

UN Data - log transform

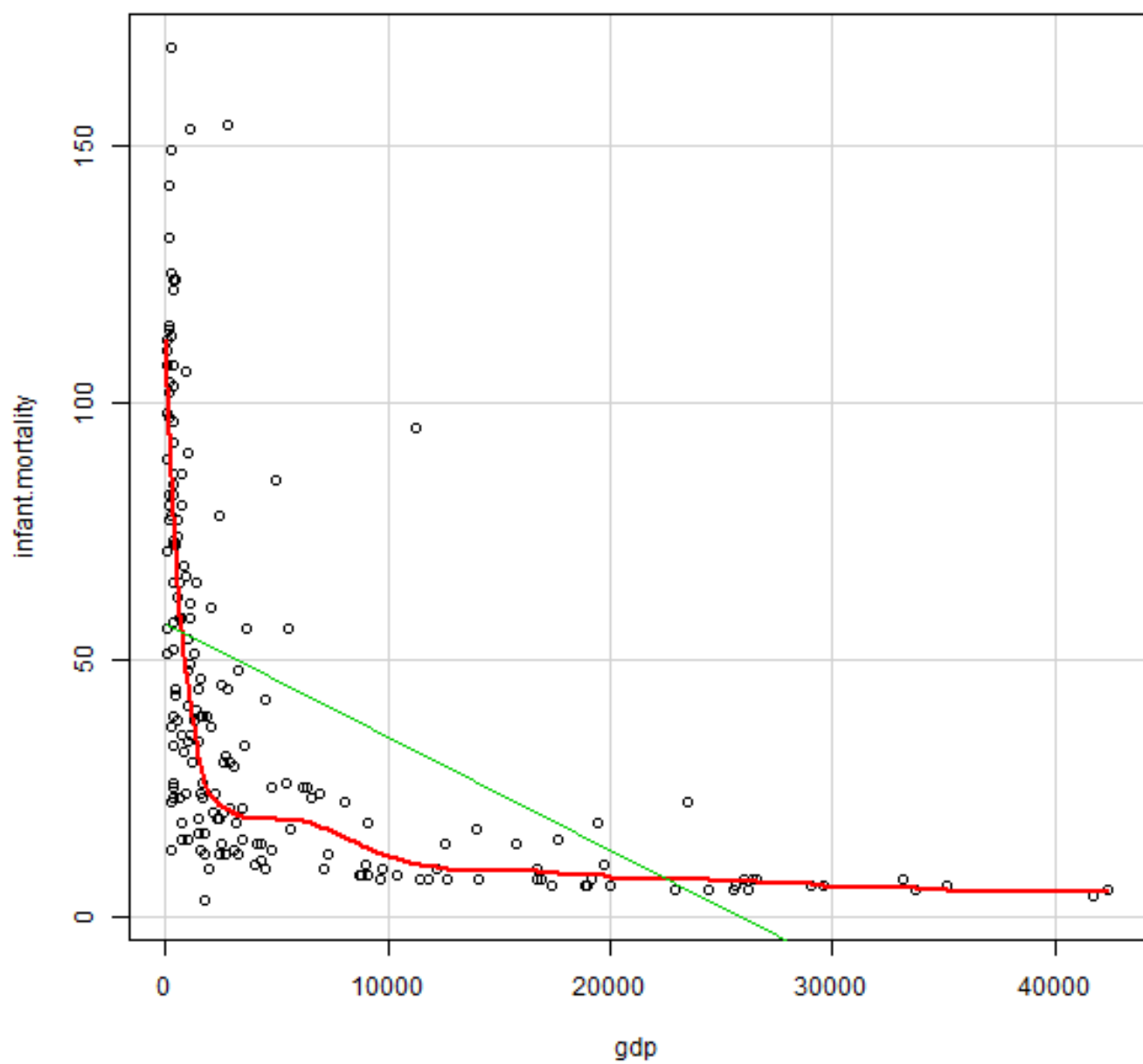
Your Name

2016-06-28

```
> setwd("C:/Users/parlar/Documents/1R/2016-1.ZLC/S2/(b) Data modelling - Flexi
```

```
> load("C:/Users/parlar/Documents/1R/2016-1.ZLC/S2/(b) Data modelling - Flexi
```

```
> scatterplot(infant.mortality~gdp, reg.line=lm, smooth=TRUE, spread=FALSE,  
