

The series of possible probability distributions in Table 2 are statistically analyzed in Table 3 using standard mean, median and range measures. The DM can then input his/her judgments in the Percent column for decision purposes.

Table 3
Statistics on the Candidate Probability Distributions in Table 2 for Events A, B, C and D

Event	Probabilities		Range			Probabilities		More Likely Value
	Mean	Median	Low	High	Midpoint	Final	Percent	
A	0.0725	0.0706	0.0481	0.1026	0.0753	0.0728	7	Base 1.00
B	0.1746	0.1734	0.1409	0.2124	0.1766	0.1749	18	18/7 = 2.57
C	0.3009	0.2981	0.2632	0.3429	0.3030	0.3006	30	30/18 = 1.67
D	0.4520	0.4511	0.3846	0.5192	0.4519	0.4517	45	45/30 = 1.50
SUM	1.0000	0.9932	0.8368	1.1771	1.0068	1.0000	100	

The values under Final in Table 3 are an average of the Mean, Median and Mid-Point values. The last column in Table 3 shows the more likely values based on the DM's percentage probabilities in the preceding column. So, the final D/C value at 1.5 here is within the required range as in Table 1 of 1.25 – 1.80 for this pairwise value. Note that the Mean, Median and Range Midpoint values are all closely aligned for each event differing by at most 1%. Of course, based on other information, the DM may use a distribution closer to number 8 in Table 2 as in 5%, 15%, 30% and 50%.

References

- Hughes, W. R., (2020). Structuring Probability Assessments. *Chinese Business Review*, 10(5), 171-177.
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