

Regression Analysis on the Relationship Between Advertising Budgets and Product Sales

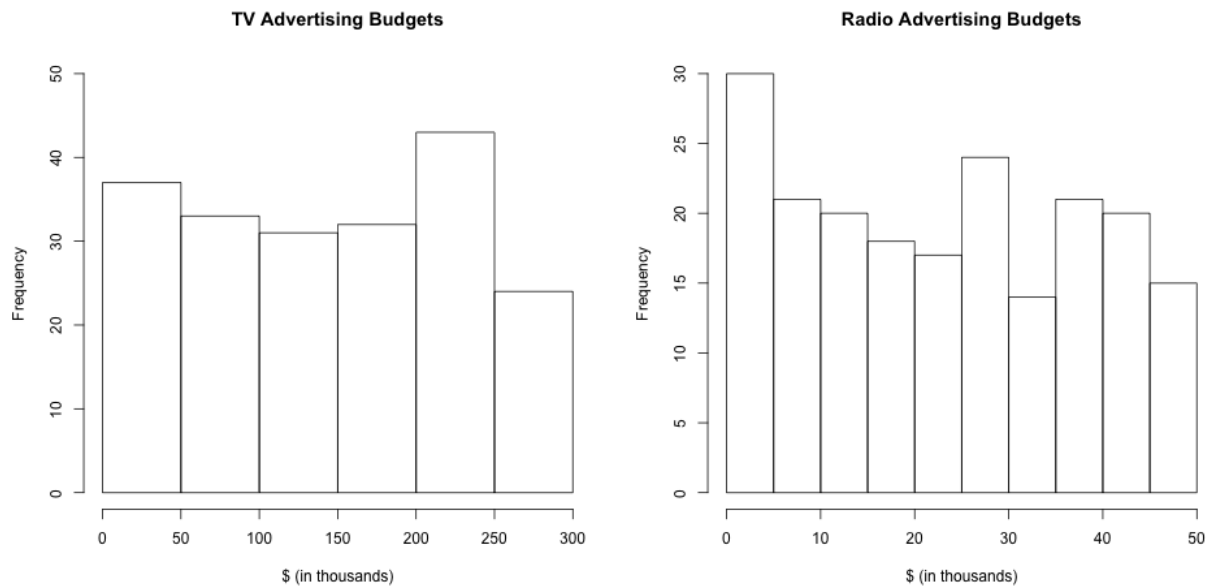
Shannon Chang

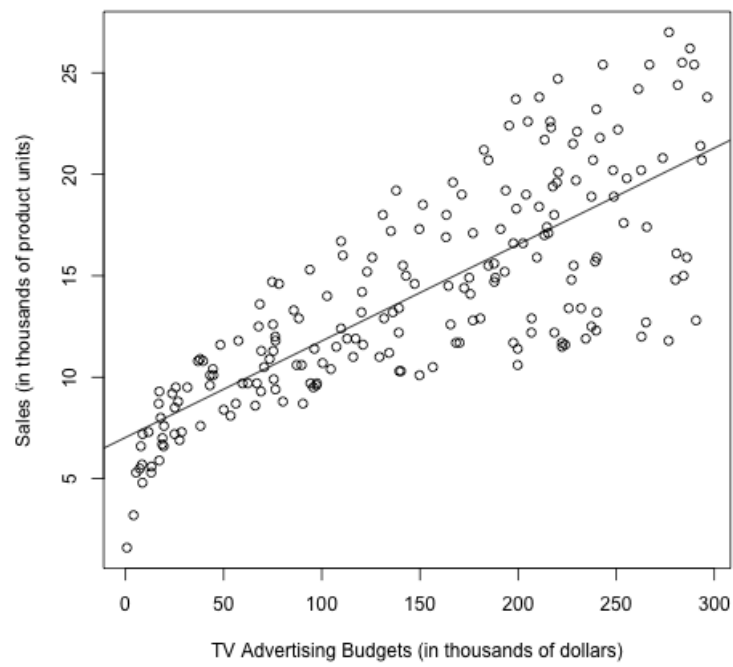
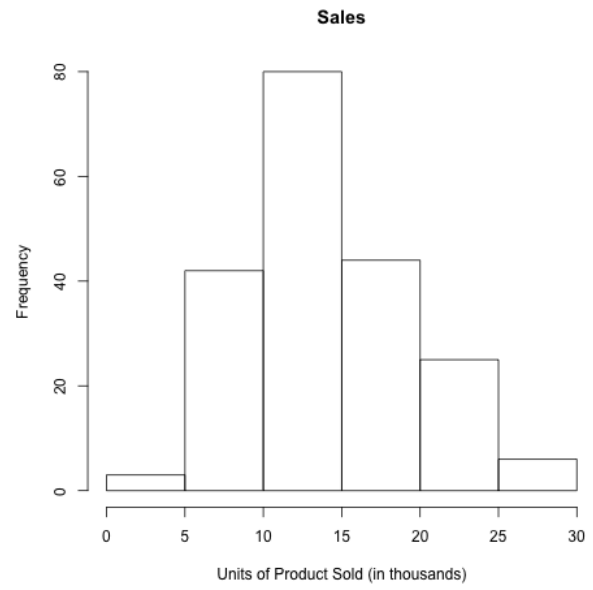
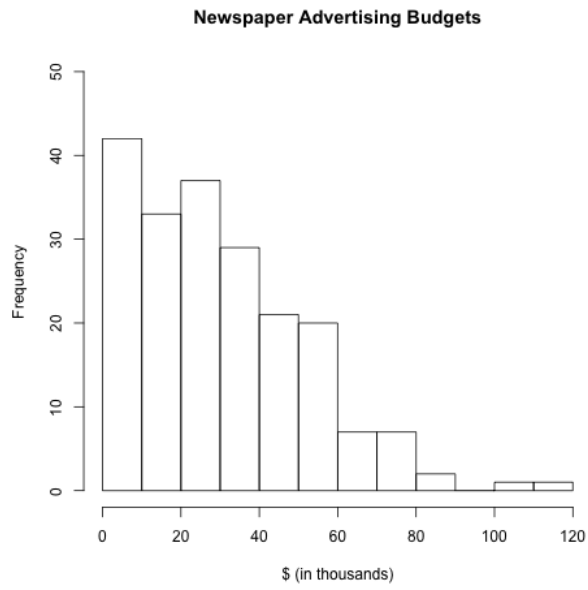
October 14, 2016

