

MANAGEMENT PRACTICES IN THE GHANAIAN HOUSE BUILDING INDUSTRY

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ABSTRACT

Against the background of the perennial management challenges facing the Ghanaian House Building Industry, project management practices in the implementation of Mass House Building Projects (MHBP) is presented with a view to reflecting on their strength and weaknesses. The role of project managers (PMs) and their performance on these projects are reviewed including how they have helped or met project objectives especially in terms of completion dates and cost. The evidence gathered suggests that, professional project management services, emanating from project inception to completion can potentially help in minimizing the effects of some of the key managerial challenges. It is suggested that, all other things being equal, some characteristics of the professional project management services could be adopted and embodied into a framework within which current management practices can be advanced for improving effective delivery of future housing projects.

Keywords: *Ghana, housing- delivery, project managers, professional project management*

INTRODUCTION

There is no doubt that managerial inefficiencies have consistently been a major problem confronting stakeholders in the Ghanaian house building industry. The literature is saturated with reports of the implementation of numerous housing projects, which sadly failed to meet expected production target amidst an acute housing delivery deficit (Edmonds and Miles, 1984; Ofori, 1989; Konadu-Agyemang, 2001). Among others, the literature allude to project management inefficiencies which in many instances have led to time and cost overruns of more than 100% in the implementation of these

projects (Edmonds and Miles, 1984; Ofori, 1989; Konadu-Agyemang, 2001). Poor project management practices have in the recent past also contributed to the abandonment of Mass House Building Projects (MHBP), notably the prefabricated housing projects in 1950 and 1978 respectively (Ofori, 1989). Sadly, the affordable housing project initiated in 2001 also appears to have been abandoned as progress of work has stalled since 2008 to date.

Clearly, a theoretical approach towards appreciating the project management options in use and potential innovations that has been intro-

duced over the years could help stakeholders to come to a consensus on a plausible pragmatic model for the effective management of future housing projects. To this effect, this critical review of the management practices is presented. A synthesis of the current housing situation in Ghana is first presented including current policy direction in housing supply. Also presented are typical management practices that have underlined housing supply in this country since the post independence era. Presentation includes two attempts at the implementation of professional project management services (PPMS) including how project managers (PMs) helped in successfully achieving project goals. Against the tenets of the principles underlying the professional project management concept (PPMC), the management practices are reviewed towards proposing a framework for addressing the effective management of future housing projects.

CURRENT HOUSING SITUATION IN GHANA

In Ghana, the shortage of housing continues to be one of the most critical socio-economic challenges facing the country (Ghana National Development Plan, 2008). This critical situation is reflected in current estimates that over 1.2 million house-units would be needed to bridge the gap by the end of this decade (Home Finance Company, 2001). Alternatively, some experts as well as the Government of Ghana's own projection have suggested that an annual delivery stock of 150,000 is what would be needed if the situation is to be arrested. Paradoxically, annual delivery is purported to be close to 37,000 house-units (Amoa-Mensah, 2003) which to the authors, even appears inconsistent. For instance, within the last eight years (2001- 2008), only 5092 houses were initiated by the Government of Ghana (GoG) (Institute of Statistical and Social Economic Research, ISSER, 2007). Unbelievably, resource mobilization and processing for these housing-units took about five years. Eventually, physical construction commenced in 2006, and quite disappointingly, not a single structure is ready for

occupation to date. Thus, the notion that Ghana is currently delivering 37,000 house-units a year might not be empirically correct. Indeed the estimated 37,000 purported annual delivery also includes projections for "self-build houses" which in practice can take several years for completion and occupation through the "locked-up" capital process. Locked-up capital involves the intermittent and piece-meal acquisition and utilization of housing inputs such as plots of land, sand, various building materials in the housing construction process in tandem with building owners resource flow. Indeed over 90% of housing stock in Ghana have been realised through this process – which in effect can be simulated to gradual lock of housing capital during the housing delivery period ranging from 5- 15 years. This is indeed the housing realization CULTURE in Ghana.

