



UNIVERSITI PUTRA MALAYSIA

**RECURRING PROJECT OVERRUN
AND
PROJECT MANAGEMENT PROBLEMS
IN
ENGINEERING AND CONSTRUCTION INDUSTRIES**

LIM CHEONG SENG

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By

LIM CHEONG SENG

**Thesis Submitted in Fulfilment of the Requirement for the
Degree of Doctor of Philosophy in the
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Universiti Putra Malaysia**

March 2001

DEDICATIONS

To God Almighty - the world's very first Project Manager (Genesis 1:1-31; 2:1-3).
Amen.

To my beloved mother, Madam Ong Soh Hong.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirement for the degree of Doctor of Philosophy.

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Chairman: Professor Dr Mohd Zain Mohamed, Ph.D.

Faculty: Malaysian Graduate School of Management

The purpose of this thesis is to present an account of the research conducted in the field of project management (PM). The broad problem area is the recurring project overrun problem. The three issues of concern are (1) the perceptions of a project, PM and their success, (2) the managerial implications of project execution problems, and (3) the verification of Baker's and Turner's theories of project success.

The research made use of preliminary studies (unstructured interviews, case study, pilot study and structured interviews) to identify, refine and focus the issues for research. Survey research is used to derive the conclusive evidences in the Engineering and Construction (EC) industries in Malaysia.

By the use of unstructured interviews, the research identified 28 factors believed to have caused project overrun problems. Among the 28 are four that have never been identified before by previous researchers. In a way, the research showed that unstructured interview is a useful methodology in identifying new ideas.

The four new factors identified are the perceptions of individuals. The perceptions manifested in statements such as “what constitute project success may vary”, “inherited problems from earlier phases”, “management does not care” and “projects are completed anyway”.

The influence and impacts of the ambiguities surrounding a project, PM and their success, on project performance could not have come to light but for the literature survey and unstructured interviews conducted.

In the case study conducted, a list of 135 project execution problems of different type and complexity were identified. The managerial implications in terms of Henri Fayol’s management function were studied. The pilot study and structured interviews helped in confirming the issues for investigation.

The basic survey research then focused on the issues discovered in the exploratory studies for further investigation. Based on the preliminary studies theoretical frameworks and 10 hypotheses were formulated for testing.

The essential finding of the research is that conceptual factors have substantial influence on the recurring project overrun problem. Statistical evidence shows that individual perspective differences would give rise to perceptual differences. The perceptual differences would influence the inhibiting factors. And the inhibiting factors would cause project overrun problem. Other findings of the research are summarised as follows:

1. The perception of a project is based on perspective (be it owner, developer, contractor, consultant, supplier, operator, user, stakeholder or non-stakeholder).
2. Each individual and perspective has an intrinsic viewpoint: macro or micro.
3. Owners, developers, users, operators, stakeholders and non-stakeholders are typically macro view holders.
4. Contractors, suppliers and consultants are typically micro view holders.
5. The macro viewpoint emphasises on completion and satisfaction criteria.
Also, the greater the satisfaction level, the lesser would be placed on the completion inadequacies encountered in project execution, the higher the perceived project success.
6. The micro viewpoint emphasises on the completion criterion of time, cost, quality, performance and safety.
7. An individual could shift his perspective and so his viewpoint.

The research's verification of Baker's theory of project success is that it would be supported at the macro level. The generalisation is that at the macro level, project success is not a function of time and cost.

The research's verification of Turner's theory of project success is that it would be supported at the micro level. The generalisation is that at the micro level, project success is a function of time and cost.

The research reveals that the traditional way of managing a project should be given a paradigm shift. The management of a project should be on a holistic approach, i.e. on both macro and micro levels. Project professionals should first recognise the existence of perspective differences and perceptual differences. They should be well prepared, in advance, with the methods of dealing with these perceptual issues if they occur. Hence, project professionals should be multi-skilled. In specific, they should improve their leadership and conceptual skills in handling projects.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk Ijazah Kedoktoran Falsafah

**MASALAH BERULANGAN PROJEK
DAN
MASALAH PENGURUSAN PROJEK
DALAM
INDUSTRI-INDUSTRI KEJURUTERAAN DAN PEMBINA**

Oleh

LIM CHEONG SENG

Mac 2001

Pengerusi: Profesor Dr Mohd. Zain Mohamed, Ph. D.

