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Benchmarking challenges in facilities management in Nigeria

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Abstract

Purpose – The paper aims to examine benchmarking challenges among Nigerian Facilities management (FM) practitioners.

Design/methodology/approach – Data collection was through self-administered questionnaires sent to 120 FM organizations in Lagos metropolis, 50 in Abuja and 15 in Port Harcourt. Also, interviews were conducted on six facilities managers to ascertain challenges faced by organizations that use best practice benchmarking. The survey achieved a total response rate of 74 per cent in Lagos, 66 per cent in Abuja and 93 per cent in Port Harcourt, respectively. Grand mean scores and relative importance index were used to ascertain ranking of the challenges. One-way analysis of variance and t-test were used to establish whether organizations' characteristics bring about significant differences in the types of benchmarking challenges encountered.

Findings – Overall, the top four challenges of benchmarking were "unwillingness of employees to change", "inadequate understanding of the exercise of benchmarking", "inadequate access to data from other organizations" and "poor execution of-the benchmarking exercise". Also, FM organization location result in a significant difference in benchmarking challenges.

Practical implications – The implication of the study is that it will assist in identifying impediments to benchmarking and barriers faced during benchmarking and, thus, enable recommendations to be made to minimize such challenges.

Originality/value – There are limited empirical studies on the problems of benchmarking in developing countries.

Keywords Nigeria, Developing countries, Empirical studies, Facilities management, Benchmarking, Minimizing challenges

Paper type Research paper

Introduction

Benchmarking process in Facilities management (FM) serves the purpose of measuring against outstanding contemporaries to achieve improved performance (Ho *et al.*, 2000). It is also a strategic planning tool used to support management in the decision-making process (Madritsch, 2009) for outsourcing (Williams, 2000; Moss *et al.*, 2007) as well as standardization of practices. Benchmarking according to Anand and Kodali (2008) involves continuous analysis and comparison of strategies, functions, processes, products or services, performances, etc. within or between best-in-class organizations. It entails obtaining information through appropriate data collection method, with the intention of assessing an organization's current standards, thereby carrying out self-improvement by implementing changes to scale or exceed those standards.

The practice of benchmarking in developed countries has grown significantly and has been applied to various fields, including higher education (Fram and Camp, 1995), manufacturing (Voss *et al.*, 1994), portfolio performance (Grinblatt and Titman, 1993) and human resources (Martinsons, 1994). Application of FM benchmarking in Nigeria could serve the purposes of helping companies to have an external focus and find industry best practices by constantly comparing their own performance against that of others.

According to Bergin (2000), there are many barriers that prevent organizations from undertaking benchmarking, especially small organizations. Also, the implementation of a benchmarking exercise is very important for its success. Benchmarking exercises involve significant organizational changes and so are usually difficult to implement (Zairi and Ahmed, 1999). Companies often derive value from simply going through the implementation steps; therefore, it is important that the implementation process itself is well conducted (Zairi and Ahmed, 1999). There is also a need to identify and discuss the barriers that typically arise during benchmarking for its implementation (Camp, 1989).

The issue of benchmarking in FM has been a subject of discussion by both academics and practitioners for over 15 years mainly in the UK, USA, Europe, Asia and Australia (Varcoe, 1996; Massheder and Finch, 1998a; Massheder and Finch, 1998b; Ho *et al.*, 2000; Stoy, 2007; Lai and Yik, 2008; Madritsch, 2009; Roka-Madarasz, 2010; Bailey and Mc Lennan, 2010; Wong *et al.*, 2013). However, studies in benchmarking literature that focused on benchmarking challenges are scarce, while the available ones according to Amaral and Sousa (2009) are scattered and in superficial manner.

Although FM was introduced into Nigeria about 30 years ago by multinational oil and gas companies, the practice according to Akintunde (2009) is still being threatened by a lack of benchmark standards and data, misconceptions about the practice of FM, as well as lack of transparency in processing of contracts. Also, there is limited evidence of empirical studies on the benchmarking challenges in FM in developing countries such as Nigeria. Hence, this study filled an essential gap in knowledge in this respect. Furthermore, while Amaral and Sousa's (2009) study which is an existing study on benchmarking barriers focused on internal benchmarking, for the purpose of better generalization, this study is not directed towards a particular type of benchmarking.

The research question for the study is:

[…] what are the benchmarking challenges in FM in Nigeria while the test of hypothesis is to determine whether FM organization characteristics result in a significant difference in the types of benchmarking challenges.

Literature review
Categories of benchmarking challenges
According to Amaral and Sousa (2009), benchmarking barriers needs to be categorized so as to provide managers with a check list of potential barriers for which they need to be prepared. Also, it provides insights on what may be the barriers most likely to occur in a benchmarking exercise. The distinction between different types of barriers is important because overcoming different barriers may require different strategies with diverse degrees of difficulty. Although the focus of Amaral and Sousa (2009) was on internal benchmarking and barriers faced during benchmarking implementation. This

study is not restricted to any type of benchmarking; also, challenges which prevent benchmarking were captured.

Three categories of benchmarking challenges identified by Amaral and Sousa (2009) from an extensive review of literature which also recur in this study are as follows.

Organizational barriers. These are broadly from people, culture and context. People barriers are from resistance and unwillingness to change, employee reluctance to cooperate and get involved when change is needed because of stress when required to move out of comfort zones, the challenge of learning new skills or the fear of exclusion. Cultural barriers include when organization does not favour learning practices, such as systematic problem-solving, experimentation, learning from past experiences, learning from others and transferring knowledge, throughout the organization. This may be due to fear of exposing organizational weaknesses, such as lack of training and development or employees not being used to seeking and sharing knowledge.

Also, poor communication practices due to lack of opportunity and incentives for the employees to communicate with each other, within and across functions and among all levels of the organizational structure, both in a formal and informal manner are cultural problems. The third barrier is context, a result of lack of a comprehensive quality culture from poor understanding, involvement or commitment of employees in providing a product or service that fulfils customer's needs.

Benchmarking project management challenges. These broadly can be from poor project planning and implementation, project leadership problems and business pressures. Project planning and implementation barrier is from insufficient/inadequate employee skills and understanding of the organizational processes, lack of adequate and sufficient employee skills to implement benchmarking, aggravated by poor understanding of the organization's products and services and their linkage to the rest of the organization. This may be due to inadequate training given to the employees. Poor project planning barrier may result from failure to define clearly expectations, goals, tasks, resources and deadlines which requires the investment of time and effort. It could also be from inadequate benchmarking topic definition, unexpected problems/changes from unforeseen major problems or last minute technical and schedule changes during implementation.

Project leadership barriers are from poor senior management support to benchmarking implementers, lack of involvement/commitment to mobilize and engage concerned employees and managers in benchmarking. Also, there is poor project coordination from failure of management to effectively organize the implementation activities and cope with uncertainty and dynamic expectations that emerge in the benchmarking process.

Business pressures barriers are from resource constraints or unavailability or insufficiency of time, money and/or expertise required to carry out benchmarking. There are also business pressures from competing activities, other priorities or uncontrollable factors, resulting from either the internal or external business environment. This leads to the need to re-assess the benchmarking process whether it is compatible with business changes.

Benchmarking data barriers. This ranges from difficulty to access/compare data to barriers in obtaining and using benchmarking data. This is due to confidentiality issues, incomparable data or uncooperative partners.

Benchmarking challenges globally
Many authors as shown in Table I have discussed benchmarking challenges in different parts of the world.

