

## COST OF IN-HOUSE VS OUTSOURCED FACILITIES MANAGEMENT SERVICES IN PUBLIC POLYTECHNICS IN GHANA

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### Abstract

The learning environment is a key factor that determines effective teaching, learning and research. Facilities management services are strategic in achieving a suitable learning environment. Without support services like janitorial, catering, transport, IT and maintenance, it would be difficult for tertiary institutions to operate and achieve their objectives. Literature has sighted cost reduction and has concentrated on core business as key reasons among other factors for outsourcing in organizations. Ironically, the scale of outsourcing in public polytechnics in Ghana is limited as most support services such as cleaning, catering, security, reception are kept in-house. This paper examines why most services are kept-in-house and makes a comparative cost analysis of some specific services by comparing the cost of in-house against the cost of outsourcing. The mixed method approach involving literature review, questionnaires, interviews and relevant secondary data were used for the study. Purposive sampling was used to select respondents while simple random sampling technique was used to select the polytechnics. This included ten (10) key persons in FM function positions in five (5) public polytechnics for the questionnaire survey and in-depth interviews conducted with twenty five (25) service providers in the vendor market to get needed data on the outsourced prices for the cost comparison with the in-house services. Both qualitative and quantitative analyses were adopted. Organizational culture, funding, first hand practical training, flexibility of labor and security were the key reasons services are kept in-house. Furthermore, the cost of outsourcing services was higher than when kept in-house. Vendor market prices were on average 20% - 35% higher than in-house. In as much public polytechnics have some comparative cost advantage from keeping services in-house, there is need to have a critical look at service quality. In-house FM must regularly monitor and update quality measures. Periodic training and motivation must be given to in-house service providers to improve service quality and delivery.

**Keywords:** In-house FM, Outsourced FM, FM practice, Cost, Ghana, Public polytechnics.

### 1. Introduction

Higher educational institutions are the bedrock for the economic, technological transformation and advancement of every nation. This is achieved through effective teaching, learning and research. Unarguably, a suitable learning environment is a key factor that affects effective teaching, learning and research. The state of the facilities in the learning environment influences teaching, learning and research and ultimately their objectives. Challenges associated with ageing and expansion of facilities was identified by higher education leaders in the developed economies as one of the determinants of academic and research performance (Marmolejo, 2007). The situation is worse for developing countries of which Ghana is no exception. In Ghana, there is a huge deficit in public infrastructure of about \$1.5 billion per annum over the

next decade (MOFEP, 2013). Neglect and poor maintenance culture of public buildings has resulted in damage and deterioration to some public buildings which have defeated the purpose for which they were put up (Asare, 2011). To serve the basic aim of facilitating effective teaching, learning and research, facilities of public educational institutions needs to be well managed with robust FM strategies developed within the context of their strategic business plans and accommodation or space strategy (Atkin and Brooks, 2009). In most developing counties, FM is a relatively young profession and does not exist as an explicit profession; however, the practice of FM is inherent in all spheres of the economy. The need for a functional built environment with related services, increase space of outsourcing due to government policies on market testing, compulsory tendering and Private Finance Initiative (PFI) has accelerated the growth of FM (Lord et. al. 2002). In Africa, FM has grown largely in two countries. In Nigeria, the development of FM is evident by the introduction of the Nigerian branch of International Facilities Management Association (IFMA) in 1997 (Adewunmi et al., 2009; IFMA, 2010). South Africa also has a registered body, with which FM is regulated; the South African Facilities Management Association (2011). In Ghana, a local chapter of IFMA has been established; however, the chapter is at a basic stage amidst some technical challenges.

The term FM has been given several definitions by several authors. Becker (1990) defines FM as the practice of coordinating the physical workplace with the people and work of the organization, integrating the principles of business administration, architecture and behavioral and engineering science. (Alexander, 1996) also explains FM as the process by which an organization delivers and sustains a quality working environment and delivers quality support services to meet the organization's objectives at best cost. The International Facilities Management Association (IFMA) describes a facility manager as one involved in coordinating all the details related to planning, designing and managing facilities including systems, equipment and furniture. A facility manager is a jack of all trades, juggler of many duties, a wearer of many hats and he/she must understand the principles of business administration, architecture, engineering and human behavior. According to (Becker 1990), FM is inextricably linked to the organization's quality and is thus fundamentally a management rather than a technical function. The prime role of FM is to co-ordinate all efforts relating to planning, design and management of an organization's resources. Facilities Management thus have the ultimate responsibility of creating the optimal environment for the organization's primary functions, taking an integrated view of the business infrastructure, and using this to deliver customer satisfaction and best value through support for and enhancement of the core business (Lindholm, 2005). Facilities management can cover a wide range of services including real estate management, financial management, change management, human resources management, health and safety and contract management, in addition to building maintenance, domestic services (such as cleaning and catering) and utilities supplies (Atkin and Brooks, 2003.)

