

Project Managers as Knowledge Workers

Subjects: Management

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Studies have shown that project managers are responsible for the successful management of various projects. Increasingly, this success depends on the project manager being a knowledge worker (KW)—i.e., possessing and utilizing both “hard” and “soft” skills/competencies to manage assigned projects. Nonetheless, there has not been enough studies on what these competencies are, especially in the context of developing countries (DCs). This study, therefore, seeks to conceptualize project managers as KWs by identifying the key competencies and their relationships needed to effectively manage projects in DCs. To achieve this objective, a survey was conducted among 112 project management (PM) practitioners in Ghana. The opinions from the respondents were edited, summarized and categorized by creating word queries, thus, making it easier to make deductions from them. Finally, content analysis was conducted to help establish links in the responses so as to deduce appropriate recommendations. The findings provide a set of “soft” and “hard” skills/competencies and their unique combinations for effective PM in DCs. The primary contribution of this study stems from highlighting the key competencies that project managers need to ensure effective PM in DCs, thus, helping these countries to make a more efficient use of their scarce resources.

Keywords: competencies ; knowledge workers ; project oriented organizations ; project management ; developing countries

1. Introduction

Projects are used in all economic and non-economic fields as means of organizing activities aimed at achieving a desired objective. They serve as the basis for creating and dealing with change and are used to implement strategies ^[1]. What is remarkable is that irrespective of how you define projects, the greater attention is being put on the project manager. Without a qualified project manager, the project oriented organization will not achieve project management (PM) success. The project manager is a leader and a team member. Therefore, the future of the project depends on his ability, experience and personal features ^[1].

In most project oriented organizations (organizations that have their activities geared towards projects), project managers are accountable for the successful management and execution of various projects^[2]. Until recently, many of the initiatives for improving the practice and profession of PM—towards achieving PM success—have been focused on enhancing techniques and methods associated with skills that included effective management of time, cost and scope. The Project Management Institute’s guide to the PM Body of Knowledge (PMBOK) tends to be primarily concerned with management competencies (craft) and the “hard” skills expected of practicing PM professionals with knowledge areas such as project human resource management and project communication management (the essential relationship-focused areas) relegated to secondary (and less important) roles ^{[3][4]}.

However, research show that achieving PM success depends on the project manager being a knowledge worker (KW)—i.e., possessing and utilizing both “hard” and “soft” skills and competencies to manage assigned projects. The project manager needs to demonstrate flexibility and competence in many areas: introverted and reflective and extroverted and social behaviors ^[2]. The management of all projects, especially those in developing countries (DCs) demand the application of the required competencies that go beyond technical expertise only, but the ability to manage scarce resources and monitor time overruns and other ad hoc situations, while dealing with employees and other organizational issues at the same time ^{[5][6]}.

Ofori ^[7] observed that most of the policies introduced by various governments in DCs are usually converted to programs and projects. The need for effective PM in DCs has therefore become more relevant in dealing with the enormous task of managing the level of poverty in these countries. Effective PM implies that the management of the project should lead to meeting stakeholder requirements, although these requirements may differ among the stakeholders ^[8]. Currently, most PM practices of many project oriented organizations in DCs do not always meet this criteria. The major challenge has been the kinds of skills and competencies possessed by project managers in these countries ^{[9][10]}. In the words of

Twumasi-Ampofo et al. ^[11], the root causes of the abandonment of most public housing projects in DCs are as a result of the inability of many project managers to act as KWs during the planning and execution of complex projects.

In an effort to improve upon the effectiveness of PM, many DCs have resorted to the use of foreign PM experts ^[12] ^[13], however, the results have mostly been unsatisfactory ^[14]. Further research has shown that as a feature of most projects in DCs, they are relatively complex, have many participants and usually have an unstructured outline; requiring very peculiar and competent project managers to be able to successfully manage ^[15]. Aligned with these assertions, Ofori ^[16] advised that managers of projects in DCs need to possess a mixture of some peculiar “soft” and “hard” skills to be able to effectively manage projects in these countries.

2. Results and Discussion

The survey on the competencies needed by project managers to effectively manage projects in DCs first asked the PM experts to suggest the important skills/competencies that they believe is required of project managers, as KWs to be able to manage projects effectively in DCs.

Generally, there was consensus among the PM experts with about 56 (18.7%) frequency of suggestion that the ability to communicate effectively is the most important competence needed by project managers. Very close to communication skills are leadership skills, technical skills, project team management and project risk management competencies with 37 (12.5%), 27 (9.1%), 26 (8.8%) and 21 (7.1%) frequencies of suggestions, respectively. It is notable that other competencies such as negotiation 15 (12.5%), strategizing and planning 13 (4.4%), organization 11 (3.7%), time management 10 (3.4%), general PM knowledge 9 (3.0%), cost management 9 (3.0%), decision making 9 (3.0%), critical thinking 8 (2.7%), procurement and contract management 7 (2.4%) and conflict management 7 (2.4%) were also relatively frequently suggested by the PM experts as relevant for effective PM in DCs. **Table 1** provides the details of various skills/competencies, their frequency of suggestion and rank in order of importance by the PM experts who participated in the survey.

