

To Identify Factors Causing Schedule Delay by Relative Importance Index Method

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Abstract: Construction wanders continue enduring delays. Things turn out seriously and the wander's complete date gets pushed back, with some individual to be reprimanded for it. Before long, attempts are made to perceive the purposes behind deferments and timetables are to merge changed length and new pursuit time. The examination itself is for the most part convoluted Schedule delays routinely occur being developed endeavors. Various methodologies have been delivered and used to look at and measure the timetable deferment of advancement wanders. Picking a proper examination approach is a critical errand for settling the timetable delay. The examination are depend upon the surveys audit coordinated to perceive and find the relative noteworthiness rundown of the imperative parts adding to advancement concede being developed expand. to perceive factors causing design delay by RII method and their noteworthiness depend on the authority, legally binding laborer proprietor/govt./client with the objective that chances of advancement delay in improvements fields are decrease diagram on time execution of many sorts of advancement stretches out in India was coordinated to The field consider drove included impermanent specialists, specialists, and proprietors/government./client eighty three explanations behind postponement were recognized in the midst of the examination and point of confinement the parts causing design delay by RII methodology

Keywords: Development Survey, plan defer Relative significance file (RII), impact of postponement, and reasons for delay, construction delay

I. INTRODUCTION

Postponements are the most well-known and expensive issue trouble on development field. Breaking down development delays has turned into an entire piece of the venture's development life. Indeed, even with the present innovation, and administration comprehension of venture administration procedures, development ventures keep on suffering postponements and venture finish dates still get pushed back. There are many reasons why delays happen. They might be because of strikes, improve, poor association, material deficiency, gear disappointment, change orders Delays are expensive to all gatherings required in the development field the time and cost acquired to set up a cases record in itself is generous. The exploration results ought to enable potential clients to choose a proper strategy effortlessly in view of their accessible data. Additionally, this investigation endeavours to propose a few recommendations on building up a perfect examination technique in light of the talk about RII postpone investigation strategy. In development deferral could be characterized as the time overwhelms either past consummation date and time given to the temporary workers and given to the gatherings for conveyance. It is a venture slipping over its arranged calendar and is considered as basic issue in development ventures. To the proprietor, postpone implies loss of income through absence of creation offices deficiencies of works, inadequate work drive, insufficient arranging and planning of venture by contractual workers encounters and lease capable space. Sometimes, to the temporary worker, postpone implies deficiencies of works, late of obtainment of material, troubles in financing venture by contractual worker, delay in advance instalment by proprietor, late in looking into and favouring configuration reports by proprietor deficiencies of works late acquirement of material and higher material expenses, and because of work cost increments. Finishing ventures is a marker of proficiency; however the development procedure is liable to numerous factors and capricious variables, which result from many sources. These sources incorporate the execution of gatherings, assets accessibility, ecological conditions, inclusion of different gatherings, and legally binding relations. In any case it is once in a while happen that a venture is finished inside the to specify especially time delay on development ventures are an all inclusive wonder they are practically joined by cost and time over run development delay host an unfriendly impact on gatherings (proprietor, contractual worker and expert it is important to characterize the genuine reasons for delay in development extend.

