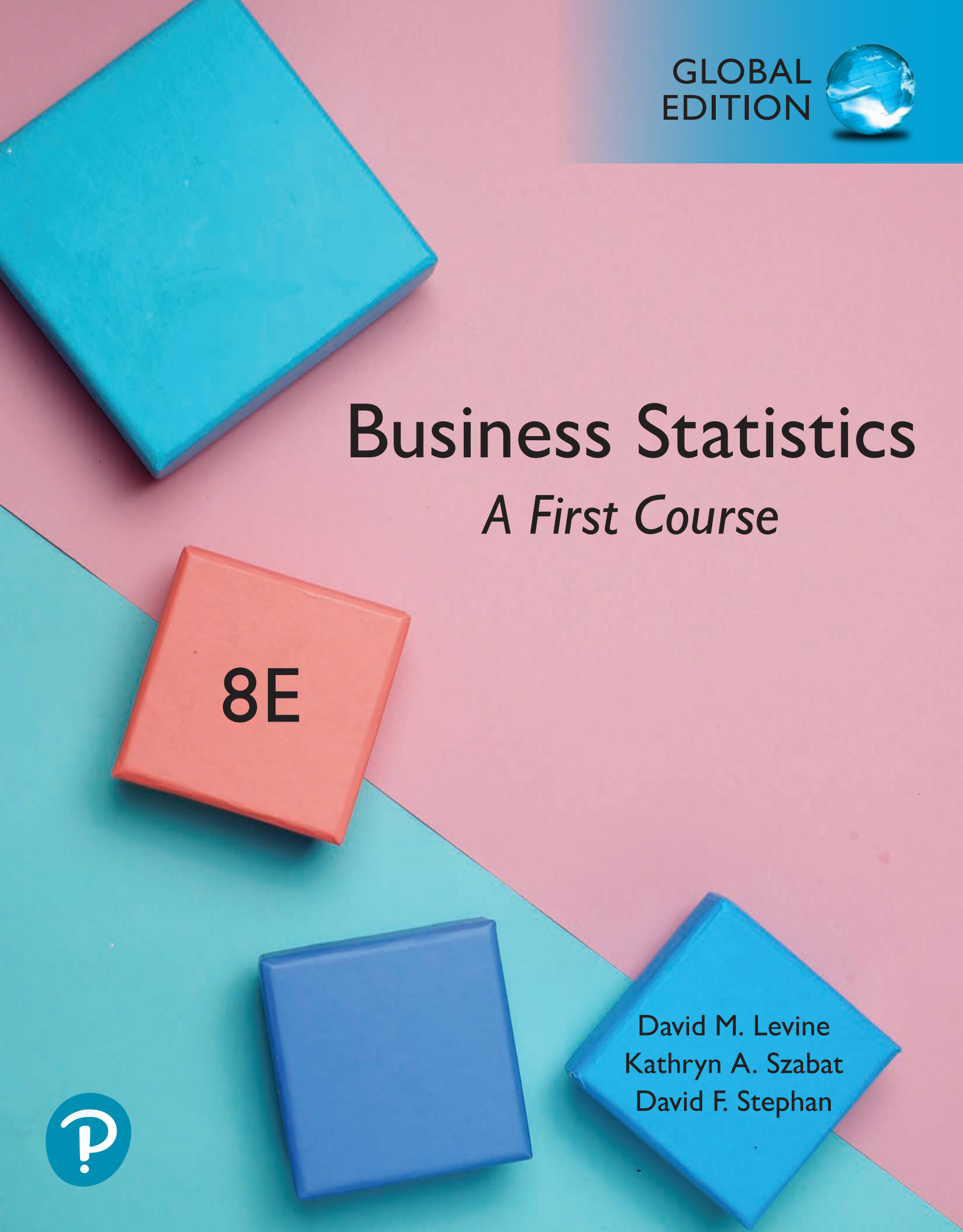
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Kathryn A. Szabat
David F. Stephan

A Roadmap for Selecting a Statistical Method

Data Analysis Task	For Numerical Variables	For Categorical Variables
Describing a group or several groups	Ordered array, stem-and-leaf display, frequency distribution, relative frequency distribution, percentage distribution, cumulative percentage distribution, histogram, polygon, cumulative percentage polygon **(Sections 2.2, 2.4)** Mean, median, mode, geometric mean, quartiles, range, interquartile range, standard deviation, variance, coefficient of variation, skewness, kurtosis, boxplot, normal probability plot **(Sections 3.1, 3.2, 3.3, 6.3)** Dashboards **(Section 14.2)**	Summary table, bar chart, pie chart, doughnut chart, Pareto chart **(Sections 2.1 and 2.3)**
Inference about one group	Confidence interval estimate of the mean **(Sections 8.1 and 8.2)** *t* test for the mean **(Section 9.2)**	Confidence interval estimate of the proportion **(Section 8.3)** *Z* test for the proportion **(Section 9.4)**
Comparing two groups	Tests for the difference in the means of two independent populations **(Section 10.1)** Paired *t* test **(Section 10.2)** *F* test for the difference between two variances **(Section 10.4)**	*Z* test for the difference between two proportions **(Section 10.3)** Chi-square test for the difference between two proportions **(Section 12.1)**
Comparing more than two groups	One-way analysis of variance for comparing several means **(Section 11.1)**	Chi-square test for differences among more than two proportions **(Section 12.2)**
Analyzing the relationship between two variables	Scatter plot, time series plot **(Section 2.5)** Covariance, coefficient of correlation **(Section 3.5)** Simple linear regression **(Chapter 13)** *t* test of correlation **(Section 13.7)** Sparklines **(Section 2.7)**	Contingency table, side-by-side bar chart, PivotTables **(Sections 2.1, 2.3, 2.6)** Chi-square test of independence **(Section 12.3)**
Analyzing the relationship between two or more variables	Colored scatter plots, bubble chart, treemap **(Section 2.7)** Multiple regression **(Chapters 14)** Dynamic bubble charts **(Section 14.2)** Regression trees **(Section 14.3)** Cluster analysis **(Section 14.5)** Multidimensional scaling **(Section 14.6)**	Multidimensional contingency tables **(Section 2.6)** Drilldown and slicers **(Section 2.7)** Classification trees **(Section 14.4)** Multiple correspondence analysis **(Section 14.6)**

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