Formal Project Management Adoption Readiness of Emerging Contractor Firms in The Mangaung Metropolitan Municipality in The Free State 0f South Africa

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Abstract
While the South African government has harnessed Emerging Contractor Firms (ECFs) as vehicles for promoting economic transformation and redressing historical economic disadvantage among previously disadvantaged groups, the capacity of these firms to transform the construction industry has been hampered by their lack of project management (PM) skills and techniques. The drive towards empowering ECFs in this industry, therefore, has been marred by evidence of poor quality construction, delays in project execution and completion leading to cost overruns and general public frustrations. Since these challenges are attributed to poor project management practices and dearth of project management skills by most ECFs, there is scope to examine the formal project management adoption readiness of ECFs. Mindful of the ECFs' involvement in construction programmes and projects on behalf of government, this theoretical study explores the extent and significance of project management readiness of emerging contractors (ECs) in the adoption and implementation of construction projects. The thesis of this paper is that since organisational culture, organisational structure and PM skills constitute the foundation for successful project management; any effective model on project management readiness of ECFs should strongly dovetail with these organisational variables as well as an appropriate business strategy. The study recommends a holistic approach to effective project management that rides on exploitation of business strategy and these organisational variables.

Key words: *Emerging contractors, emerging construction firms, project management, historically disadvantaged groups, business strategy.*

1. Introduction and problem statement

Given that projects are temporary investments undertaken to fulfill objectives that are beneficial to society and stakeholders (PMI, 2008; Brown & Hyer, 2010; Clements & Gido, 2012; Pinto, 2013), It is logical to argue that each project undergirds real opportunity costs in terms of time, effort, financial and intellectual resources. As such, it can be contended that such critical resources should be deployed to only those investments that generate the highest returns to both the project executers, the main stakeholders and the rest of the society. However, the maximization of project benefits requires any organisation that executes projects to possess project management (PM) capabilities founded on requisite PM skills in

order to deliver the project on time, within budget and according to stated quality standards (Maley, 2012; Pinto, 2013; Larson & Gray, 2014). While it is generally envisaged that the application of PM techniques and tools heightens the chances of successful delivery of projects (Pinto, 2013; Steyn, et al., 2013; Larson & Gray, 2014), the range of PM capabilities, skills and practices necessary for successful project executions cannot be assumed to be ubiquitous. More so, organisational cultures that support agility and flexibility and organisational structures which cohere with and respond sufficiently to pressing demands from multiple stakeholders during project implementation are not always immanent in small, emerging businesses in resource-poor contexts like South Africa.

While emerging contractor firms (i.e. small, emerging construction businesses) activities are inherently project based to the extent that they are temporary and time bound (Larson & Gray, 2011), their project execution processes tend to be riddled with execution delays, poor implementation and general public dissatisfaction with completed structures such as building apartments and tarmac roads. The poor project execution structure stems from paucity of PM skills and capabilities, distressed organisational cultures and unsophisticated organisational structures. The impoverished PM skills and capabilities base manifest in the haphazard implementation of construction projects without conforming to any logical methodology (Construction Industry Development Board (CIDB), 2011:7), lack of systematic planning and coherent coordination of projects. Paucity of PM skills also manifest in structural dysfunctions of ECFs, which contribute to project failures and construction project-related litigations and investigations. A typical case is the Tongaat Mall collapse in KwaZulu-Natal that resulted in loss of two lives including a Commission of Inquiry being instituted (Ramutloa, 2015) to investigate the circumstances surrounding the project execution.

A general public dissatisfaction with completed structures can be attributed to the lack of a results oriented organisational culture among ECFs. The South African print and electronic media are also awash with public frustrations with ECFs over poorly constructed Reconstruction and Development Programme (RDP) houses (i.e. low cost housing for poor communities). Projects executed by EFCs are often associated with poor or non-sustainable workmanship manifested in wall cracks, leaking roofs, poor drainage systems, cost overruns and disputes in construction contracts (The International Federation of Consulting Engineers; 2014; Sisulu, 2005).