II. LITERATURE REVIEW

Many venture encounter broad postponement and in this manner surpass introductory time and cost gauges .notwithstanding bestowing the monetary practicality of capital venture ,broad deferral give a fruitful ground to expensive debate and claims by Abdalla M. odeh and hussien T. battaineh [1]. Postponements happen regularly in development ventures. Evaluating the effect of deferral is now and then a hostile issue. A few postpone examination techniques are accessible however nobody strategy can be all around utilized over another in all circumstances. The determination of the best possible examination strategy relies on an assortment of variables including data accessible, time of investigation, abilities of the system, and time, assets and exertion designated to the investigation by David Arditi [2]. An overview on time execution of various sorts of development extends in Saudi Arabia was directed to decide the reasons for delay and their significance as indicated by each of the venture members, i.e., the proprietor, specialist and the contractual worker. by Sadi A.Assaf Sadiq Al-Hejji [3]. The development business is a noteworthy player in the economy, creating both, work and riches. However many activities encounter broad deferrals and accordingly surpass beginning time and cost gauges. A large group of reasons for development delays in private ventures were recognized and arranged by Drevin's Open Conversion System. by G. Sweis, R. Swies, A. Abu Hammed, A. Shboul [4]. The development business has utilized different timetable investigation methods to help defer claims. Incomprehensibly, asset related issues are as often as possible disregarded despite the fact that they can influence extend finish time, as well. The examination exhibited here demonstrates that postpone investigation without asset distribution rehearse considerably influences aftereffects of calendar investigation. Some deferral can cause farfetched asset assignment in downstream work, which thusly may additionally postpone the venture. by William Ibbs and Long D. Nguyen [5]. the abundance of any country is gaged by its execution in framework arrangement through its development industry. The development business is extensive, unstable, and requires huge capital costs. For creating economies, street development constitutes a noteworthy part of the development business. This implies a significant part of the national spending plan on foundation improvement is diverted to street development ventures. The point of the examination detailed in this paper was to recognize circumstances and end results of cost heightening and plan delays in street development extends by Chabota Kaliba, Mundia Muya, Kanyuka Mumba [6]. Postponed finishing of a development extend is regularly caused by a perplexing collaboration of a blend of occasions, some of which are the temporary worker's dangers and others are the venture owner's. The division of the obligation to offer impact to the hazard designation has consequently involved extraordinary debate. Many defer investigation procedures have been produced throughout the years for playing out this assignment by Issaka Ndekugri, Nuhu Braimah, and Rod Gameson [7]. Deferral in development ventures is viewed as a standout amongst the most widely recognized issues causing a huge number of negative consequences for the venture and its taking an interest parties. This paper plans to recognize the primary driver of postponement in development extends in Egypt from the perspective of contractual workers, specialists, and proprietors. A writing audit was led to incorporate a rundown of defer causes that was cleansed in light of propriety to Egypt in seven semi organized meetings. The subsequent rundown of postpone causes was subjected to a poll study for quantitative affirmation and distinguishing proof of the most vital reasons for delay. The general outcomes demonstrated that the most critical causes are: financing by temporary worker amid development, delays in contract based worker's installment by proprietor, plan changes by proprietor or his operator amid development, halfway installments amid development, and no use of expert development/legally binding administration by M. E. Abd El-Razek; H. A. Bassioni; and A. M. Mobarak [8] Schedule delays every now and again happen in development ventures. Numerous strategies have been created and used to investigate and measure the timetable postponement of development ventures. Choosing an appropriate investigation philosophy is a noteworthy undertaking for settling the calendar postpone claims experienced by Jyh-Bin Yang and Chih-Kuei Kao [9]. This investigation concentrates on cost and calendar issues of worldwide advancement (ID) ventures. Through observational investigation we look at ID extend cost and timetable execution and the primary purposes behind poor venture result. We take a gander at 100 tasks that are supported by the Asian Development Bank and facilitated by a few Asian nations. by Kamrul Ahsan, Indra Gunawan [10]. This article fundamentally talks about various clarifications for the execution issues shown by numerous megaprojects, and inspects the proposed administration arrangements. It proposes a three-overlay typology of clarifications and arrangements by inspecting creators' epistemological suspicions about leader comprehension and about chief perspectives on the idea without bounds. It contends that in spite of imperative contrasts in their epistemological introduction, these clarifications share an acknowledgment of the thought of performer farsightedness. by Jon Sanderson [11]. Postponements are special one in everything about biggest issues development organizations are confronting today. Deferrals will bring about a few negative impacts like claims between house proprietors and contractual workers, misrepresented, costs, lossof efficiency and income, and contract end. But fluctuated examinations are thought of into the causes touching deferrals, these investigations once in a while talk about normal and general reasons for delays in development comes. by Desai Megha, Dr. Bhatt Rajiv [12]. The ideal opportunity for execution of a venture is

for the most part of the quintessence to the business and the temporary worker. This has made it very basic for contracting gatherings to dissect extend delays for motivations behind settling on right choices on potential time and additionally cost pay claims. Throughout the years, existing defer examination strategies (DATs) for supporting this basic leadership have been useful however have not prevailing with regards to checking the high frequency of debate related with postpone claims resolutions by Nuhu Braimah [13]. Building development extends in Uganda's development industry are encountering a broad of deferrals. The motivation behind this examination was to evaluate the elements causing delays and their impacts on building development extends in Uganda. by L. Muhwezi, J. Acai, G. Otim [14]. Hazard and issues in each stroll of life. Similarly it exists in each development extends too. Right off the bat all the hazard factors are to be recognized, comprehend the criticalness of different dangers and its conceivable impacts in the development ventures. In the event that they are done as such, at that point it will be so natural to alleviate to above dangers, will have benefits in any development ventures efficiency by Mr. A.Ramkumar, Prof.S.Gopalakrishnan [15].