The approaches to FM in any institution can be either in-house, outsourced or hybrid and this basically depends on the priority set by the organization. According to Bernard Williams associates (1999), outsourcing is the key for the core business advantage due to benefits in relation to cost, quality, motivation, flexibility and availability of skills. Concentrating on core business has been the trend in many institutions due to competitiveness. This means that those

activities that are non-core to the business have to be outsourced to specialized service providers. To do this, companies must have to read along the lines of their strategic plans carefully. Their long-term strategy must be a continuous and iterative process that provides some competitive advantage (Johnston & Clark, 2000). The need for businesses to gain profit through the provision of high quality services has driven the organizations to outsourcing facets that are not considered integral to the core business (Lord et al., 2002; Kakabadse & Kakabadse, 2002; Cigolini et al., 2009; Cotts et al., 2010). For most businesses, outsourcing is a very good way to obtain services (Cotts et al., 2010). It is also stated that a contracted workforce is more flexible and can therefore adjust better to fluctuations in the workplace (Cigolini et al., 2009). Barret and Baldry (2003), list cost reduction and concentration on core business as the most frequent user –perceived drive in literature for outsourcing. The relevance of outsourcing is to add value to the organization’s core business (Atkin & Brooks, 2009). Outsourcing non-core activities allows the institution to focus more on education and to worry less about the other operations that are still necessary to maintain a successful campus (Atul Gupta et al., 2005).

Traditionally, in-house FM has been largely criticized due to the fact that in-house FM furnishes misleading information for decision making, fails to consider the requirements of the organization and strategy, has short-term thinking and sub optimization, provides misleading information for cost allocation and control of investments, furnishes abstract information to employees and pays little attention to the business environment (Amarantauga and Baldy, 2003). Atkin and Brooks (2005) hints on complacency, problems with performance measurement, lower customer satisfaction and the likelihood of excessive overheads. Connors (2003) opines that in-house FM is a drawback to the benefits relating to cost, quality, motivation, flexibility and expertise skills for the core business. Notwithstanding this odds and criticisms associated with in-house FM, the level of outsourcing in public polytechnics is very limited as most operational facets of FM are still kept in-house (cleaning, catering, security, reception, payroll processing, transport, maintenance, catering, reception among others), against this background, this paper seeks to examine why public polytechnics in Ghana uses in-house FM despite the increasing criticism and makes a comparative analysis of the cost of in-house versus outsourcing of some specific services and how to improve performance of in-house FM.

## **OUTSOURCED FM**

Facilities Management, whether in-housed or outsourced, has the complete responsibility for facilitating the core business of an organization (Wagenberg & Jongenelen, 2002). Facilities Management places the non-core business at the service of the core business in such a way as to protect an organization’s capital investment in real estate and helps turn a cost item into one of added value (Atkin and Brooks, 2009). Outsourcing process involves empowerment by which the service production is transferred to the external providers in order to benefit customers (Lam, 2008). The key to any outsourcing endeavor is to ensure that the process helps fulfill the institution’s mission and long-term goals and objectives. The decision to outsource is vitally derived from the fact that it is able to support functions that can be completed faster where quality can be guaranteed at cheaper and reasonable cost. As a form of privatization, outsourcing allows institutions of higher education to contract with an external organization to provide a traditional higher education function or service (Atul Gupta et al., 2005). The

contractor then either takes over the employees of the higher education institution or replaces the institutions' employees with its own staff (Ender and Mooney, 1994). Most scholarly articles on outsourcing sights achieving best practice, improving cost discipline skills of managers, to improve quality of service and to help managers focus more clearly on core competences of organizations as prime reasons for outsourcing by organizations.

Ghodeswar and Vaidyanathan (2008) classified drivers of outsourcing into organizational (ability to focus more on core business, adapt easily to business conditions, due advantage on new technologies and growth of stakeholders value), improvement(to improve operating performance such as obtaining expertise, skills and technologies; improve management control; improve risk management; acquire innovative ideas; and improve credibility and image by associating with superior providers), financial and cost (reduce investment in assets, free-up resources for other purposes and generate cash by transferring assets to the service provider). Winkleman et al 1993) identify two (2) basic drivers behind the growth of outsourcing; cost reduction and change in management of affairs of business. Beulen et al 1994, identify five (5) drivers; quality, cost, finance, core-business and co-operation. Successful outcomes of outsourcing by organizations generally will depend on the ability to determine the relevant drivers that can be taken into consideration when confronted with the decision to outsource or retain in-house FM services provision. (Atkin and Brooks, 2009) broadly explain the key factors that must be considered by organization when outsourcing. Amongst the key factors are the identification of the service attributes and it respective evaluation criteria, direct and in-direct cost associated with in-house or outsourced FM, issues of affordability with respect to services to be brought on board, evaluation criteria for the outsourcing decision based on hard' and 'soft' measures and comparing all costs with the required quality and updating of procurement routes. There is no hard and fast rule, with regards to whether to keep services in-house or outsource.

**2. SIGNIFICANT FACTORS THAT INFLUENCE OUTSOURCING DECISION**

From a theoretical point of view, several arguments are raised in support of outsourcing, with related justification or rationale for which to outsource.

