

JOURNAL of Infrastructure & Facility Asset Management

Volume 3, Issue 1, April 2021

(e)ISSN 2656-8896

(p)ISSN 2656-890X

- Framework for Facilities Management Services Procurement in Public Buildings in Abuja Nigeria** 01
S. Momoh, J. Ayegba, L. Oyewobi, C. Ayegba, A. Bilau & R. Jimoh
- Hydropower Sustainability Assessment Protocol (HSAP) Implementation in Indonesia: A mini-review** 09
Novi Andriany Teguh & Ainul Firdatun Nisaa
- Weighting The Fire Protection Systems Technical Requirement to Determine Flats Reliability Against Fire Hazards** 21
Aris Aminulwahyu, I Putu Artama Wiguna & Tri Joko Wahyu Adi
- Purabaya Bus Station Service Performance in New Adaption Period** 31
Putu Cinthya Pratiwi Kardita, Achmad Wicaksono & M. Ruslin Anwar
- Modelling and Optimization of the Compressive Strength of High Volume Fly Ash ECC with Low Modulus PVA Fiber Using Response Surface Methodology (RSM)** 43
Isyaka Abdulkadir & Bashar S. Mohammed
- Implementation of Risk Management in Property Projects** 59
I Wayan Muka & Agung Wibowo

Framework for Facilities Management Services Procurement in Public Buildings in Abuja-Nigeria

Sani Momoh¹⁾, Jennifer Ayegba²⁾, Luqman Oyewobi³⁾, Calistus Ayegba²⁾, Abdulquadri Bilau²⁾ & Richard Jimoh^{2a)}

¹⁾*Department of Architecture, Federal University of Technology Minna, Minna-Nigeria*

²⁾*Department of Building, Federal University of Technology Minna, Minna-Nigeria*

³⁾*Department of Quantity Surveying, Federal University of Technology Minna, Minna-Nigeria*

Corresponding author : ^{a)}rosney@futminna.edu.ng

ABSTRACT

Deciding what to provide in-house and what to outsource is not always easy, because of the pros and cons of each approach. This study assessed the suitability of outsourcing and in-house routes for procurement of facilities management (FM) services in public buildings to develop a framework to assist FM practitioners in making decisions on the procurement of FM services in Abuja. A mixed methods research methodology was adopted involving the administration of 122 structured questionnaires and semi-structured interviews with 10 International Facility Management Association (IFMA) members in Abuja-Nigeria. Findings show that the top three factors driving outsourcing of FM services delivery are cost reduction, improved performance standards, and improved customer orientation and service. While, the top three factors driving in-house of FM services delivery are improved quality of services, improved performance standards, and improved responsiveness and cycle times. This indicates that the framework to procure FM services includes the provision of a clear policy which should consist of a policy statement, methodology resource mobilization, government policy regarding the maintenance of the facility mapping of the facility, and a means of measuring the performance of FM services providers. The developed framework provides a significant understanding that can support decision-making on FM services in terms of whether the route to be adopted is either in-house or outsourcing.

Keywords: procurement routes; facilities management; in-house; outsource; public building

INTRODUCTION

Facility Management (FM) is a key function in managing facility services and working environments to support the core business of an organization (Chotipanich, 2004). Although traditionally carried out wholly in-house, by staff employed directly within organizations, in recent times organizations might contract out (outsource) some or all of the FM services that were hitherto carried out in-house. Deciding what to continue to provide in-house and what services to outsource is not always easy. This is because each approach has its pros and cons (Campbell, 2011). In-house procurement of FM services (or insourcing) on the one hand is the management process that delivers facilities management services by in-house staff directly employed by organizations (Musa, 2011). The Association of People Supporting Employment First (APSE, (2011) posited that insourcing was regarded as a means of delivering efficiency and savings in the face of mounting budgetary pressure. Outsourcing on the other hand leads to the creation of a new contractual relationship where the jobs undertaken by in-house employees are transferred to external companies. Typically, organizations are pushed to adopt outsourcing because of the potential to realize cost

reduction objectives, by freeing up capital, refocusing on core corporate business, transferring real estate-related risks, and increasing occupational flexibility (Jensen *et al.*, 2012). Fuelled by the globalization of business, outsourcing has become one of the most popular and widely practiced business strategies (Cigolini *et al.*, 2011; Willcocks, 2010).