III. METHODOLOGY

The studies were given to the picked firm which are related to the improvement field for social affair the basic data i.e. transitory specialist, counselor, outline, proprietor, government agent and sketcher work in reviews they offered supposition to tick marks for situating 1 to 5 low, low, medium, high and high. In this examination is to avow the revelations of the written work review outlines were coordinated to find the degree and the components causing time over continues running being developed broadens the examination of study is done by Relative Importance Index (RII) procedure for the investigation a study includes 83 factors which were recognized from the composition overview. The respondents were made a demand to give their decision as for the level of time-over Unipart one. A huge bit of the respondents are driving improvement, consultancy and government affiliations. Just authorities holding senior positions in the affiliations were moved closer to answer the survey. The authorities were made to fathom that their responses a particular wander whether it was extremely successful or significantly harming. The data gotten in the survey was poor around Relative Importance Index (RII) system To decide the relative significance of Sum of weights

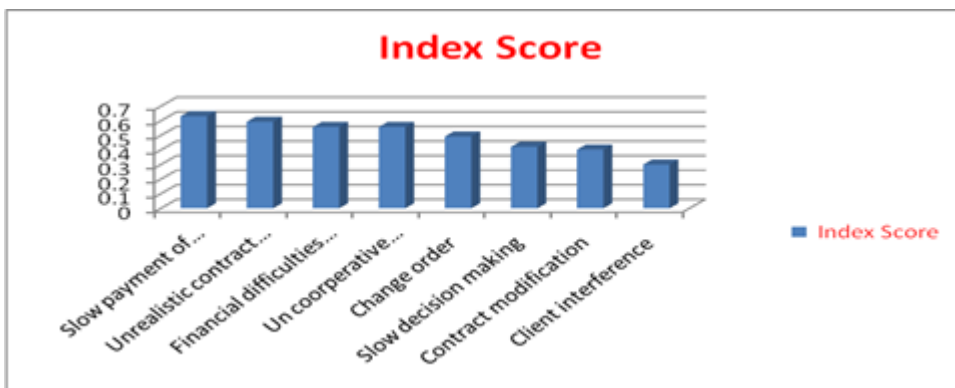
$(W1 + W2 + W3 + \dots + Wn) / A \times N$ Where
W = weights given to each factor significant.
A = highest weight (i.e. 5 in this case).
N = total number of respondent

The values shown in the table on page no. 7,8,9.

Contractor Related Delays			
S.No	Sub Delay	Index Score	Ranking
1	Financial difficulties	0.565	3
2	Improper planning	0.539	5
3	Inadequate contractor experience	0.489	7
4	Poor subcontractor performance	0.485	8
5	Defective works	0.478	9
6	Poor site management and supervision	0.462	10
7	Unsuitable construction method	0.44	11
8	Mistakes during construction	0.36	14



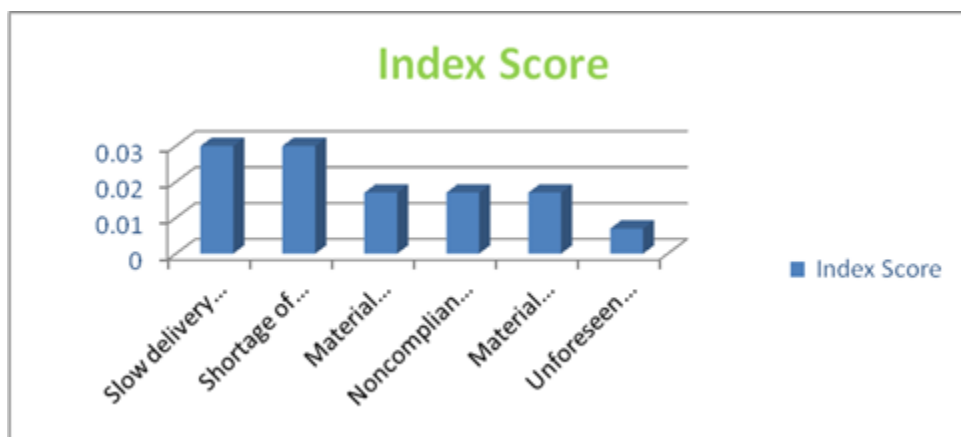
Client Related Delays			
S.No	Sub Delay	Index Score	Ranking
1	Slow payment of completed work	0.632	1
2	Unrealistic contract duration	0.594	2
3	Financial difficulties of client	0.558	4
4	Un cooperative client	0.558	4
5	Change order	0.493	6
6	Slow decision making	0.422	12
7	Contract modification	0.403	13
8	Client interference	0.3	15



