

EFFECTIVE FACILITIES MANAGEMENT OF RESIDENTIAL PROPERTIES: A LITERATURE REVIEW

Abstract

It is pertinent that buildings are livable, safe and productive. However, buildings, through occupancy, are subjected to degradation which poses unique challenges with regard to the security, health and productivity of the occupants; thus, impacting on the immediate environment and economy at large. The paper presents a review of barriers to effective maintenance of residential building facilities. Findings revealed that poor or non-existent pre-construction facility management provisions, financial constraints, lack of government support and late implementation of facilities management, hinder regular and efficient management of dwellings. Other barriers identified are the utilisation of non-professional facility managers and poor administration of a service charge account. The study provides evidence for professionals in the real estate sector to take necessary pre-emptive actions against mismanagement of residential buildings and facilities so as to prevent degradation.

Keywords: facilities, management, occupants, residential buildings

1. INTRODUCTION

Facilities management(FM), as known today, is an important aspect in the built environment, dating back to the 1980s when railway companies in USA conceived the idea of providing facilities-related services as opposed to providing buildings (Ikediashi et al., 2013). Since then, the concept and definitions have been evolving and many organizations have different views. The definition and scope of FM remains a contentious issue and definitions depend on the local culture, organization's interest and people's personal interest (Nor et al., 2014). The International Facilities Management Association (IFMA) and the British Institute of Facilities Management (BIFM) similarly defined FM as the practice of coordinating the physical workplace with the people and work of an organisation (Mustapa et al., 2008; Aliyu et al., 2015). This

implies that FM incorporates human resource, space, and services management. The South African Facilities Management Association (SAFMA) defines FM as an enabler of sustainable enterprise performance through the whole life management of productive workplaces and effective business support services (SAFMA, 2016). However, these definitions do not explicitly incorporate the management and/or maintenance of structures. A more explicit and workable definition given by Mustapa et al. (2008) identified FM as an integrated approach to operating, maintaining, improving and adapting the buildings and infrastructure of an organization in order to create an environment that supports the primary objectives of the organisation. In addition to being an integral part of a business organisation, FM is indispensable in ensuring that built environments are livable, safe and productive. Inadequate or inefficient FM, not only renders physical structures and their immediate ambience unattractive, unhealthy and unsafe to inhabitants, but also renders occupants unproductive as a result of ill-health from degraded dwellings. The scope of FM activities is very large, including the management of real estate, of finance, of change, and of human resources, in addition to services maintenance, domestic services, utilities supplies, security, safety and health and contract management, all of the non-core activities of the organization. In relation to the requirements of the occupancy and the kind of occupants to whom means and services must be delivered, a detailed, tailor made package must be created up, especially for maintenance. However, certain factors hinder the realisation of effective delivery (Mustapa et al., 2008).

Despite the importance of FM in sustaining the built environment, the concept of sustainable FM is grossly under-researched, especially in Nigeria, where awareness is abysmally low and attitude towards it is inadequate (Ikediashi et al., 2013).

Research exists on the potential factors which hinder effective implementation of FM. However, previous literature either dwelt on challenges in a specific country (Mustapa et al., *ibid.*), or broadly incorporated the implications of variations in house ownership and the roles and relations of tenants, owners, administrators and operators in implementing sustainable strategic management (Nielsen et al., 2012). Likewise, Ikediashi et al. (2013) explored sustainability in terms of functionality and economic terms and employed mixed methods to establish sustainable FM practice in Nigeria, with particular focus on oil and gas projects. More recently, Aliyu et al. (2015) focused on application of FM principles in commercial high-rise buildings in one Nigerian state.

The present paper presents a review of international and Nigerian context with the aim of identifying barriers to effective maintenance management of residential buildings and facilities to sustain their functionality. Maintenance is defined as activities required to keep a facility in as-built condition, while continuing to maintain its original productivity (Wang et al., 2013). The objective of the paper is therefore to identify barriers and potential solutions to effective management of dwellings. To achieve this objective, a distillation of related literature from online databases including Google, Google Scholar, Emerald Insight, Ebsco Host and Science

Direct, was done. Various sources including accredited journals, conference proceedings, theses and company reports were consulted. The succeeding sections present a review of related literature on the subject, summary of findings, conclusion and recommendations.