The ideal delivery mode of FM should be the one that adds the most value to the organization concerned. The problem thus becomes one of deciding how much value is added by any specific delivery mode (Kamarazaly, 2007). The theoretical background of outsourcing underlines the assumption that organizations who outsource their facility services, gain more added value than organizations that control their facility services in-house (Perera, *et al.*, 2016). Although relatively untested, this assumption has provided increasing support for the selection of outsourcing as a better route over in-house procurement of FM services. The benefits of in-house procurement of FM services are rarely fully explored and considered when decisions on how to procure FM services are being taken (Perera, *et al.*, 2016). Kamarazaly (2007) and Perera *et al.* (2016) have shown that facilities management services that are aligned to strategic functions are best suited for in-house delivery, while those that are aligned to project management and operational functions are best handled through outsourcing. In the Nigerian public sector, most key capacities concerning FM services are dealt with by in-house sourcing, notwithstanding whether outsourcing would provide better value. To change the status quo, research must provide easy-to-apply frameworks that allow FM services sourcing to be made between in-house and outsourcing by the Facility Managers in charge of public buildings.

Although FM is being increasingly accepted in commercial and public organizations, little has been researched in the area of FM sourcing strategies. Predominantly, there is no evidence for such decision-making criteria or framework for choosing between outsourcing and an in-house approach to meeting the FM needs of public buildings in Nigeria. A previous attempt to determine the suitability of in-house and outsourcing approaches in institutional buildings (Kamarazaly, 2007) focused on FM practice in New Zealand. Facilities management practice in Nigeria has seen steady growth in recent years with a wide range of applications (Alaofin, 2003; Opaluwa, 2005; Adewunmi *et al.*, 2009). With the increasing complexity of FM needs of organizations, the need for a simplified yet holistic means of choosing the optimum delivery mode for FM services also increases. Research in this area has either focused on institutions and business organizations (Kamarazaly, 2007; Vitasek *et al.*, 2018), or a specific subset of public buildings (hospitals in the case of Ikediashi, 2014). To this end, what framework will be effective for procuring FM services in public buildings in Abuja-Nigeria using either outsourcing or in-house route?

LITERATURE REVIEW

Procurement of Facilities Management Services

Facilities management services may be procured in a variety of ways, although two routes have received greater attention in the literature. These are the in-house and outsourcing routes. Although outsourcing has sometimes been touted as the panacea to the shortcomings of the in-house procurement route, it is not without its failings. For example, in the Malaysian property maintenance and management (PMM) sector, Sheng and Baharum (2015) discovered that a service chasm exists in the implementation and practice of outsourcing.

On the African continent, Nakanjako (2016) in a bid to establish the effect of outsourcing on the performance of public institutions found that outsourcing IT functions are most significant to institutional performance. However, other factors influence institutional performance other than outsourcing which are leadership experience, academic rank of the managers, applied policy and procedures, making a professional learning community, enduring efficient financial management, and accountability. An investigation of maintenance

management strategies used in tertiary institutions was carried out by Faremi *et al.* (2017). The authors also examined the extent to which the physical and functional conditions of buildings are impacted by such strategies. The study found that the general condition of buildings and services in tertiary institutions appeared to be uninfluenced by the maintenance sourcing strategy adopted. Aliyu *et al.* (2015) found a low application of facilities management in high-rise commercial properties; the use of outsourcing and in-house sourcing was influenced by the level of familiarity with the procurement routes. A study by Perera *et al.* (2016) showed that facilities management services that are aligned to strategic functions are suitable for in-house delivery, while those that are aligned to tactical and operational functions are best handled through outsourcing.

Frameworks for Procurement of FM Services

Most frameworks for the procurement of FM services focussed on the adoption of outsourcing, with limited attention to insourcing as a procurement option. Some studies have however attempted to guide how insourcing can be employed as an FM delivery mode. These are shown in the table below.