Since the late 1980s, the GoG's policy direction has been to play the role of facilitator in housing delivery rather than the traditional role of direct provision. Within this context, several private sector initiatives in housing delivery have been implemented or facilitated over the years including the formation of the Ghana Real Estate Developers Association (GREDA). Among others, the key objective of the GREDA is to help ameliorate the dismal housing deficit especially through the adoption of best practices in construction and project management. However, notwithstanding the expansive role of the private sector in recent times in this agenda, housing supply has not increased any better, and there is also no indication that project management practices of these projects has received any knowledge-based improvement. Indeed, the apparent abandonment of the 5000 National Affordable housing projects initiated in 2000 in an era of vast knowledge and experiences in effective and workable project management practices is a wake-up call to the housing industry and for that matter key players of the Ghanaian Construction Industry (GCI). Indeed, there could be other factors outside the control of PMs that can affect the success of projects. However, there is also no doubt that

effective project management decisions rank as the single most influential contributor to achieving improved performance (Goodwin, 1993). Thus, review of project management practices in the Ghanaian house building industry is relevant in helping to establish an appropriate best practice for the management of future projects.

PROJECT MANAGEMENT PRACTICES IN THE GHANAIAN MASS HOUSE BUILDING INDUSTRY

Some of the earliest and notable Ghanaian MHBPs were implemented using pre and post

independence state agencies like the Gold Coast Housing Corporation and later the State Housing Company (SHC) through the GoG’s direct housing provision programme (Tipple and Korboe, 1998). Project management was mainly traditional as captured in Fig. 1. The SHC engaged direct labour (artisans and labourers) on full-time employment for the execution of these projects. Given the traditional nature of the management approach adopted, the architect as the team leader was responsible for both supervision and management of the physical construction from inception to completion (Fig. 1).

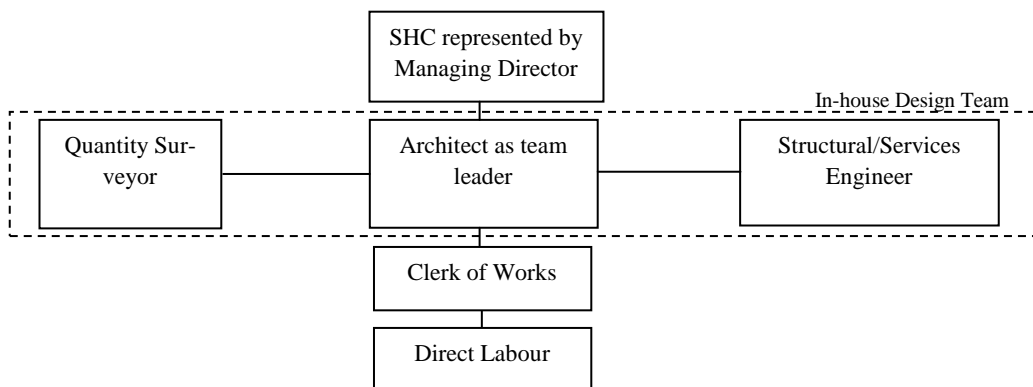


Figure 1: Typical organizational structure of the SHC on MHBPs in the late 1950s
 Source: Ahadzie (2007)

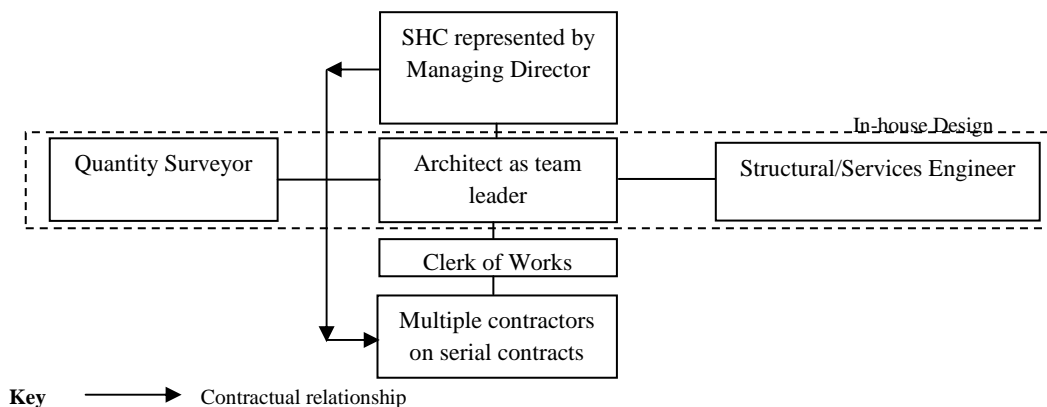


Figure 2: Typical organizational structure of the SHC involving the use of multiple contractors on serial contracts
 Source: Ahadzie, (2007)

By the 1960s, registered building contractors had become major players in the GCI. Consequently, the engagement of contractors often on “serial contracts” became the practice in the management of the construction of housing projects. In this respect, the contractors engaged their own labour force and were responsible for managing the physical construction (Fig. 2). Also, unlike the direct labour engagement described previously in Fig. 1, a contractual relationship existed between the property developer (i.e. SHC) and the contractors engaged, with the architect playing a supervisory role.