The limitations of the reviewed works were that some of the analysis was done using descriptive tools which focused on small sample size. Others are failure to examine benchmarking challenges for different environments and types of benchmarking and insufficient use of quantitative measures to enhance the rigor of the analysis. Also, there were limited empirical studies on benchmarking challenges in the field of FM, especially within a developing country context.

This study addresses some of these limitations in terms of methods used (inferential) and captured benchmarking challenges for more than one type of benchmarking. It also examined benchmarking challenges encountered by those who benchmark and those who do not. The survey had a high response rate of from the sample size.

Theoretical framework. Also, the underpinning theory for this study is Xerox presented by Camp (1989). The uniqueness of Xerox's approach is that it moves from "competitive benchmarking", which was used by Xerox to examine manufacturing costs through product comparisons, to "non-competitive benchmarking". Organizations need to do more than only comparison with competitors but develop superior practices through learning from best practices. The model encompasses a ten-step methodology (Mann, 2015). Xerox model forms the basis for the empirical test conducted in this study to help Nigerian FM practitioners develop superior practices by adapting those practices in their organizations. The model revolves around the planning, analysis, integration and action steps of benchmarking. According to Ribeiro and Cabral (2003) in St-Pierre and Delisle (2006), these four steps summarily entail:

(1) planning, i.e. decide what will be part of the benchmarking exercise and who will contribute to it;

(2) comparison through information gathering;

(3) analysis of the gaps between the organization and its partner(s), on an individual or collective basis; and

(4) adoption or implementation of changes in the organization to straighten out the situation, if need be.

Benchmarking challenges should be taken care of at all the four stages of the benchmarking process.

The Xerox benchmarking process model has been highly cited and quoted in literature. Hence, it is assumed that it is the most commonly used models by practitioners. Further, the Xerox model has been used for quite a long time without any modifications. Hence, this model could be improved and evolving best practice can be incorporated within this model (Anand and Kodali, 2008). Other models for implementing benchmarking which could be used are that of the European Foundation for Quality Management (EFQM), that of Bhutta and Huq (1999), Zairi and Baidoun (2003), Marwa and Zairi (2008) and others, but they are too process-oriented and costly to implement. Furthermore, the amount of effort and investment required for participating is consequential. The models are hardly used by small businesses and non-multinationals and focused on countries with developed economies.

Table I.
Summary of some empirical studies on benchmarking challenges

Authors (Year)	Field	Country	Methodology	Results	Shortcomings
Hinton et al. (2000)	Multi-sector	UK	Survey with 559 respondents from UK organizations and from follow-on questionnaires, collected between 1997 and 1999	Identified challenges include: Identification of suitable benchmarking partners; lack of comparable data; resource constraint and staff resistance Benchmarking was a relatively common tool for performance improvement in the UK. However, various factors inhibit its take-up such as, company size, subsidiary and organizational sector	Results focused on UK and benchmarking barriers were not grouped into categories
Longbottom (2000)	Multi-sector	UK	A total of 1,020 questionnaires were issued over a period of nine months, achieving a total response of 560, supplemented with interviews	Challenges include difficulties with negotiating with suitable benchmarking partner and staff reluctance to share information	Results focused on UK and benchmarking barriers were not grouped into categories
Kumar and Chandra (2001)	Manufacturing organizations	USA	Data were collected by using two types of instruments: mail and telephone surveys to 93 organizations. Analysis was with descriptive statistics	Identified lack of organizational cultural change; ineffective communication of benchmarking findings	Study is limited to the manufacturing sector. Also benchmarking challenges were not grouped
Jaques and Povey (2007)	Business Advisors	UK	Survey questionnaires were sent to 43 business advisors through internal mail	Identified challenges were: Gathering of valid data is overwhelming and time consuming, lack of relevant companies and appropriate sectors to compare with confidentiality of the data	Limitation in terms of statistical methods used and sample size

Authors	Field	Country	Methodology	Results	Shortcomings
Brah *et al.* (2000)	Manufacturing and service sectors	Singapore	A mail survey to 391 companies. Factor analysis and correlation were used to analyse data collected	Pre-analysis factors, implementation factors, and management factors	Was done in Singapore so findings may not be generally applicable in a developing county context
Magd (2008)	Multi- sector	Egypt	Empirical using mail surveys carried out on 500 organizations and 45 per cent responded	Benchmarking limitations were difficulty in finding a suitable partner, misperception of the need to benchmark, failure to link benchmarking to strategic priorities; lack of understanding of the benchmarking concept	Limited to Egypt Also, benchmarking challenges were not categorized in this paper
Jain *et al.* (2008)	Manufacturing	India	A postal survey was conducted on 500 Indian manufacturing companies. Only 97 companies participated in the survey. Subsequently, interviews with 20 managers of six manufacturing companies were undertaken	Barriers of identification of suitable benchmarking partner, confidentiality, lack of staff support and resources	Although study was also in a developing country, benchmarking barriers were not grouped

(continued)

Table I.

Table I.

Authors	Field	Country	Methodology	Results	Shortcomings
Amaral and Sousa (2009)	Manufacturing industries	Portugal	Systematically develops a categorized list of barriers to internal benchmarking based on the literature and validates and enriches them with an in-depth case study of an internal benchmarking initiative	Found: organizational barriers (people, culture and context), benchmarking project management barriers (planning and implementation, leadership and business pressures) and benchmarking data barriers (difficulty to access/compare data)	Focused only on internal benchmarking. Future studies might take these categories as a solid starting point in furthering the understanding of barriers to benchmarking. Paper excluded the perspective of non-benchmarkers
Williams et al. (2012)		UK	Through the use of peer-reviewed literature dated 2005-2010 found research on the topic that focused on benchmarking reluctance to be limited	Benchmarking challenges could be from many organizational issues. Benchmarking challenges can be categorized into four main areas of concern: soundness of benchmarking; lack of resources for benchmarking; inertia impending of new practices; and specific impacts of implementing new practices. Lack of organizational leadership support and participation is also a common theme	Pedagogical and not empirical

Research methods

The data used in the study were collected on variables of the same sample at one point in time (cross-sectional study). Findings from literature review and interviews with two facilities managers were used for the design of the self-administered questionnaire that was developed for the study. These questionnaires were validated by two facilities managers, two senior academic researchers and later through a pilot study. The questionnaire was again refined and again pre-tested. Self-administered questionnaire was the chosen instrument of study because it has been known to give higher response rates for studies in the Built Environment in Nigeria (Olaleye, 2000).

The sample frame of FM organizations in Lagos, Abuja and Port Harcourt as obtained from the International Facility Management Association (IFMA) list is 237 organizations, made up of 172 in Lagos, 50 in Abuja and 15 in Port Harcourt, respectively. The IFMA is the professional body that offers guidance and training to facilities managers in Nigeria; many of the established facilities managers are registered with this body. Questionnaires were administered on 123 FM organizations in Lagos metropolis, 44 in Abuja and 14 in Port Harcourt. A total of 91 questionnaires were retrieved in Lagos, 29 in Abuja and 13 in Port Harcourt. Hence, the survey achieved a total response rate of 74 per cent in Lagos, 66 per cent in Abuja and 93 per cent in Port Harcourt, respectively. The responding organizations in Lagos were chosen using the simple random sampling method to minimize bias, while the total population were included in the sample in Abuja and Port Harcourt due to their small numbers.