Table 1. Summary of FM Outsourcing and In-house Frameworks

Author(s)	Type	Description	Limitation(s)
OUTSOURCE			
Hassannain and Al- Saadi (2005)	Outsourcing framework	5 sequential processes for outsourcing asset management services	No empirical investigation; specific to Saudi Arabia municipality;
Mohammed and Baba (2005)	Outsourcing contractual framework	Involved mainly literature review to develop a best practice framework	No statistical investigation; anecdotal evidence only;
Kremic <i>et al.</i> (2006)	Outsourcing decision support framework	The system showed typical elements of the outsourcing decision	Focused mainly on profit-oriented organizations
Ghodeswar and Vidyanathan (2008)	The business process outsourcing model	Processes for outsourcing decisions and management in a business environment	Decision and management variables not clearly defined; Focused mainly on profit-oriented organizations
IN-HOUSE			
Bernard Williams Associates (1999)	Demerits of in-house sourcing	Posited that cost, quality, flexibility, motivation, and skills availability considerations do not support in-house mode	Limited to premises audits as a means of tools for facilities economics
Barret and Baldry (2003)	Best practices in FM	Mainly literature review of the merits and demerits of delivery modes for FM services.	No fieldwork-based statistical investigation
Connors (2003)	Comparative study of in-house and outsourcing in terms of innovativeness	In-house staff loses cutting-edge knowledge once removed from the cross-company competitive environment of out-sourcing.	Focused on innovativeness in FM; No statistical investigation
Atkin and Brooks (2005)	Disadvantages of in-house sourcing	Providing a total view of FM	No statistical investigation; anecdotal evidence only;
Wise (2007)	Advantages of in-house sourcing	Geared towards improving leadership in project management	No statistical investigation; anecdotal evidence only;

Source: Adopted from Ikediashi (2014) and author's summary

METHODOLOGY

The study employed a mixed-methods research design, which pursued the study objectives through the use of a questionnaire survey and interview. Mixed methods research design helps to offset the weaknesses inherent in single method designs made up of either qualitative or quantitative methodology. Mixing the two methods in the same study allows the strengths of one to complement the weaknesses of the other. This increases the researcher's confidence in the findings and provides the opportunity to better understand the task under study (Dunning *et al.*, 2008). The concurrent mixed-method approach involved the collection of a combination of quantitative and qualitative data at the same time to find out whether there exists any sort of convergence, differences or combination (Greene, 2005).

The research instrument for quantitative data collection was developed from similar instruments employed by Kamarazaly (2007) and Ikediashi (2014). The questionnaire was developed to gather information from respondents. Which comprised of sections designed to be answered by respondents. It is the vehicle used to offer the conversation starters that the analyst needs respondents to reply (Clark & Creswell, 2014). An interview protocol was developed in line with the work of Kamarazaly (2007) to collect qualitative data from facility managers of 10 selected public agencies in Abuja. The IFMA members selected were targeted through purposive snowball, and were selected based on the experience of FM in public agencies and willingness to participate in the study. It contained semi-structured questions that led to a discussion with the selected IFMA members. All participants were officially communicated and a convenient time was agreed upon for the exercise. At the commencement of the interview, the consent and permission of the participants were sought to record all of their conversations using a digital recorder. Each interview was planned to take between 30 minutes and one hour. The data were analyzed using percentile and relative importance index. Relative importance index analysis is an important tool for prioritizing indicators rated on Likert-type scales and it allows for identifying the most important services or factors based on respondent's feedback (Rooshdi *et al.*, 2018). As suggested by Akadiri (2011), five important levels are transformed from relative importance index analysis values: high (H) ($0.8 \leq RI \leq 1$), high medium (HM) ($0.6 \leq RI \leq 0.8$), medium (M) ($0.4 \leq RI \leq 0.6$), medium-low (ML) ($0.2 \leq RI \leq 0.4$) and low (L) ($0 \leq RI \leq 0.2$). The data for the services that were suitable for both in-house and outsourced and the factors driving both in-house and outsourced routes were determined using structured questionnaires. In a related development, the data for the factors to be considered in the selection of in-house or outsourced routes and the ingredients expected in facilities management policy were determined from the interviews conducted. One hundred and twenty-two (122) structured questionnaires were self-administered while 93 questionnaires were returned and 10 IFMA members participated in the semi-structured interviews. The data collected were based on the experience and qualification of the respondents, and the majority of the respondents work with public organizations.

RESULTS

In determining the variables to be included for the two procurement routes in the framework developed as shown in Figure 1, 10 variables each out of 22 variables were selected for those facilities management services that are suitable for either in-house or outsourced. In a related development, 10 drivers each out of 36 variables having the highest relative importance index were selected for in-house and outsourcing as shown in Figure 1. Those facilities management services that were most suitable for the outsourced route based on the responses received were security (0.8138), catering/restroom management (0.8116), landscaping maintenance (0.8047), waste disposal & environmental management (0.7859), general cleaning services (0.7705), plant maintenance & repairs (0.7586), facility refurbishment (0.7548), recreations (0.7398), residential accommodation (0.7318) and courier

services (0.7238). Also, for the in-house route, the 10 highest variables were purchasing and contract control and negotiation (0.7839), human resource management (0.7800), real estate/property portfolio management (0.7655), public relation/liaison services (0.7632), office furniture & stationary provision (0.7494), residential accommodation (0.7463), recreations (0.7459), reception & telephone operator (0.7333), car park maintenance (0.7295) and crèche administration (0.7293).