In view of the aforementioned complex revelations, the problem therefore, is the poor PM skills and capabilities base, absence of quality results-driven organisational culture and weak organisational structures of ECFs for effective project implementation, which result in poor project execution, project cost overruns and erection of structures with multiple defects leading to huge costs of repairs. Therefore, the successful execution of construction projects by ECFs calls into question a coherent intersection of high quality project management skills and capabilities, strong, outcome oriented organisational cultures and adaptive, agile organisational structures. The current authors, therefore, conceptualised the constitution of a PM readiness model for ECFs where PM skills, organisational culture and organisational structures were factored into the model.

2. Problem Background

History and rationale of emerging contractors

Ofori (1996) reports that contractor development in emerging economies emerged in the 1970s due the increasing realization of the incapacity of construction companies to contribute to national economic development. The incapacity of construction firms can be tracked back to their operation in a complex economic, political and legal environment (Ofori, 1996; Malongane, 2014) including a discriminatory past that challenged the provision of support to small, emerging businesses by large, well-resourced corporations. For apartheid South Africa, one of the main challenges of construction businesses was the discouragement of collaboration between large and small enterprises because apartheid policies prohibited joint entrepreneurial ventures between black- and white-run businesses (Berry et al., 2002; Tshivhase and Worku, 2012). This undermined the smooth transfer of PM skills and financial resources from large established firms to emerging construction businesses.

In post-apartheid South Africa, the government sought to redistribute wealth by allowing small emerging businesses to participate effectively in national economic development and social empowerment. Consequently, two main legislations namely, the National Department of Public Works' 1995 paper and 1997 Green Paper which heralded the establishment of Emerging Contractor Firms sought to create enabling environments in the construction and allied industries for growth and development were introduced (cited in Fortuin, 2004).

Both papers articulated the diverse challenges experienced by historically disadvantaged institutions in the construction industry. Besides, the government also established "The 10-point plan", which discussed the constraints that emerging construction firms encountered (Republic of South Africa, 1999; Fortuin, 2004). The 10 Point Plan also classified building and engineering contracts, which include those that could be executed by small emerging firms such as:

- Minor contracts - potential lower, risk contracts and less than R2 million
- Micro contracts - very small contracts with a value of less than R10 000 (South Africa, 1999; Fortuin, 2004).

It was envisaged that these government efforts would ensure integration of ECFs into the domain of the economy previously the preserve of large established businesses

In spite of the national laws seeking to create an enabling environment for new entrants into the industry and government-sponsored contractor development programmes (e.g. Extended Public Works Programme and the Contractor Incubation Programme) (CIDB, 2009), the intended outcomes have remained elusive as a large proportion of small construction firms fold up in their first year of operation (DPW, 2006; Buys & Ludwaba, 2012).

In South Africa therefore, the government has introduced the Emerging Contractor Development Programme aimed at empowering individuals from the previously disadvantaged groups by enabling them to start, manage and run small businesses in the construction industry (BBBEE Act 53 of 2003). These small businesses are referred to as Emerging Construction Firms (ECFs) and the owners of these firms are called Emerging Contractors (ECs). The long term sustainability of this Programme was tied to legislative and

policy frameworks such as Broad Based Black Empowerment (BBBEE) Act and Preferential Procurement Policy Act (PPPA). These two policy frameworks extend preferential treatment to the EFCs in the award of tenders and work contracts in the construction industry (BBBEE Act 53 of 2003; PPP Act 5 of 2000).

While this preferential procurement and tendering processes present opportunities for emerging contractor firms to optimize their construction activities, their viability is often undermined by lack of project management skills, flexible organisational frameworks and results driven organisational cultures among ECFs. This bleak background culminates in high failures of ECFs. The literature reveals that three out of five small and medium contractors fail within the first few years due to lack of effective project management skills and capabilities (Thwala & Phaladi, 2009).

The ECFs suffer from lack of project management capacity as they lack funds and resources for project management training for contractors which further limits their formal project management adoption readiness (Ofori, 1991). With regard to a managerial capability, Lazarus (2007) observes that emerging contractor firms are often informal and therefore operate unstructured business systems on largely ad hoc basis. Paucity of (quality) results orientation manifests in slowness of ECFs in delivering projects, cost overruns, low productivity and poor workmanship (Ncwadi & Dangalazana, 2006; CIDB, 2011).