Lagos in the South West is an ideal study area because it is the business nerve centre of Nigeria, which houses several of Nigeria's large corporations that require FM services. Abuja in the North is the Nation's capital; with its premier state of infrastructure, it has ever-growing need for commercial and residential real estate. Port Harcourt in the South East is Nigeria's oil and gas business hub and ranks next to Lagos and Abuja and houses the head offices of many oil and gas companies as well as related companies. However, the outcome of our study of corporations would not necessarily apply, in absolute terms, to all corporations throughout the country. This is because the property market is highly localized in nature, and no urban area can be representative of all cities in the country, as there will be different cultural, social and institutional settings.

Previous studies (Kumar and Chandra, 2001; National policy on micro, small and medium enterprises, 2007; Anderson and Mc Adam, 2007; Huq *et al.*, 2008; Sarshar *et al.*, 2010) have attempted to delineate firms into small-, medium- and large-sized organizations. Taking a cue from these researches, this study covered large- (above 250 employees), medium- (51-250) and small-sized organizations (50 and less).

Also, interviews were conducted on six facilities managers to ascertain challenges faced by organizations that use best practice benchmarking tools.

The first section of the questionnaire centred on the research question and includes variables such as company characteristics of the respondents including size, geographical coverage, size of buildings managed, FM budget and FM training undertaken by staff of the FM department. The second section focused on benchmarking challenges. The challenges are broadly, organizational, project management and data barriers (Amaral, 2005). Details of the variables used can be

found in Table II below. The reliability of scale for the questions was tested using Cronbach's alpha method, which was found to be 0.955 (95.5 per cent). The result suggested that the instrument of evaluation (questionnaire) is highly reliable and that there is an internal consistency of the items included in it. This is judging from the fact that the reliability figure obtained is substantially higher than the 0.7 value (95.5 per cent > 70 per cent) required in statistical analysis (Field, 2009). Questions asked in the interview guide revolved around two basic questions, i.e. "What are the challenges encountered during benchmarking?" and "How have you been able to surmount these challenges?".

The data were analysed with the aid of Statistical Package for Social Science. Analysis of data was done using grand mean, relative importance index (RII), used to determine the severity of the problems (Lam *et al.*, 2007) and one-way analysis of variance (ANOVA), used to test significant differences for more than two groups (Garrigos-Simon *et al.*, 2005). *T*-test was used to compare the means of two samples, to determine whether there is significant difference between them (Field, 2009).

Overall benchmarking challenges	RII	Rank
Unwillingness of employees to change (OP)	0.629	1st
Inadequate understanding (PP)	0.589	2nd
data from other organizations (D)	0.586	3rd
Poor execution (PP)	0.582	4th
Poor planning (PP)	0.579	5th
Ignorance of employees (OP)	0.574	6th
Lack of confidence in new initiatives (OCU)	0.564	7th
Cumbersome for smaller companies (OCO)	0.564	7th
Resource constraint (PB)	0.558	8th
Data accuracy and validity (D)	0.558	8th
unexpected problems (PP)	0.553	9th
Identifying comparable data (D)	0.550	10th
High consultant costs	0.544	11th
Lack of skills and expertise of staff (OP)	0.538	12th
Lack of performance measurement instruments (PP)	0.535	13th
Hierarchy in the organization (OCU)	0.529	14th
Identifying suitable partners (PP)	0.519	15th
Senior management support (PL)	0.525	15th
Poor co-ordination of the exercise (PL)	0.525	15th
Ability to analyse facilities process (PP)	0.516	16th
Size of sample data (D)	0.513	17th
Data within the organization (D)	0.510	18th
Information technology structure (PP)	0.502	19th
Lack of quality management programme (OCO)	0.5	20th
Lack of expertise to implement actions (OCO)	0.5	20th
Not a learning organization (OP)	0.492	21st
Lack of communication practices (OCU)	0.492	21st
Lack of team work (OCO)	0.484	22nd
Lack of support from employees' trade union (OCU)	0.459	23rd

Table II.
Benchmarking
challenges

Presentation and discussion of results

Characteristics of the respondents' organizations
The study found that 41 (31.3 per cent) of the companies surveyed were small companies, which are companies that are 50 and under in terms of employee size. Another 37 (28.3 per cent) were medium sized (51-250), while majority 53 (40.4 per cent) were large companies (above 250 employees). It was indicated that 49.2 per cent have wider coverage beyond Nigeria in terms of location. Most of the organizations surveyed have a floor space of between 100,000 square metres and 250,000 square metres 44 (37 per cent), this is followed by a floor space of less than 100,000 square metres 34 (28.6 per cent), 16 (15 per cent) have a floor space of between 250,000 square metres and 500,000 square metres, while 13 (10.9 per cent) have between 500,001 to 750,000 square meters. Only 12 (10.1 per cent) had a space of 1,000,000 and above square metres. Fifteen (15.7 per cent) of the respondents had only Facility management professional qualification, 17 (17.9 per cent) possessed a first degree in FM, 12 (12.6 per cent) had only certified facility manager qualification, while 5 (5.3 per cent) possessed other training in FM.

An overview of benchmarking in FM

Knowledge of benchmarking
The results of an inquiry into the views of facilities managers on prior knowledge of benchmarking is shown in Figure 1.

Figure 1 indicates that majority of the respondents had knowledge of benchmarking (84 per cent), 6 per cent said no, while another 10 per cent were unsure.

Use of benchmarking
The number of FM organizations that use benchmarking as shown in Figure 2 revealed that majority (52 per cent) do not conduct benchmarking, while a sizeable number (48 per cent) said they conduct benchmarking.
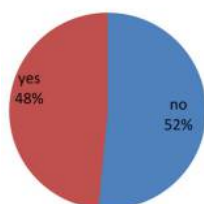

Figure 1.
Prior knowledge of
benchmarking

Figure 2.
Use of benchmarking

Previous studies from the UK and Asia showed that the use of benchmarking was low in FM (Massheder and Finch, 1998a, 1998b; Ho *et al.*, 2000; Loosemore and Hsin, 2001). Bailey and McLennan (2010), however, found in a later study that the practice of benchmarking was fair. The extent of best practice benchmarking was excluded here. Also, an extract from the larger study on benchmarking practice in FM in Nigeria showed that the level of best practice benchmarking in FM is low (Adewunmi *et al.*, 2013).

Relative importance of benchmarking challenges
To examine the views of facilities managers on benchmarking challenges, the severity of 29 variables derived from literature and pre-survey interviews with two facilities managers were rated on a five-point ordinal scale (5 = serious problem, 4 = problem, 3 = moderate problem, 2 = little problem, 1 = no problem at all). The RII of each variable was obtained, as presented in Table II. The questions were grouped according to challenges that come from the organization, and such challenges include challenges from people (OP), culture (OCU) and context of the organization (OCO). Second is benchmarking project management challenges which have to do with planning and implementation (PP), project leadership (PL) as well as business pressures (PB). Third is availability of data (D). In Table II, all the challenges were presented together without separation into groups. However, to distinguish between them, the abbreviations of each of the seven categories, i.e. OCO, OP, OCU, PB, PP, PL and D were written beside each variable.

From Table II above, overall most severe benchmarking challenges include: resistance of employees to change (RII = 0.629), inadequate understanding of the exercise (0.589), difficulty to access and compare data from other organizations (RII = 0.586), poor execution (RII = 0.582), poor planning (RII = 0.579), ignorance of employees (RII = 0.574), lack of confidence in new initiatives (RII = 0.564), cumbersome for small companies (RII = 0.564), resource constraint (RII = 0.558) and data accuracy and validity (RII = 0.558), ranking first to eighth in that order. This indicates that the most severe challenges were more from the "planning and implementation of the benchmarking exercise" category with four of the listed challenges (inadequate understanding of the exercise, poor execution, poor planning, and poor execution and resource constraint) from that category. These challenges have also been identified in previous researches of Zairi and Ahmed (1999), Bhutta and Huq (1999), Brah *et al.* (2000), Hinton *et al.* (2000), Jaques and Povey (2007), Jain *et al.* (2008) and Magd (2008).