The results from the 10 drivers having the highest values of relative importance index for the outsourced route were to improve quality of services (0.8541), improve performance standard (0.8437), improve responsiveness and cycle times (0.8165), permit quicker response to new needs (0.8163), to improve the timely delivery of services (0.8115), to improve quality, productivity and operational efficiencies (0.8047), in response to client demands (0.7929), to achieve increased innovation (0.7907), as a way to respond to pressure from employees and shareholders on sustainable practices (0.7904) and to be able to handle varying demands more effectively (0.7881). In a related development, the 10 drivers having the highest values of relative importance index for the in-house route were to achieve cost reduction with enhanced performance (0.8847), improve performance standard (0.8773), achieve improved customer orientation and service (0.8636), to focus on core competencies of staff (0.8634), to improve quality of services (0.8614), to improve the timely delivery of services (0.8533), to compare in-house performance with vendor's staff (0.8494), to concentrate on the core business of organization (0.8442), to improve/maintain corporate image/organizational ethos (0.8442) and to improve quality, productivity and operational efficiencies (0.8437).

The summary of the results from the interviews conducted indicated that the 10 interviewees posited that the essential factors to be considered in outsourced route were technical competence, cost, track record of the company, availability of materials and equipment, experience base/practice, financial stability, and Integrity/trust. For an in-house route, the factors were availability and competence of in-house staff, the policy of the organization, worth of service, availability of funding, legal/regulatory requirement, environmental health, and safety requirement, and customer satisfaction. In a related development, the ingredients that could be found in a typical facilities management policy for the procurement of services either through outsourcing or in-house were policy statement, methodology resource mobilization, trading and mapping of the facility and management regime, government policy regarding the maintenance of the facility, schedule of maintenance, time and funding, and personnel required.

