

Exercises for Session 2

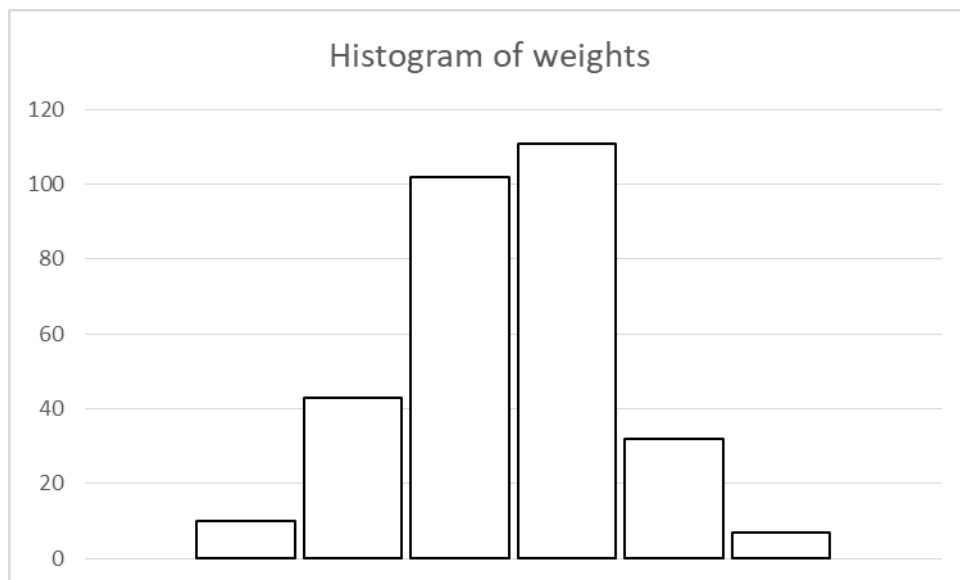
2.1 The tables below show the annual base salary, annual bonus, and the unrealized share-option gains at year-end for the bosses of selected top companies in the United States and in the United Kingdom. Where do bosses of top companies get paid more, on average, in the United States or in the United Kingdom? Do the analysis by compensation type (base salary, bonus, share-option gains) and by total compensation. Does it matter which measure of location (mean and median) you use? Also, compute the measures of dispersion (range, variance, and standard deviation) for the United States and for United Kingdom, by compensation type and by total compensation. (Note: Like most course data, these tables are available in an Excel file, Set02.xls, at the course web site.)

United States (USD M)			
Company	Base salary	Annual bonus	Unrealised share-option gains at year-end
US01	1.02	2.40	59.95
US02	1.40	1.90	26.67
US03	1.00	0.00	2.63
US04	1.28	1.19	22.33
US05	1.03	8.50	4.70
US06	1.25	1.50	106.48
US07	0.76	5.00	107.22
US08	2.80	7.20	261.54
US09	1.33	1.30	66.84
US10	1.10	1.45	101.60

United Kingdom (USD M)			
Company	Base salary	Annual bonus	Unrealised share-option gains at year-end
UK01	0.60	0.11	0.99
UK02	1.43	0.79	0.02
UK03	0.80	0.28	0.35
UK04	0.91	0.52	0.04
UK05	1.11	0.59	4.19
UK06	1.50	1.45	0.87
UK07	0.70	0.16	0.00
UK08	0.76	0.32	2.58
UK09	1.30	1.72	119.51
UK10	0.94	0.00	6.07

2.2 The following table and figure show the frequency distribution of the weights of 305 participants of a recent INSEAD class. The mean of these weights is 73.69 kilos while the standard deviation is 11.46 kilos. Use the empirical rule to estimate the frequency distribution of this data. How do the percentages obtained through such a rule compare to those of the empirical frequency distribution in the table? Can you explain the differences between the two sets of percentages?

Classes of elements		Absolute frequency	Absolute cumulative frequency	Relative frequency	Relative cumulative frequency
$-\infty$	39.30	0	0	0.000	0.000
39.31	50.76	10	10	0.033	0.033
50.77	62.22	43	53	0.141	0.174
62.23	73.68	102	155	0.334	0.508
73.69	85.15	111	266	0.364	0.872
85.16	96.61	32	298	0.105	0.977
96.62	108.07	7	305	0.023	1.000
108.08	$+\infty$	0	305	0.000	1.000
		305		1.000	



- 2.3 Suppose that the Career Development Centre informs you that the average salary for recent INSEAD MBAs who work as consultants is EUR 160,000, with a standard deviation of EUR 20,000. You do not have more detailed information. Suppose you want to construct a statement like “approximately 95% of the salaries were between EUR X and EUR Y.” If the population of salaries is assumed to be bell-shaped, what can you fill in for X and Y?