3. Literature review

3.1 Importance of construction industry - an overview

The construction industry is responsible for the building of new houses, factories, schools, bridges, sewage systems, roads, ports, railways among others, as well as being responsible for the repair of these structures (Organisation of Economic Cooperation and Development (OECD), 2008). The construction industry is, therefore, seen by governments and practitioners all over the world as the engine for sustainable economic growth and infrastructure development (Hills et al. 2008; Tshivhase & Worku, 2012). Dlamini (2012) concurs that the construction sector plays a powerful role in economic growth, in addition to producing structures that add to national productivity and quality of life. Employing economic growth theories and time series statistical analysis of construction output data to explain the relationship between the construction sector and economic growth, Dlamini (2012) reports a very strong positive relationship between construction output and Gross Domestic Product (GDP) for South Africa. The relationship between construction investment and GDP growth was most apparent in the five year period (2004-2008) leading to the Soccer World Cup in 2010 in the country when the rate of investment in infrastructural projects (soccer stadiums, roads, railways) was accelerated.

The construction industry is also conceived as an engine for job creation in the country. In 2007, about 543 686 employees worked in the construction industry and large enterprises employed 35.6% (193 786) of the labor force (Statistics SA (StatsSA), 2007). Similarly, a contraction in the construction industry translates into a decrease in employment opportunities over the past five year (Quarterly Labour Force Survey (QLFS), 2014).

3.2 ECs and the construction industry

In order to demonstrate the relevance of the construction industry, government vigorously seeks to empower individuals from the previously disadvantage groups by engaging them in construction projects where the government is the biggest client. Research suggests that government expenditure on construction industry projects hovers around 40%-50% and this industry contributes 5.1% to the Gross Domestic Product (GDP) (Ncwadi & Dangalazana, 2006; Ramokolo & Smallwood, 2008). Khumalo et al. (2010) suggest that the 2010/2011 budget speech tabled by the then Minister of Finance indicated that government planned to spend approximately R864 billion on construction infrastructure over the following three years. About 85.3 percent of this would be spent on the provision of infrastructure for electricity generation, roads, pipelines, bulk infrastructure for water and sanitation and housing (Jurgens, 2010). Such a huge investment signifies the significance of the construction industry in the development matrix of the nation.

Mindful of the huge public financial investment in the construction industry including the multiple ECFs in the country, it would be logical to expect ECFs to deliver quality construction projects, within their specified budget, on time and quality expectation. Sadly, while a handful of professionally-oriented ECFs have demonstrated sound project management skills, wide project implementation gaps still persist among the majority of ECFs operating in South Africa. The poor project implementation culture among ECFs stems from poor project management expertise and experience, lack of basic project management qualifications which all bring into question the formal project management adoption readiness of ECFs. Research in emerging economies such as Malaysia suggest that one of the chief reasons for construction project failures is the incapacity of the project architect to perform project management duties such as demonstrating project management competence, executing appropriate plans and PM perspectives (Rajoo, 2010; Yadollahi et al. 2014).

In South Africa, poor quality housing projects for which ECFs are responsible has sparked public outcry in the construction arena. Ahadzie (2007) argues that achieving project success is tied closely to the possession of construction project management competencies. To this effect, successful construction organizations are now requiring that project managers obtain the principal PM competencies that they require to be successful in their jobs (Yadollahi, et al. 2014). Zunguzane et al, (2012) investigated housing beneficiaries and contractors' perceptions of non-conformance to quality requirements in low-income housing in Port Elizabeth in the Eastern Cape. Their findings attributed the multiple defects in these projects to use of emerging contractors who had limited construction project management experience and deployed unskilled labour on the projects.

The limited resource base of ECFs is also at the heart of project failures in South Africa. Evidence of poor resourcing in relation to EFCs manifests in the lack of basic construction machinery (e.g. bulldozers, cranes, graders), lack of skilled personnel (e.g. quantity surveyors, structural engineers, electricians, plumbers and bricklayers). Literature provides an inexhaustible list of evidence of poor resourcing which manifests in, inter alia, poor quality bricks, poor quality sand and mix, lack of building plans, general use of substandard building

materials and lack of general maintenance and lack of storm-water management control, sagging and leaking roofs (National Home Builder's Registration Council (NHBRC) 2002; KwaZulu-Natal KZN Human Settlements, 2012). This contradicts the Preferential Procurement Policy Framework Act (PPPFA) which requires that effective Supply Chain Management system must strive to ensure that goods and services are available at the best price, in the right qualities, at the right time and in the right place (Public Sector Supply Chain Management Review, 2015).