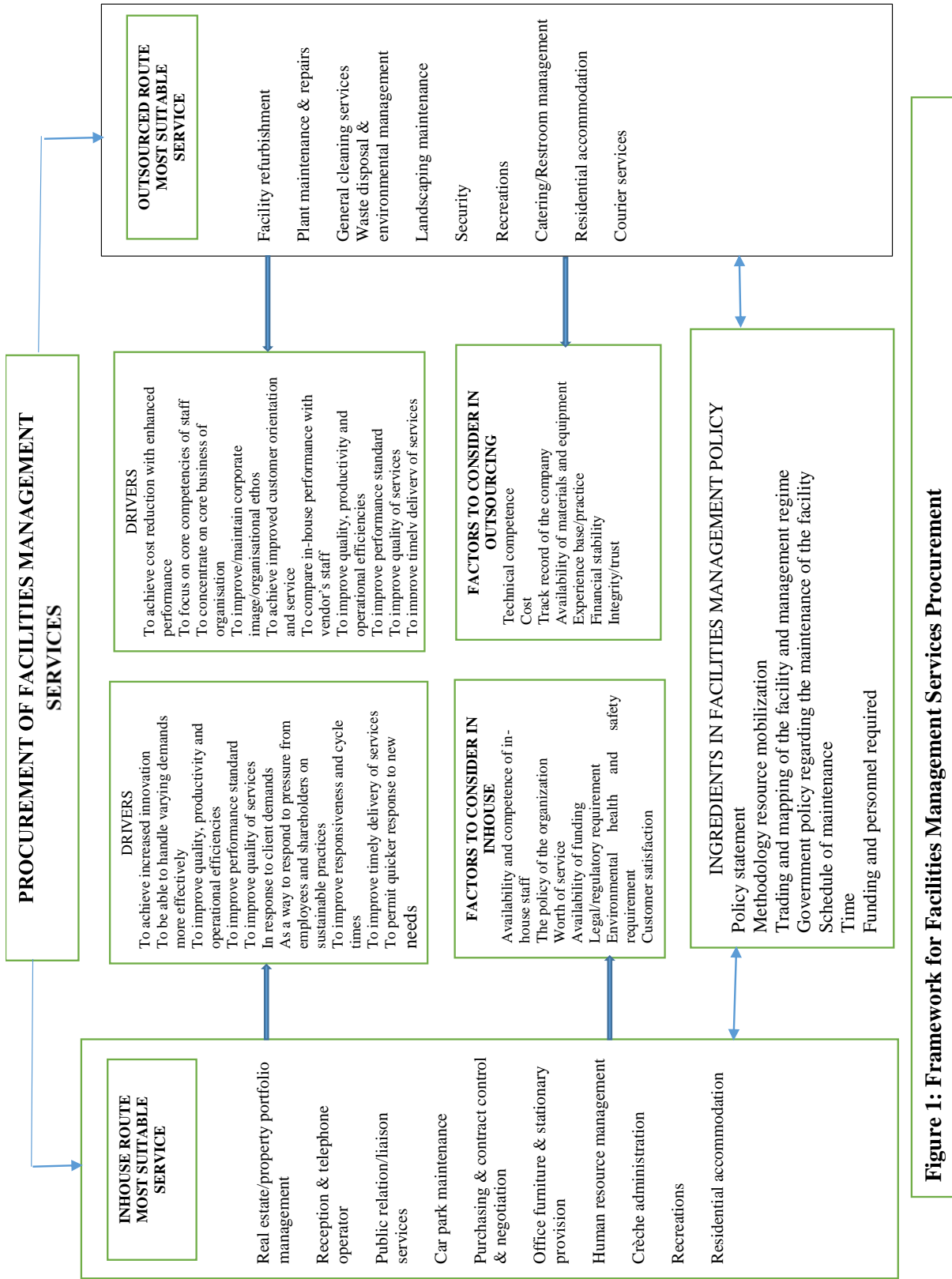


Figure 1: Framework for Facilities Management Services Procurement

CONCLUSION

Based on the quantitative and qualitative research conducted via questionnaires survey and semi-structured interviews with IFMA members in Abuja metropolis that led to the development of a framework, this study concluded that organizations favor the use of in-house FM services in handling strategic functions while outsourcing is in charge of operational functions. The factors driving FM services in-house and outsourcing delivery mode decisions have cost reduction with enhanced performance, improved performance standard, improved customer orientation, and service, the core competency of staff improved quality of service, and improved responsiveness and cycle times. The developed framework provides a significant understanding that can support decision-making on FM services in terms of whether the route to be adopted is either in-house or outsourcing in public buildings. To this end, top management in FM organizations should enhance the training of staff on new technologies, sustainable issues, and intelligent buildings to perform effectively in both in-house and outsourcing FM services depending on the route to adopt.

REFERENCES

- Adewunmi, Y., Ajayi, C. & Ogunba, O. (2009). “Facilities management: factors influencing the role of Nigerian estate surveyors”. *Journal of Facilities Management*, 7(3), 246-58.
- Akadiri, O.P. (2011). Development of a Multi-Criteria Approach for the Selection of Sustainable Materials for Building Projects. *Unpublished Ph.D. Thesis*, University of Wolverhampton. Wolverhampton, UK.
- Alaofin, V. (2003). “Overcoming the challenges facing FM operators in Nigeria to profit from hidden opportunities”. *Facilities Management World*, 19-21.
- Aliyu, A. A., Ahmad, A. & Alhaji, M. U. (2015). “Application of Facilities Management Practice in High Rise Commercial Properties, Jos in Perspective”. *Civil & Environmental Research*, 7(4), 10-19.
- Association of People Supporting Employment (APSE, 2011). “Insourcing update: The Value of Returning Local Authority Services In-house in an era of budget constraints”. *UNISON*, 1-10.
- Atkin, B. & Brooks, A. (2005). *An Introduction to Facilities Management. Total Facilities Management* (2nd Edition). Wiley-Blackwell Publishers. New York.
- Barrett, P. & Baldry, D. (2003). *Total Facilities Management towards best Practice*. Blackwell Science Inc. Malden.
- Bernard Williams Associates (1999). *Facilities Economics*. Building Economics Bureau Ltd. University of Kent. Canterbury, England.
- Campbell, J. L. (2011). *Facility and Property Management Guidebook* (2nd Edition). Campbell Consulting Group. Utah.
- Chotipanich, S. (2004). “Positioning facility management”. *Facilities*, 22 (13/14), 364-372.
- Cigolini, R., Miragliotta, G. & Pero, M. (2011). “A road-map for outsourcing facilities-related services in SMEs: Overcome criticalities and build trust”. *Facilities*, 29 (11), 445-458.
- Clark, V. L. P. & Creswell, J. W. (2014). *Understanding research: A consumer’s guide*. Saddle River Publisher. Lincoln.
- Cornors, P. (2003). Innovation process and innovativeness in facility management outsourcing. Comparative Case Study. Wageningen University, Netherland. http://www.strategic_rsb.nl/pdf.
- Dunning, H., Williams, A., Abonyi, S. & Crooks, V. (2008). “A mixed-method approach to quality of life research: A case study approach”. *Social Indicators Research*, 85 (1), 145-158.

