Standardized Regression Solution

Y =	1	X =	2	6
	3		4	8
	2		3	12
	5		7	10
	4		6	14
	7		8	18
	6		5	16
Sum	28		35	84
Mea	4		5	12
USS	140		203	1120
CSS	28		28	112

Rx = 1.0000 0.6786
0.6786 1.0000

(**X`X**)$^{-1}$ = 1.8534 –1.2577
-1.2577 1.8534

.6786/1-(.6786)^2 = r/Tol

1/1-(.6786)^2 = 1/Tol = VIF

(**Ryx**)' = 0.8929 0.8214

$\hat{\beta}$ = (**Rx**)$^{-1}$**Ryx** = 0.62175 = $\hat{\beta}_0$

0.39953 = $\hat{\beta}_1$

$$\hat{\beta}_1 = \frac{r_{y1} - (r_{y2} r_{12})}{1 - r_{12}^2}$$ =[0.8929-{(0.8214)(.6786)}]/0.5395 = 0.621175

$$\hat{\beta}_2 = \frac{r_{y2} - (r_{y1} r_{12})}{1 - r_{12}^2}$$ = [0.8214-{(0.8229)(.6786)}]/0.5395 = 0.39953

Matrix Calculations

$\hat{\beta}_1$ = [(1.8534)(0.8929)] – [(1.2577)(0.8214)]
$\hat{\beta}_1$ = [0.8929/0.5395] – [{(0.8214)(0.6786)}/0.5395]

$\hat{\beta}_2$ = [(1.8534)(0.8214)] – [(1.2577)(0.8929)]
$\hat{\beta}_2$ = [0.8214/0.5395] – [{(0.8929)(0.6786)}/0.5395]