Factors confronting quantity surveying practice: the case of Nigeria

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Abstract

Purpose – As the challenges confronting a system are better addressed when known and understood, this paper aims to report the findings of a study that investigated the factors confronting professional quantity surveying using Nigeria as a case.

Design/methodology/approach – A questionnaire was developed and pre-tested as the instrument for collecting data. A total of 64 quantity surveyors practicing in Lagos, Port Harcourt and Enugu completed the questionnaire out of a non-probabilistic sample of 100. Severity Index and Spearman rank correlation coefficient were used in data analysis.

Findings – The outcome revealed that the top five factors perceived to be confronting the profession include poor marketing of the profession, opposition from engineers, the dominance of multinational companies that do not have quantity surveying as a distinct profession in their country of origin, widespread corruption in Nigeria and professional incompetence of some quantity surveyors. Furthermore, the two categories of respondents – professional quantity surveyors and probationers – agree in their ranking of the factors confronting the profession. The ranking of the 17 factors between the two categories of respondents was tested using Spearman's rho. The result showed that the difference in perception of professional members of the Nigerian Institute of Quantity Surveyors and the probationers with regard to factors confronting the quantity surveying profession is not significant at $p < 0.01$. These findings are then discussed in the light of previous works, and implications for both academics and professionals within the quantity surveying profession were highlighted.

Originality/value – This study has highlighted the key issues to consider as stakeholders attempt to advance the course of quantity surveying and construction cost management profession.

Keywords Profession, Practice, Challenges, Quantity surveying

Paper type Research paper

Introduction

A profession according to Sidney Webb and Beatrice Webb (1917) cited in a UK Competition Commission (1977) report is a vocation founded upon specialized education training, the purpose of which is to supply objective counsel and service to others, for a direct and definite compensation, wholly apart from expectation of other business gains. Seeley and Winfield (1999) posit that quantity surveying as a professional practice has been in existence at least in the UK since 1785 with Henry Cooper and Sons' operation in Reading. Today, the quantity surveying profession has experienced developmental changes from measurement-oriented background to the current position where a quantity surveyor is accepted as a financial specialist and adviser in the construction industry of those countries where his expertise is recognized (Nkado and Meyer, 2001). Anago (2000) opined that the

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construction cost management capability of the quantity surveyor is catalytic to economic development of the Nigeria.

In spite of this, it appears that the surveyor's role in the procurement of constructed assets has been challenged at one time or the other in different national construction settings. Ndanusa (2004) writing from a Nigerian perspective opines that quantity surveying more than any other profession among the built environment profession is facing numerous challenges which must be tackled head-on if our future will be guaranteed. Smith (2004) opined that it is inevitable that documentation and data will be increasingly automated to the point where measurement and other technical processes will require minimal intervention. Reports show that there is a shortage of professional quantity surveyors in North America, Australia and the Middle East (Hannah *et al.*, 2008; Smith, 2008).

Does this imply that the challenges Ndanusa (2004) wrote about are imaginary? Perhaps stemming from his limited experiential knowledge? Do professional quantity surveyors in Nigeria agree that their project cost management skills would soon be made redundant by disruptive technology and other factors? These questions inform this preliminary study. The aim of this research is to assess the relative seriousness of the confrontational factors posed by a number of issues to quantity surveying in Nigeria as the basis for a further research aimed at the development of a conceptual business model for sustaining quantity surveying practices. The specific objectives include determining the extent of agreement among quantity surveyors about the factors confronting the profession, isolating the most serious factors in Nigeria and examining the response of quantity surveying professionals to these issues. This paper contains findings with regard to the first two objectives.

Review of related literature

Conceptual foundations

The confrontational factors construct resonates with the broad field of strategic planning. The Balance Score Card Institute (2013) defines strategic planning thus:

> It is an organisational management activity that is used to set priorities, focus energy and resources, strengthen operations, ensure that employees and other stakeholders are working towards common goals, establish agreements around intended outcomes/results, and assess and adjust the organisation's direction in response to a changing environment. It is a disciplined effort that produces fundamental decisions and actions that shape and guide what an organisation is, who it serves, what it does, and why he does it with a focus on the future.

Assessing and adjusting an organization's direction in response to environmental changes calls for evaluating four different things, namely, the organization's strengths, its weaknesses, available market opportunities and barriers to the achievement of the organizations strategic goals. This is popularly called SWOT analysis in the strategic planning literature. SWOT analysis involves examining an organization's context in terms of its strengths and weaknesses and zooming out to identify opportunities and threats in its external operating environment (Valentin, 2005).