Fakulti: Pusat Pengajian Siswazah Pengurusan Malaysia

Tujuan tesis ini ialah untuk mengemukakan laporan penyelidikan yang dijalankan dalam bidang pengurusan project. Masalah umumnya ialah masalah berulang projek. Tiga isu yang berkenaan ialah (1) tanggapan sesuatu projek, pengurusan projek dan kejayaannya, (2) implikasi pengurusan atas masalah pelaksanaan project, dan (3) pemeriksaan benar atas teori Baker dan Turner berkenaan kejayaan projek.

Penyelidikan ini menggunakan kajian permulaan (temuduga tidak berstruktur, kajian kes, kajian panduan dan temuduga berstruktur) untuk menunjuk, menyempurna dan menumpu kepada isu-isu untuk di siasat. Penyelidikan tinjauan digunakan untuk memperolehi kenyataan mutamad dalam industri-industri kejuruteraan dan pembinaan di Malaysia.

Dengan kegunaan temuduga tidak berstruktur, penyelidikan ini menunjukkan 28 faktor yang dianggap telah menyebabkan masalah-masalah projek. Antara 28 faktor ini, adalah empat faktor yang tidak pernah ditemui oleh penyelidik-penyelidik sebelum ini. Dalam pada itu, penyelidikan ini menunjukkan bahawa temuduga tidak berstruktur adalah satu kaedah berfaedah untuk menunjukkan idea baru.

Keempat-empat faktor baru tersebut adalah tanggapan individu. Tanggapan ini adalah jelas dalam kenyataan seperti “apa yang menyebabkan kejayaan projek mungkin berubah”, “mewarisi masalah dari fasa terdahulu”, “pengurusan tidak memandang penting” dan “macam manapun projek akan disempurnakan”.

Pengaruh dan kesan daripada kekaburan yang mengelilingi sesuatu projek, pengurusan projek dan kejayaannya, ke atas prestasi projek tidak akan dinyatakan jika bukan kerana tinjauan penulisan dan temuduga tidak berstruktur yang dijalankan.

Dalam kajian kes dijalankan, sesenarai sejumlah 135 masalah pelaksanaan projek yang pelbagai jenis dan pelbagai kesulitan telah dikenalpastikan. Implikasi pengurusan berbentuk fungsi pengurusan Henri Fayol telah dikaji. Kajian panduan dan temuduga berstruktur telah mengesahkan isu-isu yang disiasat.

Kemudiannya, penyelidikan tinjauan asas bertumpukan isu-isu yang ditemui dalam kajian penjelajahan untuk siasatan mendalam. Berdasarkan rangkakerja teori kajian permulaan, 10 hipotesis telah dirumuskan untuk pemeriksaan.

Penemuan penting penyelidikan ini ialah faktor konsep mempunyai pengaruh yang besar ke atas masalah berulang projek. Kenyataan perangkaan menunjukkan bahawa perbezaan perspektif individu boleh menimbulkan perbezaan tanggapan. Perbezaan tanggapan ini akan mempengaruhi faktor menghalang. Dan faktor menghalang ini akan menyebabkan pelbagai masalah projek. Penemuan lain penyelidikan ini adalah diringkaskan seperti berikut:

1. Tanggapan sesuatu projek adalah berasaskan perspektif (biarkan dari segi tuan punya, pemaju, kontraktor, perunding, pembekal, operator, pengguna, orang yang ada kena-mengena (atau stakeholder) atau orang yang tidak ada kena-mengena (atau bukan stakeholder)).
2. Setiap individu dan perspektif mempunyai pandangan hakikat: makro atau mikro.
3. Tuan punya, pemaju, pengguna, operator, stakeholder atau bukan stakeholder, pada kebiasaannya, adalah orang yang berpandangan makro.
4. Kontraktor, pembekal dan perunding, pada kebiasaannya, adalah orang yang berpandangan mikro.
5. Pandangan makro menitikberatkan kriteria kesempurnaan dan kepuasan projek. Pada tahap kepuasan yang tinggi, kurang pertimbangan akan diberi ke atas kekurangan kesempurnaan dalam pelaksanaan projek dan lebih tingginya kejayaan projek diertikan.
6. Pandangan mikro menitikberatkan kriteria kesempurnaan projek seperti masa, kos, kualiti, prestasi dan keselamatan.

