FACTORS HINDERING SUCCESSFUL IMPLEMENTATION OF

GOVERNMENT ICT PROJECTS:

THE CASE OF PASHA ICT PROJECTS OF KENYA

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KeyWords

ABSTRACT

The government of Kenya in an effrort to bridge the digital divide between the rural and urban dwellers and improve availability of governments ervices as wells as create employment opportunities, undertook a project to provide digital villages in each of the 290 constituencies in Kenya. The project was christened the Pasha Centers project. Like most Government projects involving other stakeholders, this well intented project faced a myrad of challenges in its implementation and could barely be considered successful seven years after it was launched in 2009.The current study endeavored to determine the factors that affects the successful implementation of such projects. From the analysis of the collected primary and secondary data, the findings have revealed that the skills of the project manager, collaborative development of the project design and timely availance of project funds are critical factors that should be determined upfront before commencement of such projects to guarantee its successful implementation. Technical competence of the project team is also crucial to ensure success sustainability of such projects. In the Pasha Centers project, the Government of Kenya did not comprehensively address the identified factors. This has led to near total collapse of the entire initiative. Out of the 290 Pasha Centers only 43 are operational and a paltry 17 of these are operating profitably, with about 13 making losses and another 13 being in the process of closure. This is not a desirable outcome of a well intented project with multiple benefits to the populace. The findings in this study could help inform other Government led projects with other non Governmnet actors to help mitigate such failures in the implementation. With appropriate intervention addressing the identified weakness of the implementation in the Pasha Center project, this brilliant ininitiatve can be revived and the intended objective achieved in the long run.

1   INTRODUCTION

1.1 Background of The Study

The Project Management Institute defines the discipline of project management as the art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of scope, cost, time, and quality and participation satisfaction. The four-phase model of the systems development cycle outlines the four phases of a project as Conception, Definition, Execution, and Operation. Nicholas (2004) postulated that the execution phase is when the work specified in the project plan is actualized.

Morris (2007) in a study carried out in India found out that project overruns in cost and delays were significantly attributed to project implementation challenges. In the past a lot of research undertaken partially addressed the factors that contributed to project failure in general. A great deal of the research was focused on the causes of delays in project implementation and cost overruns. Bing Sharma and Godla (2005) focused on the time and cost overruns in the power projects in Kenya and attributed project failure to factors ranging from delayed payments to contractors, client, and delay in disbursement of funds by financiers to approval of the project by the technical people. Grimsey and Lewis (2002) in analyzing project failure factors for Kenya Railways projects identified poor communication, little experience of the project manager late procurement of equipment among others.

1.2 Statement of Problem

Information and communication technology (ICT) facilities in Kenya are concentrated in urban and peri-urban areas resulting to a lag in rural areas, Drury (2011). To bridge this digital divide, the government of Kenya in 2009 rolled out Digital village projects called 'Pasha Centers' through the ICT Board, the predecessor of the current ICT Authority. The Government intent was to achieve information based society that would lead to realization of National development goals and objectives for creation of wealth and create employment.

These centers are operated by entrepreneurs presumed to have undergone training. A development loan from the revolving fund was awarded to these entrepreneurs who set up the Pasha Centers. Pasha Center projects were meant to provide ICT services that would subsequently bridge the technological divide in the nation. With implementation in 2009, each constituency in Kenya was meant to have a digital village that would provide digital services, mainly government services. This would reduce the distance the populace needed to travel to get government services.

Despite the government effort to have these projects succeed, only 43 centers out of 210 have been opened five years later, with some already closing as they could not break even. Out of the 43 sites, 17 are running well, 13 are running but making loses and the remaining 13 are not operational. Some failed sites have been converted into stores and other businesses different from the intended purpose and in some cases the managers have since disappeared to pursue other interests. This study endeavored to determine the factors which hindered the successful implementation of the Pasha Center projects and mainly focusing on the financial resources and managerial skills.

1.3 Objectives of the Study

The general objective of the study was to determine the factors which hinder successful implementation of Pasha ICT project in Kenya focusing on project managerial skills and financial resources. Precisely, the study was guided by the following specific objectives

  i.   To determine whether project manager's technical skills affect project implementation.
  ii.   To investigate whether resources affected the implementation of Pasha Centers project.
  iii.   To determine the effect of project design on implementation of the projects
  iv.   To investigate the extent to which technical competency of project implementing team affect the Projects.