This strategic planning body of knowledge (Shojaei *et al.*, 2010; Jeyaraj *et al.*, 2012) informed that an organization's strengths are the tangible, intangible attributes internal to the organization which confer distinctive competence on the organization. It is a superior capability that makes the organization more competitive than its peers. The weaknesses of the organization on the other hand are the characteristics which place the firm at a disadvantage in relation to competitors. Like strength, they are internal to the organization, and organizations must find a way of making its weaknesses irrelevant to thrive in a competitive world. The opportunities and the threats are external to the organization.

Opportunities are external chances to achieve organizational bottom lines. Threats are external environmental variables that could constrain the organization from achieving its strategic goals.

The research reported here was interested in the identification of the variables that pose a challenge to the advancement of the quantity surveying profession in Nigeria. These variables evidently include "weaknesses" component of the SWOT analysis construct. Hence, confrontational factors to quantity surveying practice in Nigeria as used in this paper cover both the weaknesses and threats components of the SWOT analysis tool. It should, however, be noted that all weaknesses and threats can be largely surmounted.

The quantity surveying profession in Nigeria

According to Odusami (2000), the profession of quantity surveying was brought into Nigeria by the Britons – our colonial masters. A number of Nigerians who trained in the UK as quantity surveyors came together to form the Nigerian Institute of Quantity Surveyors (NIQS) in 1969. The profession is statutorily recognized in Nigeria (Ogunsemi, 1999).

Alluding to some other works, Onwunsoye (2013) lists the services of the quantity surveyor to cover the following:

- preliminary cost advice/feasibility report;
- cost planning;
- advising on contractual methods;
- advising on selection of other consultants;
- preparing tender documents;
- obtaining or negotiating tenders;
- reporting on tenders received or package deal/design and build offers;
- evaluating construction works;
- preparing expenditure statements for tax accounting purposes;
- periodic financial reporting;
- technical auditing;
- assessing replacement value for insurance;
- project management-related services;
- giving expert evidence in arbitration; and
- preparing defending against construction contract claims.

The desire of quantity surveyors in Nigeria to go beyond the provision of these services on building projects is evident from the vision of the NIQS as follows:

> To take responsibility for Total Cost and Procurement Management for the achievement of clients' objectives in all types of capital projects and developments from conception to commissioning and maintenance, in all sectors of the economy to the attainment of sustainable national development and goals.

However, there are indications from some quarters within that quantity surveying community in Nigeria that the profession is confronted with barriers (Omole, 2000; Mogbo, 2002). We begin with similar research works outside Nigeria.

Previous studies on factors confronting quantity surveying practice

The future of the quantity surveying profession has been the focus of stakeholders in different climes where the profession is accepted as a distinct professional field. For example, as far back as 1971, the Royal Institution of Chartered Surveyors, RICS, published a report titled "The Future Role of the Quantity Surveyors"(Ashworth and Hogg, 2007). The report identified the provision of construction project financial management and cost consultancy services as the distinctive skill sets of the quantity surveyors. Two decades later, according to Ashworth and Hogg (2007), the RICS released another report with the title "The Core Skills and Knowledge Base of the Quantity Surveyor". Over a decade ago, yet another report provided by the RICS (1998) predicted that in the next 10 years, technology will almost completely deskill the profession. The report suggests that construction advisers, particularly quantity surveyors who rely heavily on their technical skills to win work, must find a strategic role that will enable them to add value to projects. These reports show that the UK quantity surveying profession has always prepared to evolve with changing conditions. Is this true of other countries including Nigeria?

The Australian Institute of Quantity Surveyors commissioned a market research study aimed at better understanding the issues facing the profession in that region (McGaw, 2008). The findings of the study identified the reactive cost monitoring (instead of cost controlling) role played by the profession as an issue of concern to be addressed. Mbachu and Frei (2011) developed the Strategic Health Index as a tool for diagnosing the strategic health of the Australasian cost management profession. Their work reveals lack of flexibility and versatility of service as weaknesses.

Writing from a South African perspective, Pearl (2004) posited that the so-called distinctive competencies of the quantity surveyors could be learned easily by non-quantity surveying professionals. He goes further to show that when projects are not traditionally procured, these non-quantity surveying professionals perform the quantity surveyor's traditional roles. According to him, the only claim of superiority over the non-quantity surveying professional would be in the quality of services delivered to clients by professional quantity surveyors. Unfortunately, however, he argues that clients within the South African environment perceive the profession to be delivering inferior services. The easy-to-learn nature of the quantity surveyor's competencies by allied professions and the poor quality of services are evidently barriers to the South African quantity surveying profession. Chong *et al.* (2012) investigated the quantity surveying profession in Malaysia. Barriers isolated include fee competition, apathy towards the adoption of information technology and competitions from other professionals that deliver similar services or one-stop professional services.