Table 1: Arguments for Outsourcing

<b>Significant factor</b>	<b>Rationale</b>
1. Reduced cost. Outsourcing often comes with lower cost provided the service is of the required quality (Atkin & Brooks, 2009; Barret & Baldry, 2003; Ikediashi & Okwuashi, 2015; Wagenberg, 2003; Quelin and Duhamel, 2003; Jiang et al., 2006; Bustinza et al., 2005; Ghodeswar & Vaidyanathan, 2008; Kroes & Ghosh, 2010; Hsiao et al., 2010).	FM services if kept in-house usually overspend and tend to be sub-standardized. Overheads are reduced and become variable cost.  In cases where institutions outsource Human resources, insurances, gratuities and pensions, etc are transferred to the vendor, minimizing financial commitment on employees.
2. Concentration on core business/ to improve company's focus. By outsourcing non-core services, educational institutions can simply concentrate on their core business (Atkin & Brooks, 2009; Bustinza	IT services, cleaning, janitorial, maintenance etc. are non-core activities or part of academic competencies. Institutions would therefore have more time to develop their core competencies of teaching and research.

<p>et al., 2005; Ghodeswar &amp; Vaidyanathan, 2008; Kroes &amp; Ghosh, 2010).</p>	
<p>3. Right-sized headcount/reduced space (Best et al., 2003; Natukunda et al., 2013).</p>	<p>Outsourcing leads to core competencies staff being employed, thereby resulting in right-sizing.</p> <p>Some vendor services will be delivered as a package as such there is no need for vendors to permanently occupy space, thereby reducing space and cost of rent. For instance, catering IT and other consultancy services which are delivered directly as package.</p>
<p>4. Improved productivity/operational efficiencies through improved quality of facilities services (Hinson et al., 2006; Beulen et al., 2006).</p>	<p>Outsourced service providers will provide quality services than when kept in-house.</p> <p>Failure to deliver might lead to abrogation of service contracts; as such vendors are always keen to deliver leading to improved productivity.</p>
<p>5. Increased flexibility. Most outsourcing initiatives provide more upside capabilities with fewer aches and pains. For instance academic institution may decide to change from one information service platform to another, and this requires flexibility to maintain their competitive positions. Outsourcing also gives room for short term Contract (Buck-Lew, 1992).</p>	<p>Outsourced service provider, provides swift responses to new changes in technology and services.</p> <p>Degree of flexibility is limited with in-house expert as response time to changes is longer.</p> <p>Incompetent vendors can be changed/room for contract review.</p>
<p>6. To use vendor's competence (Ikediashi &amp; Okwuashi, 2015; Barret &amp; Baldry, 2003; Abraham &amp; Taylor, 1996; Deavers, 1997; Wagenberg, 2003; Hoecht and Trott, 2006; Ghodeswar &amp; Vaidyanathan, 2008; Kroes &amp; Ghosh, 2010).</p>	<p>Outsourced service providers are specialist in their areas of service delivery, there is direct benefit from the expertise and competence of the service provider.</p> <p>Academic institutions might also lack sufficient knowledge to implement new technologies while keeping current system working.</p>
<p>7. Implementation speed (start-up)/response time (Cotts, 2010; Weber et al., 1991; Lonsdale &amp; Cox, 1998; Frohlich &amp; Dixon, 2001; Gottfredson et al., 2005).</p>	<p>Unlike internal departments that might have to organize to provide such non-services, services providers are ever ready to kick start the service provision. Time required to start work is thus limited.</p>
<p>8. To improve financial ratios. Outsourcing may increase financial ratios, without influencing the primary process (Loh&amp;Venkatraman, 1992).</p>	<p>Cash position will be improved due to capital re-injection.</p> <p>Outsourcing is cost efficient and tend to improve financial standing.</p>
<p>9. No initial capital outlay required (Best et al., 2003; Ikediashi &amp; Okwuashi, 2015; McCarthy &amp; Anagnostou, 2004; Burdon&amp;Bhalla, 2005).</p>	<p>Unlike in-house provision which requires funds to be set for service provision, outsourcing tends to shift the initial capital outlay required to the service provider.</p>

Educational institutions must also realize there are negative consequences of outsourcing. Lacity and Hirschheim (1995) report mainly on increased dependence on the outsourced service provider and also loss of knowledge and know-how. Cadwell and Young (2003) address the confidentiality risk.