1.4 Research Questions

  i.   To what extent does project manager's technical skills affect the implementation of Pasha Centers project?
  ii.   To what extend does resources affect the implementation of Pasha Centers project?
  iii.   To what extend does technical competency of implementing team affect the implementation of the project?
  iv.   How did project design affect the implementation of Pasha Centers projects?

1.5 Justification of the study

A Pasha Centre is a Digital villages Project (DVP) whose key functions are to provide a suite of services especially Government services to the public via computers connected to the internet. Successful implementation of these projects could transform the lives of many Kenyans especially those living in rural areas. The management of this project was unique given that both private and public sector partnered with the goal to ensure successful implementation. The findings from this research would be beneficial to other researchers interested in carrying out their research on ICT projects with private-public partnership approach between private sector and local governments in Kenya with a view of either validating or invalidating the challenges being experienced by other bodies. Additionally, researchers may wish to establish if project implementation challenges are similar across all industries and sector or they are unique to ICT projects only.

1.6 Scope of the Study

This study focused on the factors hindering successful implementation of ICT projects with specific reference to Pasha ICT projects in Kenya. Information and the required data were collected from Pasha Project managers and ICT Authority employees who were the supervisors of the projects. The study focused only on the extent to which financial resources, technical competency of project team and project designs affected the implementation of Pasha Project and generally government ICT Projects.

1.7 Limitations of the Study

The respondents approached were reluctant in giving information fearing that the information sought would be used to intimidate or victimized them for misappropriation of funds. Some of the Pasha Center Managers could not be reached while others flee away when they were approached.

2   LITERATURE REVIEW

2.1   Project Control Theory

Project control is the last element in the implementation cycle of planning-monitoring-controlling process. Except for accounting control, according to Gray and Larson, (2007) other project controls are not performed in most organizations. However, for project success, control should be focused on three elements of the project i.e. time, cost and performance. The focus of this research is project schedule control during implementation execution phase of projects. According to Klastorin (2004), once project implementation starts, project managers must monitor every aspect of ongoing project to concentrate their efforts on identifying those tasks that are "out-of-control" and require corrective actions.

 There are several things that can cause a project schedule to require control, specifically; initial project time estimation was based on optimistic time values, the task sequencing was initially incorrect, technical difficulties set in that take long to resolve than planned, required inputs of materials, personnel and equipment were unavailable when needed, necessary preceding tasks were incomplete, requested /generated change order requires rework, altered governmental regulations among others. The above can according to Ford, Lyeis and Taylor (2006) be generally classified as risk factors, donor factors, project complexity and human resource factors that affect project schedule control during project execution.
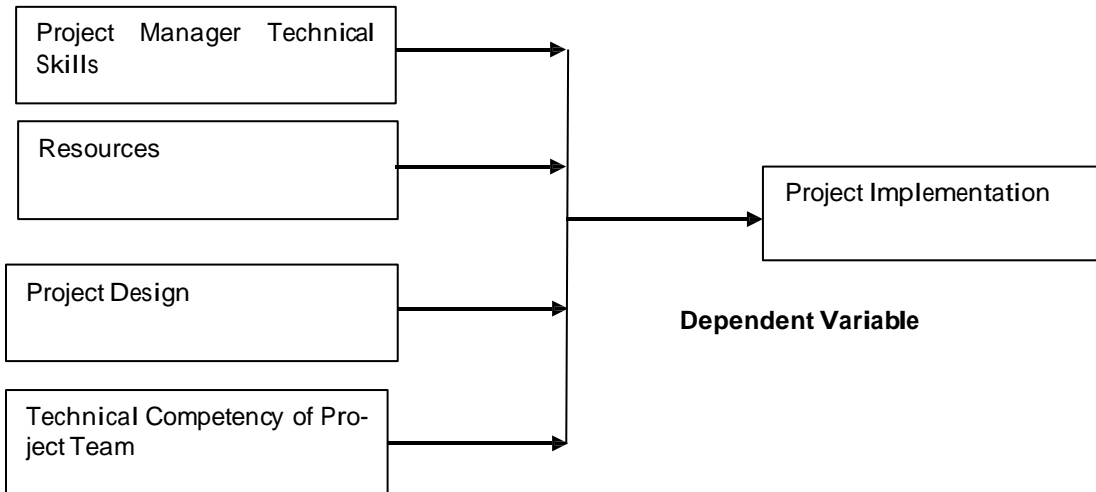
2.2   Empirical Review

Achieving project success has been of increasing interest in the project management literature. Despite this, many researchers admit that achieving project success is still a challenging task. Myers (2007) proposed two constituents of project success: determining success criteria and critical success factors (CSFs). Both are needed for enhancing the likelihood of project success within the dynamic project environment.