- Faremi, O., Adenuga, O. & Ameh, J. (2017). “Maintenance management sourcing strategies & the condition of tertiary institution buildings in Lagos & Ogun States”. *Ethiopian Journal of Environmental Studies & Management*, 10(1), 64 – 74.
- Ghodeswar, B. & Vaidyanathan, J. (2008). “Business process outsourcing: an approach to gain access to world-class opportunities”. *Business Process Management Journal*, 14(1), 23-38.
- Greene, J. C. (2005). “The generative potential of mixed methods inquiry”. *International Journal of Research & Method in Education*, 28 (2), 207-211.
- Hassanain, M.A. & Al-Saadi, S. (2005). “A framework model for outsourcing asset management services”. *Facilities*, 23 (1/2), 73-81.
- Ikediashi, D. I. (2014). A Framework for outsourcing Facilities Management Services in Nigeria’s Public Hospitals. *Unpublished Ph.D. thesis*. Heriot-Watt University, United Kingdom.
- Jensen, A., Voordt, T., Coenen, C., Felten, D., Lindholm, A., Nielsen, S. B., Riratanaphong, C. & Pfenninger, M. (2012). “In search for the added value of facilities Management: what we know and what we need to learn”. *Facilities*, 3(5) 199-217.
- Kamarazaly, M. A. (2007). Outsourcing versus in-house facilities management: a framework for value-adding selection. *Unpublished MPhil thesis*. University of Massey, Wellington, New Zealand.
- Kremic, T., Tukel, O. I. & Rom, W. O. (2006). “Outsourcing decision support: A survey of benefits, risks & decision factors”. *Supply Chain Management: An International Journal*, 11(6), 467-482.
- Mohammed, A. H., & Baba, M. (2005). “Developing a contractual framework for the outsourcing of facilities management”. Available at www.fab.utm
- Musa, Z.N. (2011). Determining the best options for facilities management (FM) service delivery in UK shopping complexes. *Unpublished Ph.D. thesis*. Liverpool John Moores University, Liverpool.
- Nakanjako, T. (2016). Outsourcing & performance of public institutions in Uganda: the case of contracting at National Planning Authority. *Executive MSc thesis in Business Administration*. Uganda Technology & Management University.
- Opaluwa, S.A. (2005). *Principles & Practice of Facilities Management in Nigeria*. Still Waters Publications. Abuja, Nigeria.
- Perera, B.A.K.S., Ahamed, M.H.S., Rameezdeen, R., Chileshe, N. & Hosseini, M. R., (2016). “Provision of facilities management services in Sri Lankan commercial organizations: Is in-house involvement necessary?” *Facilities*, 34(7/8), 394-412.
- Rooshdi, R.R.R.M., Majid, M.Z.A., Sahamir, S.R. & Ismail, N.A.A. (2018). “Relative importance index of sustainable design and construction activities criteria for a green highway”. *Chemical Engineering Transport*, 63, 151–156.
- Sheng, L. C. & Baharum, Z. A. (2015). “Effectiveness of Malaysian Property Maintenance & Management Outsourcing”. *International Journal of Property Sciences*, 5(1), 14-23.
- Vitasek, K., Fenn, I. & Flynn, M. (2018). “Choosing the right sourcing model for CRE outsourcing agreements”. *Corporate Real Estate Journal*, 7(3), 277-289.
- Willcocks, L.P. (2010). “The next step for the CEO: moving IT-enabled services outsourcing to the strategic agenda”. *Strategic Outsourcing: An International Journal*, 3(1), 62-66.
- Wise, D. (2007). “Agility Spotlight and Leadership in Project Management”. *Project Management Institute (PMI)*, 60-61.