The foregoing review shows the sustainability of the profession has been of interest to stakeholders in other countries. The review shows that limited work has focused on the existence of confrontational factors and barriers to the quantity surveying profession in Nigeria. The available works on this subject within the local construction literature are perused and synthesized with what the global quantity surveying literature has to say on the subject. The outcome of the literature synthesis is a list of 17 factors listed in Table I.

Factors confronting quantity surveying practice in Nigeria

Unlike the UK, the professional body in Nigeria, the NIQS, has not commissioned any research into the current condition or future of the profession in Nigeria. Neither is there any evidence of empirical research into the factors confronting the profession as we have in countries like Australia and Malaysia, as seen earlier. However, a number of notable figures

S/N	Issue	Meaning/Explanation
1	Opposition from engineers (Mogbo ,2002)	Engineers not wanting QSs to participate in the cost management and contract administration of engineering projects
2	Contractual dominance of architects (Adebola, 2000; Balogun, 2013)	The traditional leadership role granted to the architects in contract document
3	Conservatism (Jagboro, 2004)	The "don't rock the boat" mentality of some professionals; people within the profession unwilling on change to innovate
4	Competition within the profession (Kawu, 2003)	Fee cutting and bidding among quantity surveying consultants
5	New procurement approaches (Mogbo, 2002; Smith, 2004)	Procurement methods like package deal contact design and build, Turkey and others that eliminate the need for traditional quantity surveying consultants
6	Deskilling of technical function of measurement (Esenwa, 2000)	The elimination of the technical role of the Qs due to advances in CAD and automation of measurement
7	Declining demand for production of BOQS and other traditional services	A reduction in the number of projects for which bills of quantities are prepared
8	Dishonesty and corrupt tendencies of some professional quantity surveyors (Leeuw, 2005)	Lack of integrity and adherence to professional ethics in the conduct of businesses
9	The small nature of most quantity surveying (Odusami, 2000)	The numerical strength (less than eleven professionals) of quantity surveying consultancy firms
10	Poor marketing of the profession (Ajanlekoko, 2001, 2004; Onashile, 2005)	Lack of public awareness about the profession and its services
11	The name tag "quantity surveyor" (Anago, 2000; Ajanlekoko, 1998)	The name tag "quantity surveyor"
12	Shortage of competent QS graduates	Incompetence of fresh quantity surveying graduates occasioned by the general decline in the standard of education in the country
13	Widespread corruption in Nigeria (Omole, 2000; Leeuw, 2005)	Corrupt practices in both public and private sector
14	Professional incompetence of some professionals	Lack of skills on the part of some quantity surveyors
15	The dominance of multinational companies that do not have QS as a recognized profession in their country	Same as the issue
16	Dearth of quantity surveying educators (Ogunsemi, 2004; Lawal, 2005)	Shortage of qualified surveying lecturers
17	Competition from other professionals (Sobotie, 1999)	Professionals like management consulting firms, lawyers and accountants taking over projects and procurement management

Table I.
Authors' summary of factors confronting professional quantity surveying practice in Nigeria

within the quantity surveying profession have expressed concerned in the past about the issues militating against the profession. The identified issues are discussed next.

Information technology. Commenting on the impact of technology on the profession, Esenwa (2000) writes that many software packages are now available for performing the services being rendered by the professional quantity surveyors. Such packages can easily be learned and used by persons who are not trained as quantity surveyors. Esenwa's fears are captured in these words: "it will not be long before some bright young computer scientists

will take over our daily bread away with clever software". Smith (2011) also shared a similar view and supported the call for diversification to protect the profession.

Conservatism. Jagboro (2004) draws our attention to another issue in the professional practice of quantity surveying in Nigeria. He posits that the quantity's surveyor's preoccupation with production of bills of quantities, tender reports, interim valuations, fluctuation claims and final accounts has become the quantity surveyor's undoing in a challenging global construction village. Mogbo (2002) said that as the emphasis on public building development is shifting to civil engineering projects, the present restrictive role of the quantity surveyor in building projects has seriously challenged the profession. This study therefore includes declining demand for traditional services like production of bills of quantities as a probable strategic issue in professional quantity surveying.

