Table 5.5 Output for Exercise 5.3

Dependent Variable: *WALC*
Included observations: 1519

Variable	Coefficient	Std. Error	*t*-Statistic	Prob.
C	0.0091	0.0191		0.6347
ln(*TOTEXP*)	0.0276		6.6086	0.0000
AGE		0.0002	−6.9624	0.0000
NK	−0.0133	0.0033	−4.0750	0.0000
R-squared			Mean dependent var	0.0606
S.E. of regression			S.D. dependent var	0.0633
Sum squared resid	5.752896			

(a) Fill in the following blank spaces that appear in this table.
  (i) The t-statistic for b_1.
  (ii) The standard error for b_2.
  (iii) The estimate b_3.
  (iv) R^2.
  (v) $\hat{\sigma}$.

(a) Interpret each of the estimates b_2, b_3, and b_4.

(b) Compute a 95% interval estimate for β_3. What does this interval tell you?

(c) Test the hypothesis that the budget proportion for alcohol does not depend on the number of children in the household. Can you suggest a reason for the test outcome?

5.4* The data set used in Exercise 5.3 is used again. This time it is used to estimate how the proportion of the household budget spent on transportation *WTRANS* depends on the log of total expenditure ln(*TOTEXP*), *AGE*, and number of children *NK*. The output is reported in Table 5.6.

(a) Write out the estimated equation in the standard reporting format with standard errors below the coefficient estimates.

(b) Interpret the estimates b_2, b_3, and b_4. Do you think the results make sense from an economic or logical point of view?

(c) Are there any variables that you might exclude from the equation? Why?

(d) What proportion of variation in the budget proportion allocated to transport is explained by this equation.

Table 5.6 Output for Exercise 5.4

Dependent Variable: *WTRANS*
Included observations: 1519

Variable	Coefficient	Std. Error	*t*-Statistic	Prob.
C	−0.0315	0.0322	−0.9776	0.3284
ln(*TOTEXP*)	0.0414	0.0071	5.8561	0.0000
AGE	−0.0001	0.0004	−0.1650	0.8690
NK	−0.0130	0.0055	−2.3542	0.0187
R-squared	0.0247		Mean dependent var	0.1323
			S.D. dependent var	0.1053