 Although project success is a core project management concept, a review of the project management literature reveals that there is no standardized definition of a 'project success' in the project management literature. The success of a project is perceived differently by different success assessors. Therefore, as Powell, (2010) noted 'the only agreement seems to be the disagreement on what constitutes project success'. De Wit (1988), on the contrary, defines project success as the assessment of project outcomes against cost, time and quality. However, he points out to a distinction between the project success and project management success, which he defines a s measurement of project outcomes against the overall project objectives that will be discussed by most of the researchers interested in this subject area Lin & Pervan (2001) took a further step and conducted a study to determine criteria for assessing project success by different stakeholders.

2.3 Conceptual Model

A conceptual model is a schematic representation of the theorized concept of the intended scientific research process in which a s pecific hypothesized conceptualization is defined as a measurable occurrence or in measurable terms that basically gives a clear meaning of the concept.

Project Manager Technical Skills

Resources

Project Design

Technical Competency of Project Team

Project Implementation

Dependent Variable

3 RESEARCH METHODOLOGY

3.1 Research Design and Target Population

Research design is the basic plan that indicates an overview of the activities that are necessary to execute the research project. This research problem was studied through the use of a descriptive research design. The target population was 43 Pasha owners and project managers from ICT Authority who were supervisors of the projects.

Table 3.1: Target Population

Category	Population (Frequency)	Percentage %
Profit Making Pasha Centers	17	40
Loss Making Pasha Centers	13	30
Non-operational Pasha Centers	13	30
Total	**43**	**100.0**

Source: Pasha ICT Project, (2015)

The study grouped the population into three strata i.e. Profit-making Pasha Centers, loss making Pasha Centers, non-operational Pasha Centers. From the above population the study took the census of the whole population since there were not many respondents. The respondents were the 43 Pasha Owners and 5 project managers.

3.2 Data Collection Procedure

Questionnaires was used to collect data with preliminary reports from consultants who were tasked to evaluate the projects in addition to monthly filed reports by project managers. Secondary data from reports prepared by project managers and consultants were collected and used for this study. The data was useful for generating additional information for the study from already documented reports. This supplemented the primary data which increases the validity of the primary statistical data in the study (Kombo, 2006).

4 FINDINGS AND DISCUSSIONS

4.1 Response Rate and Reliability Analysis

The study targeted a sample size of 43 respondents from which 40 filled in and returned the questionnaires making a response rate of 93 %. According to Mugenda and Mugenda (1999), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. Based on the assertion, the response rate was considered excellent.

Since the Cronbach's Alpha coefficients were greater than 0.7, as shown on Table 4.1 below. Therefore, a conclusion was drawn that the instruments had an acceptable reliability coefficient and were appropriate for the study Anderson, Tatham & Black (1998).

Table 4.2: Reliability Analysis

Scale	Cronbach's Alpha	Number of Items
Technical Competency of Project Team	0.801	4
Resources of the project	0.717	5
Project Design –User Requirements	0.818	4
Project Manager Technical Skills	0.703	4

4.2 Analysis on the Key Aspects of Project Management

4.2.1 Manager Technical Skills

This section was designed to measure the perceptions of respondents regarding the factors affecting implementation of government ICT projects. A five-point Likert scale was used, where 1 is "strongly agreed" and 5 'strongly disagree'. From the above table, it is evident that the mean scores were above 3. The above findings concur with study findings by OECD (2002) where he argues that management skills are essential to project implementation.

Table 4.2: Manager Technical Skills

Statement	N	Mean	S.D	%
Management style is a major contributor of success of ICT projects	40	3.75	.840	84
Project Manager technical skills and abilities is key in ICT Projects implementation in Government	40	3.93	.971	97
Managerial skills are key in ICT Project implementation of	40	3.43	.549	55
Academic qualification is key in ICT Project implementation	40	3.90	.900	90

4.2.2   Financial Resources

Table 4.3 below reveal that, to a very great extent that financial resources is key in ICT Project implementation. It established that Software cost is an important ingredient of ICT investment cost and that it influences project implementation as shown by a mean of 4.34. Timely availability of project funds influences project implementation as shown by a mean of 4.28. Training cost for users of the project and technical staff recorded a mean of 4.20, Hardware cost influence project implementation registered a mean of 4.14.