Some scholars have criticized the lack of involvement of employees in the benchmarking process (Bhutta and Huq, 1999; Adebanjo *et al.*, 2010). Employee problems are usually caused by the feeling of inadequacy that their corrupt practices will be exposed or the feeling that if benchmarking is introduced, it may result in the loss of the workforce. This was also earlier mentioned in the UK studies of Holloway *et al.* (1999) and Hinton *et al.* (2000). Planning and implementation problems could be from the embryonic state of the concept of benchmarking, and this is also shown in section on the frequency of use of benchmarking. Also, the interviews confirmed that there are hardly any training courses on benchmarking, and this can make its implementation difficult.

Challenges of data comparability and lack of resources (time and money) have been earlier reported by Hinton *et al.* (2000) and Magd (2008). There is dearth of data, especially data for comparison purposes; even when the data are available, there is lack

of trust in the validity of the data. Data barrier is not only typical in firms in developing countries but also found in the developed world (Elmuti and Kathawala, 1997; Kouzmin *et al.*, 1999; Hinton *et al.*, 2000; Brah *et al.*, 2000; Fry *et al.*, 2005; Jaques and Povey, 2007; Adebanjo *et al.*, 2010). People tend not to want to release information because they believe they are in competition and that if information is released, it could result in loss of their clientele. Also, when the data are available, it is not in measurable form to aid comparison. The problem of confidentiality is not really a problem in advanced countries like UK (Hinton *et al.*, 2000), but is a problem is developing countries, as observed by Jain *et al.* (2008) in India. This may be because in developed countries, experienced benchmarkers are aware of the need to address this formally at an early stage, particularly if they are operating within existing codes of practice. Project leadership comes from ability of facilities managers to gain top management support, as a sizeable number of them find it difficult to make constructive business case agitations in playing their role. Also, benchmarking requires funds to execute and many organizations especially the small ones are constrained with regards to this.

The least severe challenges were lack of support from team trade union (RII = 0.459), lack of team work (RII = 0.484), lack of communication practices (RII =0.492), organization is not a learning organization (0.492), lack of expertise to implement actions (RII = 0.5), lack of quality management programme (RII = 0.5), IT structure (RII = 0.502), data within the organization (RII = 0.510), size of sample data (RII = 0.513) and ability to analyse facilities process (RII = 0.516) ranked from last, to tenth-before-the-last, in that order.

This section provides information on challenges that are encountered by those who are engaged in benchmarking and those that are not. This is because it is expected that the impacting challenges in both cases would be different and so would be the method of dealing with these challenges.

Those that are benchmarking already are mostly challenged in the following areas:
Unwillingness of employees to change, inadequate understanding of the benchmarking exercise (RII = 0.6813), barriers from data which can be obtained from other organizations (RII = 0.6531), poor execution (RII = 0.6281), ignorance of employees about the prospects of the project (0.0.625) as well as poor planning of the exercise (0.6219), data accuracy (0.6094), smaller companies that find the exercise overwhelming (0.6063), use of comparable data (0.6), employees lack of confidence in new initiatives (0.5719) and lack of performance measurement instrument (0.5719), in that order. The most severe challenges faced by benchmarkers reflect a mix of categories of challenges. They include organization (people, culture and context), data and planning and implementation challenges. This implies that when dealing with challenges faced by those that are involved in benchmarking, short-term and long-term efforts as well as a diversified approach should be used for effective benchmarking. Examples of approaches to be considered should be provision of training to solve people related problems, while communication systems are needed to help deal with the culture of the organization (Amaral and Sousa, 2009).

Table II shows that challenges preventing those that are not benchmarking from becoming involved in this exercise is of a wider range than that of those that are already practising benchmarking. These barriers were from people, culture and context of the organization, project management barriers as well as data challenges. Some of the most severe ones were unwillingness of employees to change (RII = 0.5559), fear of poor

execution of the project (RII = 0.5324), inadequate understanding of the exercise (0.5265), fear of poor planning of the project (0.5235), data from other organizations (0.5176) and lack of expertise to implement actions (0.5147). When addressing challenges of benchmarking with regards to those not benchmarking, a wider range of severe problems are encountered. In addition both short-term and long-term approaches to solving challenges faced by those not benchmarking are needed.

Details of the least severe challenges faced by those benchmarking and not benchmarking are found in Table III.

In addition, grand mean scores were calculated for both users and non-users of benchmarking. Non-practicing organizations are challenged greatly (mean = 3.07, SD = 0.861) than those that are benchmarking (mean = 2.83, SD = 0.96).

Severity of the categories of benchmarking challenges found across organization geographical coverage and sizes

Challenges of benchmarking can broadly be classified into "the organization", "project management" and "lack of benchmark data" perspectives. As indicated in Table IV, the severity of the challenges originating from the organization differs amongst the three different types of organizations.

The geographical coverage of benchmarking appears to be influenced by the company's degree of internationalization in business activity (Rohlfer, 2007). It was on this basis that a distinction was made between local and international companies. On the basis of geographical coverage, challenges of benchmarking were higher in local organizations overall and for the three categories of challenges: overall (mean = 3.20, SD = 0.82), organizational (mean = 3.11, SD = 0.84), project management (mean = 3.37, SD = 0.91) and data (mean = 3.14, SD = 1.0) than in International organizations.

Second, Table IV shows that both local organizations face greatest challenge with regards to project management (mean = 3.37, SD = 0.92) followed by data barriers and, third, organization barriers. On the other hand, international organizations are challenged more with regards to data barriers (mean = 3.01, SD = 1.14), followed by organization challenges and, last, project management barrier. This shows that International organizations are better competent to carry out benchmarking, perhaps because benchmarking itself is a borrowed concept brought in from globalization from western countries. According to Chukwuemeka *et al.* (2011), multinationals contribute resources that are generally not available or insufficiently available in the host countries, such as capital, technology, managerial and marketing skills. However, they have not been able to use these resources to solve the problems faced by host countries. Rohlfer (2007) in a study on British and German multinational firms found that for benchmarking, multinationals gather information internally on a cross-national basis for comparison and centrally promote best practices, they require employer and benchmarking associations data for benchmarking. In Nigeria, there are no established industry data and that could be a reason why multinationals are mainly constrained with regard to this.