Opposition from engineers. Odusami (2000) called on professional quantity surveyors to diversify into other areas like the cost management of civil and industrial engineering works. Ashworth and Hogg (2007), writing from the UK, argue that quantity surveyors have now largely been accepted as members of the engineer's design team. However, that is not the case in Nigeria. Attempts to diversify into the cost management of engineering projects have met oppositions from engineers. Mogbo (2002) posited that in Nigeria, the engineers have not always welcomed the idea of incorporating quantity surveyors into civil and heavy engineering works. This is a critical issue in professional quantity surveying in Nigeria, continues Mogbo, considering the fact that the bulk of the national construction budget is always allocated not to buildings but rather to civil and heavy engineering works. Writing on the challenges facing the quantity surveying profession in Nigeria, Ndanusa (2004) isolates inadequate contribution of the quantity surveyor to the cost management of engineering projects as one of them.

Following the release of the revised scale of fees for construction industry professionals in April 1996, which mandated quantity surveyors to prepare bills of quantities for electrical, mechanical and civil engineering works, the Nigerian Society of Engineering published the following: "In a move to counter the quantity surveyor who are bent on taking over engineering valuation from engineers, council has resolved that hence forth all engineering design should include BOQs." In the light of this, it is opined that opposition from engineers is a challenge to quantity surveying in Nigeria.

Poor marketing of the profession. Another issue identified in the literature as a confrontational factor is the poor awareness of the profession. Ajanlekoko (2004) submitted that the quantity surveyor is the least popular professional in the construction industry. Onashile (2005) posited that among the players involved in the procurement of constructed assets, the quantity surveyors are the least valued, respected and recognized. They are excluded from developments at every possible opportunity by other professionals and sometimes even by the developers out of ignorance. Anecdotal evidence suggests that quantity surveyors are perceived by clients as adding cost to project delivery.

Esenwa (2000) stated that the Nigerian society, although fairly enlightened, is still limited in the awareness of the duties of the quantity surveyors. The input of professional quantity surveyors is not sought – even by the government – in the formulation of the annual budgeting exercise. The foregoing are serious image problems emanating from a poor marketing of the profession. Poor marketing of the quantity surveying profession is therefore listed as one of the strategic issues in professional quantity surveying.

Widespread corruption. Another aspect of the image of the profession is the integrity and technical competence of professional quantity surveyors. It appears that the integrity and technical competence of quantity surveyors have been impugned. Omole (2000) observed that quantity surveyors allow themselves to be used as agents and/or facilitators of

corruption by their employers all in the vain hope of looking for security of employment and/or continuity of patronage. Surveyor's estimates are being challenged on a daily basis (Ibid).

Adebola (2000) spoke of the disdain of quantity surveyors in the public sector. Discussing the obstacles facing the African quantity surveyor, Leeuw (2005) opined that bribery and corruption could cause a prospective appointment to be awarded to others. Considering the fact that professional quantity surveyors are responsible for protecting the financial and contractual interest of their clients, it is understood that honest professional quantity surveying services may not be welcome by corrupt, greedy bureaucrats working for the governments. Widespread corruption and professional incompetence of some quantity surveyors are militating against the profession.

Dearth of qualified lecturers. Ogunsemi (2004) posits that the quantity surveying departments in Nigerian universities is 40 per cent adequate in terms of staff. According to Lawal (2005), the quantity surveying programme of the Federal University of Technology, Minna is one of the best in the country, yet the student–lecturer ratio in the 2003/2004 academic session was $1{:}56^{3}/_{8}$. A recent report shows that most university departments offering quantity surveying in the country are carrying more than the regulatory carrying capacity of 1 lecturer to 15 students (Ogunsemi *et al.*, 2013). Therefore, dearth of qualified quantity surveying lecturers is one of the factors confronting professional quantity surveying in Nigeria. Concluding discussions on the roles of leadership in promoting the profession, Ofori and Toor (2012) submitted that more attention is needed on innovation and people development. It stated that the profession should be able to entice and keep talents. Chileshe and Haupt (2010) identified the importance of salary level, working conditions and opportunities for promotion as well as lifelong learning as conditions that entice young people to a career. Apart from the ability of the aforementioned factors in enticing young talents, it is reasonable to say that the factors can also influence the employee turnover of lecturers. Table I is a summary of factors confronting the quantity surveying profession. These are the 17 factors presented to the respondents for rating in the survey.

Research method

The population for this study was quantity surveyors who are members of the NIQS who are engaged in providing quantity surveying services in three selected cities in Southern Nigeria. These cities were Lagos, Port-Harcourt and Enugu. The choice of these cities is because over 50 per cent of quantity surveying firms in Nigeria is located in these cities. Of the 156 quantity surveying firms listed in the NIQS directory of quantity surveying firms used for this research, 100 of them are located in these cities.