By late 1970s, speculative housing had been introduced in the Ghanaian market by some private and quasi-government organizations such as the Social Security and National Insurance Trust (SSNIT). Unlike the SHC, these private and quasi-governmental organizations normally did not operate an in-house design team. Hence, “external consultants” were often engaged to manage the design aspect of the project on behalf of these organizations (Fig. 3). These consultants normally comprised the design team of built environment professionals led by an architect. Under the supervision of the consultants, contractors were appointed to take contractual responsibility for the management of the construction process (Fig. 3). The implication of this contractual arrangement is that, should there be disputes, the consultants could be held responsible for only lapses in the design whilst the contractor could be held responsible for only lapses in management of the physical implementation (Murdoch and

Hughes, 1992). It is worth noting that (since the 1970s) this management approach which places the responsibility for the management of design and construction in the hands of different parties, namely, the consultants and contractors respectively, has become the conventional system for the management of housing delivery in Ghana.

Notwithstanding the popularity of the conventional management practices however, the expansive role of private sector involvement such as the GREDA especially since the 1990s has re-engineered some backtracking to the direct labour engagement first practiced by the SHC. Thus, given that these contemporary property developers often operate an in-house design team, it appears that they also find it convenient to engage and manage their own labour. Thus unlike the then SHC, labour (especially artisans/tradesmen) are not permanently employed but rather on “labour-only- subcontract.”

However, notwithstanding the changing trends, the traditional management practice of appointing consultants and contractors to take responsibility for design and management of construction respectively is still very much embedded in Ghanaian construction practice. It would therefore not be surprising to find out that many other housing organizations including the GREDA still find this system popular for their procurement needs. Concomitantly, there is also enough evidence to confirm that MHBPs executed in the past under these traditional systems were often fraught with management problems contributing to the rampant failures in

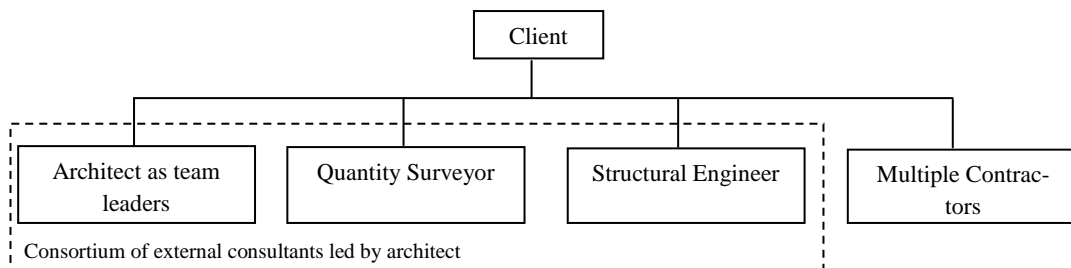


Figure 3: Typical organizational structure involving external consultants and multiple contractors

Source: *Ahadzie (2007)*

meeting performance targets (Edmonds and Miles, 1984; Ofori, 1989; Amoa-Mensah, 1999). In many instances, the contractors have been blamed for the poor performances and severely criticised for having limited knowledge in the application of requisite management techniques (Ofori, 1989; Ahadzie *et al.*, 2004). In the light of advances in project management knowledge and practices, the next section looks at how the professional project management concept (PPMC) could have offered an alternative system.

THE PROFESSIONAL PROJECT MANAGEMENT CONCEPT

Professional project management as used in this context refers to the scenario where an independent entity, be it an individual or a consortium, is appointed besides the design team to take responsibility for the management of design and construction of project from conception to completion. In this respect, Goodwin (1993) notes that the fundamental concept on which project management is based is that a single individual – the PM- is accountable for the success of a project. Thus, within this context the PM could be described as the individual who has the authority and responsibility for the management of both design and construction of MHBP from inception to completion and who works primarily in the interest of the client and/or promoter of the development.