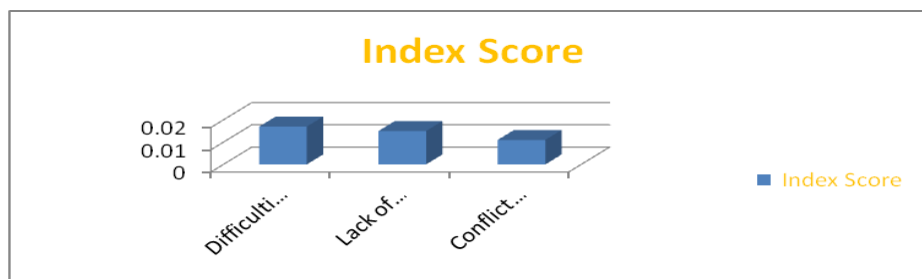
Consultant Related Delays			
S.No	Sub Delay	Index Score	Ranking
1	Mistakes in design	0.047	16
2	Changes in drawings/specifications	0.03	17
3	Late issue of instruction	0.03	17
4	Slow correction of design problem	0.03	17
5	Late valuation work	0.03	17
6	Slow inspection of completed works	0.03	17
7	Defects in design	0.028	18
8	Inadequate supervision to contractor	0.017	20
9	Incomplete documents/drawing	0.017	20
10	Delay of work approval	0.011	22



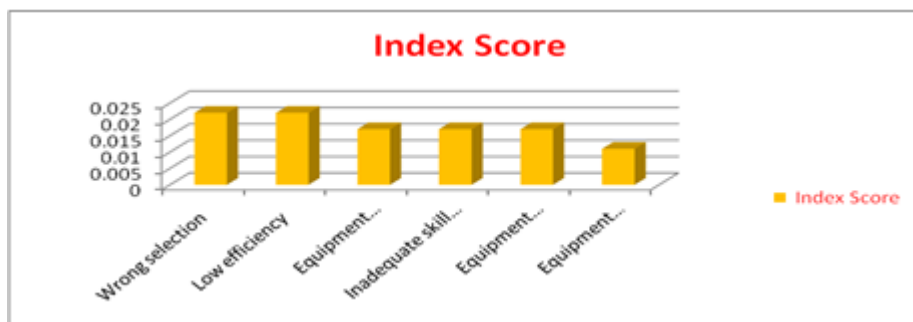
Material Related Delays			
S.No	Sub Delay	Index Score	Ranking
1	Slow delivery of ordered materials	0.03	17
2	Shortage of material	0.03	17
3	Material fabrication delay	0.017	20
4	Noncompliance of material to specification	0.017	20
5	Material procurement problem	0.017	20
6	Unforeseen material damages	0.007	24



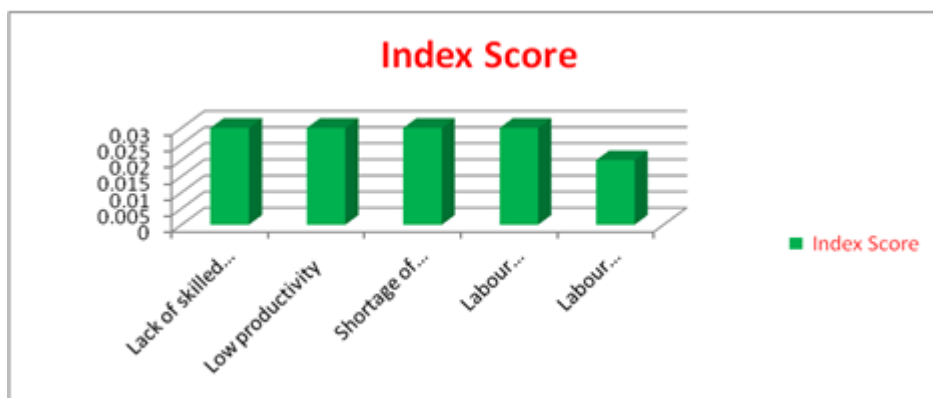
Contract-Relationship Related			
S.No	Sub Delay	Index Score	Ranking
1	Difficulties of coordination between parties	0.017	19
2	Lack of communication between parties	0.015	20
3	Conflict between parties	0.011	21