2. LITERATURE REVIEW

2.1 Facilities management in relation to sustainability

The classic definition of sustainability is given by the World Commission on Environment and Development in their report, *Our Common Future*, that sustainable development is development that “meets the needs of the present without compromising the ability of future generations to meet their own needs. (WCED, 1987, cited in Low et al., 2010)”. Mustapa et al. (2008) summarises FM as encompassing the integral managing and execution of housing, services and other means, which contribute to a better performance of the primary process (in relation to effectiveness, flexibility, efficiency and creativity) in changing surrounding (primary process, market, social and technological). This implies that for dwellings to be sustainable, they need to remain effective to serve their intended functional services/purposes. Nielsen et al. (2012) defined sustainable facilities management in terms of environmental performance of buildings and stressed incorporation of environmentally friendly and safe building materials and components such as low energy windows, low flush toilets, low energy bulbs, *etcetera*, during the design and construction of buildings. However, existing buildings which have not been designed and/or built with such facilities(example, old buildings) still need to be maintained to preserve their use.

Ikediashi et al. (2013) opined that the evolution of sustainable FM practice has consistently been driven by the need to contribute to a reduction in the impact of built environment(construction and real estate related projects and actions on the environment), thereby advancing the sustainability agenda across the three bottom lines of economic, environmental and social sustainability, measured by substantial reduction in wastes (waste management), increased productivity through efficient work practices and reduction in energy consumption. This implies that FM should commence at the design and construction stages of a building and not just implemented at upon completion/occupation of the property, a view supported by Enoma (2005), Wang et al. (2013) and Jawdeh (2013) who stressed that the implementation of FM at the design stage of building and facilities development makes provisions for future maintenance, reduces incidence of reworks, thereby ensuring consumer satisfaction and good value for money in the long-run. The author further stated that FM at the design stage of construction ensures less rework and lower maintenance costs. Basically, sustainability entails ‘to keep in existence; to maintain in order to remain continuously available, present and the future’ (Low et al., 2010).

2.2 Overview of facilities management practice

According to Mustapa et al. (2008), FM in Asian countries such as Hong Kong, Malaysia and Singapore is basically oriented towards research, practice and education. The practice of FM in Malaysia at present is undertaken by real estate companies due to the fact that buildings such as high rise office towers are managed by property consultants, who basically provide property and building management services as well as simple operations and maintenance. In addition, most companies manage a limited range and number of properties and therefore provide services related to their core employer's area of expertise. There are no designated facilities management firms. Computerised systems are used to provide integrated functions to allow management to control aspects involving property management, building operation and services management, space management, data monitoring, security, maintenance tracking, as well as monitoring energy consumption by occupants (Mustapa et al., *ibid.*).

A qualitative study which employed site observations and interviews of facility and maintenance managers compared FM implementation at the development stage of construction of high-rise buildings in Sri Lanka and revealed that in the United Kingdom (UK), the government policies integrate strong ties between construction and FM, for instance, Private Finance Initiative (PFI) contracts, where design, construction, finance and operation of projects are consolidated, have demonstrated the strong links between construction and operation (de Silva, 2011). However, this integration of FM in the development phase is unpopular in Sri Lanka due to a lack of awareness of this profession in the local industry as it is still in its adolescent stage and the absence of designated facilities manager in most government buildings and FM functions are usually outsourced in many private organizations. In addition, with the aging and increasing rate of development of high-rise buildings, maintainability recently became a heavy burden, a situation also reported in Mustapa et al. (2008).

Koleoso et al. (2012) reported that in Sweden, facilities managers are not different from traditional building support service providers such as property managers, asset and maintenance managers and that the use of the title of facilities manager is more of a marketing strategy. According to the authors, in some parts of Asia and Europe, FM is yet to integrate the strategic FM, and in the UK, FM is mostly cost-focused and operational. Koleoso et al. employed quantitative methods to compare FM practices in Nigeria and other regions where FM evolved, with emphasis on building support services.

