

log transform of Price and Qty

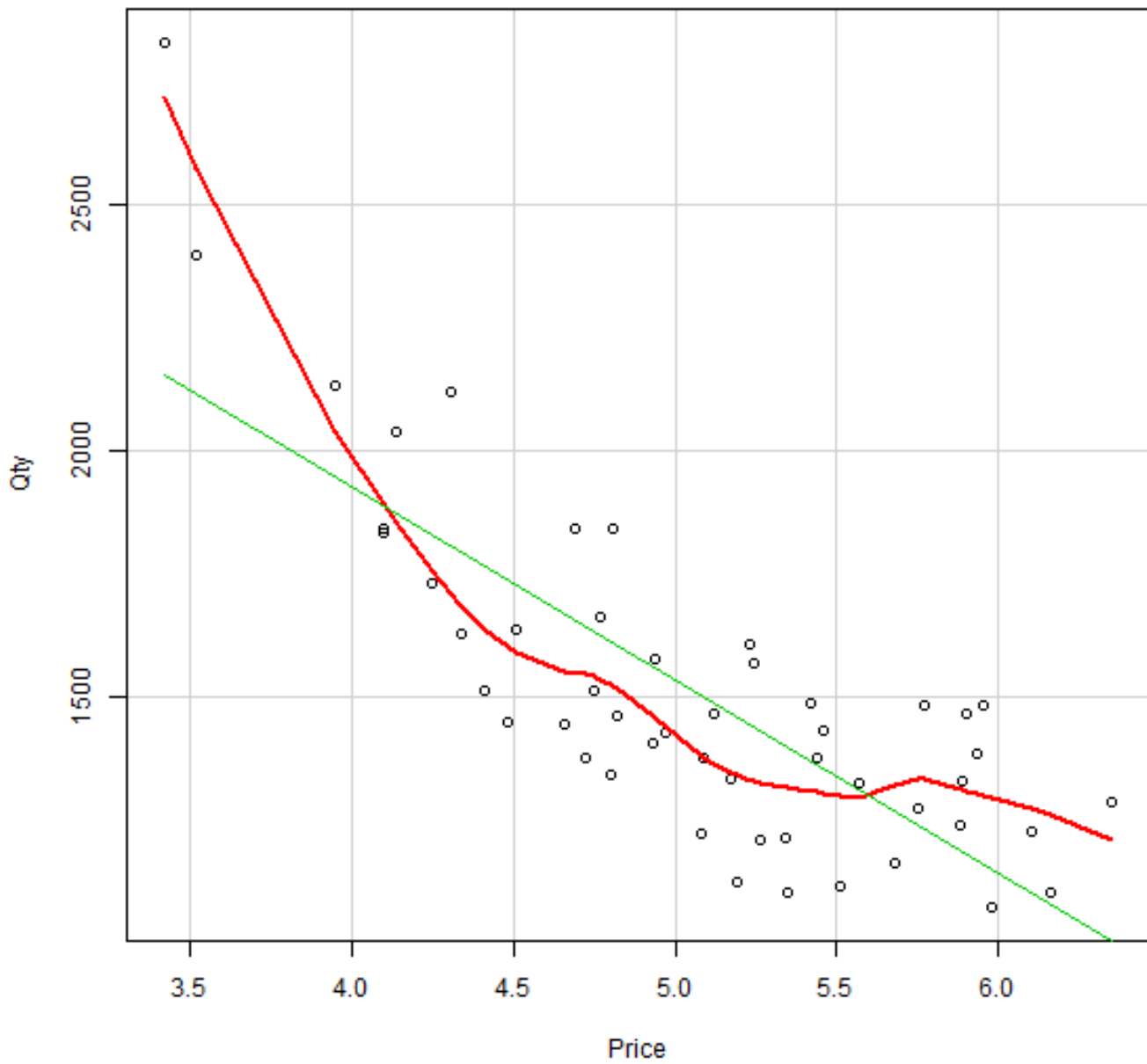
Your Name

2016-05-20

```
> setwd("C:/Users/parlar/Documents/1R/1ZLC/S2/8.Price-and-Demand-LogTransform")
```

```
> Dataset <-  
+ read.table("C:/Users/parlar/Documents/1R/1ZLC/S2/8.Price-and-Demand-LogTr.  