Table 2: Arguments against Outsourcing

Significant factor	Rationale
1. Outsourcing might result in higher cost or tend to be expensive (Atkin & Brooks, 2009; Cigolini et al., 2009; Ikediashi et al., 2012; Kakabadse & Kakabadse, 2002).	Anticipated cost savings might not always be realized.  Unlike internal departments, external service providers do have profit motives.
2. Over-reliance on support services which might be risky (Atkin & Brooks, 2009; Lacity and Hirschheim, 1995; Ikediashi et al., 2012).	Critical service failure of the non-core service provider may break the core business.  Institutions can independently invest in technologies and innovations peculiar to their situation when performing non-core business themselves.
3. Risk of selecting poor supplier/vendor incompetence/ this requires thorough selection (Atkin & Brooks, 2009; Barret & Baldry, 2003; Aron et al., 2005).	This adversely affects service delivery, especially where long term contracts are engaged with poor service providers.
4. Confidentiality risk/essential information which most often is confidential might be disclosed to service provider (Cross, 1995; Boehm, 1991; Rao, 2004; Cadwell & Young, 2003).	Decreases competitive power
5. Contrary to culture of user's organization/culture rejection (Barret & Baldry, 2003).	Varied working cultures of service providers  Difficulty in adapting to service providers work culture, i.e. staff attitude, targets, human relation amongst others.
6. Ignores in-house solution//loss of knowledge and know-how. Outsourcing might transfer specialist to companies providing services (Buelen et al., 2006).	Difficulty in re-absorbing services as all in-house expertise might have been completely lost.
7. Selective discrimination (Adewunmi et al., 2012; Barret & Baldry, 2003).	Unfair/ Bias/preferential treatment by one vendor /service provider, providing the same service to many competitive institutions. This can eventually affect competitive position.

## IN-HOUSE FM

In-house FM involves the use of traditional in-house expert to offer and manage FM services. The in-house FM has the role to plan and manage the relationship with FM service providers. They oversee the ongoing management of FM in the organization and manage any partnering agreements involved in the procurement of FM services (Atkin and Brooks, 2009). The in-house FM further has the responsibility to set, monitor and update quality measures, retain control of any activities not developed to the FM organization, oversee the hand over at the end of the contract and maintain a relevant level of expertise in the management team. According to (Wise 2007), the in-house FM has the advantage of retaining ownership of the works as such they are likely to perform better than when outsourced. Furthermore, most organizations that have outsource on the premise of saving cost eventually did not realize the anticipated cost savings as outsource service providers do also have hidden profit motive. In-house FM may lead to a financial gain in the long run, improved customers satisfaction and employee career prospect. With regards to disadvantages associated with in-house FM, (Atkin and brooks, 2003 and Amarantauga 2000), reports mainly on complacency which is easily notified by customers, problems of performance measurement in the event of delineation of roles and responsibility, higher supervision cost, misleading information, outdated technology and lack of expertise service and flexibility for the organizations core business (Connors, 2003).

### 3. FACILITIES MANAGEMENT PRACTICES IN PUBLIC POLYTECHNICS IN GHANA

In most public polytechnics in Ghana, the estate and facilities management department is responsible for the management of properties and facilities services directly under the municipal and works directorate of the polytechnics. Traditional forms of property and facilities management which is characterized by fad acquisitions, inadequate budgeting and lack of strategic planning has been the practice over the years. FM practices over the years have been largely reactive. There is no strategic approach to facilities management. Planned corrective and preventive facilities maintenance practices have also been very limited. As better put by Lavy (2008) most organizations and institutions often fail to recognize the importance of facilities management to their business performance and success. FM is not integrated into institutions strategic planning. Real estate and facilities have not been given the due priority over the years and there is also lack of policy guidelines for FM practices in most public polytechnics in Ghana. This situation is no different from other developing countries. In Nigeria, Odediran et al, (2012) reports that most buildings do not have maintenance manuals. (Adenuga and Iyagba, 2005; and Asiabaka 2008), reports mainly on lack of funds and policy guidelines as key challenges with educational FM.

In the beginning of the 21<sup>st</sup> century, government budget cut for tertiary education funding and rapidly increasing cost of higher education necessitated the government to introduce the Academic Facility User Fees (AFUF). The introduction of the fees was a form of cost sharing measure due to fiscal challenges the country was facing. Expansion of academic facilities, maintenance and other necessary works needed to keep the institutions running are partially funded from these fees. This has resulted in growing competition among educational institutions to provide improved facilities that cater for a variety of learning provisions and in a

cost-effective manner. Subsequently, higher public educational institutions are trying to improve its efficiency in the face of rising operating costs and increasing user expectations. Facilities performance appraisal is also of growing concern to public facilities management. This; however, is very weak in public polytechnics in Ghana. Performance evaluation now places more demands upon the facility (Kerscham, 1991), and this is true for universities and institutions that are entrusted with the responsibility of judiciously utilizing public funds (Preiser, 1995). Performance optimization in FM should allow indoor environment to support organizational business goals in the most effective, efficient and equitable way (Amaratunga and Baldry, 2000; Brackertz and Kenley, 2002). To achieve optimal benefit and performance, facilities assessment and auditing is thus necessary for educational facilities management.

#### 4. METHODOLOGY

##### Sample selection and data collection

The study adopted the mixed method approach. This permits researchers to address more complicated research questions and attain higher reliability and validity of the research (Yin, 1994). The approach involves literature review, questionnaire and semi-structured interviews. The target population included real estate and facilities managers, architects, quantity surveyors, maintenance engineers, planning officers, procurement officers and heads of various domestic activities (cleaning, catering and transport). These respondents work in various departments of the polytechnics municipal and works department, estate and facilities management department, procurement unit, engineering and maintenance, planning units, domestic services units, parks and gardens, power, physical planning and development department of the polytechnics. A total of 42 copies of the questionnaire were distributed, and 30 were retrieved giving a response rate of 71.42%. The data was collected through questionnaires administered to members of staff in charge of FM. To validate the responses from the questionnaire survey, 8 key informants knowledgeable in educational FM within the polytechnics were also purposively selected for the questionnaire survey and interview. This was done by arranging for appointments for the interviews through phones. Respectively, most of the interview sections were done at the offices of the respondents. Further, 25 key players on the vendor market who offer various categories of services were also purposively selected across the study area of the five public polytechnics for interview to get an insight into the average cost of the outsourced services. Table 3 gives the various vendors and their respective services offered.