Professional members and probationers within the NIQS (Offoreh, 2005) were targeted. These members possess the depth of experience of the practical work of a professional quantity surveyor to make the desired input into the study. To capture the perceptions of professional quantity surveyors about the issues confronting the quantity surveying practice, a three-part questionnaire was designed in line with the criteria suggested by Naoum (1999). The first section in the questionnaire captures the demographic background of the respondents. The second part of the questionnaire asks the respondent whether each of the 17 pre-identified issues obtained from the literature are challenges to the advancement of the profession. A score of 0 is assigned to the "No" answer. Respondents who answered yes to each question are further asked, to rate on a Likert scale, from not serious (rated 1) to very serious (rated 5), their self-perception of the seriousness of confrontational factors. The third part of the questionnaire is not related to the report presented here.

Descriptive statistics and two non-parametric statistical techniques embodied in the Statistical Package for Social Sciences were deployed for analysis – the Severity Index and Spearman correlation coefficient. The Severity Index method is a non-parametric technique based on the aggregate weighing of the initial frequency score of each factor (Kangwa and Olubodun, 2003). It was used to quantify the seriousness of the factors before ranking in descending order of severity.

It was calculated using the following equation:

$$\text{Severity index} = \frac{\Sigma(\textit{Weight for each rating} * \textit{Frequency of response}) * 100}{\textit{Total number of respondents}}$$

According to Naoum (1999), the Spearmen (rho) correlation is a non-parametric test for measuring the difference in ranking between two groups of respondents' scoring a number of issues, attributes or factors.

Figure 1 is the summary of activities undertaken to achieve the goals of this research.

Findings

Survey responses

Out of the 100 questionnaires administered, 64 were retrieved. This represents a survey response rate of 64 per cent. This success rate is not common in survey research (Frei and Mbachu, 2009). The "wait and get" self-administration of the questionnaire must have contributed to achieving the response rate. Another measure taken to increase response rate includes the assurance in the covering letter that the information provided by respondents will be treated with strict confidence and that individual firms will not be identified.

Demographic information of respondents

The demographic variables of the respondents are presented in Table II. Fifty-five per cent of the respondents are professional quantity surveyors registered with the NIQS; they are referred to as "professionals" in this study. The remaining 45 per cent are probationers, i.e. quantity surveyors undergoing training in professional quantity surveying after their formal education in universities and polytechnics.

Table II also shows the gender distribution of respondents and other information. Only 5 of the 64 respondents were female, the remaining 59 were male. Also, the highest formal qualification achieved by the responding quantity surveyors was captured in the table.

Twenty-five of them were polytechnic graduates with HND degrees. There was no PhD holder among the respondents.

As evident in Table II, the respondents are from both public and private sectors of the economy. Fifty-five per cent of the respondents are from the private sectors. The rest of the respondents are from the public sector. Out of the 64 quantity surveyors who responded to the research effort, 25 of them are working in quantity surveying consultancy offices and multidisciplinary practices.

Quantifying the seriousness of the confrontational factors

The non-parametric Severity Index was used to calculate the seriousness or severity of the confrontational factors using the Likert scale ratings provided by the two categories of respondents. Table III shows the ranking of factors by professionals.

The ranking of the factors by probationers is presented in Table IV.