+ header=TRUE, sep=",", na.strings="NA", dec=".", strip.white=TRUE)
```

```
> scatterplot(Qty~Price, reg.line=lm, smooth=TRUE, spread=FALSE,  
+ boxplots=FALSE, span=0.5, ellipse=FALSE, levels=c(.5, .9), data=Dataset)
```



```
> RegModel.1 <- lm(Qty~Price, data=Dataset)
> summary(RegModel.1)
```

```
Call:
lm(formula = Qty ~ Price, data = Dataset)

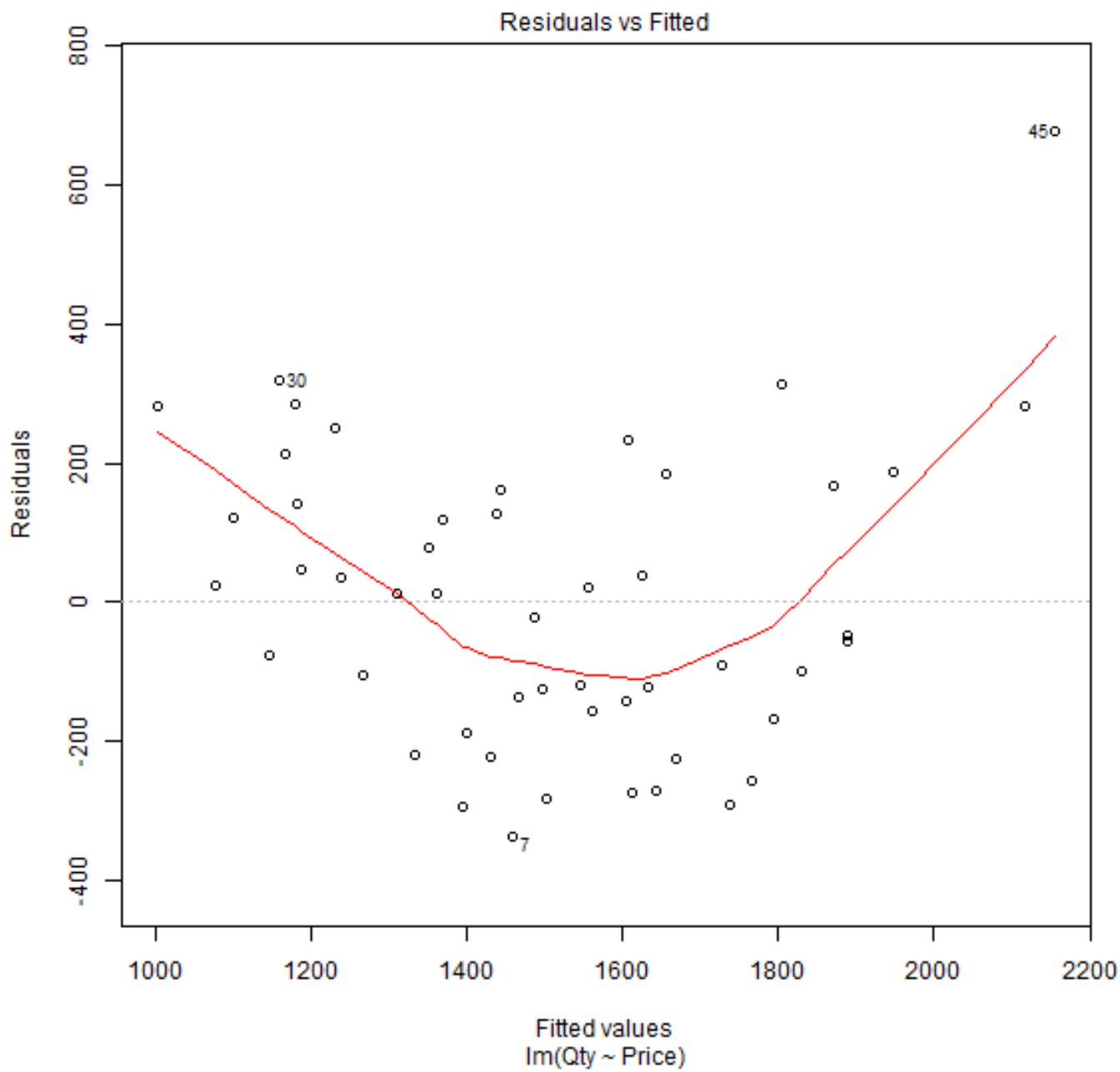
Residuals:
    Min       1Q   Median       3Q      Max
-338.04 -153.96  -5.62  156.90  676.23

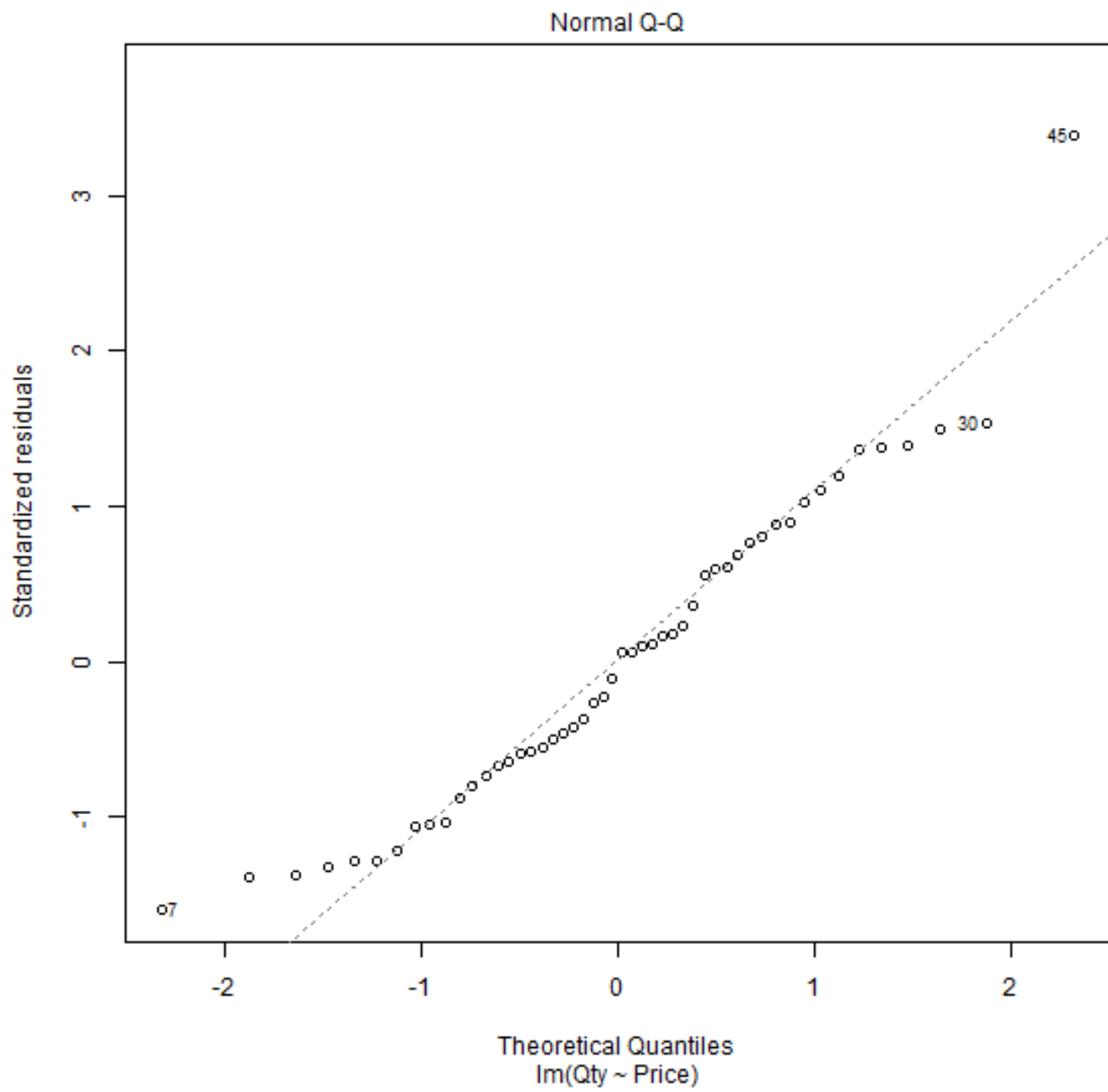
Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  3501.99     225.57  15.525 < 2e-16 ***