7. Seseorang individu boleh menukar perspektifnya dan juga segi pandangannya.

Pemeriksaan penyelidikan ini atas benarnya teori Baker berkenaan kejayaan projek menunjukkan bahawa ianya disokong pada peringkat makro. Kenyataan umumnya ialah pada peringkat makro, kejayaan projek tidak berfungsi masa dan kos.

Pemeriksaan penyelidikan ini atas benarnya teori Turner berkenaan kejayaan projek menunjukkan bahawa ianya disokong pada peringkat mikro. Kenyataan umumnya ialah pada peringkat mikro, kejayaan projek adalah berfungsi masa dan kos.

Penyelidikan ini menunjukkan bahawa cara tradisional mengurus projek seharusnya diberi perubahan paradigma. Pengurusan projek seharusnya berkaedah keseluruhan atau holistik, iaitu pada kedua-dua peringkat makro dan mikro. Ahli profesional projek seharusnya mengenali dahulu wujudnya perbezaan perspektif dan perbezaan tanggapan. Mereka seharusnya bersedia terutamanya dengan kaedah mengurus isu-isu tanggapan jika ia berlaku. Oleh itu, ahli profesional projek seharusnya mempunyai belbagai kemahiran. Pada khususnya, mereka seharusnya memperbaiki memahiran pimpinan dan tanggap dalam urusan projek.

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TABLE OF CONTENTS

	Page
DEDICATIONS	ii
ABSTRACT	iii
ABSTRAK	vii
ACKNOWLEDGEMENTS	xi
APPROVAL	xiii
DECLARATION	xv
LIST OF TABLES	xx
LIST OF FIGURES	xxiii
LIST OF ABBREVIATIONS	xxv

CHAPTER

1	INTRODUCTION	1.1
1.1	Background and Justification	1.3
1.2	The Problem Statement	1.11
1.3	Research Objectives	1.11
1.4	The Research Questions	1.12
1.5	Definitions	1.12
1.6	Scientific Investigation	1.14
1.7	The Significance of the Study	1.17
1.8	Research Process and Topic Selection	1.18
1.9	Organisation of Thesis	1.20
2	LITERATURE REVIEW	2.1
2.1	An Overview of Project Management Development	2.1
2.1.1	The Growth of Project Management	2.2
2.1.2	The Contributions of Traditional Management Thoughts on Project Management Thoughts	2.5
2.2	Review of Key Theories	2.6
2.2.1	Definition of Project	2.6
2.2.2	Definition of Management	2.10
2.2.3	Definition of Project Management	2.16
2.2.4	Objectives and Performance	2.17
2.2.5	Definition of Project Success	2.19
2.2.6	Stakeholders	2.20
2.2.7	Other Theoretical Developments	2.22
2.3	Review of Previous Researches	2.23
2.3.1	Project Overrun Studies	2.23
2.3.2	Project Success Studies	2.30

2.4	Discussion	2.38
2.4.1	Project Overrun Studies	2.38
2.4.2	Project Success	2.42
2.5	Conclusions	2.44
3	THEORETICAL FRAMEWORKS AND HYPOTHESES	3.1
3.1	General Framework	3.2
3.2	Project Overrun Framework	3.4
3.3	Project Managerial Problems Framework	3.5
3.4	Project Success Framework	3.8
3.4.1	Criteria and Factors	3.9
3.4.2	Individual Perspectives	3.13
3.4.3	Macro and Micro Viewpoint of a Project	3.14
3.4.4	Macro Viewpoint of Project Success	3.17
3.4.5	Micro Viewpoint of Project Success	3.20
3.5	Theories of Project Success	3.23
4	METHODOLOGY	4.1
4.1	Research Design	4.5
4.2	Methods of Data Collection	4.8
4.3	Methods of Data Analysis	4.18
4.4	Computer Packages	4.32
4.5	Good Measurement	4.33
4.5.1	Validity	4.33
4.5.2	Reliability	4.35
4.5.3	Sensitivity	4.37
4.5.4	Summary	4.37
4.6	Limitations	4.38
5	RESULTS OF PRELIMINARY RESEARCH	5.1
5.1	Unstructured Interviews	5.2
5.2	Case Study	5.11
5.3	Pilot Study	5.18
5.4	Structured Interviews	5.27