Admittedly, what should constitute the appropriate professional background of the PM remains a debatable subject. According to the Chartered Institute of Building (2002), the PM could come from any professional background but would also need to have the requisite skills and competence in managing all aspects of projects from conception to completion. Some authors have also noted that while the PM could come from any background, generally the consensus is the need to possess some degree of technical skills relating to the project at hand (Ogunlana *et al.*, 2002). Alternatively, others contend that any construction related professional could be a PM provided a good overall

knowledge and experience of the industry is demonstrated (Odusami *et al.*, 2003). While the debate would definitely continue to be contextual because of the variety of stakeholder interest involved, it is agreeable that some form of postgraduate training in project management and membership of an appropriate professional body is an advantage (Ogunlana *et al.*, 2002).

Indeed the emerging growth of the PPMC in construction is now a universal phenomenon (Wilkinson, 2001). The concept which first started in the United States of America (USA) in early 1950s and later Western Europe early 1960s is now practiced the world over. This expansive growth is reflected in the international nature of the membership of the Project Management Institute (PMI), USA and the International Project Management Association (IPMA), Europe (Austin, 2000). In developing countries as well, evidence of the recognition of the PPMC is manifest in the rising numbers of educational institutions offering construction project management courses and papers recently published on the subject matter (Abassi, and Al-Mharmah 2000; Kartam *et al.*, 2000; Liu *et al.*, 2004; Ahadzie *et al.*, 2008). Admittedly, PPMC is still evolving in developing countries but researchers and practitioners are strongly convinced that the concept has come to stay as a most plausible approach for achieving improved performance in management of construction projects (Abbasi and Al-Mhamara, 2000; Odusami *et al.*, 2003).

PROFESSIONAL PROJECT MANAGEMENT PRACTICES IN GHANAIAN MHBPS

In Ghana, the introduction of the PPMC in construction and in particular in MHBP dates back to the late '1980s when, the framework was first introduced to the Social Security and National Insurance Trust (SSNIT). Hitherto, the SSNIT relied largely on traditional management practices using external consultants (Fig. 3) in the implementation of its housing projects. Typically, time and cost over-runs of sometimes more than 100% were a common feature

on these projects, and the GoG and the general public whose contributions were being used for such investments became alarmed and lost confidence in the SSNIT as a reliable housing provider (Ofori, 1989). It was during this trying period that the SSNIT appointed their first PM on a MHBP in Ghana.

The Contribution of Project Managers

The contribution of the PMs’ draws on four mass housing projects the authors were involved in. That is, the authors gathered the data as a result as part of the project management/construction team. Part of the data is published in a non peer-reviewed journal (Amoa-Mensah, 1999) while the remaining, although documented, are unpublished (Ahadzie, 1995). The data were gathered as part of an action research. Although the data dates 15 years ago, lessons have not been learnt for the benefit of the housing industry which is why the paper is relevant even today.

Case 1

The project on which the SSNIT appointed its first professional PM involved the construction of 1637 single storey-housing units, each of 82m² internal floor area in the *Sakumono* area of the *Greater Accra region* of Ghana (*Sakumono* phase 1 and 2). The project initiated in 1989 was executed by 37 small-scale

contractors who were professionally managed by the PM. Fig. 4 represents the organizational structure that ensued. From a sample of 12 local construction contractors involved, 71% were in the financial class (3-4) with upper operational limit of GH¢ 2500.

According to Amoa-Mensah (1999) these small scale contractors were able to deliver approximately 96 house-units within four months and finally attained an average construction output of about 25 house-units per contractor for the year. Within this context, the annual average contractor performance capacity on the project was in the region of GH¢ 7800.00, that is 3.12 times the upper limit of the class 3 contractors. According to Amoa-Mensah (2002; Ahadzie *et al.*, 2004; Ahadzie, 2007), this rate of delivery was over a relatively short-time and at no cost-overrun was remarkable given that it was the first in the annals of house-building in Ghana to be achieved by small-scale contractors.