Table V further shows that the ten most severe challenges faced by both local and international companies are similar. Some of the challenges faced by both include: unwillingness of employees to change, poor planning and execution, data, unexpected problems faced during implementation of benchmarking and ignorance of employees about usefulness of the project. The fact that both types of organizations share similar

Benchmarking challenges/ benchmarkers	RII	Rank	Benchmarking challenges/ non-benchmarkers	RII	Rank
Unwillingness of employees to change (OP)	0.6813	1st	Unwillingness of employees to change (OP)	0.5559	1st
Inadequate understanding (PP)	0.6531	2nd	Resource constraint (PB)	0.5412	2nd
Data from other organizations (D)	0.6531	2nd	Fear of Poor execution (PP)	0.5324	3rd
Poor execution (PP)	0.6281	3rd	Hierarchy in the organization (OCU)	0.5324	3rd
Ignorance of employees (OP)	0.625	4th	Lack of skills and expertise of staff (OP)	0.5294	4th
Poor planning (PP)	0.6219	5th	Cumbersome for smaller companies (OCO)	0.5294	4th
Data accuracy and validity (D)	0.6094	6th	Inadequate understanding (PP)	0.5265	5th
Cumbersome for smaller companies (OCO)	0.6063	7th	High consultant costs	0.5235	6th
Identifying comparable data (D)	0.6	8th	Fear of Poor planning (PP)	0.5235	6th
Unexpected problems (PP)	0.5844	9th	Support from employees trade union (OCU)	0.5235	6th
lack of confidence in new initiatives (OCU)	0.5719	10th	Fear of unexpected problems (PP)	0.5206	7th
Lack of performance measurement instruments (PP)	0.5719	10th	Data from other organizations (D)	0.5176	8th
Resource constraint (PB)	0.5688	11th	Lack of confidence in new initiatives (OCU)	0.5176	8th
High consultant costs	0.5625	12th	Fear of Identifying suitable partners (PP)	0.5147	9th
Senior management support (PL)	0.5594	13th	Lack of expertise to implement actions (OCO)	0.5147	9th
Poor co-ordination of the exercise (PL)	0.5531	14th	Lack of quality management programme (OCO)	0.5147	9th
Size of sample data (D)	0.5531	14th	Fear of Data accuracy and validity (D)	0.5029	10th
Data within the organization (D)	0.5438	15th	Identifying comparable data (D)	0.4971	11th
Ability to analyse facilities process (PP)	0.5406	16th	Lack of communication practices (OCU)	0.4971	11th
Lack of skills and expertise of staff (OP)	0.5375	17th	Lack of performance measurement instruments (PP)	0.4941	12th
Hierarchy in the organization (OCU)	0.5281	18th	Fear of Poor co-ordination of the exercise (PL)	0.4941	12th
Identifying suitable partners (PP)	0.5281	19th	Senior management support (PL)	0.4882	13th
Lack of expertise to implement actions (OCO)	0.5281	19th	Ability to analyse facilities process (PP)	0.4882	13th
Information technology structure (PP)	0.525	20th	Ignorance of employees (OP)	0.4853	14th
Lack of team work (OCO)	0.5156	21st	Lack of team work (OCO)	0.4824	15th
Lack of communication practices (OCU)	0.5125	22nd	Information technology structure (PP)	0.4765	16th
not a learning organization (OP)	0.5094	23rd	Data within the organization (D)	0.4706	17th
Lack of quality management programme (OCO)	0.5031	24th	Size of sample data (D)	0.4675	18th
Support from employees trade union (OCU)	0.4281	25th	Not a learning organization (OP)	0.4471	19th

Table III.
Benchmarking challenges of benchmarkers and non-benchmarkers

Challenges of benchmarking	N	Mean	SD	Size	N	Mean	SD
Those emanating from the organizations							
Nigeria only	56	3.1083	0.84255	Small	30	3.2249	0.72909
Intercontinental	60	2.9545	0.88291	Medium	14	3.4589	0.79528
				Large	75	2.9022	0.88474
				Total	119	3.0490	0.85599
Those emanating from project management							
Nigeria only	55	3.3670	0.91311	Small	31	3.3726	0.74184
Intercontinental	60	2.9085	0.96703	Medium	14	3.4801	1.21065
				Large	73	2.9773	0.96485
				Total	118	3.1408	0.95996
Those emanating from lack of benchmarking data							
Nigeria only	54	3.1463	0.99900	Small	30	3.0117	0.93989
Intercontinental	60	3.0083	1.13899	Medium	14	3.4286	1.22250
				Large	73	3.0692	1.04737
				Total	117	3.0974	1.04157
Aggregate of all benchmarking challenges							
Nigeria only	56	3.1995	0.81692	Small	31	3.2042	0.67969
Intercontinental	61	2.9714	0.88747	Medium	14	3.4558	1.02645
				Large	75	2.9892	0.85942
				Total	120	3.0992	0.84636

Table IV.
Grand mean results for challenges of benchmarking by geographical coverage and size

challenges might be linked to existing local conditions that are not easy to change (Rohlfer, 2007). Local companies have peculiar severe problems with regards to skills and expertise of staff and employees reluctance to embrace benchmarking. This affirms the need for training and advocacy for employees and owners of local firms. Peculiar problems faced by international firms are linked to data and the culture of the organization. Though these firms can easily transfer benchmarking competence from their global network, access to local data and benchmarks is often a challenge, as confirmed by the interviews. Many of them rely on use of international benchmarks for benchmarking.

Small and Medium organizations and large business organizations are different in terms of structure, policymaking procedures and utilization of resources as a result the extent that the application of large business concepts such as benchmarking directly to small- and medium-sized enterprises (SMEs) may not be appropriate (Deros *et al.*, 2006).

On the basis of size, challenges of benchmarking were highest in medium-sized organizations for the three categories of challenges: organizational (mean = 3.46, SD = 0.80), project management (mean = 3.48, SD = 1.21) and data (mean = 3.43, SD = 1.22). This was followed by small organizations for organizational (mean = 3.23, SD = 0.73) and project management problems (mean = 3.37, SD = 0.74). Large companies had lowest ranked challenges for organizational (mean = 2.9, SD = 0.88) and project management challenges (mean = 2.98, SD = 0.96). Large organizations had the least ranked data barriers (mean = 3.01, SD = 0.94), while large organizations ranked second (mean = 3.06, SD = 1.04).

Benchmarking challenges/local	RII	Rank	Benchmarking challenges/international	RII	Rank
Unwillingness of employees to change (OP)	0.5846	1st	Unwillingness of employees to change (OP)	0.6286	1st
Poor execution (PP)	0.5846	1st	Data from other organizations (D)	0.5905	2nd
Inadequate understanding (PP)	0.5785	2nd	Identifying comparable data (D)	0.5905	2nd
Poor planning (PP)	0.5785	2nd	Ignorance of employees (OP)	0.5746	3rd
Data from other organizations (D)	0.5754	3rd	Data accuracy and validity (D)	0.5746	3rd
Cumbersome for smaller companies (OCO)	0.5508	4th	Unexpected problems (PP)	0.5683	4th
Resource constraint (PB)	0.5508	4th	Inadequate understanding (PP)	0.5662	5th
High consultant costs	0.5477	5th	Cumbersome for smaller companies (OCO)	0.5662	5th
Lack of skills and expertise of staff (OP)	0.5477	5th	Poor execution (PP)	0.5651	6th
Lack of performance measurement instruments (PP)	0.5385	6th	Poor planning (PP)	0.5492	7th
Data accuracy and validity (D)	0.5323	7th	Lack of confidence in new initiatives (OCU)	0.5492	7th
Poor co-ordination of the exercise (PL)	0.5292	8th	Resource constraint (PB)	0.5460	8th
Unexpected problems (PP)	0.5231	9th	Hierarchy in the organization (OCU)	0.5460	8th
Lack of confidence in new initiatives (OCU)	0.5231	9th	Size of sample data (D)	0.5429	9th
Lack of skills to implement actions (OCO)	0.5231	9th	High consultant costs	0.5333	10th
Ignorance of employees (OP)	0.52	10th	Identifying suitable partners (PP)	0.5302	11th
Senior management support (PL)	0.5169	11th	Lack of performance measurement instruments (PP)	0.5238	12th
Lack of quality management programme (OCO)	0.5108	12th	Data within the organization (D)	0.5238	12th
Identifying comparable data (D)	0.5108	12th	Lack of communication practices (OCU)	0.5238	12th
Hierarchy in the organization (OCU)	0.5046	13th	Ability to analyse facilities process (PP)	0.5206	13th
Identifying suitable partners (PP)	0.5046	13th	Lack of team work (OCO)	0.5175	14th
Ability to analyse facilities process (PP)	0.5015	14th	Poor co-ordination of the exercise (PL)	0.5048	15th
Information technology structure (PP)	0.5015	14th	Lack of skills and expertise of staff (OP)	0.5048	15th
Data within the organization (D)	0.4862	15th	Not a learning organization (OP)	0.5048	15th
Lack of team work (OCO)	0.4831	16th	Lack of expertise to implement actions (OCO)	0.5016	16th
Lack of communication practices (OCU)	0.48	17th	Lack of quality management programme (OCO)	0.4952	17th
Size of sample data (D)	0.4738	18th	Support from employees trade union (OCU)	0.4888	18th
Support from employees trade union (OCU)	0.4646	19th	Senior management support (PL)	0.4888	18th
Not a learning organization (OP)	0.4369	20th	Information technology structure (PP)	0.4857	19th