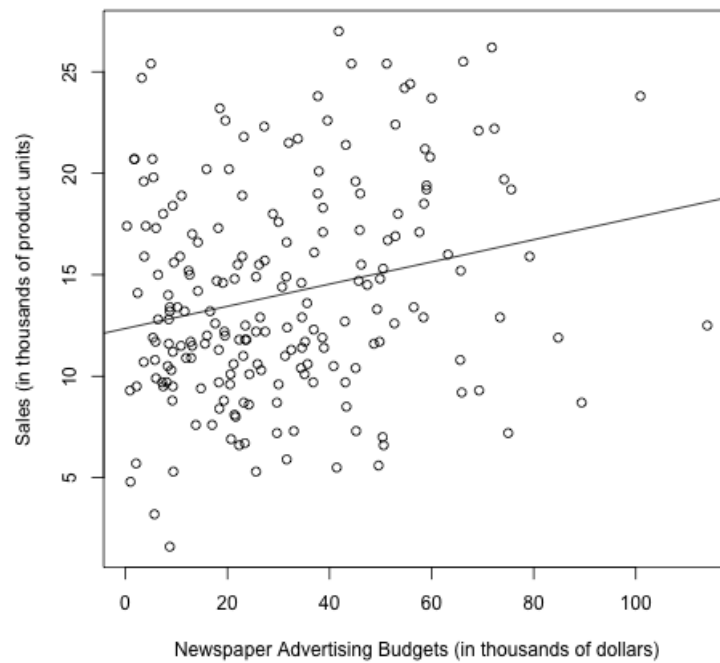
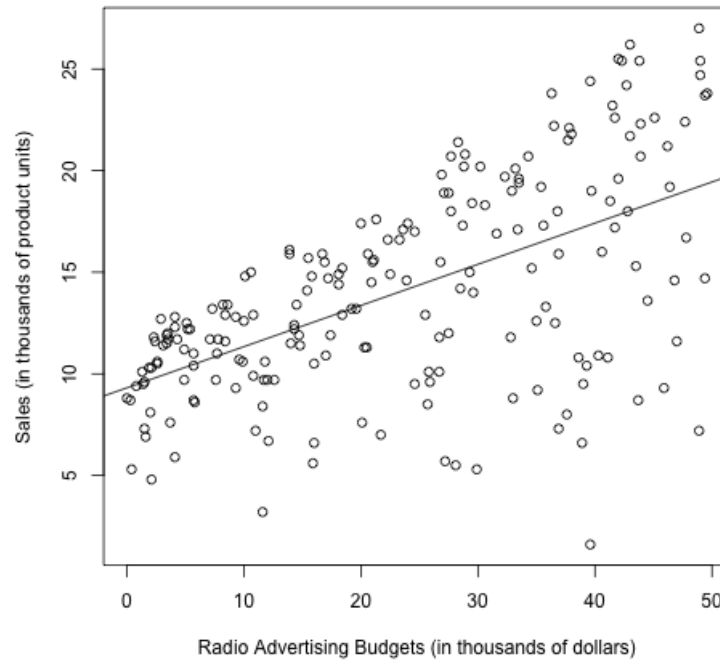
Abstract