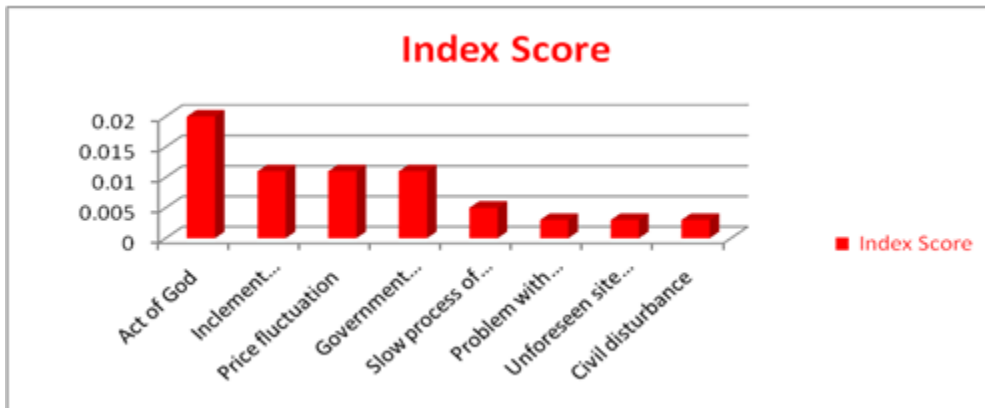
Plant/Equipment Related			
S.No	Sub Delay	Index Score	Ranking
1	Wrong selection	0.022	18
2	Low efficiency	0.022	18
3	Equipment delivery problem	0.017	19
4	Inadequate skill of operators	0.017	19
5	Equipment breakdown and maintenance problem	0.017	19
6	Equipment shortage	0.011	21



Labour Related Delays			
S.No	Sub Delay	Index Score	Ranking
1	Lack of skilled labour	0.03	17
2	Low productivity	0.03	17
3	Shortage of manpower	0.03	17
4	Labour injuries/accident in site	0.03	17
5	Labour disputes/strikes	0.02	18
6	Absenteeism	0.017	19
7	Weak motivation	0.017	19



External Factors			
S.No	Sub Delay	Index Score	Ranking
1	Act of God	0.02	18
2	Inclement weather condition	0.011	22
3	Price fluctuation	0.011	22
4	Government regulation	0.011	22
5	Slow process of Building permit	0.005	25
6	Problem with neighbour	0.003	26
7	Unforeseen site condition	0.003	26
8	Civil disturbance	0.003	26