Table 1. Skills/competencies and their frequency of suggestion.

Competencies	Frequency of Suggestion	Percent (%)	Rank (Importance)
Communication Skills	56	18.90	1
Leadership Skills	37	12.50	2
Technical Expertise	27	9.10	3
Project Team Management	26	8.80	4
Project Risk Management	21	7.10	5
Negotiation Skills	15	5.10	6
Strategizing and Planning	13	4.40	7
Organizational Skills	11	3.70	8
Time Management	10	3.40	9
General PM Knowledge	9	3.00	10
Decision Making	9	3.00	10
Cost and Financial Management	9	3.00	10
Critical Thinking	8	2.70	13
Project Procurement and Contract Management	7	2.40	14
Conflict Management/Problem Solving	7	2.40	14
Interpersonal Relationship Management	5	1.70	16
Legal Expertise	3	1.00	17
Data Analysis and Interpretation	3	1.00	17
Innovativeness	3	1.00	17

Competencies	Frequency of Suggestion	Percent (%)	Rank (Importance)
Evaluation and Control	3	1.00	17
Adaptability	3	1.00	17
Supervision	3	1.00	17
Proactiveness	2	0.70	23
Records Keeping	2	0.70	23
Feedback Management	1	0.30	25
Emotional Intelligence	1	0.30	25
Critical Thinking	1	0.30	25
Prioritization	1	0.30	25
Delegation	1	0.30	25
Total	297	100.00	

These findings (from **Table 1**) closely validates the suggestions of [Amponsah \[17\]](#), the [PMI \[18\]](#) and the [IPMA \[19\]](#) on the competencies needed by project managers to effectively manage projects. Therefore, the competencies identified are reasonably supported and could therefore be potentially useful for further development for use by PM practitioners. That is, while the knowledge of other related competencies might help in delivering some required level of managerial performance, the knowledge of the competencies herein outlined is what “PM experts” expect project managers to have towards achieving effective PM in DCs. The findings therefore provide a pragmatic base on which project managers can improve their knowledge and skills in the key competencies identified, to be able address some of the PM challenges highlighted by [Williams\[20\]](#) and [Bokor \[21\]](#) in their respective studies. It is notable however that there are some differences found in our findings compared to similar studies in the literature. Specifically, competencies such as technical skills [22], financial management [23], organizational governance [24] and risk management [25][26][27] were ranked as very relevant for effective PM. These disparities are understandable since these studies were conducted in contexts different from ours (DCs).

Again, the PM experts were asked to suggest a combination of competencies that they deem fit for project managers as KWs who want to achieve PM effectiveness in DCs. The consensus did re-emphasize the relevance of the findings and the statement below best captures some of the very interesting views expressed. One group of the experts (category 1) stated that:

“To achieve PM effectiveness, project managers need to have a mix of technical competence, leadership skills, critical thinking ability, project team management, strategy development, communication and decision making competence”.

The same group of respondents added that if the projects to be managed are in DCs, the project manager will need an additional mix of competencies including;

“Risk management, project cost and financial management, project schedule management, project stakeholder engagement competencies and negotiation skills”.

Again, category 1 experts recommended that aside having these competencies, project managers need to undertake some of the activities below to able to achieve PM effectiveness:

“Consider stakeholders requirements, create project team, create project risk response team, create and formalize PM roles, create and align leadership competencies with technical competencies, and deploy acceptable scheduling standards for technical tasks, employ qualified, experienced and competent PM personnel, train employees and supervisors before start of the project and continuously inspect ongoing projects.

Another group of experts (category 2) wrote that:

“Generally, for effective PM, the project manager need to have a combination of both “soft” and “hard” skills. Specifically, these skills/competencies should include general knowledge in PM, time management, risk management, human resource management competencies and expertise in information communication technology (ICT). However, a combination of competences such as project planning and organization, conflict management and problem solving, project procurement and contract management competencies, data analysis and interpretation skills and legal expertise are needed for the purposes of PM in DCs”.

The respondents again suggested some activities that need to be embarked on by project managers in order to effectively manage an assigned project. The activities include:

“Establish clear project vision and mission, adopt better scheduling standards, develop leadership and technical competencies, clarify project roles and responsibilities, communicate early and often, monitor each progress and manage risk, communicate with project team and beneficiary communities, check the competence and materials of the contractor, involve conflict resolution team in land disputes, investigate any complaint of improper tendering and procurement and involve stakeholders in all stages of the project”.

Finally, the last group (category 3) of the respondents also contributed that:

“Project managers need a mix of supervisory, interpersonal relationships and record keeping skills, ability to prioritize, effective delegation and change management. Furthermore, for the purposes of achieving PM effectiveness in DCs, a combination of competencies such as project monitoring, evaluation and control competencies, project stakeholder management, feedback management competencies, emotional intelligence, proactiveness and innovativeness, ethical and personal integrity recommended for project managers”.