Similar studies conducted in Nigeria revealed that the practice of FM is still in its infancy but growing due to the country's rising profile as one of the fastest growing entities in the emerging market economies (Ikediashi et al., 2013). A recent study which dwelt on properties, albeit commercial revealed that facilities provided in the studied high-rise buildings were in poor condition due to the "below-average" level of FM practice (Aliyu et al., 2015). Aliyu et al.'s study, which employed quantitative research methods to investigate the application of FM

practices in high-rise commercial properties in Jos, Nigeria, revealed various tools including outsourcing, in-house sourcing and co-sourcing, used in practice. Effective FM could entail assigning some activities or functions, usually non-core activities, to external service providers in order to focus on core functions in an enterprise, termed outsourcing (Kurdi et al., 2011).

2.3 Barriers to effective management

Panoply of factors was identified as barriers to effective implementation of FM. These are discussed hereunder.

2.3.1 Poor or non-existent pre-construction FM provisions

According to Enoma (2005), de Silva (2011) and Jawdeh (2013), pre-construction provisions which articulate end-users' needs at the design stage hardly exist. As a result, quality is compromised and rework is needed, in some cases. Inclusion of FM at the development phase minimizes maintainability problems at the occupancy phase (de Silva, 2011). De Silva's qualitative study in Sri Lanka identified critical, but preventable, maintainability problems (such as defects in floor components, plaster and tiles, *etcetera*) which originated during the development phase of the sampled high-rise buildings and which escalated management costs as a result. The lack of attention for future maintenance requirements was the most critical factor that gave rise to the problems, for instance, future needs with regard to frequency, method and access systems of cleaning and maintenance, budget, *etcetera*, should be considered at the pre-construction stage.

2.3.2 Use of non-professional personnel

The nature of FM requires professional competence and input in such areas as formulating and communicating facility policy, planning and designing for continuous improvement of service quality, identifying business needs and user/customer requirements, negotiating service level agreements, establishing effective purchasing and contract strategies, creating service partnership and creating systematic service appraisal in terms of quality, value and risks. However, Mustapa et al. (2008) opined that in Malaysia, FM services are being undertaken by operatives who are traditionally blue-collar employees with limited training. This view was supported in a similar study in which the essence of competent facility managers was stressed (Ikediashi et al., 2013). Interestingly, Ikediashi et al. (2013) explained that the sustainability of the FM services rendered was negatively affected by the dearth of trained FM professionals to handle intelligent and green buildings. The situation is compounded by a lack of tools for appropriate training and response to emergency maintenance needs (Mustapa et al., 2008; Ikediashi et al., 2013).

2.3.3 Poor administration of a service charge account

A major challenge of service charge administration stems from the competence or lack thereof of the managing agent regarding service charge administration. The challenges of service charge administration in Nigeria as identified by Okpala (2013) stems from improper budget practice, lack of consideration of service charge items with heavy price fluctuation, and above all lack of excellent communication and reward system resulting from weak budgetary control. The study recommended that budgetary control should be intensified to motivate employees to embark on service cost minimization to gain savings or at least achieve a state of break-even in order to promote tenancy relationship and achievement of financial objective. This study however, investigated FM from the view of managing operatives and the commercial/economic value of properties.

2.3.4 Lack of government support/incentives and inadequate infrastructure

A lack of incentives and support from the government makes it difficult for organisations to commit and create routines around environmental issues (Nielsen et al., 2012; Ikediashi et al., 2013). In agreement with this view, Mustapa et al. (2008), opined that the lack of funding support exacerbates a situation of uncertainty about benefits from FM as most building managers claim that their profits are not as much as expected and in order to adopt an integrated FM system, funding support is required. This suggests that another factor hindering the advancement of FM practices is uncertainty of benefits and outcomes. According to Ikediashi et al. (2013), as it is today in Nigeria, inadequate infrastructure base and organisational resources at federal and state levels means that even with the existence of laws and regulations, it would be difficult to achieve compliance.