INTERVIEW NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Total	Mean(m)	SD(s)	COV=(s/m)	
Contractor Related Delays																										
1	Poor site management and supervision	0.48	0.36	0.48	0.48	0.64	0.48	0.48	0.48	0.48	0.64	0.64	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	9.72	0.462857	0.130389	0.281705203
2	Financial difficulties	0.64	0.64	0.36	0.64	0.64	1	0.64	0.48	0.48	0.64	0.64	0.64	0.64	0.64	0.36	0.64	0.16	0.48	0.36	0.64	11.88	0.565714	0.170282	0.301003322	
3	Unsuitable construction method	0.36	0.64	0.24	0.36	0.48	0.48	0.36	0.36	0.64	0.36	0.36	0.36	0.36	0.48	0.8	0.36	0.24	0.64	0.24	0.36	9.28	0.441905	0.164451	0.372140305	
4	Mistakes during construction	0.36	0.64	0.32	0.36	0.36	0.48	0.36	0.48	0.36	0.36	0.36	0.36	0.48	0.16	0.64	0.2	0.16	0.24	0.24	0.36	7.56	0.36	0.131221	0.364503802	
5	Inadequate contractor experience	0.64	0.16	0.36	0.48	0.64	0.48	0.48	0.64	0.64	0.64	0.64	0.64	0.64	0.24	0.64	0.64	0.36	0.24	0.32	0.64	10.28	0.489524	0.172336	0.352048702	
6	Defective works	0.64	0.36	0.24	0.48	0.48	0.48	0.48	0.48	0.64	0.64	0.64	0.24	0.64	0.48	0.24	0.64	0.2	0.24	0.48	0.64	10.04	0.478095	0.164451	0.348970322	
7	Poor subcontractor performance	0.48	0.36	0.48	0.48	0.36	0.64	0.48	0.36	0.48	0.48	0.64	0.64	0.64	0.64	0.36	0.48	0.36	0.48	0.36	0.48	10.2	0.485714	0.109916	0.226298636	
8	Improper planning	0.64	0.36	0.48	0.64	0.64	0.36	0.64	0.64	0.64	0.64	0.64	0.36	0.64	0.36	0.64	0.64	0.12	0.48	0.64	0.64	11.32	0.539048	0.14586	0.270589254	
1	Client interference	0.12	0.36	0.12	0.36	0.48	0.48	0.36	0.36	0.16	0.36	0.36	0.36	0.36	0.16	0.24	0.36	0.12	0.36	0.36	0.36	6.44	0.306667	0.102787	0.335173604	
2	Slow decision making	0.24	0.64	0.16	0.48	0.36	0.64	0.64	0.36	0.16	0.64	0.64	0.64	0.16	0.64	0.48	0.24	0.64	0.16	0.16	0.64	8.88	0.422857	0.209333	0.49504484	
3	Contract modification	0.36	0.48	0.04	0.64	0.36	0.36	0.48	0.48	0.36	0.48	0.48	0.36	0.48	0.48	0.36	0.36	0.24	0.36	0.36	0.48	8.48	0.40381	0.116393	0.28823804	
4	Change order	0.48	0.64	0.08	0.64	0.36	0.64	0.64	0.48	0.36	0.64	0.64	0.64	0.64	0.36	0.64	0.36	0.64	0.24	0.24	0.64	10.36	0.493333	0.172526	0.349714035	
5	Financial difficulties of client	0.48	0.64	0.02	0.64	0.64	0.64	0.64	0.48	0.64	0.64	0.32	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.24	0.64	11.74	0.558857	0.164217	0.293843517	
6	Un cooperative client	0.48	0.64	0.04	0.8	0.48	0.64	0.8	0.36	0.36	0.8	0.8	0.48	0.8	0.48	0.24	0.6	0.24	0.64	0.8	11.72	0.558095	0.213265	0.382130649		
7	Slow payment of completed work	1	1	0.08	1	0.48	0.08	1	0.8	0.48	1	0.64	0.8	0.24	1	0.8	0.24	0.8	0.2	0.32	0.32	13.28	0.632381	0.338426	0.35162224	
8	Unrealistic contract duration	1	1	0.04	0.8	0.08	0.08	1	0.8	0.16	1	0.8	0.8	0.16	1	0.8	0.16	0.8	0.12	0.24	0.64	12.48	0.594286	0.37772	0.635585833	

Client Related Delays																				
Mistakes in design	1	0.64	0.24	1	0.8	1	1	1	1	0.36	1	0.64	1	0.36	1	0.64	1	0.36	1	14.8
Changes in drawings/specifications	0.64	0.36	0.16	0.64	0.8	0.8	0.6	0.64	0.16	0.64	0.8	0.8	0.16	0.64	0.8	0.16	0.64	0.8	0.08	0.24
Incomplete documents/drawing	0.36	0.64	0.08	0.48	0.48	0.4	0.4	0.48	0.36	0.36	0.36	0.48	0.36	0.64	0.36	0.36	0.64	0.6	0.36	8.84
Defects in design	0.6	0.48	0.08	0.6	0.8	0.6	0.6	0.8	0.36	0.6	0.64	0.6	0.36	0.64	0.8	0.36	0.36	0.2	0.36	10.76
Inadequate supervision to contractor	0.36	0.36	0.04	0.36	0.64	0.5	0.4	0.64	0.16	0.36	0.36	0.36	0.16	0.64	0.36	0.16	0.36	0.1	0.24	7.2
Delay of work approval	0.24	0.36	0.08	0.16	0.36	0.2	0.2	0.24	0.36	0.16	0.16	0.16	0.36	0.36	0.16	0.36	0.36	0.4	0.36	5.24
Late issue of instruction	0.64	0.36	0.08	0.64	0.48	0.6	0.6	0.64	0.16	0.64	0.64	0.32	0.16	0.64	0.48	0.24	0.64	0.2	0.16	9.32
Slow correction of design problem	0.64	0.24	0.08	0.64	0.48	0.6	0.6	0.64	0.36	0.64	0.64	0.36	0.64	0.64	0.36	0.64	0.6	0.24	0.24	10.64
Late valuation work	0.8	0.24	0.04	0.64	0.64	0.6	0.6	0.64	0.16	0.64	0.36	0.64	0.16	0.64	0.16	0.64	0.1	0.16	0.16	9.36
Slow inspection of completed works	0.64	0.36	0.04	0.64	0.64	0.6	0.6	0.64	0.16	0.64	0.64	0.48	0.04	0.36	0.64	0.04	0.36	1	0.12	9.72
Storage of material	0.64	0.64	0.04	0.64	0.64	0.6	0.6	0.64	0.16	0.64	0.64	0.16	0.64	0.64	0.16	0.64	1	0.16	0.36	11
Material procurement problem	0.36	0.36	0.36	0.36	0.36	0.4	0.4	0.36	0.24	0.36	0.36	0.36	0.12	0.36	0.36	0.12	0.48	0.3	0.12	6.8
Material fabrication delay	0.36	0.36	0.08	0.36	0.36	0.4	0.4	0.36	0.24	0.36	0.36	0.36	0.16	0.36	0.36	0.16	0.36	0.1	0.16	6.1
Unforeseen material damages	0.16	0.16	0.16	0.16	0.16	0.2	0.2	0.16	0.08	0.16	0.16	0.24	0.04	0.16	0.16	0.04	0.36	0.8	0.04	3.84
Slow delivery of ordered materials	0.64	0.64	0.16	0.64	0.36	0.6	0.6	0.36	0.16	0.64	0.64	0.04	0.64	0.48	0.04	0.64	0.4	0.04	0.16	9.24
Noncompliance of material to specification	0.36	0.36	0.16	0.36	0.36	0.4	0.4	0.36	0.24	0.36	0.36	0.36	0.12	0.36	0.36	0.24	0.36	1	0.24	7.2