The other contravention of building regulations manifests in the poor quality of buildings and structures erected by ECFs. Mkhonto's (2014) study into quality management practices in low-cost housing projects delivery in Mpumalanga province suggests that a lack of stakeholder involvement and participation in the development, construction and management of quality in low-cost housing accounts for the apparent poor quality. The failure to involve stakeholders in the project management process once again demonstrates the lack of project management skills and capabilities of ECFs hence bringing into doubt their formal project management adoption readiness.

The cost of poor project management skills and competencies and flawed organisational structures can be catastrophic to general project delivery resulting in national government incurring hefty project repair costs. As the Public Sector Supply Chain Management Review (2015) reports, over a three-year period (2012-2015), the Department of Human Settlements spent R2.129 billion on repairing poorly-built RDP houses. Similarly Van der Merwe (2009) suggests that investigations and audits by the Department of Human Settlements revealed that the rectification of badly built Reconstruction and Development Programme (RDP) houses would cost South Africa about R1.3-billion, or 10% of its 2009/10 year's budget (cited in CIDB, 2011). This is a clear indication of poor project execution and general poor workmanship by ECFs including weak enforcement of minimum project quality standards.

3.3 PM and construction industry

Given this bleak picture on the performance of ECFs in South Africa, it is logical to recommend a strong PM culture in the sector. Yet PM cannot be grasped outside the ambit of projects themselves. Projects are said to be unique and temporary endeavour undertaken to create a unique product, service or result whilst considering the constraints of time, cost and quality in addition to meeting the concern of the environment and other stakeholders (Brown & Hyer, 2010; Maley, 2012; Steyn et al., 2013). For projects to be conducted in a successful manner, a compendium of PM skills, knowledge, tools and techniques must be applied to project activities. Therefore, PM is generally considered as the application of a set of skills, knowledge, tools and techniques to project activities in order to meet project requirements (PMI, 2008; Clements & Gido, 2012; Maley, 2012:2; Kerzner, 2013).

There is an axiomatic relationship between projects, project management and the construction industry. Activities in the construction industry such as construction of new bridges, houses, factories, roads, ports including the repairs and maintenance of such infrastructure are mostly considered as projects since they are temporary, time bound, unique and geared towards the

creation of unique product, service or result (Larson & Gray, 2011; PMI, 2008). Both the construction and maintenance of these structures are grounded in strong PM skills, knowledge, tools and techniques making PM the foundation for successful delivery of construction projects. As such, Palaneeswaran (2006) argues that construction industry is inherently project-based and adherence to coherent project management practices is critical to addressing the multiple stakeholders involved in construction projects. In fact, PM approach has long been the style of doing business in the construction industry by the US Defense Department (Larson & Gray, 2014) suggesting its indispensability in successful completion of construction projects.

Hills et al. (2008) reiterate that since the design and construction phases of construction projects entail multiple specialists (e.g. project manager, construction manager or design engineer), project management is fundamental to their proper coordination including provision of equitable solutions to the problems that arise during construction. The pivotal role of project management in construction projects derives from the uniqueness of every construction project (with regard to levels of attention demanded, professionalism and energy of the team and experience of project leaders involved) and the importance of efficiency in project execution in gaining competitive advantage (Nikumbh and Pimplika, 2014). Regrettably, project management capacity and capability of ECFs is embryonic and in most cases questionable. As Thwala and Phaladi (2009) observe, ECFs are plagued by challenges such as lack of resources for project management training of contractors, lack of management capacity, poor funding leading to bad construction procurement systems and limited resources to equip managers to operate their business enterprises effectively and efficiently. Agumba (2006:i) concurs that small scale, micro and medium enterprises (SMMEs), of which ECFs are a component, lack the requisite project management expertise and experience to deliver the infrastructure backlog among previously disadvantaged groups due to their peripheral position in the mainstream construction industry. These observations provide merit to the necessity of a project management readiness model for ECFs to ensure their optimal participation and full integration into the mainstream construction industry.