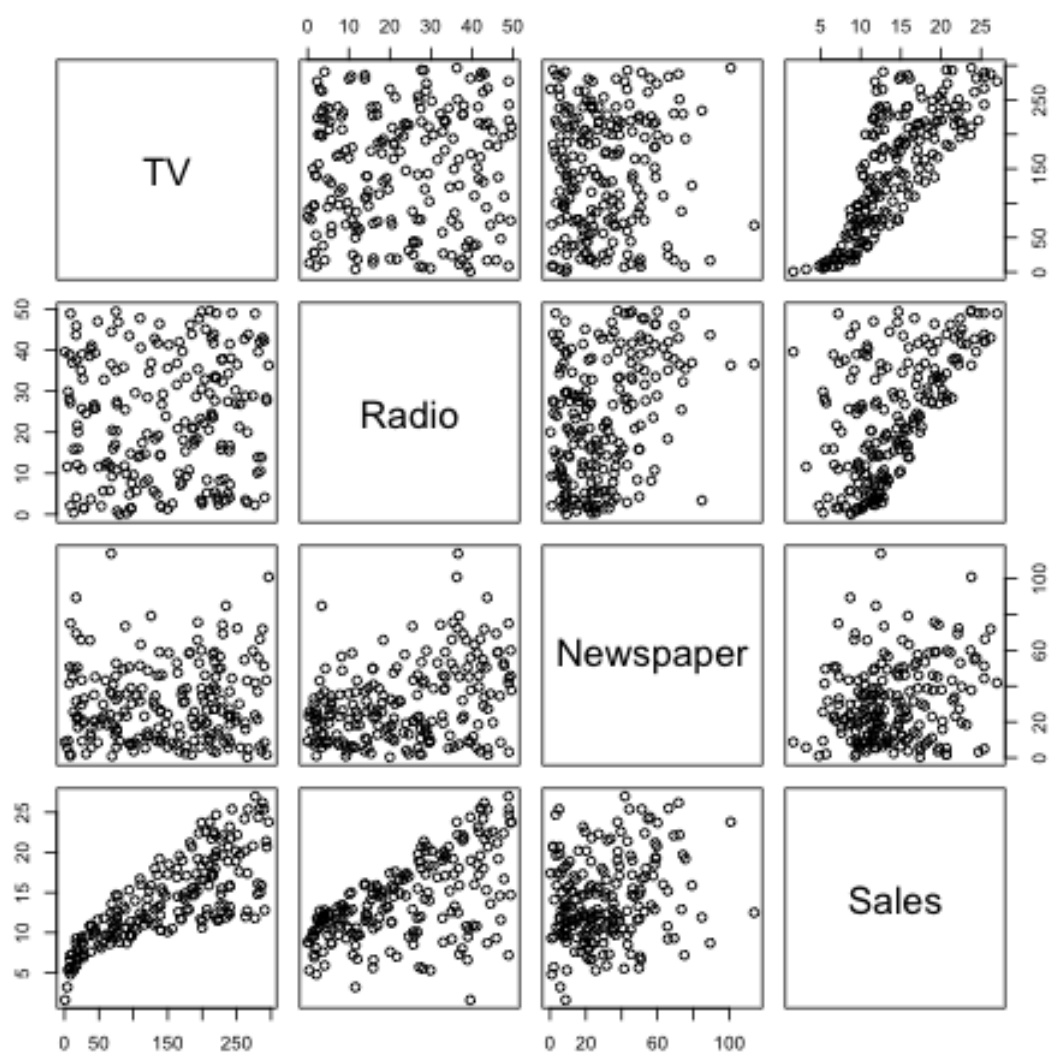
Introduction