Price       -393.63      44.14  -8.918 9.38e-12 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

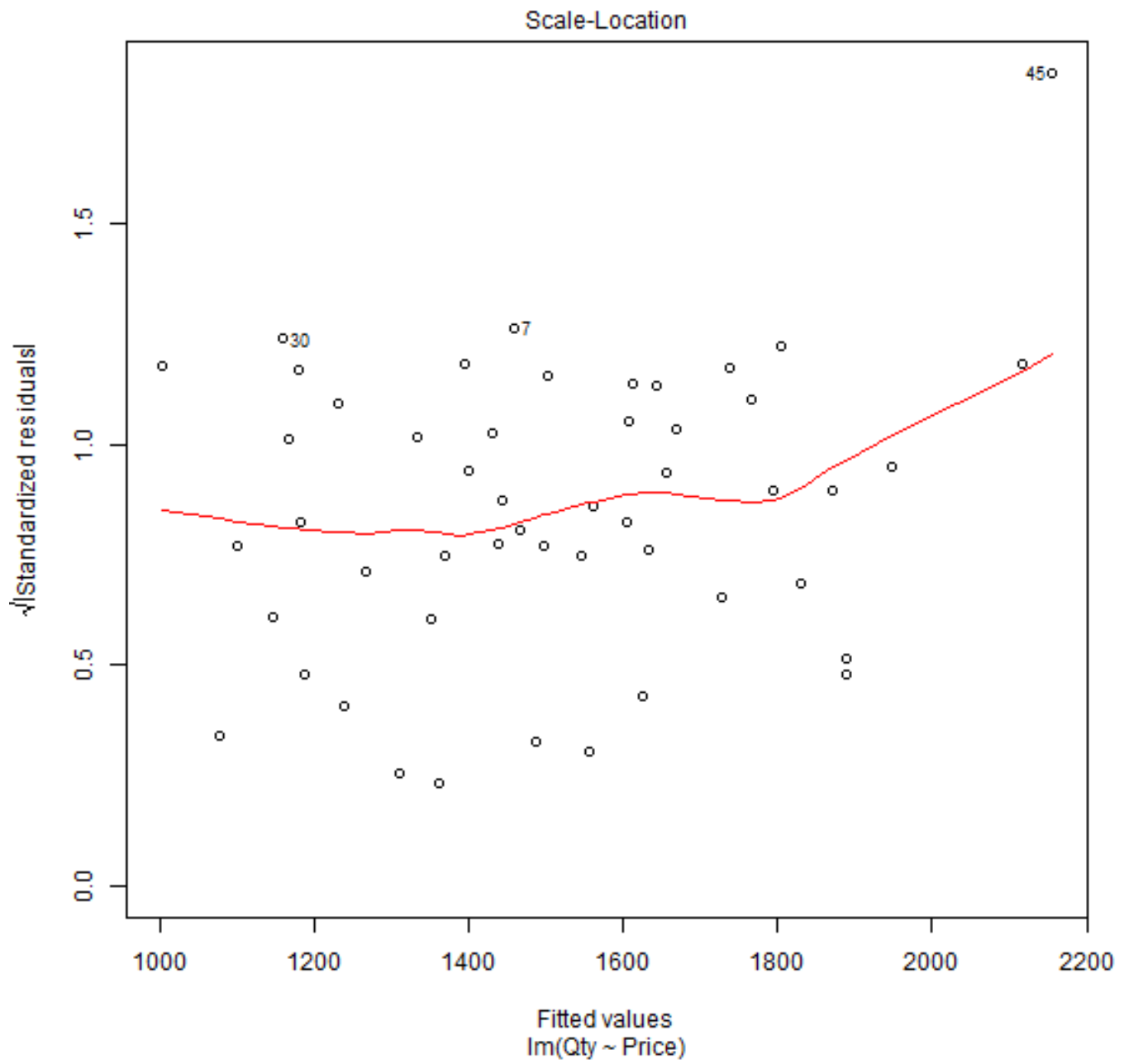
Residual standard error: 214.3 on 48 degrees of freedom
Multiple R-squared:  0.6236,    Adjusted R-squared:  0.6158
F-statistic: 79.52 on 1 and 48 DF,  p-value: 9.377e-12
```

