



**UNIVERSITI PUTRA MALAYSIA**

***CAUSES OF DELAY IN THE BUILDING CONSTRUCTION  
INDUSTRY IN MAJOR CITIES OF IRAN***

**MEHRAN KOUCHAKNEZHAD**

**FK 2011 7**

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CONSTRUCTION INDUSTRY IN MAJOR CITIES  
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**MASTER OF SCIENCE**

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**CAUSES OF DELAY IN THE BUILDING CONSTRUCTION INDUSTRY IN  
MAJOR CITIES OF IRAN**

By

**MEHRAN KOUCHAKNEZHAD**

Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia,  
in Fulfilment of the Requirement for the Degree of Master of Science

**January 2011**

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of requirement for the degree of Master of Science

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**January 2011**

**Chair: Prof. Ir. Abang Abdullah Bin Abang Ali**

**Faculty: Engineering**

The problem of delays in the construction industry is a global issue and it affects construction projects in Iran. This thesis presents the results of a study that was undertaken to determine and evaluate the importance of different factors causing delays in the building construction in major cities of Iran. The survey covered 90 selected factors causing delays which were grouped into four major categories, namely owner related, consultant related, contractor related, and external related. The main reasons for the delays were analyzed and ranked according to the different categories using different analyses. It was found that owners and consultants believe that contractors were the most important party in creating delay in the building construction industry in Iran, while contractors believe that consultants and owners were the important parties in creating delays. This study identified ten most important causes of delays from a list comprising 90 pre-determined causes. The ten most important causes were: lack of experience among the subcontractors, inadequate contractor's work, low productivity and efficiency of equipment, insufficient numbers of equipment, deficiencies in planning and scheduling, frequent

equipment breakdown, poor quality, poor construction methods, financial difficulties and equipment allocation problems which were all put together in the contractor category. These factors were the main causes of delays in the building construction in major cities of Iran, and they could provide a basis for developing strategies to minimize delays in construction projects.



Abstrak tesis yang dikemukakan kepada senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master of Science

**SEBAB-SEBAB KELEWATAN DI DALAM PEMBINAAN DALAM  
INDUSTRI PEMBINAAN DI BANDAR RAYA UTAMA IRAN**

Oleh

**MEHRAN KOUCHAKNEZHAD**

**Januari 2011**

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Masalah kelewatan dalam industri pembinaan merupakan masalah global dan ia menjejaskan projek-projek pembinaan di Iran. Tesis ini membentangkan hasil kajian yang dilakukan untuk menentukan dan menilai pentingnya faktor-faktor lain yang menyebabkan kelewatan dalam pembinaan bangunan dalam bandar raya utama Iran. Tinjauan ini meliputi 90 faktor-faktor terpilih menyebabkan kelewatan yang dikumpulkan dalam empat kategori utama; iaitu pemilik berkaitan, perunding berkaitan, kontraktor berkaitan, dan luaran yang berkaitan. Sebab-sebab utama penangguhan dianalisis dan diberi kategori yang berbeza menggunakan analisa yang berbeza. Ia dijumpai bahawa pemilik dan perunding percaya bahawa kontraktor adalah pihak yang menyebabkan berlakunya penangguhan binaan bangunan di Iran. Manakala, kontraktor percaya bahawa pemilik dan perunding adalah pihak yang bertanggungjawab atas penangguhan ini. Kajian ini mengenalpasti sepuluh punca utama kelewatan daripada satu senarai yang terdiri daripada 90 penyebab-penyebab yang telah ditentukan sebelumnya. Sepuluh faktor-faktor utama kelewatan adalah: kurangnya pengalaman sesama subkontraktor, kerja kontraktor yang tidak memadai,

rendahnya produktiviti dan kecekapan peralatan, kurangnya jumlah peralatan, kekurangan dalam perancangan dan penjadualan, kerap kerosakan peralatan, peralatan berkualiti buruk, kaedah pembinaan yang buruk, kesulitan kewangan dan masalah pembahagian peralatan di mana kesemuanya dihimpun dalam kategori kontraktor. Sepuluh faktor-faktor telah ditentukan sebagai sebab-sebab utama kelewatan dalam pembinaan bangunan dalam bandar raya utama Iran, dan mereka boleh menyediakan satu dasar bagi strategi-strategi untuk meminimumkan kelewatan di dalam projek-projek pembinaan.