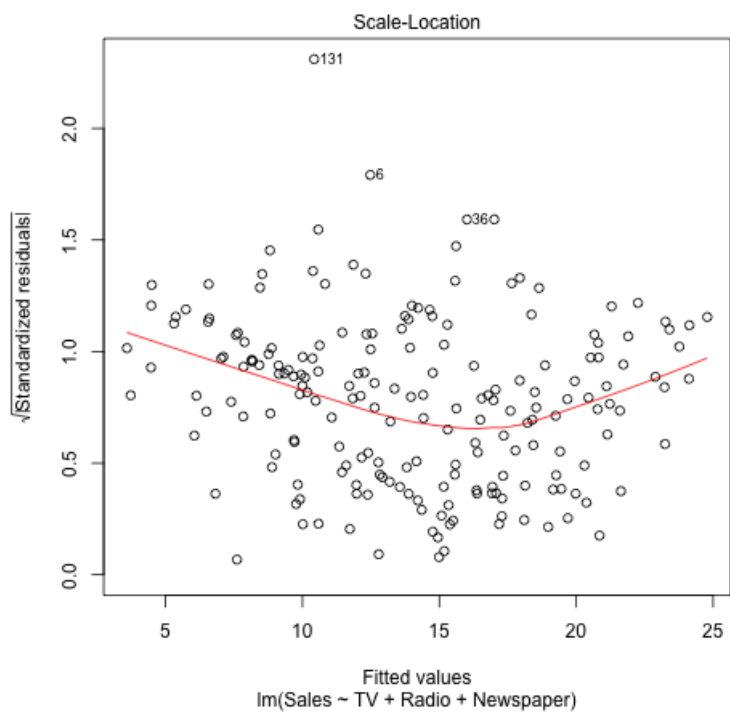
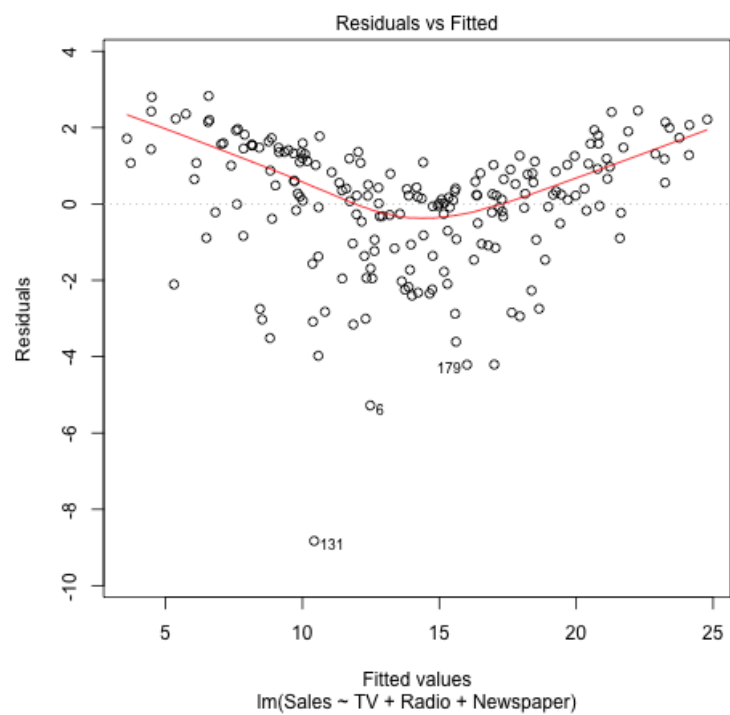
Data