Table 3 - FM Service Providers

Category of services offered	Number of service providers
Cleaning, Security and Catering	6
ICT, Accounting and Auditing	5
ICT, Maintenance Engineering	4
Guidance and Counseling, Reception Services	4
Landscaping & Gardening, Janitorial services	4
Transport and Security	1
Maintenance Engineering only	1
<b>TOTAL</b>	<b>25</b>



Source: Field Survey (November, 2015)

The use of purposive sampling is to afford the researcher the leverage to select the most productive sample who have the experience and expertise to provide quality information and valuable insights needed to answer the research question (Fellows and Liu, 2008; Denscombe M. 2010)

### Design of Questionnaire and Interview guide

The questionnaire for the study was designed bearing in mind the objectives of the study, as well the literature review. From the literature review, on the argument raised for and against outsourcing and in-house facilities management, and after pre-texting the questionnaire with academic experts and experienced FM practitioners, 14 key variables likely to influence the decision for public polytechnic to retain services in-house were drawn. One important benefit from the pre-texting of the questionnaire was the inclusion of organizational culture and hands on training as key factors that influence the decision to use in-house FM. Basically, the questionnaire was in two parts. Part A sought general information about the respondents (level of managerial positions, academic and professional affiliations, job descriptions, and years of experience). Part B of the questionnaire sought to seek the respondent view on the factors influencing the decision to keep services in-house. The respondents were asked to rank the factors that influence the decision to use in-house FM using the Likert scale of 1-5 in order of significance where "1" represented **Strongly Disagree**, "2" represented **Disagree**, "3" represented **Neutral**, "4" represented **Agree**, and "5" represented **Strongly Agree**.

The third part of the questionnaire was basically related to how to improve in-house FM. The interview guide designed for the key informants were geared basically towards why in-house FM approach and how in-house FM can be improved, with the aim to triangulate the responses from the questionnaire survey. The interviews with the outsourced service providers also aimed at getting the average cost of the outsourced services. This was achieved by probing vendors on the bid prices of the various services offered. Accordingly, extensive search was made on relevant data from the budget offices of the selected polytechnics and vendors.

### 5. Data analysis

A qualitative and quantitative approach to data analysis was employed for the study. The data collected was edited, sorted and coded. Descriptive statistical tools such as frequencies, percentages, mean, standard deviation and Relative importance index (RII) were used to analyze the demographical details of respondents and factors influencing the choice of in-house FM. The main statistical software was Statistical Package for Social Sciences (SPSS). The RII was used to examine the relative ranking of perception of importance attached to the factors. The RII was a good check because it gives a direct descriptive interpretation of the most critical factor based on the rankings with the Likert scale by each respondent. These rankings made it possible to compare the relative importance of the factors that most influence the decision to keep services in-house. Factors above 0.5 and closer to 1 (0.9632-0.5211) were deemed as significant with ranking 1-8 respectively where 1 is highest, while factors below 0.5 (0.4474-0.2789) were deemed as least significant factors that influence decision to keep services in-house. Basic numeric arithmetic was used for calculating the averages cost of outsourced and

in-house FM services. Content analysis advanced by Denscombe M. (2010) was used for the discussions from the interview section and the qualitative analysis. As the study adopted purposive sampling, an appropriate sample of text from the interview was explicitly drawn. We then further segmented the text into smaller components based on major words and terms used as well as the short sentences. Based on the aims of the research, we developed categories for the analyzing the data. Codes were then assigned to the various groups interviewed. The terms, major words and short sentences were categorized. Broader categories were further sub-divided to allow for a greater differentiation and similarities. The frequency of the text occurring within the broader and sub categories were noted and accordingly the inter connections with other units that occurred were duly noted. This aided the possible findings and conclusions of the study.

### **Scope/limitation**

The study was limited to all five public polytechnics in southern Ghana (Kumasi, Takoradi, Koforidua, Accra and Cape Coast polytechnics). The study was limited to southern Ghana because of common socio-economic factors; as such data from the vendor market gives a fair representation across the sector for the study.