The above findings concur with the research findings on the elusive nature of delivering benefits from IT investment by Remenyi (2000) who found out that ICT investment offers potential for significant ICT project implementation.

Table 4.3 Financial Resources

Statement	N	Mean	S.D
Training cost of both users and technical staff is critical	40	4.20	0.20
Software cost is an important ingredient of ICT investment cost and that it influences project performance	40	4.34	0.23
Hardware cost influence Project performance	40	4.14	0.24
Availability of required funds on time influences project performance	40	4.28	0.25

4.2.3   Technical Competency of Project team

The findings as shown on Table 4.4 below indicates that competency of implementing team is key to ICT project implementation in government. Project technical skills of the project owner, in this case the Pasha managers is critical to success of the project as shown with a mean of 4.29. Experience of ICT employees is an important factor of competency and that it influences implementation of ICT projects, Training on ICT Skills is a factor that influences implementation of ICT projects as shown by mean of 4.25 in each case, ICT employees with Cognitive skills is a key competency factor and that it influences implementation of ICT projects as shown by mean of 4.18, ICT employees with Technical skills is a critical factor and that it influences ICT project performance as shown by mean of 4.17.

The above findings concur with the research findings by English (2005), that every employee in the ICT firm needs to be aware of the ICT- security risks as well as the potential consequences of such security breaches.

Table 4.4 Technical Competency of Project team

Statement	N	Mean	S.D
Knowledge of project skills on project owner is a key factor of competency and that it influences Project performance	40	4.29	0.23
Experience of ICT employees is an important factor of competency and that it influences Project performance	40	4.25	0.25
ICT employees with Technical skills is a critical factor and that it influences Project performance	40	4.17	0.23
ICT employees with Cognitive skills is a key competency factor and that it influences Project performance	40	4.18	0.23
Training on ICT Skills is a factor that influences Project performance	40	4.25	0.23

4.2.4 Project Design

The study sought to determine the influence of Project design on successful implementation of ICT projects. As revealed on Table 4.5 below, planning can help in identifying the pre-requisites conditions for successful ICT implementation rather than "rushing into a complex ICT Project strategy as shown by a mean of 4.11; comprehensive user training and awareness programme need to be incorporated into ICT Project design as it affects its implementation as shown by a mean of 3.80 and there is strong need to involved users during the design of ICT Projects especially when technical specifications of the project are being captured. This will ensure that the users have a 'buy in' in the project hence support its implementation and roll out as shown by a mean of 3.70. This is an indication that respondents believed that all the mentioned factors are important drivers of government ICT projects implementation. These findings have been reinforced by Aineruhanga (2004) who observed that planning as a tool can help in reducing waste by identifying the pre-requisites conditions for successful ICT implementation rather than "rushing into a complex e-Government strategy without having first finalized a national ICT policy".

Table 4.5 Project Design

Statement	N	Mean	S. D
The users of the ICT Projects must be involved during design of the project for a 'buy in".	40	3.70	.248
Proper Planning and understanding of the environment where the project will operate can help in identifying the pre-requisites conditions for successful ICT Project implementation.	40	4.11	.313
Comprehensive users training and awareness programme need to be incorporate into ICT project design	40	3.80	.262

4.3 Regression Analysis and The Model Summary

The model summary below shows that the model is significant at 0.01 confidence level, the value of r is 0.815 indicating a strong linear relationship between the independent variables (Resources, Project manager technical skills, Technical Competency of Project Team and Project Design) and the dependent variable (Project implementation). The model further indicates that the R^2 is 0.644, revealing that at least 64.4% percent of all variations in the dependent variable accounted for by the independent variables.