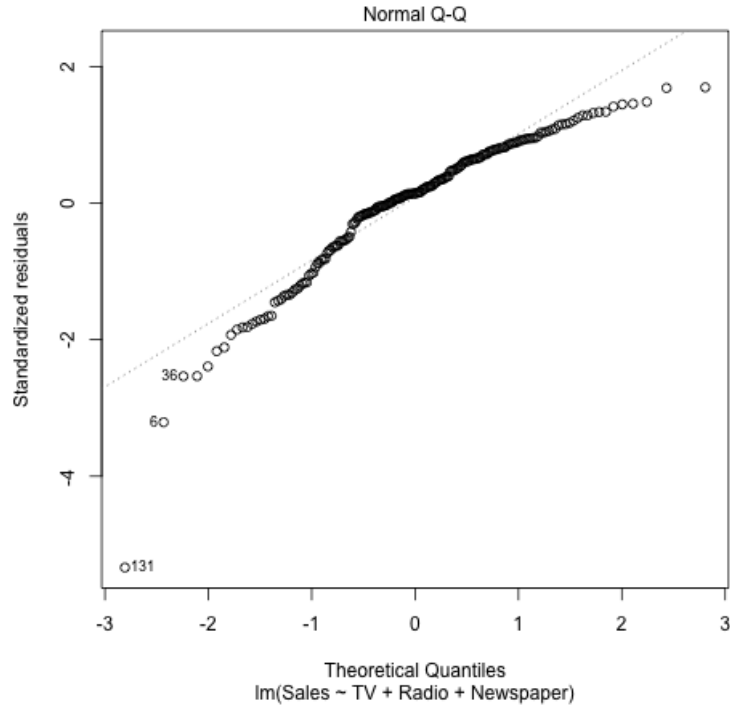












Methodology

Results

Table 1: Coefficient Estimates from the Simple Regression of Sales on TV

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	7.033	0.458	15.36	0.0000
TV	0.048	0.003	17.67	0.0000

Table 2: Coefficient Estimates from the Simple Regression of Sales on Radio

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	9.312	0.563	16.54	0.0000
Radio	0.202	0.020	9.92	0.0000

Table 3: Coefficient Estimates from the Simple Regression of Sales on Newspaper

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	12.351	0.621	19.88	0.0000
Newspaper	0.055	0.017	3.30	0.0011

Conclusions

Table 4: Coefficient Estimates from the Simple Regression of Sales on Radio

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	9.312	0.563	16.54	0.0000
Radio	0.202	0.020	9.92	0.0000

Table 5: Correlation Matrix

	TV	Radio	Newspaper	Sales
TV	1.00	0.05	0.06	0.78
Radio	0.05	1.00	0.35	0.58
Newspaper	0.06	0.35	1.00	0.23
Sales	0.78	0.58	0.23	1.00