Table V.
Benchmarking
challenges of local
and international
organizations

Overall, benchmarking problems were highest in medium companies (mean = 3.46, SD = 1.02), then small size companies (mean = 3. 20, SD = 0.68) and lastly large companies (mean = 2.99, SD = 0.86). This can be because larger organizations have access to resources needed for benchmarking and, thus, may face lesser problems when trying to benchmark. In a similar vein, a study by Panwar *et al.* (2013) in India by comparing mean scores of both small and medium enterprises and large companies showed that challenges of benchmarking are more severe for SMEs because large companies have a clear and better understanding of benchmarking concepts. Also, Bergin (2000), St-Pierre and Delisle (2006), Cassell *et al.* (2001) and Zeinalnezhad *et al.* (2014) found that smaller organizations are more constrained than larger organizations with regards to the conduct of benchmarking. Also, managers in SMEs often do not have the required strategic and global view of their enterprise to conduct a benchmarking exercise when compared with large organizations (Julien, 1998 cited in St-Pierre and Delisle, 2006). According to Monkhouse (1995), SMEs are usually too busy that they are usually not aware of the need for and the potential benefits of benchmarking and, thus, consider it to be of little use.

Second, Table IV shows that both small- and medium-sized organizations face greater challenge in project management of benchmarking exercise, followed by barriers from the organization and third data problems. This could also be that SMEs have not gained the competencies needed to carry out a benchmarking exercise. Therefore, they need to be trained with regards to this especially with regards to using their limited resources to do this. Larger companies had severe constraints with regards to data. This was followed by project management and last organization barriers. Larger companies are better equipped to carry out benchmarking because they have resources and competencies; however, obtaining comparable data for benchmarking has been a challenge to execute and implement benchmarking. An industry-wide approach should be considered to improve the pool of data needed for the exercise.

Reponses in Table VI further shows that small as well as medium-sized organisations faced a wider range of severe challenges when compared with large organizations (most of the listed challenges fell in the top ten).

Table VI shows that both small companies and medium companies were most severely challenged with regard to inadequate understanding of the exercise, data from other organizations and poor planning of the exercise. Small organizations are particularly challenged in terms of poor execution of the exercise (RII = 0.5171), resource constraint (0.4927), small companies find it overwhelming (0.4780) and they lack senior management support (0.4732). Small businesses tend to be poor strategic planners and rarely review their business. Also, they are limited in their practice of benchmarking and find it too theoretical and time consuming. Lack of understanding about how to go about benchmarking is also a problem because there are many that feel the establishment of standards is important, but is constrained by how to improve standards. They can also be protective about their internal operations and innovations and, hence, do not want to release data (Bergin, 2000).

Medium-sized companies had unwillingness of employees to change (0.2920), lack of confidence in new initiatives (0.2703), data validity and accuracy (0.2703) and lack of comprehensive quality management programmes (0.2649) as peculiar severe benchmarking barriers. In the UK, Monkhouse (1995) also found problems of benchmarking faced by SMEs to emanate from confidentiality of data. Managers in

Benchmarking challenges/small	RII	Rank	Benchmarking challenges/medium	RII	Rank	Benchmarking challenges/large	RII	Rank
Poor execution (PP)	0.5171	1st	Inadequate understanding (PP)	0.2920	1st	Hierarchy in the organization (OCU)	0.96	1st
Inadequate understanding (PP)	0.5024	2nd	Unwillingness of employees to change (OP)	0.2920	1st	Unwillingness of employees to change (OP)	0.9547	2nd
Data from other organizations (D)	0.5024	2nd	Poor planning (PP)	0.2865	2nd	Data from other organizations (D)	0.8792	3rd
Resource constraint (PB)	0.4927	3rd	Data from other organizations (D)	0.2757	3rd	Inadequate understanding (PP)	0.8604	4th
Cumbersome for smaller companies (OCO)	0.4780	4th	lack of confidence in new initiatives (OCU)	0.2703	4th	Poor execution (PP)	0.8566	5th
Senior management support (PL)	0.4732	5th	Data accuracy and validity (D)	0.2703	4th	Identifying comparable data (D)	0.8566	5th
Poor planning (PP)	0.4683	6th	Lack of comprehensive quality management programme (OCO)	0.2649	5th	Poor planning (PP)	0.8491	6th
Lack of skills and expertise of staff (OP)	0.4683	6th	Lack of skills and expertise of staff (OP)	0.2595	6th	Data accuracy and validity (D)	0.8491	6th
Poor co-ordination of the exercise (PL)	0.4683	6th	Identifying comparable data (D)	0.2595	6th	Cumbersome for smaller companies (OCO)	0.8415	7th
Lack of skills to implement actions (OCO)	0.4683	6th	Lack of communication practices (OCU)	0.2595	6th	Ignorance of employees (OP)	0.8415	7th
Lack of performance measurement instruments (PP)	0.4634	7th	Cumbersome for smaller companies (OCO)	0.2537	7th	Unexpected problems (PP)	0.8340	8th
Unwillingness of employees to change (OP)	0.4585	7th	High consultant cost (PP)	0.2537	7th	Resource constraint (PB)	0.8189	9th

(*continued*)

Table VI.
Benchmarking challenges of small, medium and large organizations

Table VI.

Benchmarking challenges/small	RII	Rank	Benchmarking challenges/medium	RII	Rank	Benchmarking challenges/large	RII	Rank
High consultant cost (PP)	0.4585	7th	Ability to analyse facilities process (PP)	0.2537	6th	Lack of confidence in new initiatives (OCU)	0.8	10th
Unexpected problems (PP)	0.4585	7th	Ignorance of employees (OP)	0.2537	6th	Size of sample data (D)	0.8	10th
Lack of confidence in new initiatives (OCU)	0.4585	7th	Hierarchy in the organization (OCU)	0.2486	7th	Lack of performance measurement instruments (PP)	0.7925	11th
Identifying suitable partners (PP)	0.4585	7th	Size of sample data (D)	0.2486	7th	High consultant cost (PP)	0.7849	12th
Data accuracy and validity (D)	0.4488	8th	Not a learning organization (OP)	0.2486	7th	Data within the organization (D)	0.7774	13th
Information technology structure (PP)	0.4488	8th	Poor execution (PP)	0.2486	7th	Lack of skills and expertise of staff (OP)	0.7736	14th
Lack of quality management programme (OCO)	0.4439	9th	Resource constraint (PB)	0.2432	8th	Senior management support (PL)	0.7698	15th
Ability to analyse facilities process (PP)	0.4390	10th	Unexpected problems (PP)	0.2432	8th	Identifying suitable partners (PP)	0.7660	16th
Ignorance of employees (OP)	0.4341	11th	Lack of skills to implement actions (OCO)	0.2432	8th	Poor co-ordination of the exercise (PL)	0.7660	16th
Support from employees trade union (OCU)	0.4293	12th	Data within the organization (D)	0.2432	8th	Lack of skills to implement actions (OCO)	0.7585	17th
Hierarchy in the organization (OCU)	0.4244	13th	Lack of team work (OCO)	0.2378	9th	Lack of team work (OCO)	0.7585	17th