Table 4.6 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
1	0.815	0.644	0.427	0.511	0.00

Table 4.7 Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	1.998	0.495		.
	PM Technical Skills	0.703	0.088	0.007	0.003
	Financial Resource	0.608	0.078	-0.354	0.019
	Technical Competency of Project Team	0.411	0.366	0.028	0.116
	Project Design	0.614	0.366	0.036	0.003

From Table 4.7 above, project manager technical skills ranked the highest with a coefficient value of 0.703 indicating that a percentage increase in the dependent variable (Project implementation) will cause a 0.703 increase in the independent variable while a percentage increase in the dependent variable will result to a 0.614 increase in the independent variable funding of the projects, a 0.608 increase in entrepreneur technical skills lead to a percentage increase in the dependent variable while a 0.411 increase in technical competency of project team will lead to a percentage increase in the dependent variable. Thus, the regression equation becomes;

$$Y = 1.998 + 0.703X_1 + 0.608X_2 + 0.411X_3 + 0.614X_4 + \varepsilon$$

Where, X_1 is project manager technical skills, X_2 is the financial resources, X_3 is the project team's technical competency, X_1 is the project design and ε is the unexplained variations of the dependent variable, **Y.**

5   SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1   Summary of Findings

The study revealed that project manager technical skills influenced the implementation of Pasha ICT Projects and that; management style is a major contributor of implementation of government ICT projects, technical skills and abilities are critical ingredient of implementation of government ICT project, managerial skills and academic qualifications also contributed to the implementation the Projects. In the case of Pasha Centre Projects, project managers providing oversight roles had limited skills in this area hence they were not regularly available to guide the pasha managers during implementation of the projects.

The study focused on financial resource as key component in implementation of ICT Projects in Government. It was established that timely and availability of funds is critical in the implementation of ICT projects in government. It also identified the key components of ICT projects which must be funded for successful implementation. Software, hardware and training cost are among key important ingredient of ICT investment cost and it influences ICT project implementation. Pasha Projects largely failed due to delay in disbursement of loans by the sponsor, family bank, as well as poor funding of key project components.

The study also found that technical competency of the project team plays a significant role in implementation of ICT projects in government. It was established that the project owner must be competent in the project being implemented for their needs, in this case, the Pasha Center managers. It further established that experience ICT employees is an important factor of competency which influences implementation of ICT projects, Training on ICT Skills is a factor that impacts implementation of ICT projects. ICT employees with Cognitive skills is a key competency factor and that it influences implementation of ICT projects; ICT employees with technical skills is a critical factor and that it influences implementation. In the case of Pasha Center, Pasha managers had limited skills in ICT projects management and effort to get competent staff became difficult due to limited funding.

Revelation from the study indicates that the way ICT projects are designed in government influences their implementation. Proper planning of ICT projects can help in identifying the pre-requisites conditions for successful ICT implementation. Involving users during design stages has better 'buy in' influencing the implementation. It is revealed that proper training and awareness programme need to be incorporated into ICT projects at design stage to assist in deployment of the projects. Pasha Center projects failed to consult the target clients for their projects during the design to enable them to understand their immediate needs. The products of Pasha Centre range from bureau services, Internet, training, Agency banking, photography and sale of airtime. Most of these services are not being consumed by the rural community due to low IT literacy level and low income. This resulted in poor usage of these services leading to low revenue which resulted in either closure of some centres while others are operating with a lot of losses as they await financial support and direction from the Sponsor.

5.2 Conclusions and Recommendations

From the findings the study established that project management skills of project manager influences implementation of ICT projects and that; management style is a major contributor of implementation of government ICT project. The study also revealed that funding of the projects affects implementation of the project, software and hardware costs is an important ingredient of ICT investment cost and that it influences project implementation. Additionally, timely and availability of funds a key factor of implementing ICT projects. The study found out that technical competency of project team influences implementation of ICT projects; Experience of ICT employees is an important factor of competency and that it influences implementation of ICT projects. The study revealed that proper design of projects is critical since at this stage users are involved as well as carry out a feasibility study and this can help in identifying the pre-requisites conditions for successful ICT implementation.

The study revealed that timely and availability of ICT Project funds is key for the success of government ICT Projects. To address this problem, the study recommends that the government formulates a clear policy framework on funding of ICT projects to be in line with government budgetary cycle and corporate planning. This applies to all other projects which are non-ICT in government.

The study also revealed that technical competency of project team as a well as proper project planning are important in the implementation of ICT projects in government. The government should set and implement proper governance structures for implementation of ICT projects which address among others the technical competency of project teams as a pre-requisite for the start of the project. This should ensure that government ICT projects pass through the required stages of project implementation where planning, design execution, testing monitoring and evaluation are considered critical for successful the project implementation.

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