

Module 9: Multiple regression

(The attached PDF file has better formatting.)

Homework assignment: Two independent variables

We regress the Y values on the X_1 and X_2 values in the table below.

X_1	X_2	Y	X_1	X_2	Y	X_1	X_2	Y	X_1	X_2	Y
1	1	-0.395	1	2	-1.705	1	3	-2.942	1	4	-3.634
2	1	1.942	2	2	0.964	2	3	-2.463	2	4	-1.349
3	1	1.717	3	2	0.206	3	3	0.397	3	4	-0.982
4	1	2.258	4	2	2.908	4	3	-0.092	4	4	-0.235

- A. What is the least squares estimator of α ?
- B. What is the least squares estimator of β_1 , the coefficient of X_1 ?
- C. What is the least squares estimator of β_2 , the coefficient of X_2 ?

Show the formulas and the computations. You can check your work with Excel or other statistical software.