

Learning objectives

After reading this chapter and doing the exercises you should be able to:

- 1 Understand how multiple regression analysis can be used to develop relationships involving one dependent variable and several independent variables.
- 2 Interpret the coefficients in a multiple regression analysis.
- 3 Appreciate the background assumptions necessary to conduct statistical tests involving the hypothesized regression model.
- 4 Understand the role of computer packages in performing multiple regression analysis.
- 5 Interpret and use computer output to develop the estimated regression equation.
- 6 Determine how good a fit is provided by the estimated regression equation.
- 7 Test the significance of the regression equation.
- 8 Understand how multicollinearity affects multiple regression analysis.
- 9 Understand how residual analysis can be used to make a judgment as to the appropriateness of the model, identify outliers and determine which observations are influential.
- 10 Understand how logistic regression is used for regression analyses involving a binary dependent variable.