

**Supplemental materials for**  
**Quantitative risk evaluation by building type**  
**based on probability and cost of accidents**

Jayho Soh<sup>1</sup>; Jaewook Jeong<sup>2\*</sup>; Jaemin Jeong<sup>3</sup>; and Jaehyun Lee<sup>4</sup>

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**Table S1.** Example of collected accident data

Number	Project name	Facility type	Work type	Accident date	Severity
1	"A" construction	Residential building	Temporary work	2019.05.30	Fatality
2	"B" construction	Factories	Earth work	2020.10.20	Injury
...					
5 082	"C" construction	Business facilities	Landscape work	2020.01.29	Injury
5 083	"D" construction	Lodging facilities	Stonework	2021.03.24	Fatality

**Table S2.** Annual construction costs in South Korea

<b>Year</b>	<b>Annual construction costs (million dollars)</b>
2017	163,988
2018	165,319
2019	162,588
Average	163,965

**Table S3.** Code name for accident occurrence, no accident, and facility type

<b>Name</b>	<b>Code</b>
Accident occurrence	A1
No accident	A2
Residential buildings	B1
Factories	B2
Tourist resting facilities	B3
Education and research facilities	B4
Neighborhood living facilities	B5
Houses	B6
Cultural and assembly facilities	B7
Lodging facilities	B8
Business facilities	B9
Sports facilities	B10
Transportation facilities	B11
Storage and treatment facilities for hazardous substances	B12
Medical facilities	B13
Religious facilities	B14
Warehouse facilities	B15
Sales facilities	B16
Miscellaneous facilities	B17

**Table S4.** Accident cost items in construction industry

Cost items			
Productivity loss cost	Labor loss cost	Income loss cost	Worker
		Tax	Government
		Health insurance	Government
		National pension	Government
		Employment insurance	Government
		Human cost	Worker
Compensation cost	Industrial accident insurance		Government
	Worker's compensation cost		Government
	Settlement cost		Employer
Business loss and administrative costs	Business loss cost	Legal cost	Employer
		Delay reimbursement cost	Employer
		Insurance premium cost	Government
		Administrative cost	Employer/ Government