6	RESULTS OF SURVEY RESEARCH	6.1
6.1	Sample Distributions	6.3
6.1.1	Response Rates	6.3
6.1.2	Gender	6.5
6.1.3	Company Years of Establishment	6.5
6.1.4	Numbers of Employees	6.6
6.1.5	Paid-Up Capital	6.7
6.1.6	Working Experience	6.8
6.1.7	Years of Managing Projects	6.9
6.1.8	Job Function	6.9
6.1.9	Highest Academic Background	6.10
6.1.10	Training and Study in Project Management	6.11
6.1.11	Tally of Responses	6.12
6.2	Project Overrun Problem	6.12
6.2.1	Recurrence	6.12
6.2.2	Perceptual Factors	6.15
6.2.3	Effects of Perception	6.17
6.2.4	Possible Solutions to Unanswered Questions	6.24
6.2.5	Perspective Disparity – Testing Hypothesis 1	6.25
6.3	Project Managerial Problems	6.29
6.3.1	Project Performance Problem	6.29
6.3.2	Nature of Problems	6.34
6.3.3	Types of Problems	6.36
6.3.4	Management Functions	6.38
6.4	Project Success	6.47
6.4.1	Testing Hypothesis 2	6.47
6.4.2	Testing Hypothesis 3	6.50
6.4.3	Testing Hypothesis 4	6.52
6.4.4	Testing Hypothesis 5	6.54
6.4.5	Testing Hypothesis 6	6.56
6.4.6	Testing Hypothesis 7	6.58
6.4.7	Testing Hypothesis 8	6.61
6.4.8	Testing Hypothesis 9	6.64
6.4.9	Testing Hypothesis 10	6.66
7	CONCLUSIONS AND RECOMMENDATIONS	7.1
7.1	Project Overrun Problem	7.1
7.2	Project Managerial Problems	7.6
7.3	Project Success	7.8
7.4	Implications	7.15
7.5	Limitations	7.18
7.6	Recommendations for Future Research	7.19

BIBLIOGRAPHY	R.1
APPENDICES :	
A Questionnaire for Pilot Study	A.1
B Guidelines to Interview Questions	B.1
C Questionnaire for Main Study	C.1
D Example of Random Number Generator	D.1
E Project Organisation Chart	E.1
F Project Execution Problems Encountered	F.1
G Levels of Agreement Amongst Respondents in Pilot Study	G.1
H Record of Interviews	H.1
I List of Respondents	I.1
J Responses on Project Management Matters	J.1
K Responses for Problems Encountered	K.1
L Summary of Responses	L.1
M Statistical Tables	M.1
VITA	V.1
PUBLICATIONS	P.1

LIST OF TABLES

Table	Page
2.1 Contributions of Management Thoughts	2.6
4.1 Sample Groups for Project Overrun Studies	4.13
4.2 Sample Groups for Project Success Studies	4.14
4.3 Selection of Appropriate Test Methods	4.27
5.1 Summary of Unstructured Interview Respondents by Firms	5.2
5.2 Possible Reasons for the Project Overrun Problem	5.5
5.3 Suggested Solution to the Recurring Project Overrun Problems	5.9
5.4 Summary of Interview Responses	5.32
6.1 Response Rates	6.3
6.2 Sample Distribution by Gender	6.5
6.3 Sample Distribution by Years of Establishment	6.5
6.4 Sample Distribution by Numbers of Employees	6.6
6.5 Sample Distribution by Paid-Up Capital	6.7
6.6 Sample Distribution by Working Experience	6.8
6.7 Sample Distribution by Year of Managing Projects	6.9
6.8 Sample Distribution by Job Function	6.9
6.9 Sample Distribution by Highest Academic Background	6.10
6.10 Sample Distribution by Training/Study in PM	6.11
6.11 Frequency of Project Overrun	6.13
6.12 Responses to the Perceptual Factors	6.15