Labour Related Delays																				
Labour disputes/strikes	0.48	0.48	0.32	0.48	0.48	0.5	0.5	0.48	0.48	0.48	0.48	0.48	0.6	0.48	0.48	0.6	0.36	0.2	0.48	9.64
Weak motivation	0.36	0.36	0.04	0.36	0.48	0.2	0.4	0.36	0.36	0.36	0.24	0.36	0.48	0.48	0.36	0.48	0.36	0.2	0.48	7.12
Lack of skilled labour	0.64	0.64	0.08	0.64	0.64	0.5	0.6	0.64	0.36	0.64	0.48	0.64	0.24	0.64	0.24	0.24	0.36	0.6	0.24	9.96
Low productivity	0.64	0.64	0.16	0.64	0.36	0.6	0.6	0.36	0.36	0.64	0.64	0.64	0.24	0.8	0.48	0.24	0.64	0.4	0.24	10.28
Shortage of manpower	0.64	0.64	0.24	0.64	0.64	0.6	0.6	0.64	0.36	0.64	0.64	0.64	0.6	0.64	0.64	0.48	0.64	0.1	0.48	11.56
Labour injuries/accident in site	0.64	0.64	0.08	0.64	0.64	0.6	0.6	0.64	0.64	0.64	0.64	0.64	0.36	0.64	0.48	0.36	0.64	0.2	0.24	11.04
Absenteeism	0.36	0.36	0.16	0.36	0.36	0.4	0.4	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.5	0.16	0.36	7

Plant/Equipment Related																									
Equipment shortage	0.24	0.24	0.08	0.24	0.16	0.2	0.2	0.24	0.48	0.24	0.24	0.24	0.48	0.24	0.24	0.48	0.36	0	0.48	0.36	0.24	5.8	0.011429	0.120257	10.52246275
Wrong selection	0.48	0.48	0.04	0.48	0.36	0.5	0.5	0.48	0.24	0.48	0.36	0.48	0.48	0.24	0.36	0.36	0.36	0.3	0.48	0.36	0.48	8.28	0.022857	0.112655	4.928657694
Low efficiency	0.48	0.48	0.02	0.48	0.36	0.3	0.4	0.36	0.36	0.48	0.64	0.48	0.36	0.48	0.48	0.36	0.48	0.1	0.36	0.16	0.48	8.096	0.022857	0.140043	6.126898799
Equipment delivery problem	0.36	0.36	0.12	0.36	0.36	0.3	0.4	0.36	0.16	0.36	0.48	0.36	0.16	0.36	0.48	0.16	0.24	0.4	0.16	0.16	0.36	6.44	0.017143	0.107851	6.291283408
Inadequate skill of operators	0.36	0.36	0.16	0.48	0.32	0.4	0.4	0.48	0.36	0.36	0.48	0.36	0.36	0.36	0.24	0.36	0.48	0.2	0.36	0.36	0.36	7.52	0.017143	0.081394	4.747969026
Equipment breakdown and maintenance problem	0.36	0.36	0.36	0.64	0.24	0.2	0.4	0.24	0.36	0.36	0.48	0.48	0.36	0.36	0.36	0.36	0.48	0.2	0.36	0.36	0.36	7.64	0.017143	0.098681	5.756370599