3.4 PM and business strategy

It would be insidious to conceive successful PM without due consideration of the business strategy of organisation, as ECFs are essentially entrepreneurial business ventures whose success depends on the implementation of an appropriate strategy for effective project execution. Traditionally, a business strategy emphasised the clear positioning of the business (Volberda 2004). The contemporary focus of strategy has, however, shifted from positioning to progression of the organization over a long period taking advantage of the changing externalities through a combination of resources and competences with the objective of fulfilling its stakeholder expectations (Volberda 2004; Johnson et al. 2005; Zadeh & Ching, 2007). The successful deployment of resources and competencies to advance stakeholder expectations and the sustenance of the organisation is intricately connected to PM, which focuses on successful project design and execution through the sustainable coordination and integration of project activities. Yet, despite this perceived need to connect PM to business strategy to allow efficient and effective implementation of project activities at the right time

and place as well as to derive corporate value, alignment of PM with the business strategy depends on the type, nature and complexity of the given project including the interests of project stakeholders involved. To this end, there has been divergence of opinion on whether PM should be aligned to the overall business strategy or to the project strategy. While some PM literature subscribes to alignment of project strategy to business strategy (Gardiner 2005; Milosevic & Srivannaboon 2006), other literature maintains that projects should adopt their own strategy irrespective of the strategy of parent company (Shenhar, 2004; Arnaboldi et al.2004; Zadeh and Ching, 2007).

Our view is that the increasing articulation and implementation of projects from strategic project management perspective suggests that successful project management underlies careful consideration of the business strategy. Strategic project management, therefore, enables the alignment of business strategic objectives with project strategy in support of overall competitive advantage (DyReyes, 2008:7). The fact that 30% of project failure has been attributed to misalignment between the project management and the business strategy including the view that involving the project manager in the strategy development contributes directly to aligning project management to business strategy (Alsudiri, 2011) all suggest that successful project implementation is to a considerable degree dependent on the founding of PM on a solid business strategy.

Another way of conceiving the PM-business strategy is to regard projects as tools of implementing the business strategy of an organisation as every project in an organisation should contribute to its strategic plan (ESI International, 2006). In order for businesses to implement new strategies, PM tools and techniques can be used since new strategies can be considered as projects (Larson & Gray, 2014). Drawing on Porter's generic typology for classifying strategy, Cooke-Davies et al. (2009) align PM systems with strategy by arguing that components of PM systems that should be aligned with the business strategy are policy, people, structure and process (cited in Budayan et al, 2015). The implementation of strategy through projects including subsequent use of PM techniques to maintain competitive advantage can be seen in the mobile phone manufacturing industry where companies like Samsung, LG, Apple, Sony and Huawei are experimenting with mobile technology features like bigger (wider), thinner mobile touch screens, cloud computing including a wider range of applications, as strategies for implementing their mobile technology innovations. The prioritization, organisation and subsequent implementation of projects should take cognizance of and should be informed by the business strategy

Budayan et al. (2015), however, contend that few studies have investigated the relationship between business level strategy and implementation of PM in the construction industry. The above authors drew on structural equation modelling (SEM) to validate the relationship between differentiation and the PM process. Their findings demonstrated a relationship between differentiation strategy and PM and highlighted two types of differentiation namely "product variety and speed-related differentiation" (PSD) and "quality and image-related differentiation" (QID). They argued that companies striving to differentiate based on PSD should focus on cost, time and quality management while those trying to differentiate on QID

should consider health, safety and environmental issues as well as quality. It is our considered view that since ECFs are resource-constarined, it is logical for them to adopt PSD since cost, among others, is their major concern.

3.5 PM and organisational structure

Organizational structure is considered as the framework within which the strategic processes of the organization operate in order to achieve its goals. The structure is also considered as the medium through which tasks and responsibilities are assigned within an organization, which enables it to effectively manage and deliver the goals of the organization successfully (Ehlers & Lazenby, 2010; Pearce & Robinson, 2013). Generally, three types of organisational structures are considered as the key types used by organizations namely functional, project and matrix organisational structures (Ehlers & Lazenby, 2010; Pearce & Robinson, 2013). The organisational structure to apply during project implementation is dependent on the organisational consideration, resource availability as well as its size.