Cognisant of the limited financial base of the contractors and their perennial lack of access to credit, the PM decided to re-package the trade-works so that any investments mobilized by the contractors could well be managed and sustained throughout the project. Subsequently, multiple contracts of small units of the operations involved in the house building were

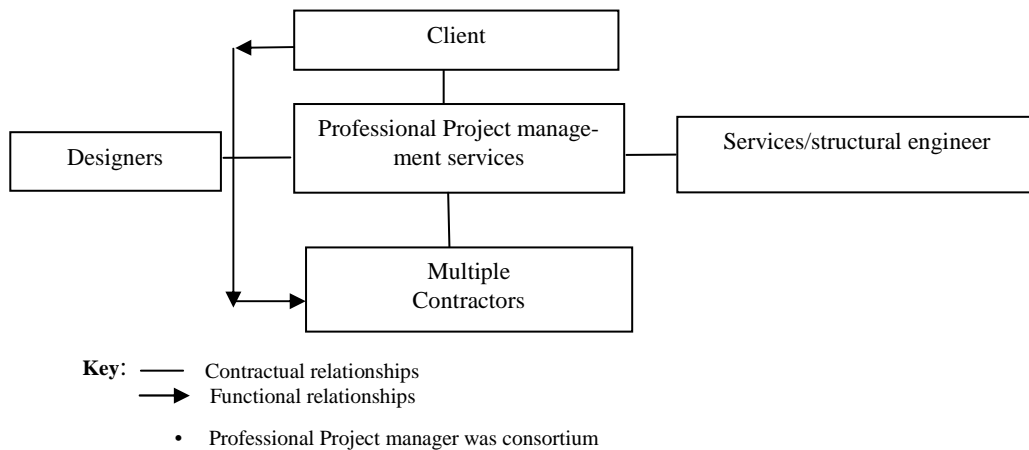


Figure 4: Typical organizational structure involving the use of PM
 Source: Ahadzie (2007)

awarded to these contractors to spread the risk involved (Amoa-Mensah, 1999 and 2002; Ahadzie *et al.*, 2004; Ahadzie, 2007). Specifically, the contract was re-packaged into substructure and superstructure works of repetitive units and each contractor was initially given four house-units as a start on a serial contract. Successful completion of the substructure was a requirement to proceed onto the superstructure. Amoa-Mensah (1999) explains that the four house-units were selected because an appraisal of the resources required demonstrated that these could help minimize the risk level of the contractors and also sustain a steady flow of work, when certificates were honoured promptly.

To motivate contractors for good performance, the first contractor to finish each batch of contracts was awarded 2 times the number of completed house-units. This was a form of performance based incentive award system. Similarly, contractors who then completed the next eight units on schedule were offered 16 house-units and so on. This incentive scheme generated intense competition amongst the contractors who strived to increase productivity. The literature revealed that because the contracts were re-packaged into smaller units, the capital required to turn over a house-unit also became lower and manageable by the contractors (Amoa-Mensah, 1999). The result was that, by the time substructure works for the first 100 units were completed; works re-measurement undertaken showed a potential cost saving of 28% (Amoa-Mensah, 1999).

Equally significant, the PM maintained a strong site-based office which was very good in facilitating effective communications. Furthermore, the PM ensured that site meetings were held fortnightly to make sure that progress was on course and to iron out problems that may be beyond the site staff (under the traditional management system the usual practice is to hold site meetings monthly). When progress became steady, the site meetings were held every three weeks and when delivery time was approaching

the meetings were held weekly.

Another intervention provided by the PM was in relation to materials supply bottlenecks, which are also a common feature in the Ghanaian construction industry. In this regard, a resource availability auditing was undertaken at the inception stage and also periodically as the projects progressed. The auditing enabled the PM to evaluate the potential resources demand at the micro and macro level vis-a-vis the national construction economy. For instance, the auditing revealed that 4,500 tons of cement would be required for the project and this meant a further demand strain of 0.6% relative to the previous years national consumption of 700,000 tons (Amoa-Mensah, 1999). Relief was therefore sought in cement component substitutes already being manufactured since that would already have been accounted for in the national quota for the fiscal year. The substitutes were:

- Ready mixed concrete instead of on-site mixed in-situ concrete bed
- Pre-cast drain pipes and gullies
- Nominated supplies for sandcrete blocks
- Pre-cast concrete lintels
- Hydro-fill sand bed to receive floor slab
- Clay brick walls and lintels
- Bottle shaped septic tank

With these arrangements, the direct contractor cement input (i.e. purchased) was reduced by about 50% with the relative effect dropping from 0.6 to 0.3% on the previous years national consumption. Similar exercises were implemented for key materials such as timber and corrugated aluminium sheets for roof work so as to sustain the availability of these materials within the national economy.