(continued)

Benchmarking challenges/small	RII	Rank	Benchmarking challenges/medium	RII	Rank	Benchmarking challenges/large	RII	Rank
Identifying comparable data (D)	0.4244	13th	Identifying suitable partners (PP)	0.2378	9th	Lack of communication practices (OCU)	0.7585	17th
Data within the organization (D)	0.4146	14th	Lack of performance measurement instruments (PP)	0.2324	10th	not a learning organization (OP)	0.7321	18th
Lack of team work (OCO)	0.4098	15th	Information technology structure (PP)	0.2324	10th	Information technology structure (PP)	0.7321	18th
Lack of communication practices (OCU)	0.4098	15th	Poor co-ordination of the exercise (PL)	0.2270	11th	Lack of quality management programme (OCO)	0.7283	19th
Size of sample data (D)	0.3854	16th	Support from employees trade union (OCU)	0.2270	11th	Ability to analyse facilities process (PP)	0.7283	19th
Not a learning organization (OP)	0.3561	17th	Senior management support (PL)	0.2162	12th	Support from employees trade union (OCU)	0.6943	20th

Table VI.

medium companies do not have access to tools that will aid benchmarking. This implies that challenges that emanate from people problems are more pronounced in medium organizations, and this can be linked to the believe that benchmarking is a concept that can result in loss of jobs or exposure of corrupt practices of employees.

Previous studies in developed countries (Kozak and Rimmington, 1998; Monkhouse, 1995 cited in Bergin, 2000) showed that performance measurement is rarely used by small businesses. There are many barriers that prevent small businesses from undertaking benchmarking and they include lack of time, cost issues, lack of knowledge and poor strategic planning (Monkhouse, 1995 cited in Bergin, 2000).

Severity of the categories of benchmarking challenges in the three locations
As shown in Table VII, challenges from the organization were rated most highly in Abuja (mean = 3.58, SD = 0.69), then Lagos (mean = 2.96, SD = 0.86) and least highly in Port Harcourt (mean = 2.94, SD = 0.83). Project management barriers were also rated most highly in Abuja (mean = 3.76, SD = 0.81), then Port Harcourt (mean = 3.28, SD = 1.03) and least highly in Lagos (mean = 3.02, SD = 0.98). Data barriers are also highest in Abuja (mean = 3.47, SD = 0.96), then Lagos (mean = 3.04, SD = 1.05) and least in Port Harcourt (mean = 2.83, SD = 1.09). The aggregate analysis indicate that overall, benchmarking challenges are more severe in Abuja (mean = 3.59, SD = 0.61), then Port Harcourt (mean = 3.02, SD = 0.88) and least in Lagos (mean = 3.01, SD = 0.85).

Benchmarking challenges	N	Mean	SD
Challenges emanating from the organizations			
Abuja	18	3.5779	0.69111
Lagos	91	2.9601	0.86362
PHC	12	2.9361	0.83430
Average	121	3.0496	0.86028
Project management challenges			
Abuja	18	3.7580	0.53699
Lagos	89	3.0159	0.98049
PHC	13	3.2759	1.02890
Average	120	3.1554	0.96433
Benchmarking data barriers			
Abuja	17	3.4706	0.96162
Lagos	89	3.0410	1.05207
PHC	13	2.8269	1.09746
average	119	3.0790	1.05047
Aggregate of all benchmarking challenges			
Abuja	18	3.5942	0.60836
Lagos	91	3.0108	0.85853
PHC	13	3.0223	0.87999
Average	122	3.0981	0.84853
Note: PHC = Port Harcourt			

Table VII.
Benchmarking challenges by location

The findings in Adewunmi *et al.* (2013) showed that practice of benchmarking was lowest in Abuja. This could be connected to the greater severity of benchmarking challenges observed in this location. This, as shown by interviews, could also be attributable to cultural differences "Northern attitude", as professionals from the Northern part of the country are believed to have a more laid back approach to services provisions (including FM duties) when compared with those from other parts of Nigeria. Project management barriers pose the greatest category of challenge in Abuja, as shown in Table VII and possibly explain the low level of competency of facilities managers there to execute benchmarking. Cost of maintenance is higher in Lagos than in Abuja; the presence of training programmes in FM must have raised the profile of FM in the city. There is also competition arising from conglomeration of commercial activities which perhaps explain why data barriers pose the greatest category of challenge, as found in Table VII. Also, the practice of FM itself started with multinational oil and gas companies in Lagos (Odiete, 1998), so that could explain why the practice of benchmarking is more pronounced in Lagos than Abuja. In Port Harcourt, there is high presence of oil and gas multinational organizations that have policies which compel them to participate in benchmarking through their global operations and that may explain why challenges are less severe there with regards to benchmarking. Although benchmarks based on the organizations' sector were found, one rarely finds formal FM benchmarks. FM organizations here face the most severe challenge when project managing the benchmarking exercise (Adewunmi *et al.*, 2013).

Hypothesis testing

H1. FM organizations' characteristics does not result in a significant difference in the types of benchmarking challenges encountered.

H0. FM organizations' characteristics results in a significant difference in the types of benchmarking challenges encountered.

ANOVA results at 0.05 level of significance showed that organization size does not result in a significant difference in the type of benchmarking challenges encountered ($F = 2.156$, $p = 0.12$). Also, *t*-test result showed that organization geographical coverage does not result in a significant difference in the type of benchmarking challenges encountered ($p = 0.152$) at 0.05 level of significance. These results could be attributable to the embryonic stage of development of benchmarking of FM practice in the study areas. It also implies that although differences exist in the severity of benchmarking challenges encountered by the different types of organizations, the differences are not significant.

As shown in Table VIII, the results at 0.05 level of significance showed that organization's location results in a significant difference in the organizational challenges ($F = 4.204$, $p = 0.017$) and project management barriers encountered ($F = 4.84$, $p = 0.010$). On the other hand, organization's location does not result in a significant difference in data challenges ($F = 1.631$, $p = 0.200$) of benchmarking. Overall, organization location results in a significant difference in benchmarking challenges ($F = 3.776$, $p = 0.026$). Therefore, the null hypothesis was rejected. The implication of this is that the alternative hypothesis that "FM organizations' characteristics results in a significant difference in the types of benchmarking challenges encountered" is true.

Challenges of benchmarking	Sum of squares	Location df	F	Significance
Organization				
Between groups	5.907	2	4.204	0.017
Within groups	82.903	118		
Total	88.810	120		
Project management				
Between groups	8.456	2	4.840	0.010
Within groups	102.205	117		
Total	110.662	119		
Data barriers				
Between groups	3.561	2	1.631	0.200
Within groups	126.651	116		
Total	130.212	118		
Overall				
Between groups	5.198	2	3.776	0.026
Within groups	81.922	119		
Total	87.120	121		

Table VIII.
One-way ANOVA for significant difference between challenges of benchmarking based on organization location

This implies that when dealing with benchmarking challenges, practitioners should note and make adjustments for the location of the facilities. Particular emphasis should be placed on locational differences when dealing with benchmarking challenges which emanate from the organization and from project management of the benchmarking exercise. For example, when designing training programmes to solve people-related challenges, the location of the organization should be factored into the programme. Differences in location as found by interviews is as a result of differences in access to skilled personnel as well as infrastructure.