## **6. FINDINGS AND DISCUSSION**

### **DEMOGRAPHIC DETAILS OF SURVEY RESPONDENTS**

Table 4 depicts the respondent for the study. The respondents represented professionals in FM positions and vendors on the outsourced market across southern Ghana. Conspicuously, the majority of respondents were in top and middle level managerial positions as evidenced by 55.56% and 31.75% of the respondents, respectively. With regards to academic qualification majority of the respondent had either an MSC/MBA/MPhil in their various areas of specialty, thus constituting 66.67%. The number of respondent with PhD was limited. The professional affiliation of the respondents were varied due to the divers nature of the services, as well as the wide scope of FM. Majority of the respondent were members of the Ghana Institution of Surveyors(GHIS) which included estate/property/ facility managers/valuers and quantity surveyors. This constituted 41.27% of the respondent. Other professional bodies Ghana Institute of Purchasing and Supply Chain (GIPS), IFMA, Ghana Institute of Engineers (GIE), Ghana Institute of Architects (GIA) and Institute of Chartered Accountant (ICA) and Ghana Institute of Chartered Accountants (GICA) were ranging 9%-12% of the respondents, while members of the Royal Institute of Chartered surveyors (RICS) were the least with 4.76%. The various professionals have been practicing between 1 - 20 years and over. 30.16% had work experience of more than 20 years. 19.05% had 16 – 20 years of work experience, 33.33% had 11 – 15 years of experience, 11.11% had 6 -10 years of experience and 6.35% had 1 – 5 years of experience making them knowledgeable and qualified enough to be respondents for the study. The professions of the respondents were also considered. 39.68% were real estate and facilities managers which formed the majority, followed by architects which constituted 12.70%. The least represented was counselors which was 4.76% of the respondents.

Table 4: Demographic information of respondents

VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE
Managerial Level	Top	35	55.56
	Middle	20	31.75
	Low	8	12.70
Academic Qualification	PhD	4	6.35
	MSC/MBA/MPhil	42	66.67
	BSc/HND	17	26.98
Professional Affiliation	GIPS	7	11.11
	IFMA	7	11.11
	GhIS	26	41.27
	RICS	3	4.76
	GIA	6	9.52
	GIE	6	9.52
	ICA/GICA	8	12.70
	Over 20 years	19	30.16
Years of Experience	16-20	12	19.05
	11-15	21	33.33
	6-10	7	11.11
	1-5	4	6.35
	Property/Facilities		
Profession	Managers	25	39.68
	Architects	8	12.70
	Quantity Surveyors	7	11.11
	Maintenance Engineers	6	9.52
	Planning Officers	5	7.94
	Procurement Officers	5	7.94
	Accountants	4	6.35
	Counselors	3	4.76

**Note:** MSc, Master of Science; MBA, Master of Business Administration; MPhil, Master of Philosophy; BSc, Bachelor of Science; HND, Higher National Diploma; GIPS, Ghana Institute of Purchasing and Supply Chain; IFMA, International Facilities Management Association; GhIS, Ghana Institution of Surveyors; RICS, Royal Institute of Chartered Surveyors; GIA, Ghana Institute of Architects; GIE, Ghana Institute of Engineers; ICA, Institute of Chartered Accountants; CIGA, Ghana Institute of Chartered Accountants.

### REASONS WHY FMSERVICES ARE KEPT IN-HOUSE

Table 5: Reasons for keeping FM services in-house by public polytechnics.

FACTOR	MEAN	STD	RII	RANK
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V1	Organizational Culture	4.8158	0.3929	0.9632	1
V2	Finance	4.6053	0.4954	0.9211	2
V3	Hands on training	4.2368	1.1493	0.8474	3
V14	Maintain control over services	4.0789	1.2602	0.8158	4
V5	Make best use of in-house expert/avoid losing in-house experts	3.8158	0.7660	0.7632	5
V6	Security/confidentiality risk	3.4737	1.3504	0.6947	6
V10	Avoid overreliance on service provider	3.2632	1.6222	0.6526	7
V12	Culture rejection/contrary to user culture/work culture/attitudes/targets	2.6053	0.4954	0.5211	8
V11	Risk of selecting poor vendor	2.2368	1.1954	0.4474	9
V9	Quality of service that can enhance TL&R	2.2105	0.7410	0.4421	10
V8	Improving employees career prospects	2.000	0.9005	0.4000	11
V7	Decision time required to decide on outsourcing	1.8158	0.7660	0.3632	12
V4	Flexibility of labor	1.5789	0.7929	0.3158	13
V13	Fear of Selective discrimination/commercial sensitivities	1.3947	0.4954	0.2789	14

Source: Field Survey (November, 2015)

Organizational culture was ranked as the key reason why public polytechnics keep services in-house. This had a mean value of 4.8158, with RII of 0.9632. The study revealed that it's been a norm since 1990 for polytechnics to use the in-house approach with FM. The idea looks more of change management, which is difficult to address. This was followed by finance, hands on training and maintain control over the FM services with mean values of 4.6053(RII=0.9211), 4.2368(RII=0.8474) and 4.0789(RII=.08158) respectively. Most public polytechnics in Ghana get their funding through the academic facility user fees with some limited government subvention. The chunk of the payment of these services is routed through the government payroll under the controller and accountant generals department. Interestingly, the respondents were of the view that outsourcing these services will unduly put pressure on their internally generated funds as such in-house FM is much preferred. The nature of the payment thus favors in-house FM than outsourcing. This coupled with the fact that outsourcing is expensive makes finance influence decision to keep services in-house. Polytechnics in Ghana are to train middle manpower as technical institutions. The need for hands on training cannot be overlooked. The study revealed that students have ease of access to practical training with in-house FM than an external service provider. Most public polytechnics argued that services such as catering, maintenance engineering, transport, physical development and IT systems design offer more avenues for more practical training for their students. Due to some problems associated with outsourcing such as vendor's commitment, continuity and slower response time, polytechnics view in-house FM as an approach to maintain control over services. The 5<sup>th</sup> ranked factor was making the best use of in-house expert and fear of losing in-house staff. This had mean values of 3.8158(RII=0.7632). According to Wise 2007, in-house FM can perform better as such most public polytechnics use in-house FM to get the expertise from in house FM. Further, one of the key disadvantage associated with the decision to outsource is the re-absorption of services as