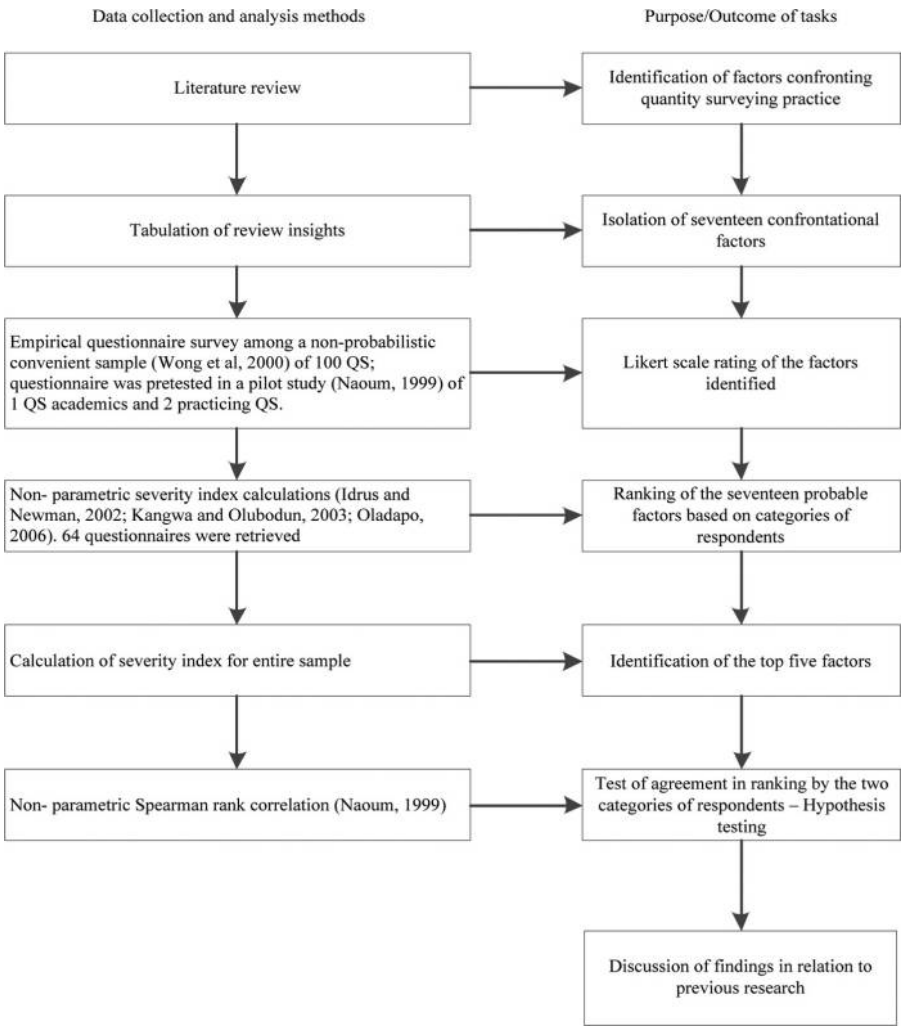

Figure 1.
Research method flowchart

The ranking of factors by the respective groups and the overall ranking based on the responses of the entire sample (both professionals and probationers) are presented in Table V.

Isolation of top five factors

The first objective was to isolate the top most serious issues facing quantity surveying practice. Table V shows the ranking of the factors by the two categories of respondents that make up the population. However, pooling the responses together and treating it as a single population of respondents, the following top five factors were generated.

Variable heading	Category	Frequency	(%)
NIQS membership status of respondents	Fellow	7	11
	Associate	28	44
	Probationer	29	45
	Total	*64*	*100*
Years of experience of respondents	1-5	12	19
	6-10	7	11
	11-15	13	20
	16-20	12	19
	>20	20	31
	Total	*64*	*100*
Gender of respondents	Male	59	92
	Female	5	8
	Total	*64*	*100*
Highest educational attainment of respondent	HND	25	39
	PGD	4	6
	BSc/BTech	20	31
	MSc/MTech	13	21
	Others	2	3
	Total	*64*	*100*
Nature of respondent's firm	QS consultancy	20	31
	Contracting firm	4	6
	Multidisciplinary Consultancy	5	8
	Public sector procurement agency	29	45
	Others	6	10
	Total	*64*	*100*

Table II.
Demographic information of respondents

	Valid percentage score							
Factor/Issue	0	1	2	3	4	5	S.I %	Rank
Poor marketing of the profession	3.1	15.6	3.1	18.8	31.3	28.1	68.7	1
Opposition from engineers	16.7	10.0	3.3	23.3	20.0	26.7	59.4	2
Conservatism	25.0	0	3.6	32.1	17.9	21.4	56.4	3
Dearth of QS lecturers	35.5	3.2	6.5	6.5	25.8	22.6	51.3	4
The dominance of multinatural companies	33.3	3.3	3.3	13.3	26.7	20	51.3	4
Professional incompetence of some professionals	25.8	0	16.1	22.6	22.6	12.9	51.1	6
Widespread corruption in Nigeria	38.7	3.2	6.5	6.5	22.6	22.6	47.8	7
Competition within the profession	37.9	6.9	6.9	13.80	20.7	13.80	42.9	8
Shortage of complete QS graduates	51.7	0	0	3.4	27.6	17.2	41.2	9
Dishonesty and corrupt tendencies of some professional QS	39.3	3.6	14.3	14.3	14.3	14.3	40.7	10
Procurement methods	58.6	6.9	10.3	6.9	0	17.2	39.2	11
Deeding demand for BOQ and other traditional services	44.8	10.3	10.3	10.3	13.80	10.3	33.7	12
Contractual dominance of architects	48.4	4.5	2.6	3.9	5.2	9.7	32.4	13
Competition from other professionals	58.1	3.2	6.5	12.9	9.7	9.7	26.6	14
The name "quantity surveyor"	65.5	3.5	10.3	10.3	3.5	6.9	20.7	16
Deskilling of technical function of measurement	69.0	6.7	3.4	6.9	6.9	6.9	19.3	17