The group also suggested some activities that project managers need to undertake with their competencies to be able to manage projects effectively. The activities include:

“Define the scope and objectives of the project and brief the project team on these objectives, ensure community participation, provide insurance for the project, verify employees’ qualifications, provide technical input to project specification., assist tender committee in evaluation., identify stakeholders and their requirements, adopt the appropriate mode of communication, set rules on site and using the right PM methodologies, prepare detailed procedures of work breakdown structures, provide adequate duration for all deliveries, ensure safety standards meets international requirement and coordinate activities of various sections of the project oriented organization”.

From these suggestions of skills and competencies and their combination by respondents for project managers who want to be effective in the management of project assigned to them, one could observe their alignment with those recommended by [Bartoška et al. \[28\]](#), [Mader et al. \[29\]](#), [IPMA \[19\]](#) and [Jalocha et al. \[30\]](#). Again, with these suggested competencies and activities, PM challenges that are associated with project planning, deployment of project managers and job-matching, time and cost overruns, structural challenges, institutional challenges, managerial/organizational challenges, lack of competent staff and overreliance on religious beliefs [\[31\]\[32\]](#) [\[33\]](#) [\[34\]](#) in DCs can be addressed.

Implications of Findings

From the findings obtained in this study, some managerial and policy implications can be drawn for effective PM in DCs.

First, project oriented organizations need to make it as a matter of policy to employ project managers who have the competence to manage projects in DCs. The project manager to be selected to lead projects in DCs should be required to exhibit sound knowledge of the culture, values, morals and the orientation of the clients and the stakeholders of the projects in these countries. Again, they must be required to possess some of the specific competencies discussed in this study. Project oriented organizations need to further polish the competencies of their project managers by offering them periodic training and refresher courses on the changing PM environment of DCs.

Other findings in this study emphasize the fact that project oriented organizations need to come to the realization that there are some specific competencies that are desired from project managers in order to effectively manage projects in DCs; and that most of these competences are developing-country-specific and not required in any other PM environment.

What needs to be understood here is that these competencies are not only “hard skills” (technical competences) but a combination of both “hard” and “soft” skills (ethical, interpersonal and conceptual skills).

Additionally, top managers of project oriented organizations in DCs need to use the competency-profiles created in this study to facilitate the establishment of continuing professional development programs for their project managers to ensure that they maintain the currency and scope of the knowledge and skills that are needed to manage projects effectively in DCs. In this context, the competency profiles developed in this study should be used as a foundation for developing a knowledge-based tool-kit or a skills charting competency mapping processes for which project managers in DCs can review, plan and undertake self-assessment of the key knowledge and skills they require to develop their managerial excellence.

Finally, international project managers need to avoid the direct deployment of complex PM techniques and activities that have been used to manage projects in developed countries to manage projects in DCs. Managers of projects in DCs need to adopt some of the DCs-specific PM practices that have been discussed in this study. Consequently, the over reliance on advanced countries for their expertise to manage projects in DCs need to be reconsidered since their techniques and practices have almost always been difficult to implement due to cultural differences.

3. Conclusions

Studies have shown that projects in DCs are relatively complex, have many participants and usually have an unstructured outline; requiring project managers who are KWs to deploy unique competencies to be able to effectively manage ^[35]. However, there has not been enough studies on what these so-called unique competencies are ^{[36][32][31]}, especially in the context of DCs. This study therefore seeks to identify key competencies and their relationships for effective PM in DCs.

Under these circumstances, the original contribution of this study is geared towards building a competency profile for effective PM in DCs through the recommendations made under the discussion of the implications of the findings. In the discussion section, this study makes it clear the kind of competencies and skills that are needed by project managers (in the contemporary and challenging environment of DCs) to effectively manage an assigned project. These competency profiles can be used in practice by project oriented organizations to employ project managers with the appropriate competencies for managerial positions. Therefore, the profile could be used to develop an in-service decision-making tool to help top managers who may want to deploy other categories of staff such as deputy project manager and/or project coordinator who demonstrate some reasonable understanding of the relevant knowledge and skills to assist the project manager. For instance, if the project manager becomes indisposed and a replacement is needed as quickly as possible, the checklist developed in this study could be used to quickly identify an appropriate replacement.

Again, studies show that one of the major problems often faced by panelists in many project oriented organizations during interviews is to have an objective framework on which to make informed and uniform decisions ^[37]. The findings in this study could therefore be used as an “interviewing checklist” by top managers of project oriented organizations so that when selecting potential project managers, the interview panel will have a working framework on which to ask questions and also score points for the project managers with the appropriate competencies and skills.

Furthermore, in many DCs, PM training are not specific and offer very little room for generating the professional development of project managers. In many DCs, very little emphasis is placed on curriculum development towards generating PM activities that are required for effective PM ^[38]. With the increasingly strategic importance of projects in many DCs both in terms of scope and the potential for advancement of improved managerial practices, these findings could be used among other things, as a foundation for developing any future specific curricula for PM education and training in these countries.

Another contribution of this study is the fact that the findings of this research will help improve PM success rates in DCs. Understanding the competencies for effective PM in these countries will help both policy makers and managers of project oriented organizations to know who to assign a particular project, thus, helping to deal with PM challenges faced by these countries.

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