In ECFs which are small scale organisations with a small staff complement and less sophisticated skills, limited operational budget, the project structure normally serves them best. A project organisational structure is known to be specifically used in situations where activities within the organisation are managed using the PM techniques and tools. Therefore, for organisations to benefit from PM tools and techniques using organisational structure, the adopted structure must be able to satisfy the needs of all project stake holders. An appropriate organisational structure could be perceived as a prerequisite for our conceptualised formal project management adoption readiness model.

3.6 PM and organisational culture

The culture of an organisation is considered to comprise formal and informal practices and values that are inherent in the organisation into which new members are initiated (Kloppenborg, 2012). Stare (2012) argues that project organisational culture can be viewed from four perspectives namely:

- **Organisational strategy, structure, systems, behavioural patterns and processes of an organisation** that determine the internal environment required for project management to be successful,
- **Corporate culture with an indirect influence** - employees' involvement, consistency (a strong internal culture, a concern with shared values), mission and long-term directions, adaptability to the environment (Kuo & Kuo, 2010); how decision-makers respond to ambiguity, complexity, and uncertainty (Shore, 2008); organisational direction, competitiveness orientation, decision-making rationale, cross-functional integration, communication philosophy and locus of decision-making,
- **Project organisational culture** with a direct influence – top and line management supporting/attitude, monitoring, prioritisation and project staffing (Kerzner, 2009, Andersen et al., 2009), and

- **The "subculture" of the project team** (a direct influence) – effective communication, co-operation, trust and teamwork (Kerzner, 2001), and level of willingness to share ideas and problems including level of informality among team members (Cleland, 1999 cited in Stare 2012).

We infer from these categories that any understanding of PM in relation to organisational culture needs to clearly articulate the level at which culture is conceived: whether corporate culture, project management culture, team culture including the preferred focus of these levels of culture –be it strategy, project implementation processes, personal leadership traits e.g. level of tolerance of particular phenomenon such as ambiguity and complexity. PM success can be guaranteed when organisations respond to different types of cultures depending on organisational size and location.

In general terms, organisational culture could be considered as the way of life of the organisation or the way of life of the individuals within the organisation. This way of life denotes how organisations react and adapt in the long term to socio-economic, political and cultural issues and changes within the organisation such labour legislation, technological innovations, and demographic changes. It is therefore important to ensure that organisations flexibly adapt to changes in their external environment to ensure successful project execution and satisfaction of multiple stakeholders. The ability to adapt organisational culture to both external and internal contingencies underscores the formal project management adoption readiness of the organisation.

Overall, Schwalbe (2009:208) concedes that good PM requires a supportive organisational culture. This implies that for PM techniques and tools to be adopted and implemented in an organisation, the organization must exhibit a culture that supports it. In Larson and Gray's (2014) assertion, no matter how well the organisational structure is, without a supportive culture the use of PM approach in project implementation can be hampered in an organisation. Larson and Gray (2014) further argue that in situations where organisations implement same projects, the outcomes of the projects might differ depending on the differential organisational cultural levels

3.7 PM and specialized skills

The acquisition of certain specialized skills is critical to an individual or an organisation's skillful use of PM techniques and tools for effective and successful project delivery (Kloppenborg, 2012; Maley, 2012). With regard to the acquisition of PM techniques in any field, Kloppenborg (2012) distinguishes hard from soft skills while Larson and Gray (2014) identify technical and sociocultural skills. What Kloppenborg (2012) considers hard and soft skills are what Larson and Gray (2014) regard to be technical and sociocultural skills respectively. Hard/technical skills include risk analysis, quality control, scheduling, budgeting, resource allocation while the soft/sociocultural skills include leadership, problem solving, teamwork, negotiation, politics and other related skills which are also needed for successful implementation of PM tools and techniques (Larson & Gray, 2014; Kloppenborg, 2012). For the construction industry hard PM skills relate to practical execution of projects

(e.g. structural engineering skills, project design, interpretation of site maps and drawing, accurate measurements of materials and structures, forecasting of costs, costing of materials, scheduling of tasks) while soft PM skills denote ancillary skills relevant to the expediting of processes of project completion such as people coordination skills, interpersonal communication and leadership. Kloppenborg (2012) and Larson and Gray (2014) assert that for effective PM tools and technique implementation, these two sets of skills need to be acquired and used simultaneously.