Table III.
Factors confronting quantity surveying practice in Nigeria (professionals' perspective)

Factor/Issue	Valid percentage score 0	1	2	3	4	5	S.I %	Rank
Poor marketing of the profession	11.1	7.4	11.1	7.4	7.4	55.6	73.4	1
Opposition from engineers	21.4	3.6	0	25.0	10.7	39.3	63.6	2
Widespread corruption in Nigeria	23.1	15.4	7.7	11.5	7.7	24.6	53.9	3
Contractual dominance of architects	17.9	7.1	14.3	35.7	10.7	14.3	51.4	4
The dominance of multinational companies	30.8	0	11.5	26.9	11.5	19.2	49.4	5
Professional incompetence of some quantity surveyors	29.6	11.1	11.1	11.1	22.2	14.84	45.9	6
Competition from other professional	23.1	11.5	23.1	15.4	11.5	15.4	45.5	7
Conservatism	13.0	10.3	6.9	20.7	17.2	13.8	44.9	8
Declining demand for BOQ and other traditional services	38.5	7.7	0	23.1	15.4	15.4	43.1	9
Dearth of quantity surveying lecturers/ educators	42.3	3.8	11.5	23.1	0	19.2	38.5	10
Dishonesty and corrupt tendencies of some quantity surveyors	37.0	14.8	22.2	7.4	7.4	11.1	33.3	11
Competition within the profession	50.0	3.8	15.4	11.5	11.5	7.7	30.8	12
Shortage of competent QS firms	65.4	0	0	7.7	7.7	19.2	30.0	13
The small size of most QS firms	50	7.7	19.2	7.7	7.7	7.7	27.7	14
The name "Quantity Surveyor"	51.9	11.1	14.8	3.7	7.4	11.1	27.3	15
New procurement method	56.0	8.0	16.0	12.0	8.0	0	22.2	16
Deskilling of technical function of measurement	59.3	7.4	11.1	18.5	3.7	0	20.0	17

Table IV.
Factors threatening the quantity surveying practice in Nigerian (probationers' perspective)

Factors/Issues	Professionals	Probationers	Professional + probationers (i.e. entire sample)	Severity index
Poor marketing of the profession	1	1	1	74.0%
Opposition from engineers	2	2	2	61.7%
Conservatism	3	8	7	42.7%
Dearth of QS lecturers	4	10	6	47.7%
The dominance of multinational construction companies	4	5	3	57.5%
Professional incompetence of some quantity surveyors	6	6	5	49.0%
Widespread corruption in Nigeria	7	3	4	50.6%
Competition within the profession	8	12	11	37.1%
Shortage of competent QS graduates	9	13	13	35.8%
Dishonesty and corrupt tendencies of some professional QS	10	11	9	38.8%
New procurement methods	11	16	16	19.7%
Declining demand for BOQ and other traditional services	12	9	8	39.3%
Contractual dominance of architects	13	4	10	38.1%
Competition from other professionals	14	7	12	36.1%
The small size of most QS firms	15	14	14	24.4%
The name "quantity surveyor"	16	15	15	23.9%
Deskilling of technical function of measurement	17	17	16	19.7%

Note: The percentage values in right-hand column are the severity index for the factors, based on the responses of the entire sample (both professionals and probationers)

Table V.
Ranking of factors by the two categories of respondents

- Poor marketing of the profession ranked .
- Opposition from engineers ranked.
- The dominance of multinational companies ranked.
- Widespread corruption in Nigeria ranked.
- Professional incompetence of some quantity surveyors ranked.

The first objective is therefore met.

Assessing the extent of agreement between the two categories of respondents

The second objective of the research reported in this paper is to ascertain whether there exists a consensus among quantity surveyors. To achieve this, the following was hypothesized:

The ranking of the factors confronting the quantity surveying profession by professional members of the NIQS would not be different from the ranking by the probationers.

To test this hypothesis, Spearman's rho was computed using the rank of factors as contained in Table III and Table IV.

The result of Spearman's rank correlation analysis indicates a significant positive correlation between the ranking of factors by the two categories of respondents ($r = 0.67$, $p \leq 0.01$). The null hypothesis is therefore accepted as the ranking of the 17 factors by the two categories of respondents was found to have a significant positive correlation at the $p \leq 0.01$ level of significance. The inference then is that the difference in perception of professional members of the NIQS and the probationers with regards to factors confronting the quantity surveying profession is not significant.

