

HW1 Econometrics 3

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Table 1: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
beta_0	100	9.590	9.716	-13.569	35.337
beta_1	100	0.971	0.520	-0.481	2.243
beta_2	100	1.050	0.386	0.344	1.896
var_b0	100	70.313	35.817	17.030	193.850
var_b1	100	0.203	0.103	0.049	0.559
var_b2	100	0.145	0.074	0.035	0.399
se_b0	100	8.139	2.029	4.127	13.923
se_b1	100	0.437	0.109	0.222	0.748
se_b2	100	0.369	0.092	0.187	0.632
t_val_b0	100	1.262	1.271	-1.565	5.098
t_val_b1	100	2.335	1.219	-0.644	5.307
t_val_b2	100	3.038	1.401	0.665	7.349
BP_testStat	100	6.292	4.894	0.061	20.898
GV_HET_Test	100	4.797	3.828	0.001	16.076

good 1 = meats

good 2 = dairy

good 3 = beans

betas_mle [1,] 8.1882436 [2,] 1.2549192 [3,] 0.8625738 [4,] -1.4642840 [5,] 0.2047149

$$\ln L = -0.5n \log(2\pi) - 0.5 \sum (\sigma^2) - 0.5 \sum \left[\frac{(y - X'\beta)^2}{\sigma^2} \right] \quad (1)$$