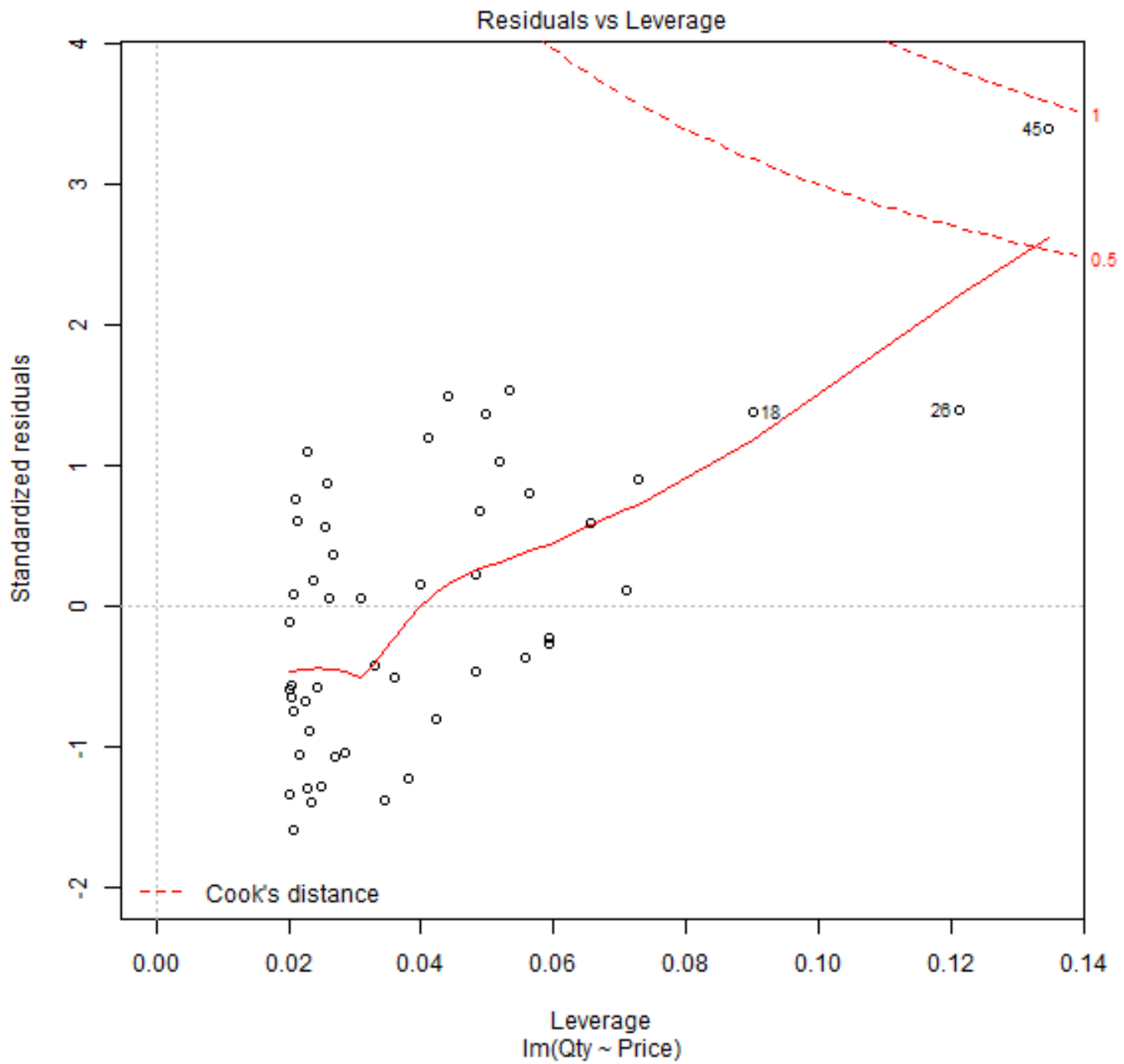
```
> oldpar <- par(oma=c(0,0,3,0), mfrow=c(2,2))
```

```
> plot(RegModel.1)
```



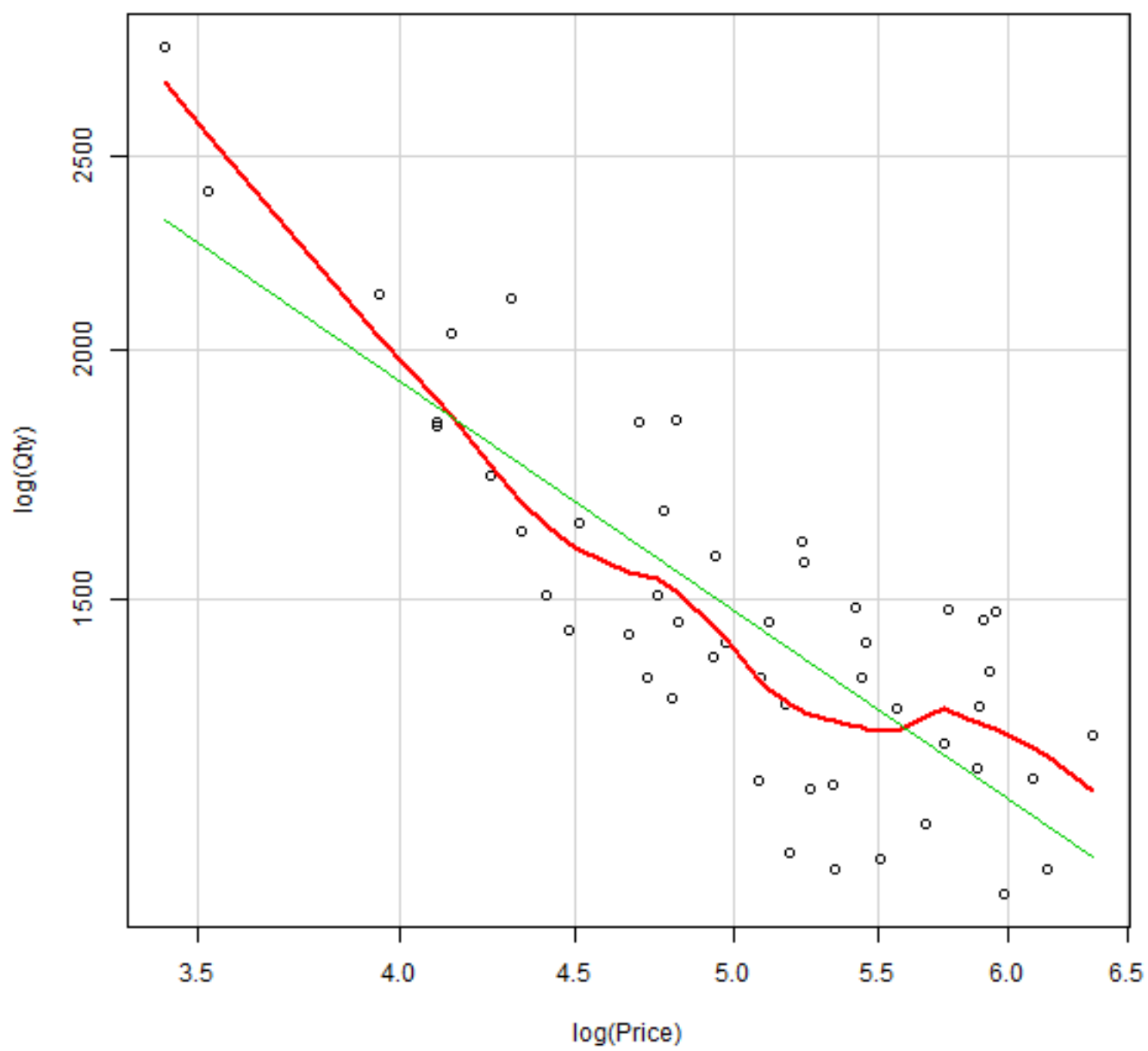






```
> par(oldpar)
```

```
> scatterplot(Qty~Price, log="xy", reg.line=lm, smooth=TRUE, spread=FALSE,
+ boxplots=FALSE, span=0.5, ellipse=FALSE, levels=c(.5, .9),