Challenges faced by users of best practice benchmarking
Six organizations from the construction, service provision, Oil and Gas and banking industry sectors (two were from medium-sized organizations and four from large organizations were interviewed). The facilities managers contacted in these companies were in the senior management cadre. They use internationally recognized benchmarking tools (IFMA questionnaire, Investment Property Databank (IPD) rates for benchmarking, FM benchmarking and German benchmarking program). These tools were useful to the interviewed organizations in the following areas: helping to make strategic plans, identifying areas of improvement, setting performance goals and making sure they were realized, industry leadership, helping to address the problems that impact the firm's business and how it will survive in the future, providing explanations for improvements that cannot obtain be made in the near future. Though useful, there is need to capture the challenges faced in the use of these tools to proffer appropriate solutions to further aid the use.

German benchmarking program. Challenge faced by this organization was access to information and employees' unwillingness to change and to comply with company set standards:

None because there is skilled expertise which if absent can be brought in through expatriates, access to information; employees just have to change because they have to comply with set standards in the company.

IFMA questionnaire. Two out of the three organizations that used this tool said there was problem with accessing information for benchmarking.

IPD rates for benchmarking. The response to the interview question (in quote below), indicate that the challenges the organization that used this tool faced were from lack of access to information as well as unwillingness of benchmarking partners to understand the usefulness of the project:

Dearth of data, People do not want to give you information. People do not even want to understand why you want to benchmark because when you want to ask for information they think that the reason is that you want to come and take their property from their clients. Lack of trust.

FM benchmarking. The challenges faced by the organization that used this type of benchmarking (response in quote below) were from the quality of data obtained; there are not multiple users of this tool. Also, people do not want to pay for benchmarking and they should realize that benchmarking requires some funding to keep the tool running:

First, being able to standardize the benchmarking environment, then the quality of data obtained, how the quality of data will be improved over the length of time. There must be multiple players in the industry. General knowledge of players in the industry because if you throw in a very bad data because of your incompetence or lack of knowledge or awareness or understanding of the methodology it will give you wrong information and you can mislead others who are using the data to also compare it with their own. The fact that benchmarking requires some funding to run it and people must be prepared to put a lot of money into it. We work and put in money through our work with IFMA so that people can utilize it and see the benefit in it and at the long run it helps and we can probably make our profit later but not now.

The challenges faced by those doing successful benchmarking using recognized tools are similar to those faced by those that just do general benchmarking. For example, those that do benchmark generally are also severely challenged in areas of unwillingness of employees to change, inadequate understanding of the benchmarking exercise, and barriers from data which can be obtained from other organizations and data inaccuracy. The unique challenge faced by those using benchmarking tools is unwillingness to pay for these tools.

According to the findings of this research, organizations that focused on benchmarking have tried to overcome these challenges through having structured process in place for facilities. Some have processes in place that monitor critical aspects of their operations. Two of them had dedicated staff for the benchmarking exercise responsible for information gathering and analysis. An organization used a people-oriented approach through sensitizing employees and clients on the importance of benchmarking and services that should be benchmarked. The managers' comment was that:

You have to let people know that it improves their services, the profession as a whole because once people know you are giving them value for money they will buy into it.

Also conscious efforts were made by some of the organizations to gain knowledge about the concept of benchmarking and to invest in it.

Conclusion

The results of the study showed that the most severe benchmarking challenges include: resistance of employees to change, inadequate understanding of the exercise, difficulty to access and compare data from other organizations, poor execution, poor planning, ignorance of employees, lack of confidence in new initiatives, cumbersome for small companies, resource constraint and data accuracy and validity, in that order. The most severe challenges faced by those involved in benchmarking reflect a mix of categories of challenges. They are from the organization (people, culture and context), data and planning and implementation challenges. Challenges preventing those that are not benchmarking from practicing it are more severe and include a wider range of challenges than in the case of those that were benchmarking already. Barriers were from people, culture and context of the organization, project management barriers as well as data challenges.

Benchmarking challenges were highest in local organizations when compared with international companies. Local organizations face mostly project management barriers, while international companies face data barriers the most. Overall, benchmarking challenges was highest in medium companies, then small size companies and lastly large companies. Small and medium organizations face project management barriers more, while large organizations face mostly data challenges. The severity of benchmarking challenges from the organization ranked highest in Abuja, then Lagos and thirdly Port Harcourt. The results of the one-way ANOVA showed that there was no significant difference in benchmarking challenges based on geographical coverage and size. There was significant difference in benchmarking challenges based on location.

The interview results further found that the challenges faced by those using benchmarking tools were similar to those faced by those that do benchmarking generally. Other areas of severe benchmarking challenges for those who do general benchmark generally also are severely challenged in areas such as unwillingness of employees to change, inadequate understanding of the benchmarking exercise and barriers from data which can be obtained from other organizations and data accuracy. The unique challenge faced by those using benchmarking tools was with regards to unwillingness to pay for benchmarking tools.

Organizations that use best practice benchmarking have tried to overcome these challenges through having a structured process in place for facilities that monitor critical aspects of their operations. Some have dedicated staff for the benchmarking exercise responsible for information gathering and analysis. Another approach was to use a people-oriented approach through sensitizing employees and clients on the importance of benchmarking and services that should be benchmarked. Also, conscious efforts were made to gain knowledge about the concept of benchmarking and to invest in benchmarking.

When dealing with challenges faced by those benchmarking short-term and long-term efforts as well as a diversified approach should be used for effective benchmarking. Examples of approaches to be considered should be provision of training to solve people-related problems, while communication systems are needed to help deal with the culture of the organization (Amaral and Sousa, 2009). When addressing challenges of benchmarking with regards to those not benchmarking, both short-term and long-term approaches are also needed to solving challenges faced.

As local companies as well as small and medium enterprises have peculiar severe problems with regards to skills and expertise of staff and employees and project management of the benchmarking exercise, they need to use training and advocacy for employees and owners. International firms as well as large organizations need collaborative efforts through taking part and investing in industry benchmarking networks to help solve their problems of getting external data for benchmarking. This can be done in conjunction with IFMA to further assist in the quantum of data derivable from the industry. The quality of data used can be enhanced through the help of consultants that can help verify the quality of data used for the exercise.

Particular emphasis should be placed on locational differences when dealing with benchmarking challenges. For example, when designing training programmes to solve people-related challenges, the location of the organization should be factored into the programme. Differences in location as found by the interviews is as a result of differences in access to skilled personnel as well as infrastructure. Hence, government should provide enabling environment through provision of adequate infrastructure such as good roads, electricity, so that FM can thrive. Also, artisans especially those in the FM industry should be trained so as to ensure they provide standard services needed to structure and standardize FM processes for benchmarking to work.

To further encourage best practice benchmarking, tools that are affordable should be provided as the study found that organizations are currently not willing to pay for the use of available ones. The study also showed that for best practice benchmarking to thrive, organizations should have structured process in place for facilities that monitors critical aspects of their operations. They should have a dedicated employee in place for the exercise responsible for information gathering and analysis. Also, conscious efforts must be made to gain knowledge about the concept of benchmarking and to invest in benchmarking.

This study is part of a PhD study on benchmarking in FM in selected cities in Nigeria. Future studies could develop hypotheses about the importance of each benchmarking challenge for each type of benchmarking initiative (Amaral and Sousa, 2009). The study can also be done on cities apart from those chosen from the study.

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