Corrections to Abraham and Ledolter: Introduction to Regression Modeling

Page 1, line 19:

Replace "**production function**" with "**supply function**"

Page 18, line 11:

Replace "increases" with "changes"

Page 24, line 30 (left panel):

… invested principal (1,000, 1,200, and 1,500).

Page 30, first line after 2.3.2:

Replace "Minimization" with "Maximization"

Page 117, line 6 from bottom (in equation):

$$F^* = \frac{(A\hat{\beta} - \delta)'[A(X'X)^{-1}A']^{-1}(A\hat{\beta} - \delta)/l}{S(\hat{\beta})/(n - p - 1)}$$

Page 120, two lines from the bottom:

Delete the last two lines on page 120. The last two lines on page 120 are correct (actually an equality) if the two events are independent. But the result is not true in general. Furthermore, the statement is really not needed for making the point we are making on top of page 121.

For our statement on top of page 121 we need

$P(L_1 \le \beta_1 \le U_1, L_2 \le \beta_2 \le U_2) \le P(L_1 \le \beta_1 \le U_1) = 0.95$

$P(L_1 \le \beta_1 \le U_1, L_2 \le \beta_2 \le U_2) \le P(L_2 \le \beta_2 \le U_2) = 0.95$

Page 130, insert in line 1:

… known specified weights, and $\mathbf{x}_i'$ is the ith row of the matrix X.

Page 158, standardization in last line should be:

$$y_i^* = \frac{y_i - \bar{y}}{s_y \sqrt{n-1}} \quad \text{and} \quad z_{ij} = \frac{x_{ij} - \bar{x}_j}{s_j \sqrt{n-1}}, \quad j = 1, \dots, p$$

Page 191, equation (6.24):

… multiply with $sign(e_i)$. It should be $= [D_i (p+1) s^2 / s_{(i)}^2]^{1/2} sign(e_i)$

Page 303, equation (9.33):

$$y = \beta_1 + \frac{\beta_3}{1 + \exp[-\beta_2 (x - \beta_4)} + \varepsilon$$

Pages 351, in equations (11.13) to (11.15) write:

$$\frac{\partial \ln L(\boldsymbol{\beta})}{\partial \boldsymbol{\beta}} = \sum_{i=1}^{m} \frac{\partial \{ y_i \ln \pi_i + (n_i - y_i) \ln(1 - \pi_i) \}}{\partial \boldsymbol{\beta}} = \sum_{i=1}^{m} \frac{\partial \{ y_i \ln \pi_i + (n_i - y_i) \ln(1 - \pi_i) \}}{\partial \pi_i} \frac{\partial \pi_i}{\partial \boldsymbol{\beta}}$$

$$= \sum_{i=1}^{m} \left[\frac{y_i}{\pi_i} - \frac{n_i - y_i}{1 - \pi_i} \right] \pi_i (1 - \pi_i) \boldsymbol{x}_i = \sum_{i=1}^{m} (y_i - n_i \pi_i) \boldsymbol{x}_i \quad .$$

Page 354, equation (11.26):

$$D = 2 \ln \frac{L(saturated)}{L(full)} = \dots$$

Pages 384, Replace equations (12.8) and (12.9) with:

$$\frac{\partial \ln L}{\partial \boldsymbol{\beta}} = \sum_{i=1}^{n} \frac{\partial \{ y_i \ln \mu_i - \mu_i \}}{\partial \boldsymbol{\beta}} = \sum_{i=1}^{n} \frac{\partial \{ y_i \ln \mu_i - \mu_i) \}}{\partial \mu_i} \frac{\partial \mu_i}{\partial \boldsymbol{\beta}} \tag{12.8}$$

$$= \sum_{i=1}^{n} \frac{y_i - \mu_i}{\mu_i} \mu_i \boldsymbol{x}_i = \sum_{i=1}^{n} (y_i - \mu_i) \boldsymbol{x}_i \tag{12.9}$$

Page 406, Solution to Exercise 4.12(b): (also page 22 of Solutions Manual)

F = … = 0.73; *p* value = P(F(2,11) > 0.73) = 0.56