الآيـــة



Acknowledgements

First and foremost, praises and thanks to the God, the Almighty, for his showers of blessings throughout my research work to complete the research successfully.

I would like to express my deep and sincere gratitude to my research supervisor, Dr.Esam Abbaka for giving me the opportunity to do research and providing invaluable guidance throughout this research. He has taught me methodology to carry out the research and to present the research works as clearly as possible.

I am extremely grateful to my parents for their love, prayers, caring and sacrifices for educating and preparing me for my future. Also I express my thanks to my sister's and brother's for their support and valuable prayers. My special thanks to my friend's, teacher's for the keep interest shown to complete thesis successfully. They are shared their memories and experiences, especially my teacher's friend's.

Abstract

The key factors associated with contraction industry development worldwide are identified by using a grounded theory approach. This first involved the identification of 62 variables from earlier studies. A questionnaire survey was then used to elicit views of current strength of each variable. This study was carried out to rank the factors affecting the performance of contactors in construction projects in Sudan. These factors are considered as performance indicators can be used for benchmarking purposes, and would be key components for any organization to achieving best practice.

The literature in this area of the research was reviewed to identify these factors. Consequently a questionnaire was established as a tool for collecting data from the research population. The questionnaire had distributed to contractors. Results obtained showed that the most important factor affecting performance is the quality of equipment and raw materials, availability of personal with high experience and qualification, review of failures and solving them, material and equipment cost, sequencing of work according to schedule and leadership skills for project manager.

The recommendations stipulate that the contractors should have clear mission and vision to formulate, implement and evaluate performance. It is important for construction organizations to identify the weaknesses of performance in order to solve.

Table of contents

Content	Page No
Ayah from holy Quran	I
Acknowledgement	IV
Abstract	III
Table of contents	V
List of figures	VIII
List of table	X
List of abbreviations	XII

Chapter one: Introduction

Content	Page No
Introduction	1
Research objectives	2
Problem statement	3
The importance of study	4
Research hypotheses	4
Research structure	5

Chapter two: Literature review

Performance in construction project

NO.	Content	Page No
2.1	Construction management	6
2.2	Success of construction project	7
2.3	Performance of construction project	9
2.4	Problems of performance in construction projects	10
2.5	Measurement of project performance	11

2.6	Performance criteria	15
2.6.1	Providing proper planning and scheduling	15
2.6.2	Procuring material for site	16
2.6.3	Providing suggestions on cost cutting	16

2.6.4	Providing safety precaution at construction site	16
2.6.5	Subcontracting control	17
2.6.6	Ensuring efficient administration and supervision	17
2.6.7	Ensuring availability of required equipments and facilities factor affecting performance	18
2.7	Factor affecting performance of manager	18
2.8	Factor affecting cost and time performance	19
2.9	Common factor affecting the construction project performance	21
2.9.1	Project-related factor	23

2.9.2	Procurement-related factors	23
2.9.3	Project management factors	23
2.9.4	Project participants-related factors	24
2.9.5	External factor	25

Chapter three: Research methodology- Results analysis and data discussion

NO.	Content	Page No
3.1	Introduction	26
3.2	Literature review	26
3.3	Methodology of data analysis	26
3.4	Part one: general information	29
3.5	Part two: factor affecting the performance	41
3.6	hypothesis test	56

Chapter Four: conclusions and recommendation

NO.	Content	Page No
4.1	Conclusion	58
4.2	Recommendation	63
Referen	ce	65
Append	ix	67

List of Figures

Figures No	Title	Page No
(3-1)	Company size.	29
(3-2)	Specialization of company	30
(3-3)	The number of project executed in the last five years	31
(3-4)	Frequency of meeting	32
(3-5)	Coordinate current schedule with master schedule	33
(3-6)	The way of incentive system	34
(3-7)	Software using for planning and scheduling.	35

(3-8)	Having the cost schedule associated with the estimated time schedule.	36
(3-9)	Having a cost engineer	37
(3-10)	Giving authority for line managers to manage the actual expenses	38
(3-11)	The project delay by late payment from the owner	39
(3-12)	Variation in cost because economical condition.	40
(3-13)	RII of time factor.	42
(3-14)	RII of cost factor.	44
(3-15)	RII of quality.	46
(3-16)	RII of client satisfaction factor.	48
(3-17)	RII of health and safety factor	50
(3-18)	RII of innovation and learning factor	52
(3-19)	RII of productivity factors	54

List of tables

Table No	Title	Page No
(3-1)	Company size.	29
(3-2)	Specialization of company	30
(3-3)	The number of project executed in the last five years	31
(3-4)	Frequency of meeting	32
(3-5)	Coordinate current schedule with master schedule	33
(3-6)	The way of incentive system	34
(3-7)	Software using for planning and scheduling.	35
(3-8)	Having the cost schedule associated with the estimated time schedule.	36
(3-9)	Having a cost engineer	37
(3-10)	Giving authority for line managers to manage the actual expenses	38
(3-11)	The project delay by late payment from the owner	39
(3-12)	Variation in cost because economical condition.	40

(3-13)	RII of time factor.	42
(3-14)	RII of cost factor.	44
(3-15)	RII of quality.	46
(3-16)	RII of client satisfaction factor.	48
(3-17)	RII of health and safety factor	50
(3-18)	RII of innovation and learning factor	52
(3-19)	RII of productivity factors	54
(3-20)	Kendall's coefficient of concordance	57

List of abbreviations

BPM	Building project management
UK	United Kingdom
PPMS	Project performance monitoring system
PPI	Project performance indicators
IT	Information technology
PPE	Project performance evaluation
KPL	Key performance indicators
EPS	Environmental performance score
CPI	Cost performance index
BCWP	Budgeted cost of the work performed
Acwp	Actual cost of the work performed
SPI	Schedule performance index