Chapter 1
An Introduction to Regression Analysis

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Applied Regression Analysis:

A Second Course in Business and Economic Statistics, fourth edition

A Mountain of Data

◆Advances in technology have buried present-day managers under a mountain of data.

◆This text has been prepared to give future managers some tools for examining relationships between two or more variables.

◆Some examples are how sales are affected by advertising, or what determines the selling price of a house.

Regression Analysis

◆One of the most important tools for examining relationships between variables.

◆You develop an equation for predicting a dependent variable from one or more explanatory variables.

◆In the process, you also describe how the relationship operates and sometimes how to control the dependent variable.

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Trial and Error

◆Much statistical analysis is a multistage process of trial and error.

◆There is a good deal of exploratory work, then several stages of model building and judgment.

◆The emphasis of this text is on the process rather than computations or theory.

Software

- Three software packages are discussed in the text.

- The first is Excel because it is so often used in business.

- Minitab is an efficient standalone package that has been around since the 1970s.

- SAS is an all-encompassing package that does many things other than statistical analysis.

Data, Data, Data

◆Data sets for all the examples and exercises are on the CD.

◆They come in versions for all three packages.

◆Each chapter ends with a section illustrating how to apply the techniques with the software.

◆On these PowerPoint slides, almost all of the output is from Minitab.