

APPENDIX D

Evaluated Risk Factors by Participants (RII, Rank & Importance Level)

ID	Risk Categories (Sources of Risk)	Overall				Consultant				Contractor			
		RII	RC	Rank	IL	RII	RC	Rank	IL	RII	RC	Rank	IL
1. Preliminary & Detail Design													
D1	Poorly recognized preferences of the clients	0.63	8	45	H-M	0.64	6	39	H-M	0.622	8	45	H-M
D2	Underestimating the costs of the project	0.726	3	24	H-M	0.726	2	25	H-M	0.724	4	21	H-M
D3	Improper design team selection	0.636	7	43	H-M	0.656	5	37	H-M	0.618	9	47	H-M
D4	Overestimating the costs of the project	0.538	9	49	M	0.504	10	50	M	0.566	10	49	H-M
D5	Improper technology selection	0.636	7	44	H-M	0.614	9	45	H-M	0.656	7	39	H-M
D6	Delays in material and shop drawing approval	0.732	2	22	H-M	0.708	3	28	H-M	0.75	2	14	H-M
D7	Inadequate & ambiguous specification	0.718	4	25	H-M	0.698	4	32	H-M	0.736	3	19	H-M
D8	Design change by clients	0.79	1	7	H-M	0.796	1	7	H-M	0.784	1	8	H-M
D9	Producing defective design	0.654	6	41	H-M	0.626	8	42	H-M	0.68	6	34	H-M
D10	Unforeseen site ground condition	0.662	5	38	H-M	0.634	7	40	H-M	0.686	5	32	H-M
2. Tender													
T1	Poorly recognized competition	0.658	5	39	H-M	0.66	5	36	H-M	0.656	5	40	H-M
T2	Awarding design to unqualified design consultant	0.656	6	40	H-M	0.674	4	34	H-M	0.642	6	43	H-M
T3	Risk of corruption	0.802	1	4	H	0.796	1	8	H-M	0.808	1	4	H
T4	Risk of tender cancellation,	0.666	4	36	H-M	0.652	6	38	H-M	0.68	4	35	H-M

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		RII	RC	Rank	IL	RII	RC	Rank	IL	RII	RC	Rank	IL
T5	Quoting bad estimation for the project	0.736	3	18	H-M	0.708	3	29	H-M	0.758	2	11	H-M
T6	Using predatory pricing by competitors	0.744	2	16	H-M	0.74	2	21	H-M	0.748	3	16	H-M
3. Construction Works													
C1	Lack of competent & qualified professionals	0.75	7	15	H-M	0.766	7	17	H-M	0.736	5	20	H-M
C2	Employees' absence at work place	0.638	15	42	H-M	0.63	14	41	H-M	0.646	14	42	H-M
C3	Poor employees' work performance	0.736	8	19	H-M	0.77	6	15	H-M	0.706	10	28	H-M
C4	High employee turnover	0.696	12	33	H-M	0.726	12	26	H-M	0.672	12	37	H-M
C5	Poor resource management	0.822	1	3	H	0.848	1	1	H	0.8	1	6	H
C6	Poor construction materials quality	0.756	5	13	H-M	0.814	2	3	H	0.706	10	29	H-M
C7	Insufficient control of work	0.736	8	20	H-M	0.752	8	18	H-M	0.72	6	22	H-M
C8	Extending scope of work	0.704	11	32	H-M	0.692	13	33	H-M	0.714	8	24	H-M
C9	Poor organization of work	0.766	4	12	H-M	0.792	4	9	H-M	0.744	4	17	H-M
C10	Poor communication & coordination among staff	0.714	10	28	H-M	0.748	9	20	H-M	0.684	11	33	H-M
C11	Inappropriate change order by client	0.668	14	35	H-M	0.622	15	43	H-M	0.71	9	25	H-M
C12	Lack of clients managerial capability	0.718	9	26	H-M	0.726	12	27	H-M	0.71	9	26	H-M
C13	Defective construction work	0.692	13	34	H-M	0.74	10	22	H-M	0.652	13	41	H-M
C14	Low labor and equipment productivity	0.776	2	9	H-M	0.801	3	5	H	0.754	3	12	H-M
C15	Inadequate program	0.752	6	14	H-M	0.792	4	10	H-M	0.716	7	23	H-M
C16	Lack of skilled/unskilled labor	0.718	9	27	H-M	0.73	11	24	H-M	0.706	10	30	H-M
C17	Accidents and injuries on project sites	0.626	16	46	H-M	0.622	15	44	H-M	0.63	15	44	H-M

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		RII	RC	Rank	IL	RII	RC	Rank	IL	RII	RC	Rank	IL
C18	Burglary on site	0.608	17	47	H-M	0.604	16	47	H-M	0.612	16	48	H-M
C19	Unrealistic construction schedule	0.774	3	10	H-M	0.778	5	13	H-M	0.77	2	9	H-M
C20	High project complexity	0.528	18	50	M	0.508	17	49	M	0.544	17	50	M
4. Financial & Economic													
EF1	Economic instability	0.801	3	5	H	0.782	4	11	H	0.818	3	3	H
EF2	High inflation rate	0.85	1	1	H	0.834	1	2	H	0.864	2	2	H
EF3	High interest rate	0.728	7	23	H-M	0.708	6	30	H-M	0.744	8	18	H-M
EF4	Improper cost plan	0.796	4	6	H-M	0.782	4	12	H-M	0.807	4	5	H
EF5	Recession in the industry	0.666	9	37	H-M	0.674	7	35	H-M	0.66	9	38	H-M
EF6	Delayed payment by client	0.836	2	2	H	0.8	3	6	H-M	0.868	1	1	H
EF7	Poor cost control	0.77	6	11	H-M	0.77	5	16	H-M	0.77	6	10	H-M
EF8	Financial failure of contractor	0.778	5	8	H-M	0.804	2	4	H	0.754	7	13	H-M
EF9	Delays in approval of payment certificate by the consultant	0.71	8	30	H-M	0.608	8	46	HM	0.796	5	7	H-M
5. Political & Legal													
PL1	Political instability	0.706	4	31	H-M	0.7	4	31	H-M	0.71	2	27	H-M
PL2	Weak law compliance & enforcement	0.734	2	21	H-M	0.778	1	14	H-M	0.694	3	31	H-M
PL3	Changes in legislative regulations contrarily	0.606	5	48	H-M	0.586	5	48	M	0.622	5	46	H-M
PL4	Difficulty in obtaining permits and ordinances	0.712	3	29	H-M	0.752	2	19	H-M	0.676	4	36	H-M
PL5	Delays in solving contractual issues	0.744	1	17	H-M	0.734	3	23	H-M	0.75	1	15	H-M

Source: Own Survey (2019). **Note:** **RII** (Relative Importance Indices), **RC** (Rank by Category), & **IL** (Importance Level)