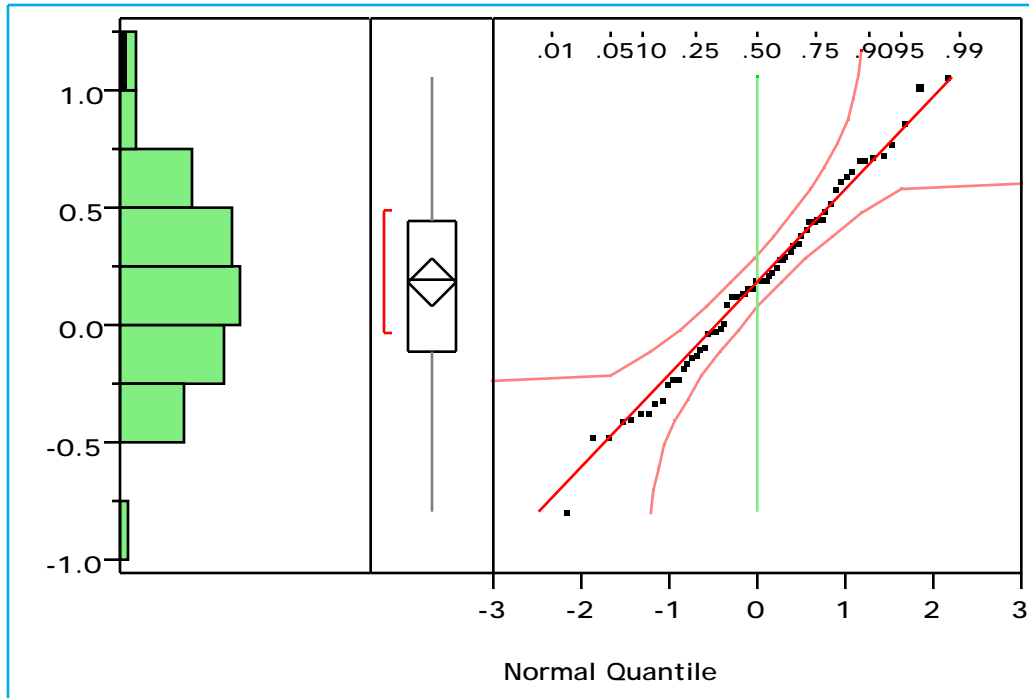


The residuals from our analysis above suggest there are two points (the ones in the lower left of the q-q residual plot) which are possible outliers in Florida. Those turn out to be Broward and Dade counties. So they, in addition to Palm Beach county, were removed and a regression run on the model $Y_{Buch} / \sqrt{n} = (\sqrt{n} - Y_{Bush} / \sqrt{n}) +$ for the remaining data. That analysis yields the least squares equation

$$\hat{Y}_{Buch} / \sqrt{n} = 0.00646(\sqrt{n} - Y_{Bush} / \sqrt{n})$$

with a standard error of the coefficient of 0.000446 and an $R^2 = .74$. The residual plot is below and is in agreement with our theoretical model.

Residual Buchnorm



Quantiles

maximum	100.0%	1.0612
	99.5%	1.0612
	97.5%	1.0320
	90.0%	0.7150
quartile	75.0%	0.4529
median	50.0%	0.1940
quartile	25.0%	-0.1124
	10.0%	-0.3690
	2.5%	-0.5949
	0.5%	-0.7918
minimum	0.0%	-0.7918

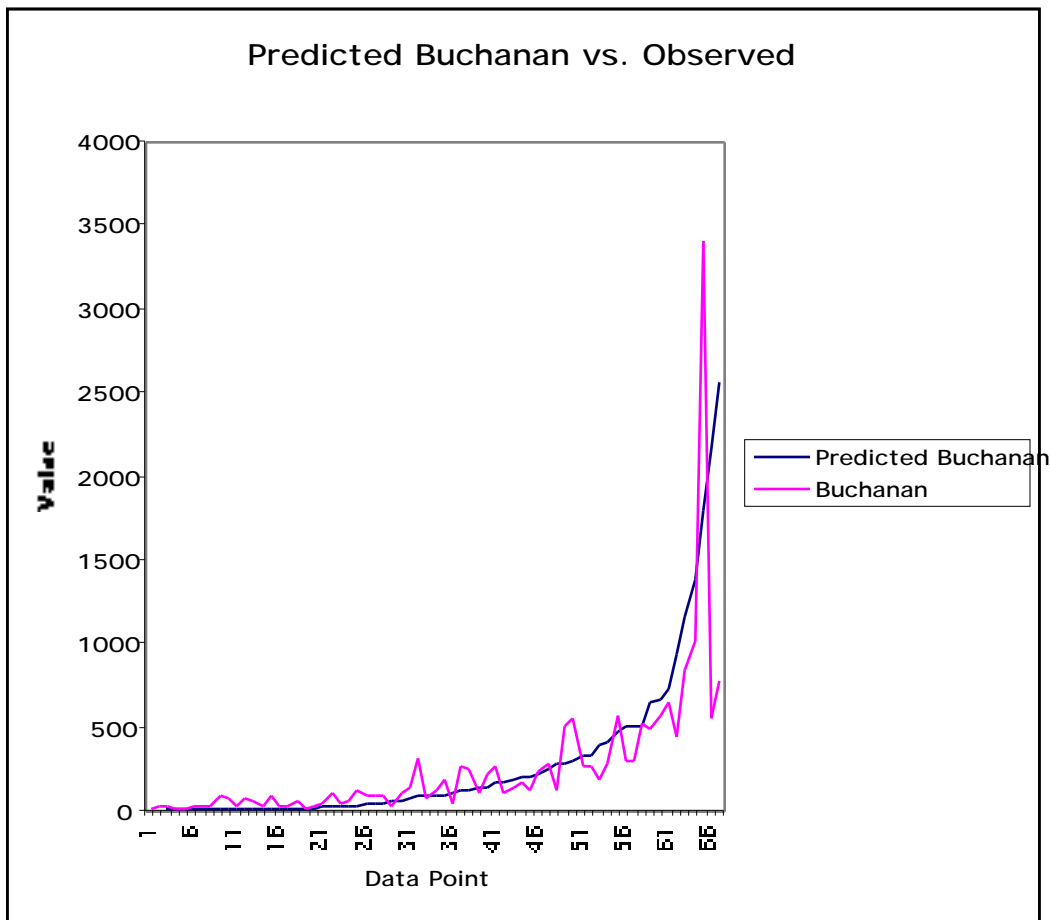
Moments

Mean	0.18590
Std Dev	0.39511
Std Error Mean	0.04939
Upper 95% Mean	0.28460
Lower 95% Mean	0.08721
N	64.00000
Sum Weights	64.00000

Using the prediction equation from above we see from

1805.53385 1601.46615 PALM BEACH
2170.14262 -1610.142622 DADE
2559.12972 -1771.129719 BROWARD

that in Palm Beach Buchanan received 1601 votes more than predicted, in Dade he received 1610 fewer than predicted, and in Broward 1771 fewer than predicted from the rest of the state. Furthermore, the fit of the model at an $R^2 = .74$ seems reasonable on the data points in the rest of the state. One concludes that the three counties differ from the rest of the state with regard to the value of the ratio p_{Buch} / q_{Bush} .



With regard to the heteroskedasticity, the variance term is

$$P_{Buch} (q_{Buch} q_{Bush} - P_{Buch} p_{Bush}) / q_{Bush}$$

which is plotted below for values of p which are representative of the ones observed. Note that the variances are not large and they differ by at most .012 over the range of values.