+ xlab="log(Price)", ylab="log(Qty)", data=Dataset)
```



```
> LinearModel.2 <- lm(log(Qty) ~ log(Price), data=Dataset)
> summary(LinearModel.2)
```



```
Call:
lm(formula = log(Qty) ~ log(Price), data = Dataset)

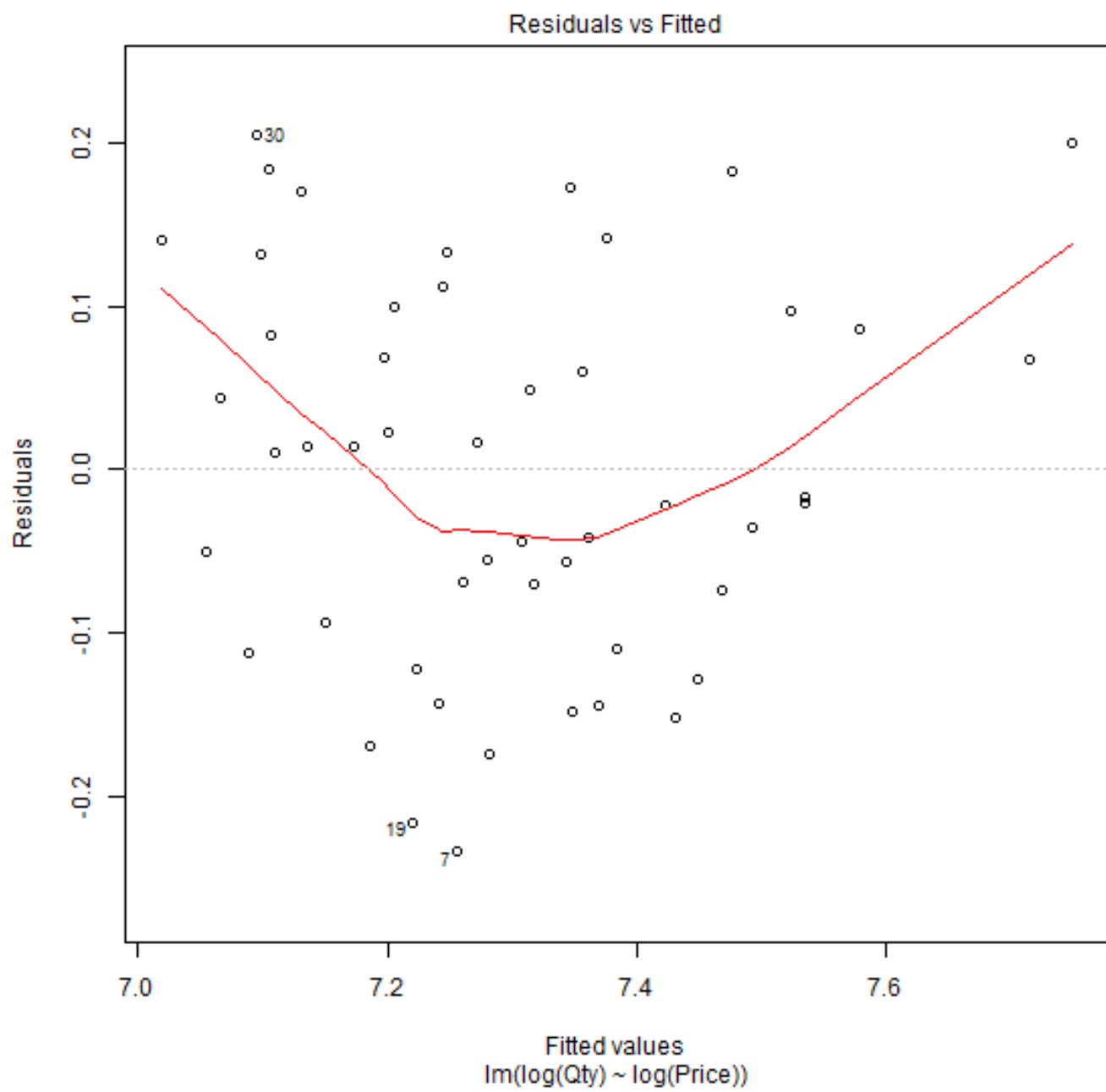
Residuals:
    Min       1Q   Median       3Q      Max