6.13	Order of Importance	6.17
6.14	Reasons Why the Perception of Project Success Differ	6.18
6.15	Reasons Why “Management Does Not Care”	6.20
6.16	Reasons Why “Projects Are Completed Anyway” Could Result in Project Overrun Problem	6.23
6.17	Possible Solutions to Unanswered Questions	6.24
6.18	Individual Perspectives Could Result in Problems	6.25
6.19	Test of Normality for Hypothesis 1	6.26
6.20	Reliability Test for Hypothesis 1	6.27
6.21	Kruskal-Wallis Test for Hypothesis 1	6.28
6.22	Elements that Cause the Most Problems	6.29
6.23	Main Problems With Respect To Human Resources	6.30
6.24	Main Problems With Respect To Physical Resources	6.32
6.25	Main Problems With Respect To Situation	6.33
6.26	Minor Problems Worsen to Become Critical	6.35
6.27	Major Problems Could Become Insignificant	6.35
6.28	The Type of Problems Most Difficult to Manage	6.37
6.29	Main Problems With Respect To Planning	6.38
6.30	Main Problems With Respect To Organising	6.40
6.31	Main Problems With Respect To Staffing	6.41
6.32	Main Problems With Respect To Leading	6.43
6.33	Main Problems With Respect To Controlling	6.44
6.34	Contingency Table for Hypothesis 2	6.48
6.35	Contingency Table for Hypothesis 3	6.50

6.36	Contingency Table for Hypothesis 4	6.53
6.37	Contingency Table for Hypothesis 5	6.55
6.38	Contingency Table for Hypothesis 6	6.57
6.39	Test of Normality for Hypothesis 7	6.59
6.40	Group Statistics for Hypothesis 7	6.60
6.41	Test Statistic for Hypothesis 7	6.60
6.42	Contingency Table for Hypothesis 8	6.62
6.43	Contingency Table for Hypothesis 9	6.64
6.44	Test of Normality for Hypothesis 10	6.67
6.45	Kruskal-Wallis Test for Hypothesis 10	6.68
M-1	Chi-Square Distribution	M.1
M-2	Student-t Distribution	M.2
M-3	Normal Distribution	M.3

LIST OF FIGURES

Figure	Page
1.1 The Selection of Research Topic	1.19
2.1 Management Skills, Functions and Roles	2.15
2.2 Systems Approach to Management	2.16
2.3 Four Approaches to Organisation Effectiveness	2.21
2.4 Model Used by Baldwin and Arditi	2.40
2.5 Model Used by Fern and Okpala	2.40
2.6 Model Used by Mansfield	2.40
2.7 Model Used by Assaf and Daniel Chan	2.40
2.8 Model Used by Jamilah Hassan	2.42
2.9 Model Used By Kerzner, Pinto, Morris and Nicholas	2.42
3.1 Possible Sources of Problems	3.2
3.2 Facilitating and Inhibiting Forces Along Project Phases	3.3
3.3 A Model of Project Overrun Problem	3.4
3.4 A Model of Project Performance Problem	3.6
3.5 The Status of a Problem May Change	3.6
3.6 Criteria and Factors that Lead to Judgement/Results	3.9
3.7 Criteria and Factors As Applied to Project Success	3.9
3.8 Getting a Degree	3.11
3.9 Criteria and Success Factors in a Soccer Game	3.12
3.10 Individual Perspectives	3.13
3.11 Macro and Micro Viewpoints of a Project	3.15

3.12	Macro Viewpoint of Project Success	3.17
3.13	Micro Viewpoint of Project Success	3.21
3.14	Summary of Concepts	3.24
5.1	Pattern of Number of Problems Encountered	5.16