3.8 PM readiness of emerging construction firms

CIDB suggests that most ECFs do not possess PM techniques and tools in their project activities (CIDB Act 38 of 2000; CIDB, 2011). This inadequacy has resulted in project cost overruns, project implementation delays and low quality of projects delivered by ECFs (Ncwadi & Dagalazan, 2006; CIDB, 2011). Based on these observations, it could be inferred that the paucity of PM tools and techniques among ECFs has compromised their ability to adopt PM for successful project execution. In view of the ad hoc adoption of PM tools and techniques by ECFs including the public outcry on badly constructed buildings and structures, the consideration of formal PM approach for ECFs cannot be overemphasized. Yet the transition from informal project activities towards more coherent formal PM cannot be assumed to be automatic but rather necessitates the creation of a propitious work environment for its smooth implementation.

The transition of ECFs to effective PM culture, calls into question a conducive work environment comprising a supportive organisational structure, a hands-on/practical and results-oriented organisational culture and specialized PM skills necessary for successful project execution. The supportive organisation structure allows for the smooth assignment of work responsibilities and coordination of work tasks, appropriate and flexible delegation of authority for successful task assignments/execution and flow of work-based communication. The practical, task-oriented culture permits successful work completion through concentration on delivery of quality outcomes, within budgetary limits and on time. Task orientation also allows tasks to be organized around the organisational strategy to improve work coordination, and where tasks deviate from strategy, corrective measures can then be instituted to ensure coherence or to explain deviations. Organisational skills are key to the success of PM implementation in light of the skills gaps evident among ECFs owners bequeathed by apartheid legacy. The skills deficiencies perpetuated by a legacy of sub-standard education, limited professional training and limited construction experience all crystallise into an amalgam that is inimical to successful project implementation. To this end, the combination of a supportive organisation structure, task-oriented organisational culture and an assortment of organisational-wide PM skills will collectively trigger successful PM and project execution (see Figure 1).

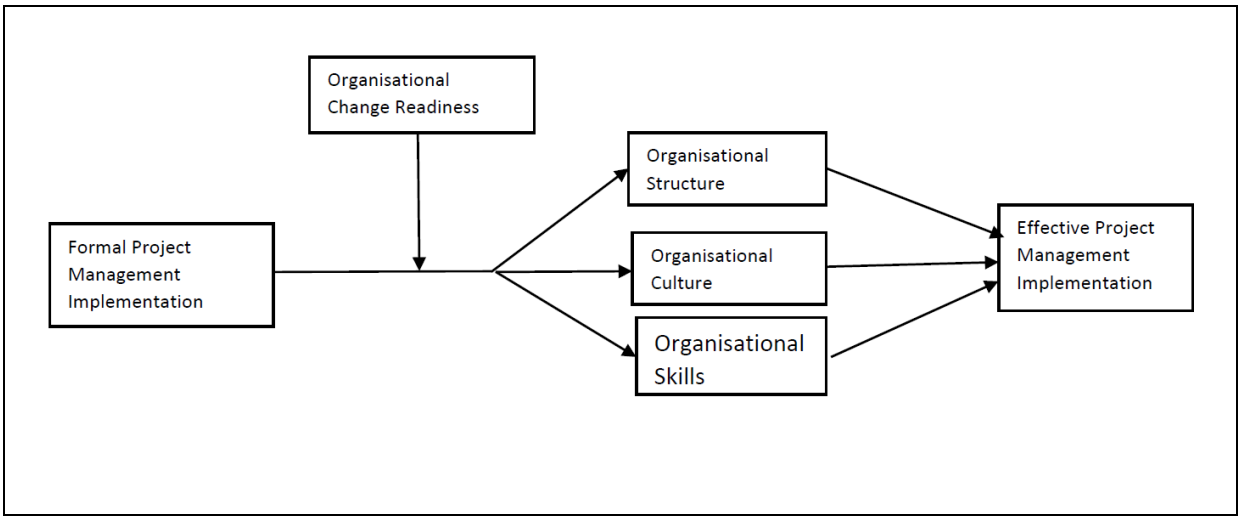
3.9 Proposed conceptual framework

Understanding the formal PM adoption readiness of ECFs necessitates an appreciation of the constitutive components of the project implementation model to ensure the effective execution of PM techniques and tools in project activities of ECFs. The model suggests that