there is the possibilities of the organization losing completely all internal experts (Barret and Baldry, 2003; Lindhom, 2005). Keeping services in-house averts this problem of difficulty when organizations want to re-absorb outsourced services. As an institution of higher learning and research, security is of much concern. The likelihood of an external service provider having access to some salient and vital information as well as theft issues is of greater concern to public polytechnics. Security was ranked 6<sup>th</sup> with a mean of 3.4737(RII=0.6947). Unarguably supporting services are strategic to creating a conducive learning environment. A critical failure by the external service provider could result in the closure of the polytechnics, to avert such situation, hence the use of in-house FM. (Atkin & Brooks, 2009; Lacity and Hirschheim, 1995; Ikediashi et al., 2012) reports on the consequences on overreliance on the service providers to the core business. This was ranked 7<sup>th</sup> with a mean value of 3.2632(RII=0.6526)

Contrary to user culture or culture rejection was ranked 8<sup>th</sup> with a mean value of 2.6053(RII=0.5211). The polytechnics as academic institutions of higher learning have their working culture, attitudes, and targets. Issues relating to integrity of service and discipline are core in their mandate. Although it is paramount for the service provider to quickly and easily understand and integrate into the business culture of the polytechnics to appreciate their needs. There are instances whereby mismatch of culture creates problems and subsequently affects service delivery.

The least ranked was fear of discrimination in provision of service by vendors with a mean score of 1.3947(RII=0.2789), followed by flexibility of labor, decision time required to outsource, improving employee prospects, quality of service that will enhance teaching and learning and risk of selecting poor contractor with mean values of 1.5789(RII=0.3158), 1.8158(RII=0.3632), 2.000(RII=0.4000), 2.2368(RII=0.4474) and 2.2368(RII=0.4474) respectively. The study revealed that these factors were ranked low since they least influence the decision to keep services in-house. Contractors are selected based on competence after the necessary due diligence and competitive tendering minimizing the risk of selecting poor vendor. There are criticisms associated with the quality of work by the in-house. Issues relating to low remuneration, laxity at work and complacency were cited as possible causes.

The study revealed that despite the avenues created for in-house staff to improve in terms of education and manpower, due advantage was not taken by most employees. Respondents generally expressed the view that decision time to outsource was not a problem as the public procurement act is adhered to. In-house FM is not also flexible as compared to outsourced FM because the terms and condition of employment coupled with the work scheduled are pre-established. Service discrimination by vendors was not much expected when they outsource as such a very weak factor.

## **COST OF IN-HOUSE FM VERSUS OUTSOURCED FM**

Table 6 present the average cost of in-housing versus outsourcing of FM services peculiar to the five polytechnic selected for this study. The services covered were cleaning, landscaping and gardening, security, ICT, catering, payroll, maintenance engineering, health education and reception services for student hostels. Generally, the cost of outsourcing was higher than when kept in-house across the five polytechnics. With regards to selected service across the five polytechnics cost of outsourcing cleaning and landscaping and gardening were 35% higher than



in-house. Security, ICT, catering, payroll were on average 32.41%, 27.11%, 42.86%, 29.69%, respectively, higher than in-house. Health education was on average 31.71% while, reception service was 25.61% higher. Maintenance engineering (servicing of air conditioners) was the highest with 60.3%. This trend was why finance (higher cost of outsourced services) was ranked as 2<sup>nd</sup> major factor why public polytechnics adopt in-house FM approach. The study however found that some few services are outsourced in critical areas where the polytechnics lack the capacity to deliver. The findings of this study clearly defeats the notion that cost reduction is a primary drive for organization to outsource. Cost reduction is, thus, not a factor influencing public polytechnics in Ghana to outsource.