2.4.5 Late implementation of facilities management

Implementation of FM is late for most buildings, especially aging buildings with high level of deterioration (Mustapa et al., 2008; Nielsen et al., 2012). However, FM may help in standardising future maintenance allocation required albeit maintenance costs may be higher as building services in poor condition, due to improper maintenance carried out in the past, may be more expensive to maintain.

2.4.6 Non-existence of standards to measure performance and relevant laws and regulations

Lack of relevant laws and regulations to guide FM practice hinders effective implementation. The non-existence of standards that can be used to measure the quality and performance of both traditional and integrated FM applied by the building/property management is a major challenge in FM. Depending on the services provided or practices applied for the buildings, practices may vary from one firm to another. Laws and standards should ideally guide FM practices. The slow pace of regulating appropriate FM standard or regulation in Malaysia hinders FM (Mustapa et al., 2008). The situation is even more important where political class distinction is rife. Enforcement remains weak and ineffective where political bickering among the political class

slows down the legislative process (Ikediashi et al., 2013). Furthermore, performance of properties should be measured in order to identify potential for improvement. As Roka-Madarasz (2011) aptly stated, benchmark metrics and standards should be available to identify early warning signs of obsolescence in buildings, to help prioritise maintenance or remodeling works and to assist in achieving value for money (on the part of the end-users).

2.4.7 Financial constraints

Due to the high costs of maintenance of degrading properties, finance for maintenance is a problem (Ikediashi et al., 2013). A high financial cost involved in the management of facilities was one of the identified difficulties encountered in the FM of high rise commercial properties (Aliyu et al., 2015). In addition, due to high initial costs, the lack of software development or computerized systems for integrated FM is a major challenge (Mustapa et al., 2008).

The above factors were identified as major barriers to effective FM in management of buildings. Other factors including housing administrators having too little time and too few resources, limited data on energy consumption, limited knowledge about environmental themes, lack of consensus and focus about sustainability, lack of senior management commitment, were also indicated (Nielsen et al., 2012). However, although Nielsen et al.'s study dwelt on sustainability of buildings in terms of energy conservation and climatic considerations, it is noteworthy that the indicated factors are relatable to sustainability of residential buildings in terms of functionality.

4. DISCUSSION

A plethora of factors was identified as barriers to effective management of residential properties. These barriers could cause conflicts between the property owners, the occupiers and the facilities managers. As part of its regulatory function, the Royal Institution of Chartered Surveyors (RICS) has developed a code for the administration of service charge in residential and commercial properties which can be adopted by facility managers. By formulating this code, one of the aims of the RICS is to improve the general standards of practice, encourage uniformity, fairness and transparency in the management and administration of service charge. Though the code was developed to be used in England, specifically, aspects of the provisions can be adopted in different geographical locations. There is a need for promulgation of relevant laws and regulatory framework to guide stakeholders generally, particularly foreign investors who are investing in the national economies (Ikediashi et al., 2013). Innovation management principles should be incorporated at all levels - strategic, tactic and operational (Scupola, 2012).

5. CONCLUSION

The study set out to establish barriers to effective implementation of FM in dwellings with a view to sustaining their functionality as healthy and habitable. The study found that non-existent

pre-construction facility management provisions, financial constraints, lack of government support and late implementation of facilities management, hinder regular and efficient management of dwellings, use of non-professional facility managers and poor administration of a service charge account hinders effective facilities management. By highlighting potential barriers to efficient management of residential buildings and their facilities, the study adds to the body of knowledge on literature regarding facilities management. In addition, the study provides evidence base for professionals in the real estate sector to take necessary pre-emptive actions towards prevention of mismanagement of residential buildings and facilities, thereby preventing degradation. Attention to these identified barriers, especially in Nigeria, where the concept is fast-growing is vital to ensure effective maintenance of residential properties. Adequate tools, training and incentives could be provided to support the FM building services.

Owing to time constraints, the present paper presented a synthesis of literature. A survey research is needed to establish the perceptions of practicing facility managers on the hindrances they encounter in the course of their work. Further studies could also explore the relationship between facilities management and sustainability of buildings in terms of preserving commercial or market value, since the present paper dwelt on satisfaction and productivity of residential estate occupants.

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