Following successful completion of the *Sakumono* project, the client demonstrated their satisfaction in the performance of the PM and invested in 627 more houses –units of internal floor area 120m² in Ashongman also in the

Greater Accra Region of Ghana. This further project which was initiated in 1992 was successfully completed within a year. The average cost per completed house-unit was GH¢ 339 as against an initial contract sum of GH¢ 344. This represented an average cost saving per house-unit of 1% at a period when the average annual construction cost increase in Ghana was estimated at 16% (Amoa-Mensah, 1999; Osei-Tutu and Adjei-Kumi, 2000). In another development, 500 house-units of 120m² internal floor area were implemented in 1994 in Teshie-Nungua. This project was also delivered within one year at no cost-overruns by mainly small-scale contractors. A vast number of house-units were also implemented under the same project management arrangement in other parts of the country such as Wa in the Upper West Region of Ghana. The evidence gathered suggests that, to all intents and purposes, the key role played by the professional project management team helped in achieving a very successful performance on these MHBPs

Indeed in the opinion of Amoa-Mensah (1999; 2002; 2003) the PM was largely responsible for the significant improvement in meeting performance targets on these MHBPs, which for far too long had been elusive in the Ghanaian housing industry (Ofori, 1989). This led Amoa-Mensah (1996; 2002), to summarise the achievement as follows:

“This laudable output performance has not only led to higher efficiency but also proved a case that with meaningful resources management, the small scale contractor can expand their performance capacity to achieve increased delivery within the available resource base.”

Case 2

This project involved the implementation of 150 single storey three bedroom senior staff house-units for the then Ashanti Goldfields Company, Obuasi in 1994. The total floor area per house-unit was 142m² including garage, storeroom and a porch. The contract sum per house was GH¢ 3200 and the contract period

one year from the date of commencement. The nature of the contract was such that as soon as a house-unit was completed, the client took over and moved into occupation. Figure 4 shows the organizational structure that was adopted for the management of the project. Figure 4 suggests that the procurement route adopted reflected a management contract in which the property developer was to manage a number of package contractors. However, unlike the traditional management contract, here the property developer executed some parts of the project as a way of creating and sustaining an internally robust competitive environment for the package contractors. Specifically, the property developer sub-contracted 100 of the house-units to the package contractors and executed the remaining 50 by its own site management team (see site engineer for property developer and site labour for property developer in Fig. 4). This site management of the property developer including those of the package contractors and the design team were all under the management of the PM. However, an important innovation in this context was that when it became apparent that the package contractors were running behind the tight delivery schedule for a particular house-unit, the property developer took over the house-unit in question and completed same using its site management team. It thus appears that the innovation by the property developer to execute part of projects (even though the procurement appeared to be management contract) was to put check and balance in incentivising the package contractors to deliver and also to be ever-ready to quickly address any non-performance by them.

As shown in Fig. 5, the functional relationship indicates that while all the key management personnel report to the hierarchy of the real estate developer, a professional PM was also appointed to coordinate the activities of the functional managers working in the company including direct labour and also provide project management services to the works contractors. In this example as well, the PM was charge with the responsibility of initiating all manage-

