Promotes lower work quality was ranked first, Delays project completion was ranked second, creates an adverse work environment was ranked third, Increased life costs on a project was ranked third and General inefficient prosecution of work was ranked fifth”.

**Table 7.** Possible implications

S/N	Possible implications	SA	A	U	D	SD	$\Sigma W$	A×N	RII Index	RANK
1	Poor aesthetic value	7	3	0	8	17	80	180	0.44	5
2	Collapse of buildings	6	3	2	5	20	78	180	0.43	6

3	Poor value for money	12	11	1	3	9	122	180	0.67	4
4	Poor workmanship	12	13	2	4	5	131	180	0.72	3
5	High maintenance cost	18	8	3	2	5	140	180	0.77	2
6	Vulnerability to frequent maintenance work	20	10	1	3	2	151	180	0.84	1

The table above indicates that vulnerability to frequent maintenance work was ranked first, High maintenance cost was ranked second, poor workmanship was ranked third, poor value for money was ranked fourth, poor aesthetics value was ranked fifth and Collapse of buildings was ranked sixth.

**Table 8.** Penalties that should be taken against contractors who practice bid shopping

S/N	Penalties that should be taken against contractors who practice bid shopping	SA	A	U	D	SD	$\Sigma W$	A×N	RII Index	RANK
1	Imposing liquidated damages or fines	17	14	2	2	1	166	180	0.92	1
2	Suspension of licenses or permit	14	6	0	6	10	116	180	0.64	4
3	Eventual punishment by lack of competitive bidding	3	1	0	10	22	61	180	0.34	5
4	Disqualifying winning bidders who are immediately found guilty of bid shopping	15	9	3	4	5	133	180	0.74	2
5	None. No any action	11	14	0	1	10	123	180	0.68	3

The table above indicates that imposing liquidated damages or fines was ranked first, disqualifying winning bidders who are immediately found guilty of bid shopping was ranked second, no any action was ranked third, Suspension of licenses or permit was ranked fourth and eventual punishment by lack of competitive bidding was ranked fifth.

#### 4. Discussion

The current study observed that unethical professional practices in construction have severe effects on the management of projects which was corroborated by Ibrahim (2020). Nawaz and Ikram (2013), expounded that lack of training in ethics, corruption and bribery, bid shopping, and fraud and unfair conduct were factors effecting construction projects which is totally in agreement with the current effort. In his study, Maseko (2017) agrees totally with the findings of this study that the most dominant unethical practices are corruption, bribery and collusive tendering, lack of safety, overstatement of capacity and falsification of experience affects construction projects significantly. Adnan et al (2012) acknowledges that the most common unethical conduct evidenced by the contractors are cover pricing, bid cutting, poor documentation, late and short payments, subcontractors' lack of safety ethics, unfair treatment of contractors in tender/final account negotiations, competitors' overstatement of capacity and qualifications to secure work, competitors' falsification of experience and qualifications and bureaucratic, government policy these were some of the findings observed in the current research. Vulnerability to frequent maintenance work, delays and cost overruns as the extremely severe effects of unethical practices on projects performance and adherence to professional ethics, transparency and accountability in contract administration, the use of approved construction designs from certified professionals as highly effective remedies for curbing unethical professional practices. In their study Inuwa, Usman and Dantong (2015), discovered that vulnerability to frequent maintenance work, delays and cost

overruns as the extremely severe effects of unethical practices on projects performance and adherence to professional ethics, transparency and accountability in contract administration, the use of approved construction designs from certified professionals as highly effective remedies for curbing unethical professional practices which is in concordance with current findings.

## 5. Conclusion

Post-award bid shopping is considered the most harmful to the public building projects. In post-award bid shopping, the contractor seeks to obtain a lower price from a second subcontractor, after having already been awarded the prime contract through the original subcontractors bid. And has been considered by respondents as the major technique of bid shopping used by contractors. Bid shopping forces a subcontractor to reduce the costs in an effort to break even or make up for lost profits. One way in which a subcontractor can do this is by reducing the crew size. Obviously, by reducing the size of the crew, the odds of finishing the project on time are less likely than they would have been if the original crew size been kept. Bid shopping destroys team spirit and cooperation by creating a spirit of distrust and self-interest among project team members. The penalties that should be taken against contractors who practice bid shopping are: Imposing liquidated damages or fines, disqualifying winning bidders who are immediately found guilty of bid shopping and Suspension of licenses or permit.

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