formal PM implementation involves a complex change management process, in which the PM-based organisation has an organisational structure, culture and PM skills base which are congruent with the organisation's situated context, and are moderated by organisational change readiness (OCR) (see Pinto 2010; Kloppenborg, 2012). For ECFs, high levels of PM implementation depend on the conduciveness for change of organisational structure, culture and PM skills base (see Figure 1). This implies that readiness of organisational change is a crucial pre-condition for effective implementation and management of formal PM techniques and tools within their organisations.

The framework assumes that once a conducive organisational structure, organisational culture and PM skills are available and moderated by OCR, there are high chances of effective implementation of projects. Since external variables such as the nature and size of the industry the ECF is in, the general performance of the economy, and competition from rivals are givens, they were considered not worth of inclusion in the model. Therefore, we argue that although the external environment provides a facilitative environment for the articulation of organisational readiness, the actual success of formal project management/ implementation rides on a conducive organisational structure, organisational culture and prevalence of PM skills within the ECFs (see Figure 1).

Figure 1: A formal PM implementation model



Source: Researchers' own Compilation, 2014

4. Observations and reflections

This paper has already alluded to the central place of the ECFs in the economic development agenda of South Africa including the value of the construction industry in the redistribution of the economic wealth of the country. The challenge, however, is that the fulfillment of these mandates is neither automatic nor a simple enterprise given the highly complex nature of this industry, multiple legislation and multiple stakeholders deeply involved in the reconstruction and development agenda of the nation.

In South Africa, the complexity of construction projects arises from the multiple structural, contextual and professional complexities. The structural issues relate to the construction backlog among historically marginalised groups bequeathed by the segregatory apartheid regime, the high demand for decent accommodation in the face of a rapidly expanding population and resource constraints that limit public provision of decent housing across various social groups. Contextual concerns undergird public pressure for decent accommodation that manifests in strikes and demonstrations for basic amenities, which have become a public spectacle across the breadth of the country. At the professional level, is the abundant evidence of project skills gaps among ECF owners, their low educational attainments with limited skills that complicate effective project delivery and inadequate organisational structure for successful implementation of large infrastructural projects.

Combined the aforementioned constraints become a recipe for construction disaster given that construction projects have to be delivered on time, within budgets and quality. Therefore, formal PM techniques could enhance project implementation success by increasing chances of delivering successful projects while satisfying stakeholder needs. Project Management success, therefore, demands PM readiness, itself a mediator of organisational structure, organisational culture, organisational strategy and PM skills.

5. Significance of the study

Given the study objectives of determining the formal PM adoption readiness of emerging contractors, the theoretical discussion of this research should render an informative heuristic to:

1. Enable ECFs to realize the importance of organisational change readiness including adoption and implementation of formal PM techniques in their project activities.

2. Empower ECFs to identify and develop appropriate business strategies consonant with the types and scale of projects they implement,

3. Attract sufficient local corporate investment in ECFs including the development of durable collaborations with the corporate sector on large scale projects,

4. Enable government construction regulation agencies to develop and monitor the PM skills base of ECFs and advise them on the appropriate organisational structure for effective implementation of their projects, and

5. Enable government agencies to adjust and adapt current contractor development programmes to suit the skills base, organisational and structural realities and complexities of ECFs.

6. Concluding remarks

The paper argued that although PM techniques and tools are considered critical to effective implementation of ECF projects, the adoption of such tools and techniques is never an automatic process or a simplistic venture as effective project management implementation

demands sufficient organisational change readiness. Such readiness sets the socio-cultural context and appropriate professional tone for developing a supporting organisational structure, coherent, results oriented organisational culture, corresponding business strategy and PM skills base congruent with successful project execution. To this effect, effective project execution can be conceived to be a chain reaction process: one in which organisational change management presupposes organisational readiness, while organisational readiness cultivates the situated context and aura for a relevant organisational culture, structure, strategy and PM skills base that trigger effective project implementation.

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