-0.23437 -0.08879 -0.00340  0.09432  0.20484

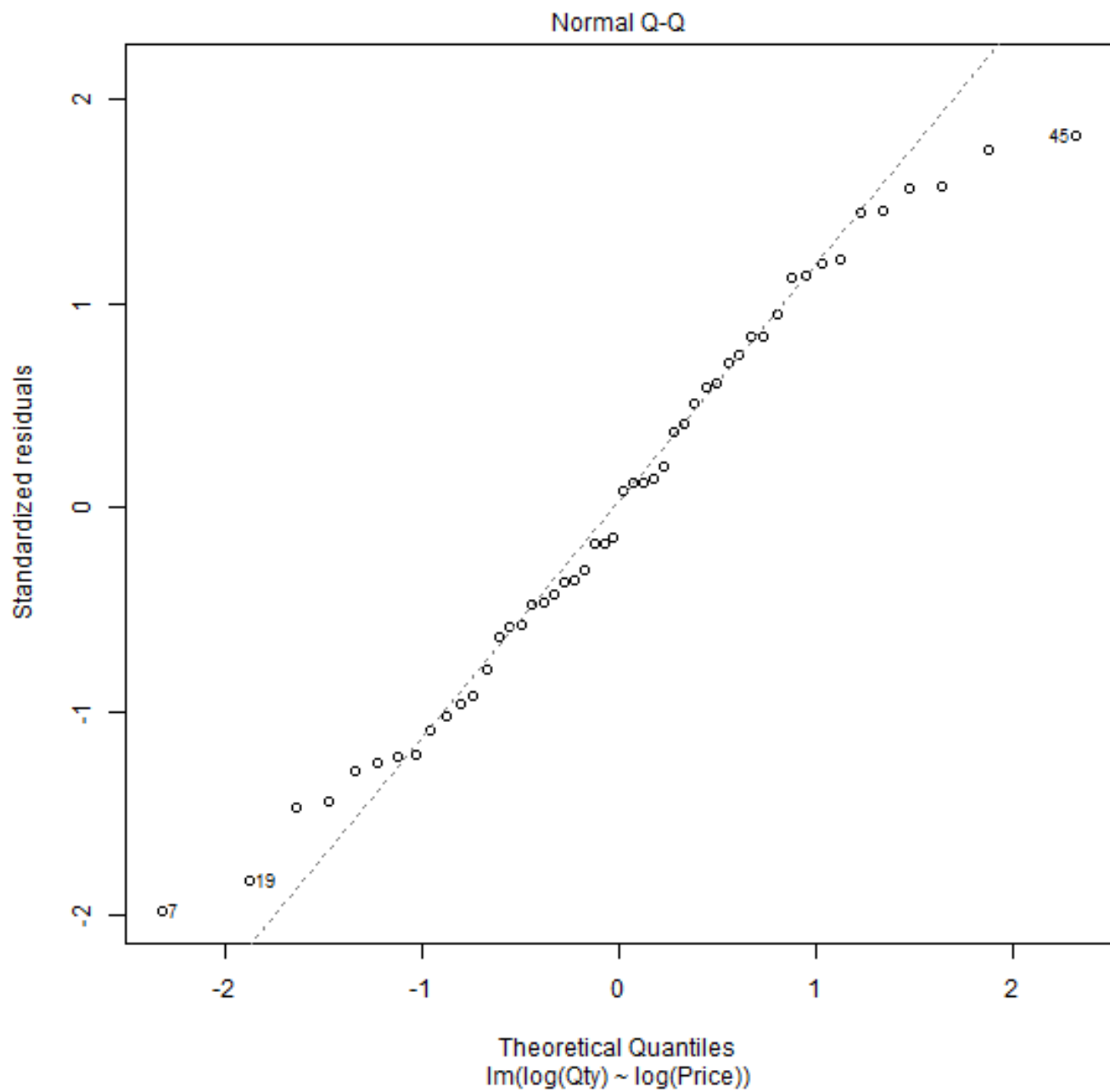
Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)   9.2011     0.1946  47.273 < 2e-16 ***
log(Price)   -1.1810     0.1202  -9.822 4.55e-13 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

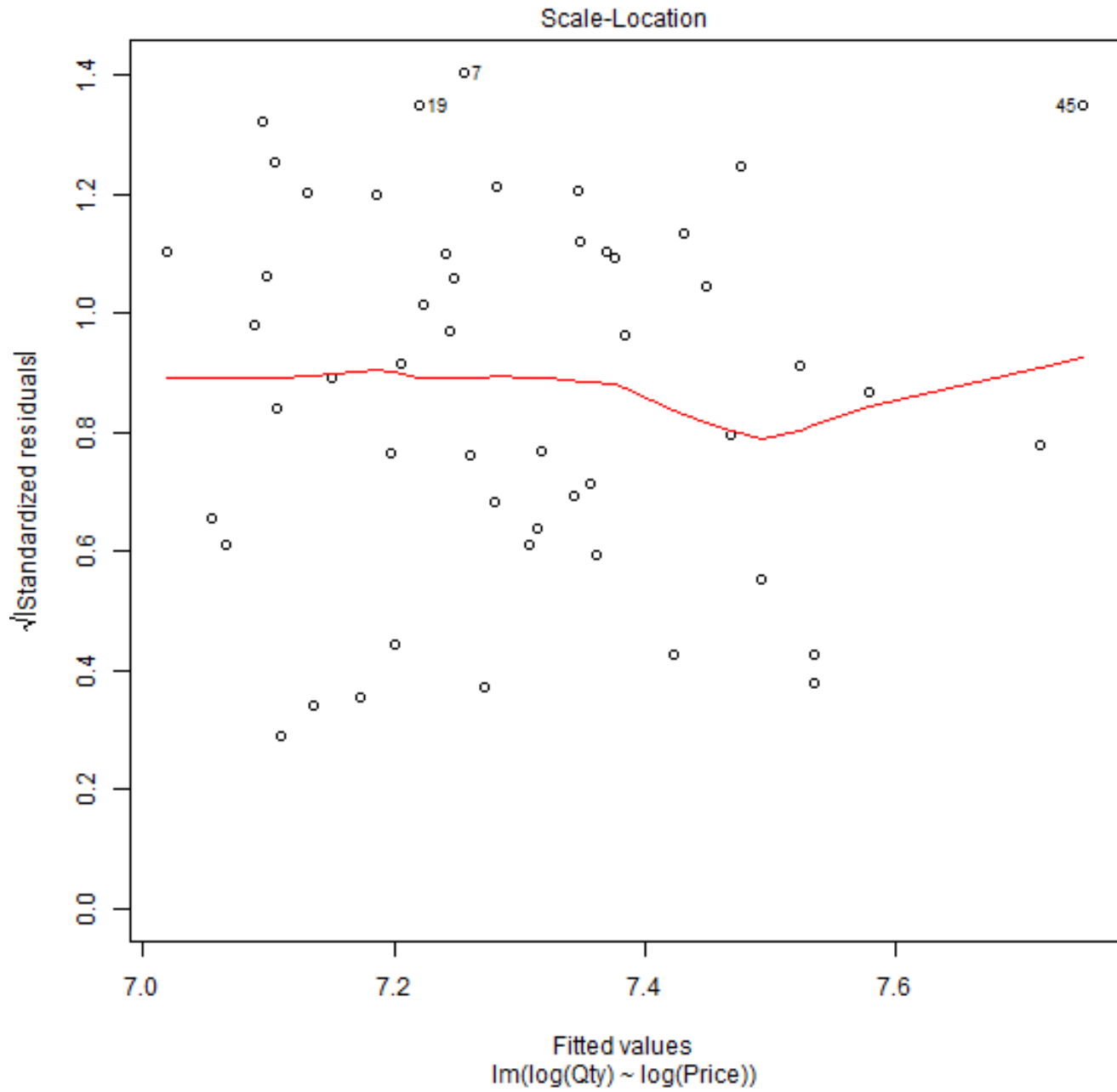