Contract-Relationship Related																									
Conflict between parties	0.24	0.24	0.16	0.24	0.36	0.2	0.4	0.48	0.36	0.24	0.48	0.36	0.48	0.24	0.24	0.48	0.24	0.1	0.36	0.36	0.24	6.48	0.011429	0.109121	9.548123725
Difficulties of coordination between parties	0.36	0.24	0.08	0.24	0.36	0.5	0.4	0.36	0.36	0.24	0.48	0.36	0.48	0.24	0.24	0.48	0.24	0.2	0.36	0.36	0.24	6.76	0.017143	0.10509	6.130272989
Lack of communication between parties	0.32	0.36	0.12	0.24	0.36	0.2	0.2	0.36	0.16	0.24	0.48	0.36	0.36	0.24	0.01	0.36	0.24	0.2	0.36	0.36	0.24	5.848	0.015238	0.103357	6.782790724

External Factors																									
Act of God	0.48	0.48	0.2	0.48	0.64	0.5	0.5	0.64	0.64	0.48	0.48	0.48	0.8	0.48	0.48	0.8	0.48	0.2	0.8	0.64	0.48	11.08	0.022857	0.160769	7.033649282
Incliment weather condition	0.24	0.24	0.24	0.24	0.36	0.3	0.2	0.36	0.36	0.24	0.24	0.24	0.24	0.24	0.48	0.36	0.48	0.4	0.36	0.36	0.24	6.48	0.011429	0.080136	7.011894656
Price fluctuation	0.24	0.24	0.08	0.24	0.36	0.2	0.2	0.36	0.36	0.24	0.24	0.24	0.16	0.24	0.24	0.36	0.36	0.2	0.24	0.36	0.24	5.48	0.011429	0.072631	6.355225322
Government regulation	0.24	0.24	0.04	0.24	0.36	0.2	0.2	0.36	0.36	0.24	0.24	0.24	0.16	0.48	0.24	0.16	0.36	0.2	0.16	0.36	0.24	5.28	0.011429	0.092434	8.087954006
Problem with neighbour	0.08	0.08	0.16	0.24	0.16	0.1	0.1	0.16	0.24	0.08	0.08	0.08	0.24	0.16	0.08	0.16	0.16	0.3	0.24	0.16	0.08	3.12	0.00381	0.071066	18.65475811
Unforeseen site condition	0.08	0.08	0.04	0.24	0.16	0.1	0.1	0.16	0.24	0.08	0.16	0.08	0.24	0.16	0.08	0.16	0.16	0.3	0.16	0.16	0.08	3	0.00381	0.07045	18.49324201
Civil disturbance	0.08	0.08	0.04	0.24	0.16	0.1	0.1	0.16	0.16	0.08	0.16	0.08	0.24	0.16	0.08	0.16	0.16	0.2	0.16	0.16	0.08	2.8	0.00381	0.055663	14.6116392
Slow process of Building permit	0.12	0.01	0.08	0.36	0.24	0.1	0.1	0.24	0.24	0.12	0.24	0.12	0.24	0.24	0.12	0.16	0.36	0.6	0.24	0.16	0.12	4.252	0.005714	0.123446	21.60298333

IV. RESULTS AND CONCLUSION

The going with trade will underscore on the most basic purposes behind postponement by each of the three social affairs brief laborer, pro and proprietor and by the total appraisal hobby as given by the authorities. Delay in underwriting critical changes in the degree of work by Consultant, legally binding laborer and proprietor if these reason for factors are confine ,by then factors causing design deferral should be controls

- A. Delay in approving major changes in the scope of work by Consultant
- B. late in reviewing and approving design documents
- C. rework due to errors
- D. design changes by owner or his agent during construction
- E. slow mobilization of equipment
- F. accidents during construction
- G. Strike
- H. Changes in material types and specifications during construction
- I. Damage of sorted materials
- J. Poor quality of construction materials
- K. Change orders
- L. Suspension of work by owner

- M. Ineffective delay penalties

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