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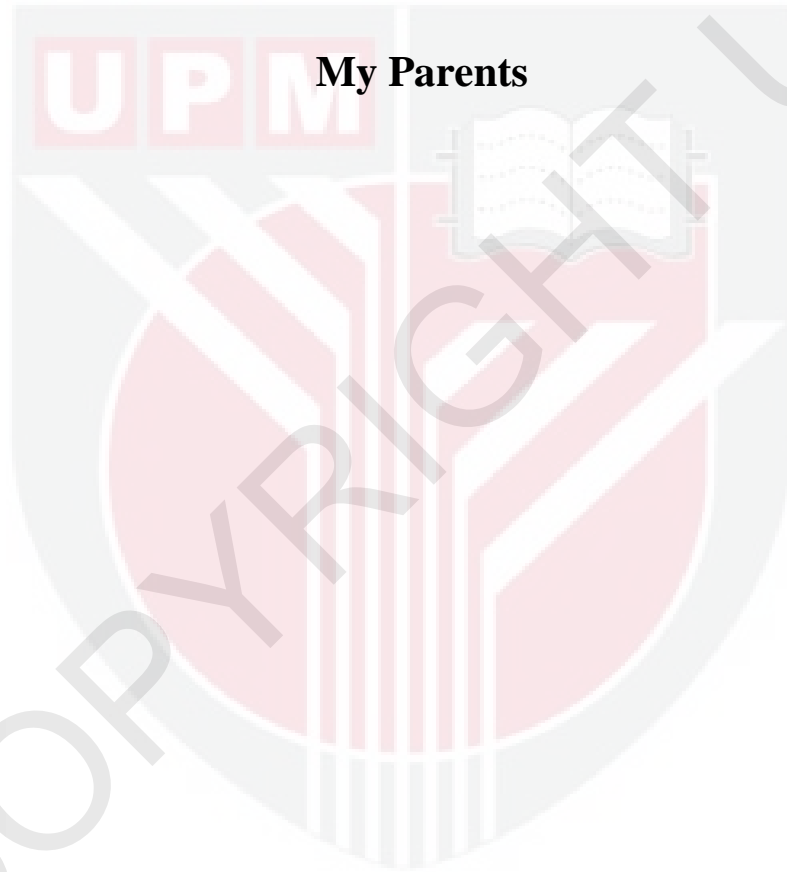
Above all, praise is to God.





**To**

**My Parents**



I certify that a Thesis Examination Committee Has met on 21 January 2011 to conduct the final examination of Mehran Kouchaknezhad on his thesis entitled “Causes of Delay in the Building Construction Industry in Major Cities of Iran” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U. (A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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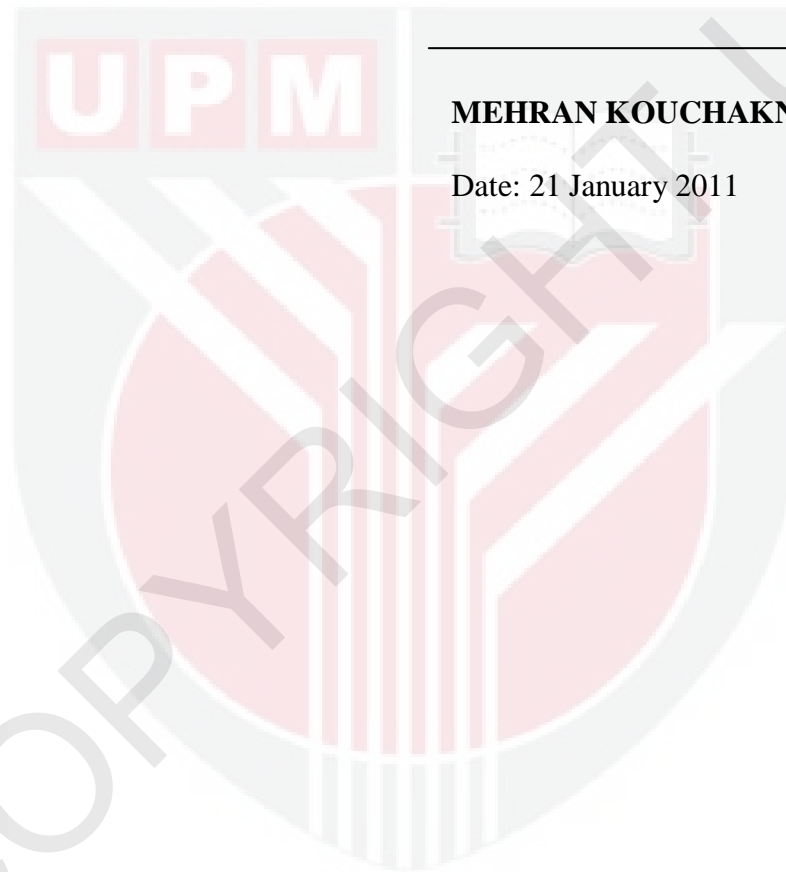
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## DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.