Table 6: Cost of In-house Versus Outsourced FM Services

	ACCRA POLYTECHNIC		CAPE COAST POLYTECHNIC		KOFORIDUA POLYTECHNIC		KUMASI POLYTECHNIC		TAKORADI POLYTECHNIC		ALL 5 POLYTECH NIC'S	ALL 5 POLYTECH NIC'S	ALL 5 POLYTECHNI C'S
<b>FM SERVICE</b>	COST OF INHOUS E SERVICE (GHC)	AVERAGE COST OF OUTSOUR CING (GHC)	COST OF INHOUS E SERVICE (GHC)	AVERAGE COST OF OUTSOUR CING (GHC)	COST OF INHOUS E SERVICE (GHC)	AVERAGE COST OF OUTSOUR CING (GHC)	COST OF INHOUS E SERVICE (GHC)	AVERAGE COST OF OUTSOUR CING (GHC)	COST OF INHOUS E SERVICE (GHC)	AVERAGE COST OF OUTSOUR CING (GHC)	AVERAGE COST OF IN HOUSE SERVICE (GHC)	AVERAGE COST OF OUTSOUR CING (GHC)	PERCENTAGE OF OUTSOURCE COST OVER INHOUSE COST
<b>Cleaning</b>													
Cost of cleaning offices/classrooms per meter square	2.9	4.5	2.73	4.32	2.78	4.2	2.74	4.22	2.94	4.52	2.818	4.352	35.25
Unit cost of cleaning water closet/sink per month	23.3	34.3	20.44	34	21.55	33.2	21.44	33.6	22.4	34.8	21.826	33.98	35.77
<b>Landscaping/Gardening</b>													
Average Labour Cost for maintaining 1 acre green grass per month	390	590	376	540	383	500	380	550	394	586	384.6	553.2	35.48
<b>Security</b>													
Average monthly cost of providing a security personel on main campus	485	750	491	700	471	650	466	700	497	750	482	710	32.11
Average monthly cost of providing security in one staff bangalow	485	750	491	700	471	650	466	700	497	750	482	710	32.11
<b>ICT</b>													
Cost of networking a 40 seater capacity computer laboratory (excluding provision of internet)	16,000	22,000	15,000	24,000	15,000	18,000	15,000	20,000	16,000	22,000	15400	21200	27.36

Average cost of developing a website for the Polytechnic with high content	2,566	3,700	2,433	3,500	2,589	3,500	2,533	3,500	2,500	3,800	2524.2	3600	29.88
Average monthly cost of managing a Polytechnic's website	1,356	1,800	1,271	1,750	1,355	1,700	1,259	1,700	1,403	1,800	1328.8	1750	24.07
<b>Catering</b>													
Per unit cost of providing lunch for 100 staff (ie vegetable rice with chicken piece and 750ml bottled mineral water	8	16	8	13	7	11	7	10.5	8	16	7.6	13.3	42.86
<b>Payroll</b>													
Per monthly cost of paying payroll staff to process for the rectification of salary errors of Polytechnic staff	2,611	3,700	2,531	3,500	2,467	3,400	2,455	3,500	2,452	3,700	2503.2	3560	29.69
<b>Maintenance Engineering</b>													
Per monthly labour cost for servicing airconditioners	1,234	3,700	1,234	3,800	1,341	3,400	1,356	1,980	1,366	3,600	1306.2	3296	60.37
Per monthly labour cost for servicing generator sets on campus	1,833	2,700	1,833	2,500	1,833	2,400	1,833	2,500	1,833	2,700	1833	2560	28.40
Electrical services (monthly labour cost for maintaining 3 technicians to carry out minor repairs)	2,055	3,700	2,055	3,500	2,055	3,400	2,250	3,650	2,366	3,650	2156.2	3580	39.77
<b>Health Education</b>													
Cost of educating students on STD's per faculty	300	500	300	400	250	350	250	350	300	450	280	410	31.71





**Reception Service in Student's Hostel**

Per monthly cost for providing reception services in a student's hostel( 4 Senior Porters)

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3,321	4,200	2,456	4,000	2,377	3,600	3,133	4,000	3,144	3,600	2886.2	3880	25.61
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Source: Authors Construct (November 2015)

\*Note: GHC is Ghana Cedi and GHC 3.90 is equivalent to 1 USD as at November, 2015



## CONCLUSION

Organizational culture, finance, hands on training and maintaining control over services were identified as key factors that influence the decision to keep services in-house. Fear of discrimination was least ranked factors that influence the decision to keep services in-house. The study again revealed that cost of outsourcing was generally expensive than in-house. As polytechnics are moving towards a more cost sharing approach, there is more expectation in service delivery from students. In as much as public polytechnics uses in-house, one area of primary concern should be service quality. The need to provide quality services cannot be underestimated. Generally, the level of service quality was weak as evidenced by its 10<sup>th</sup> position on reasons why public polytechnics keep services in house. Performance management systems are also weak. There is need therefore to strengthen Service Level Specifications (SLSs) and their respective Critical Success Factors (CSFs) and Key Performance Indicators (KPIs) to check service performance. The current KPI which is stakeholder's satisfaction based on number of complains needs to be strengthened. A more detailed survey may be required to get a clearer picture on stakeholders' satisfaction. Public polytechnics may need to find more CSFs and KPIs. Other CSF (lowest practical cost, highest performance, enhanced reputation) and KPIs (year-on-year cost trend, churn rate, user satisfaction index, deadlines met) could be helpful. This to some extent will address the issue of unsatisfactory service performance (Incognito, 2001; Atkin & Brooks, 2009). Further in-house FM must regularly review and update service level specification. A comprehensive performance management system alongside periodic training and motivation must be put in place for in-house FM. This will invariably create the enabling environment required to enhance teaching, learning and research which is the core mandate of educational institutions.

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