Note the perfect agreement in the ranking of the following factors by the categories of respondents: poor marketing of the profession, opposition from engineers and professional incompetence of some quantity surveyors and deskilling of the technical function of measurement. It is also noteworthy that there is a wide difference in the ranking of contractual dominance of architects and competition from other professionals by the two categories of respondents.

Discussion of findings

The findings of the investigation into factors confronting quantity surveying practice in Nigeria reported in this paper are reminiscent of some prominent views and related works in other parts of the world. The observation that poor marketing of the profession is the most serious factor confronting the profession in Nigeria corroborates the stance that professional quantity surveyors are the least popular (Ajanlekoko, 2004) and the least valued and recognized (Onashile, 2005) within the Nigerian construction industry. Opposition from

Table VI. Test of agreement between the categories of respondents

			Professionals	Probationers
Spearman's rho	Professionals	Correlation coefficient	1.000	0.668**
		Sig. (2-tailed)	.	0.003
		N	17	17
	Probationers	Correlation Coefficient	0.668**	1.000
		Sig. (2-tailed)	0.003	.
		N	17	17

Note: ** Correlation is significant at the 0.01 level

engineers who are not comfortable with the inclusion of quantity surveyors on engineering project design teams is the second most serious factor. This finding agrees with Balogun's (2013) view that the practice environment of the Nigerian quantity surveying profession is characterized by hostile competition and Mogbo's (2002) submission that Nigerian engineers do not want quantity surveyors on engineering projects. This finding also agrees with the results of Chong *et al.* (2012), which identified poor marketing as a barrier to the quantity surveying profession in Malaysia.

The findings that professional members of the NIQS ranked "conservatism", the "don't rock the boat" mentality of some professionals; people within the profession unwilling on change, to innovate, the third most serious factor resonates with Mbachu and Frei (2011), who found that lack of flexibility and versatility of service are sources of threats for the Australasian quantity surveying profession. Widespread corruption is seen as the fourth most serious confrontational factor in Nigeria. This agrees with Leeuw (2005) and Ofori and Toor (2012), who include corruption as one of the challenges of the profession in Singapore.

Contrary to expectations and the fears expressed in the past (Esenwa, 2000; Smith, 2004), this study shows that deskilling of the profession by computer-based technology is not perceived as a militating factor to the quantity surveying practice in Nigeria. This factor is ranked the least. This study also shows that the name tag "quantity surveyor" is not seen as a factor militating against the profession. The same is true of declining demand for bill of quantities; it is ranked "8" with 39.3 per cent severity index.

Conclusions and recommendation

Using a pre-tested, structured questionnaire that was self-administered to a non-probabilistic sample of quantity surveyors in Lagos, Port-Harcourt and Enugu, this study sought to identify factors or issues perceived by quantity surveyor to be confronting the profession. The quality of responses received was high and the response rate adequate. Pooling the responses together and treating it as a single population of respondent generated top five factors: poor marketing of the profession ranked, opposition from engineers ranked, dominance of multinational companies ranked, widespread corruption and professional incompetence of some quantity surveyors. The first objective is therefore met. The second objective of this study was to determine the extent to which quantity surveyors agree on the factors confronting the profession. To achieve this objective, the ranking of the factors confronting the profession by the two categories of quantity surveyors – professional members and probationers – was obtained. The ranks were correlated using Spearman's rank correlation, and the results of the statistical test conducted showed that there is no significant difference in the ranking by the two categories of respondents. This largely confirms the magnitude of the significance of the identified factors to the profession in the country.

This study has clearly achieved its objectives but not without limitations. This work is silent about what quantity surveyors are doing to tackle the factors confronting the profession. A future paper will present empirical evidence with regards to strategies being deployed by Nigerian quantity surveyors to combat these factors. This work has implications for academics and professionals within the quantity surveying profession in Nigeria as well as developing countries and other nations that share similar attributes with Nigeria. The NIQS should begin to put a robust strategic plan together to address the top factors confronting the profession as revealed in this study. There is limited documented evidence of action along this line of reasoning yet. As the practice of the profession in Nigeria is very similar to several other emerging economies, this study provides an insight into issues that require attention with respect to the quantity surveying profession in these

nations. The study also sets the stage for a bigger research and provokes thoughts in practice and academia with respect to the advancement of the profession in an emerging economy.

Future research direction

Other researchers could pick any of the issues and take an in-depth look at their impact on the Nigerian quantity surveying profession.

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