**MEHRAN KOUCHAKNEZHAD**

Date: 21 January 2011

## TABLE OF CONTENTS

	<b>Page</b>
ABSTRACT	ii
ABSTRAK	iv
ACKNOWLEDGEMENTS	vi
APPROVAL	viii
DECLARATION	x
LIST OF TABLES	xiv
LIST OF FIGURES	xvii
<b>CHAPTER</b>	
<b>1 INTRODUCTION</b>	<b>1</b>
1.0 Introduction	1
1.1 Construction Delays	2
1.2 Significance of the Study	3
1.3 Problem Statement	3
1.4 Research Objectives	4
1.5 Scope and Limitation of the Study	5
1.6 Thesis Organization	7
<b>2 LITERATURE REVIEW</b>	<b>8</b>
2.0 Introduction	8
2.1 Construction industry in Iran	9
2.2 Type of Delays	13
2.3 Causes of Delays	15
2.3.1 Delay Analysis in Construction	15
2.3.2 Causes of Delay in the Construction Industry	17
2.3.3 Causes of Delay in Large Building Construction Projects	18
2.3.4 Causes of Delay in Large Construction Projects	21
2.3.5 Construction Delay: A Quantitative Analysis	24
2.3.6 A Comparative Study of Causes of Time Overruns	25

2.3.7 Causes of Construction Delay: Traditional Contracts	27
2.3.8 Causes of Delay and Cost Overruns in Construction of Groundwater Projects in Developing Countries; a Case Study of Ghana	30
2.3.9 Causes and Effects of Delays in the Malaysian Construction Industry	33
2.3.10 Significant Factors Causing Delay of Building Construction Projects in Malaysia	34
2.3.11 Delay and Cost Overruns in Large Construction Projects in Vietnam	36
2.4 Summary of Literature Review	39
<b>3 METHODOLOGY</b>	<b>40</b>
3.0 Introduction	40
3.1 Pilot Study	40
3.2 General Data on Project and Respondents	41
3.3 The Causes of Delays	42
3.4 The Calculation of the Factors Causes Delay	42
3.4.1 The Scale of Each Factor	42
3.4.2 Population and Sampling Size	42
3.4.3 Data Processing and Analysis	44
<b>4 RESULT AND DISCUSSION</b>	<b>47</b>
4.0 Introduction	47
4.1 General Project Information	47
Project owner	48
Project type	48
Contract price	50
Delay time	51
Type of organization	52
4.2 Analysis for the Causes of Delay	53
4.2.1 General Analysis	54
4.2.2 Special Analysis	64
4.2.3 Analysis of the Owners' Point of View	75
4.2.4 Analysis of the Consultants' Point of View	85
4.2.5 Analysis of the Contractors' Point of View	95

<b>5</b>	<b>SUMMARY AND CONCLUSION</b>	105
5.1	Comparison of the Importance Index between Different Point of View	105
5.2	The General Analysis	107
5.3	Special Analysis	108
5.4	A Comparison of the Causes of Delay between Iran and other Countries	110
5.5	Owners' Point of View	111
5.6	Consultants' Point of View	112
5.7	Contractors' Point of View	112
5.8	Conclusion	114
5.8.1	Main Causes of Delays in the Building Construction Industry in Major Cities of Iran	114
5.8.2	A Comparison of All the Parties' Point of View	114
5.9	Recommendations for Future Studies	118
	<b>REFERENCES</b>	119
	<b>APPENDICES</b>	122
	Appendix 1 General data on project in questionnaire	123
	Appendix 2 General data of respondent in questionnaire	124
	Appendix 3 Causes of delay factors in questionnaire	125
	Appendix 4 List of projects which the questionnaire is filled	132
	Appendix 5 List of consultants that have filled the questionnaire	133
	Appendix 6 List of contractors that have filled the questionnaire	134
	<b>BIODATA OF STUDENT</b>	135