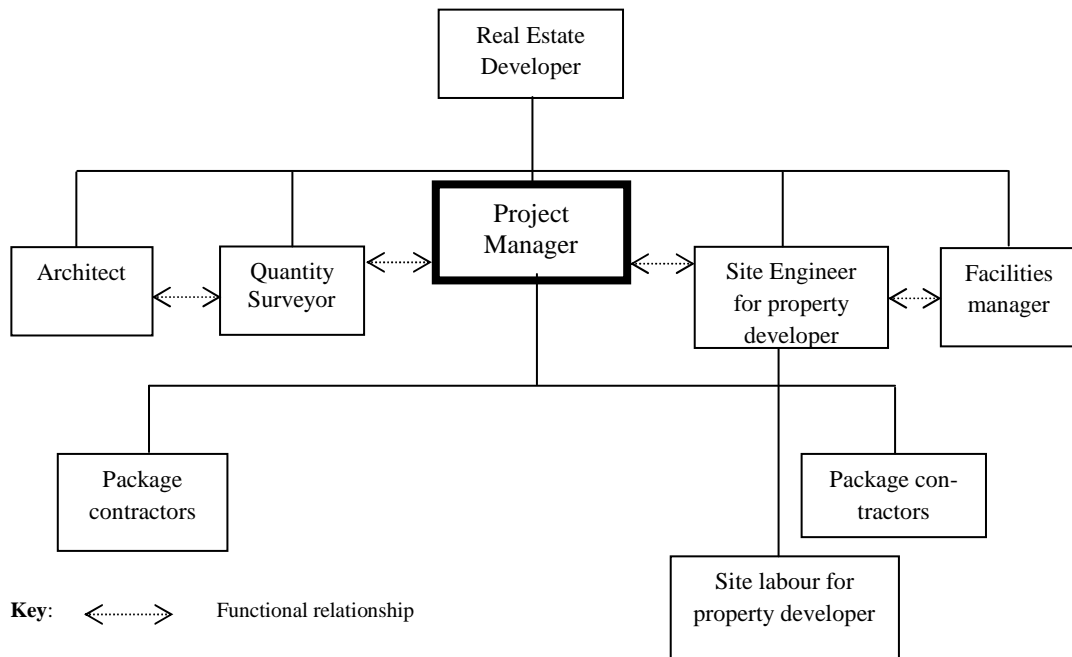


Figure 5: Typical organizational structure case study 2
 Source: Ahadzie (2007)

ment related issues on the project from inception to completion including even the management of an in-house design team. Furthermore, the PM was responsible for preparing the works programme for the works contractors to follow and adhere to. Tables 1 and 2 are typical exam-

ples of some of the schedules used by the PM for ensuring adherence and monitoring all operations involved.

Instead of the typical Bar chart which is technically difficult to represent and comprehend on

Table 1: Master Schedule prepared by the PM

Real Estate Development Company Typical Delivery Schedule for Housing Units		
Delivery Date	Qty	House Numbers
Contractor A		
September 22, 1995	5	D11, D12, D 16, D17, D18
September 27, 1995	10	D1, D3, D15, etc
October 14, 1995	10	D6, D8, D5, etc
Contractor B		
September 21, 1995	20	E1, E2, E5, E10 etc
September 27, 1995	30	List of house-units
Contractor C		
Repeat for other contractors	Repeat for other contractors	Repeat for other contractors

Table 2: Detailed schedule prepared by PM

Real Estate Development Company							
House No.1	Sector	Date Commenced					
Activity	Duration	Project Start	Proposed Start	Actual Start	Finish Date	Actual Finish Date	CHKD and APPVD
Profiling							
Excavation							
Foundation Concrete							
Foundation Block work							
Backfilling Foundation							
Hardcore filling							
Bed formwork/Blinding							
Slab Concrete							
1 st Course Block work							
Column formwork							
Block work to Lintel							
Lintel Formwork/Reinforcement							
Lintel Concrete							
.....							
.....							
.....							
Clean up/Polish							

MHBPs, the PM used these simple schedules which the package contractors could conveniently understand and implement. In consultations with the various package contractors, the PM insisted that the contractors adhered strictly to the programme by reminding them on every visit to various project sites.

While Table 1 was a master schedule reflecting the overall project programme, Table 2 in particular was used for detailed monitoring of operations of the individual house-unit. In this project, apart from the fact that the PM office was also site based throughout the duration of the project he also practiced what he termed “management by walking” as the PM walked around all the project sites at least once a day. As in case 1, the PM also used the materials auditing technique to take

control of the supply of some strategic materials. By the strict, proactive and innovative project management initiatives, all 150 house-units were completed to the extent that, by the time the last house-unit was completed within the agreed contract period of one year, all 150 house-units were occupied. All infrastructures such as estate roads lighting and sewerage treatment were also in place.

DISCUSSION

“The fundamental concept on which the project management concept is based is that a single individual - the PM is accountable for the success of the project” (Goodwin, 1993). Within this context, success is deemed to have been realised when the PM helps in achieving the project criteria especially the

triple constant of time, cost and quality (Clarke, 1999). In Ghana, it is no secret that construction firms particularly the small-scale type have teething troubles when it comes to applying effective construction management techniques. It is therefore not surprising that, in the failures experienced in MHPBs executed in the past, the contractors involved were often blamed and criticized by stakeholders and people in authority.