Residual standard error: 0.12 on 48 degrees of freedom
Multiple R-squared:  0.6677,    Adjusted R-squared:  0.6608
F-statistic: 96.46 on 1 and 48 DF,  p-value: 4.552e-13
```

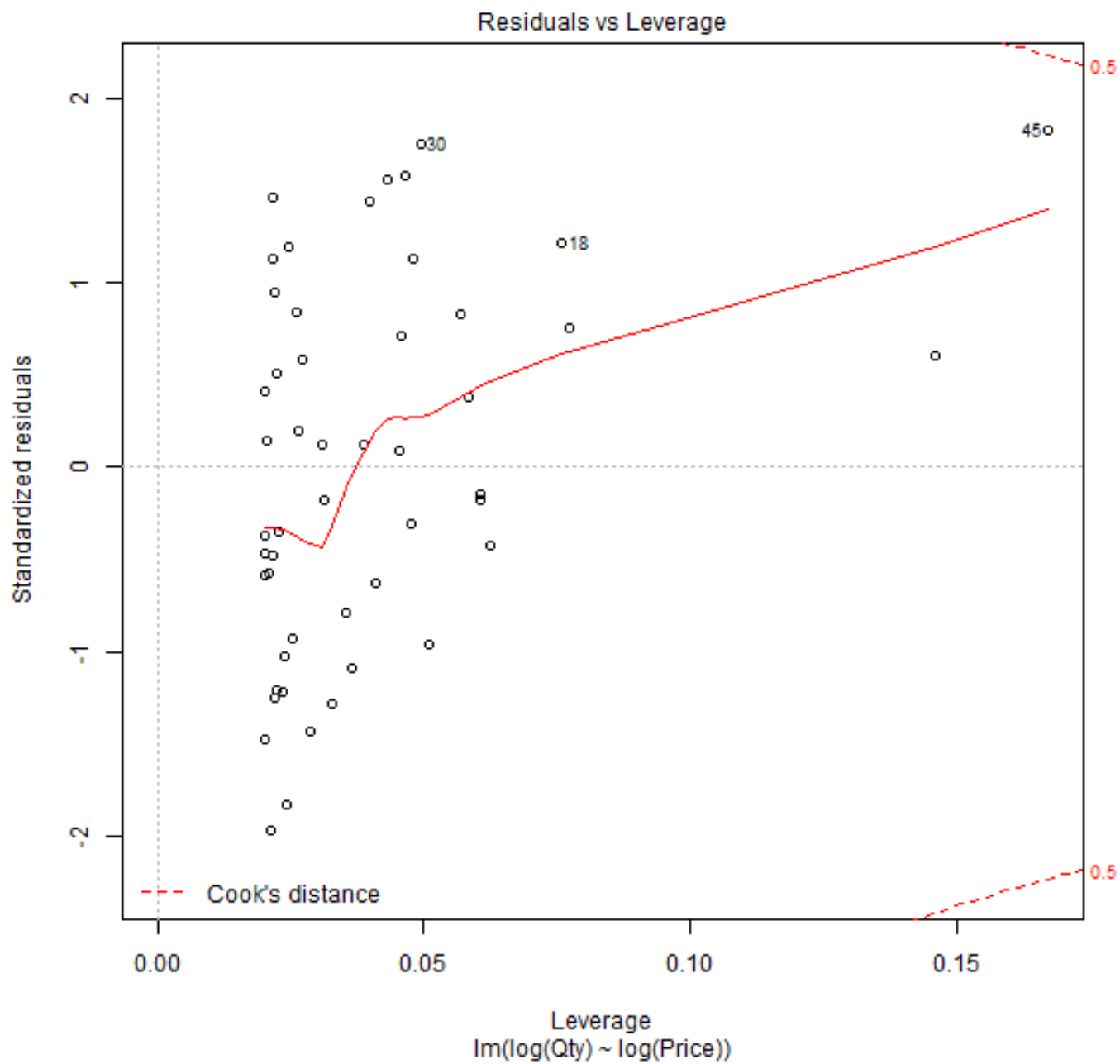
```
> oldpar <- par(oma=c(0,0,3,0), mfrow=c(2,2))
```

```
> plot(LinearModel.2)
```









```
> par(oldpar)
```