Indeed the National Shelter Strategy continues to re-affirm this dilemma and has many times expressed the need for contractors to improve upon their management skills (President of Ghana, 2005). Added to this dilemma is the fact that Ghanaian contractors (as in many developing countries) operate in a difficult and unpredictable business environment involving challenges such as delays in honouring certificates for work done, inadequate working capital and the general lack of access to credit facilities, poor communication practices at site level between consultants and contractors and an unreliable materials supply base. PMs are therefore faced with two major functions to integrate all elements of the project system and to provide leadership to the project team. To this extent, the effectiveness of the PM would depend on how robustly every conceptual, technical, human and negotiating skills are brought to bear in addressing the ensuing challenges. The ingredient that is common to the range of skills is the ability to read the difficulties that the stakeholders are likely to face and proposing appropriate but robust solutions.

One of such key interventions is when both PMs (though not part of the package contractors management team) offered to assist the contractors prepare and adhere to realistic programme schedule. The reality is that, most Ghanaian companies especially the small-scale contractors who are often engaged as package contractors on MHPBs have low project management capacities. This must be recognised by PMs to set the stage for the initial training, discussions and walking through the project to set

the project delivery mindset. Hence a strict involvement and monitoring from the PMs is necessary to encourage these contractors to follow pragmatic management principles as demonstrated in both case studies. Simplicity in the use of programme schedule is an option that could also be used to help contractors appreciate the relevance of these schedules to the success of their projects. Tables 1 and 2 as used by the PM in case study 2 are therefore useful templates that could be relied upon in future projects of this nature. Indeed details captured in Table 2 could also be used for other management purposes such as assessing productive outputs of the package contractor for each operation. Admittedly, this data if captured in the format that was used could be useful for assessing future productivity measurement and management of similar projects. The innovation by the PM to take over house-units running behind schedule from the package contractors and placed under the site engineer of the property developer is also a novelty that could be adopted for future housing projects in Ghana.

Case study 1 also demonstrated some insightful innovations worth noting. For instance, the idea of repackaging the operations involved in smaller units to minimise the risk to the package contractors is very well supported by many researchers who have argued that, because of the peculiar difficulties that contractors face with credit and cash-flow in developing countries, it would be prudent if construction projects are often divided into such smaller manageable units (Ogunlana and Olomolaiye, 1989). Within this context, there is also the potential of repackaging the works to aid site monitoring and control. The resource availability auditing introduced by the PMs in both cases reported is also laudable and have been recommended in the literature. In particular, Mansfield (1994) argued that this is even more appropriate in the construction industry of developing economies and has the potential to help improve effective materials management.

The robust site management offices kept by

both PMs have also been acknowledged as a useful agenda for improving communication at project sites. Enhassi (1997) has noted that, one of the biggest organizational problems faced on housing projects is lack of effective communication. For instance, a simple site problem that can easily be solved can take several weeks because the person who is supposed to take the final decision is not readily available at the site. In both case studies described, both PMs demonstrated their understanding of this problem that is why they decided to implement a strong site based office. Of course, in the very recent times when mobile phones and telephoning system have improved considerably much more could be done with site base office to further improve communication on the management of MHBPs.

Obviously the PPMC cannot be described to be the sole panacea for addressing poor management practices in the housing supply chain mechanism. However, judging from the cases presented, there is no doubt that the innovations provided by the PMs require a thorough understanding of the local business environment and the unique challenges that these pose to the operations of contractors in particular. These innovations when brought to the fore are what make the duties and roles of the professional PM different from the management approaches often employed in the traditional management practices (EL-Saaba, 2001). Ultimately, in the Ghanaian context, the literature acknowledges the limited knowledge of small-scale contractors in management techniques. However, the cases reviewed here suggest that with appropriate professional project management practices, these local contractors can be guided to achieve better performance and also improve upon their operational capacity with the same resource base. It is suggested that the policies for improving the delivery of housing in Ghana must take full account of the PPMC as the epitome of best practices for addressing the management of future housing projects. This is because it offers many advantages especially with respect to introducing pragmatic and proactive

management principles in the management of construction projects.

CONCLUSION

In the midst of the perennial project management problems that have bedevilled the management of housing projects in this country for several years, this paper has mainly sought to reflect on the management practices on current situations. Tracing from the pre and post independence era, management practices on housing construction projects have been illuminated. While traditional management practices continue to dominate the paradigm of housing construction management, the review has revealed that professional project management services involving an independent project manager besides the design team have been explored with success on some projects. The contribution of the PMs in the case studies reviewed demonstrates that project management model if well implemented has the potential of guiding local contractors to achieve better performance and also improve upon their operational capacity with the same resource base. Within this context it is suggested that the PPMC could be adopted to help improve the management of future MHBPs in this country.

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