+   boxplots=FALSE, span=0.5, ellipse=FALSE, levels=c(.5, .9), data=UN)
```



```
> RegModel.1 <- lm(infant.mortality~gdp, data=UN)
> summary(RegModel.1)
```

```
Call:
lm(formula = infant.mortality ~ gdp, data = UN)

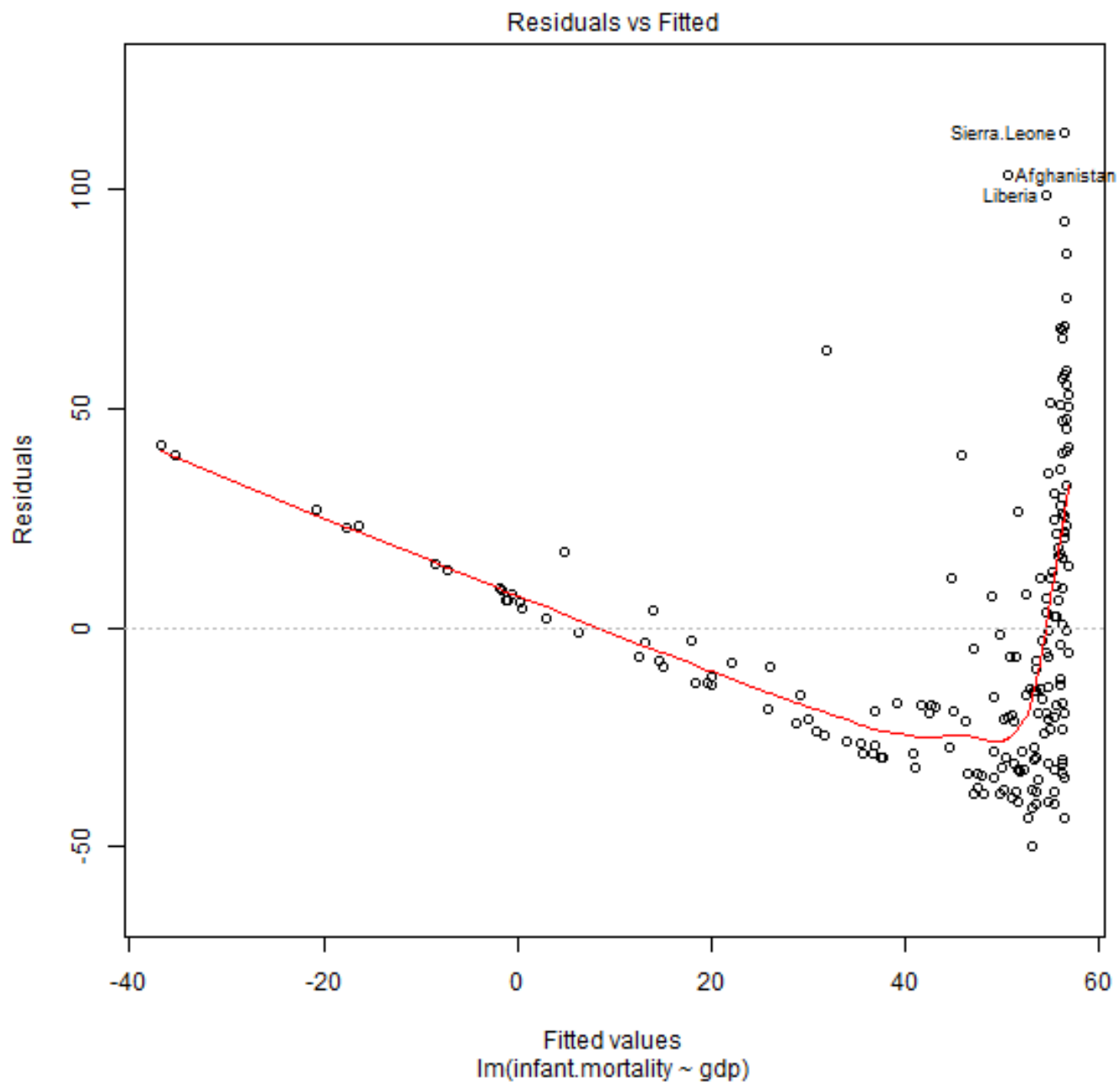
Residuals:
    Min       1Q   Median       3Q      Max
-49.97 -26.40  -8.09   18.19 112.72

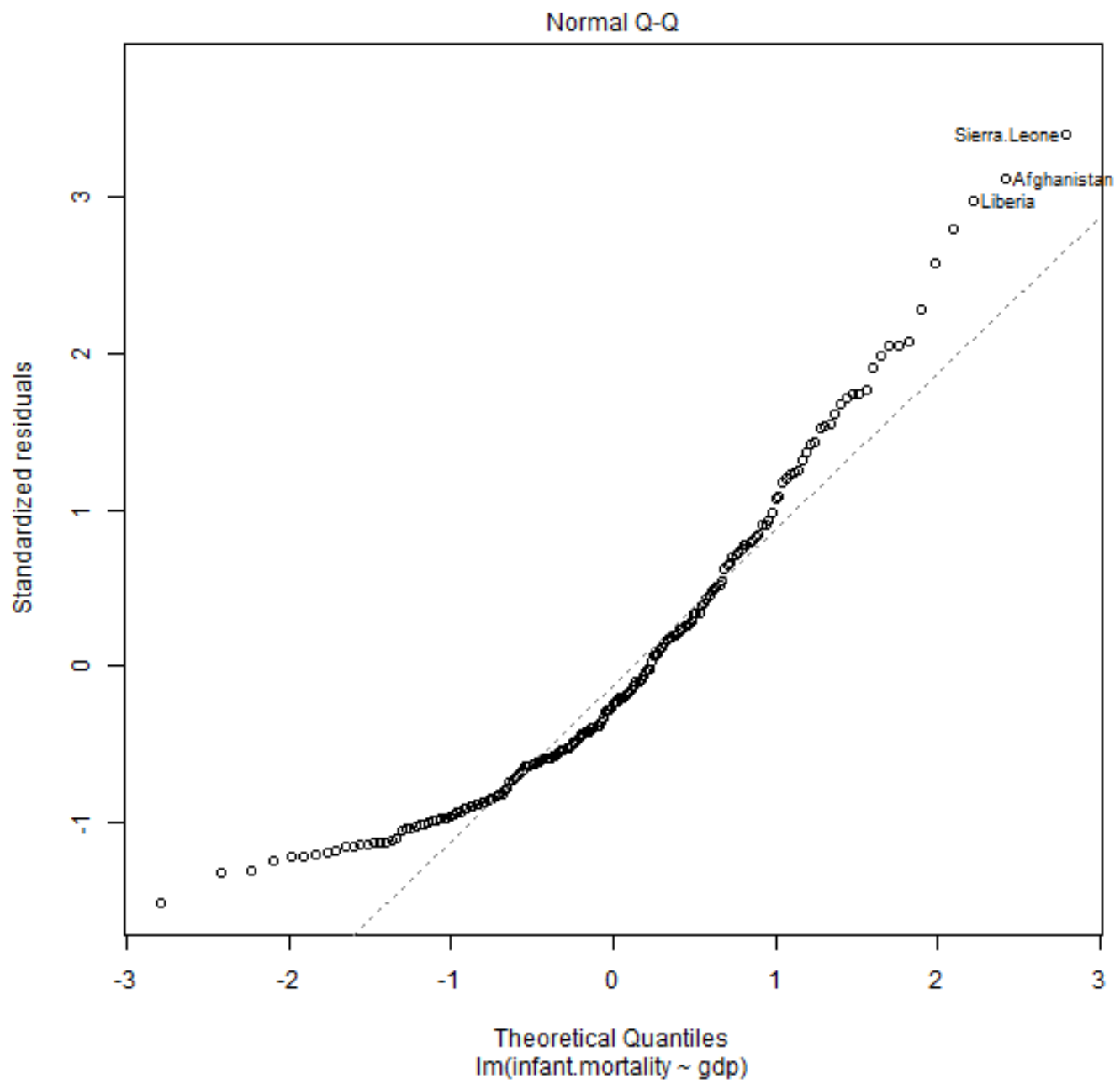
Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)  56.9238670   2.8743320   19.804 < 2e-16 ***
gdp          -0.0022107   0.0002692   -8.213 3.18e-14 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

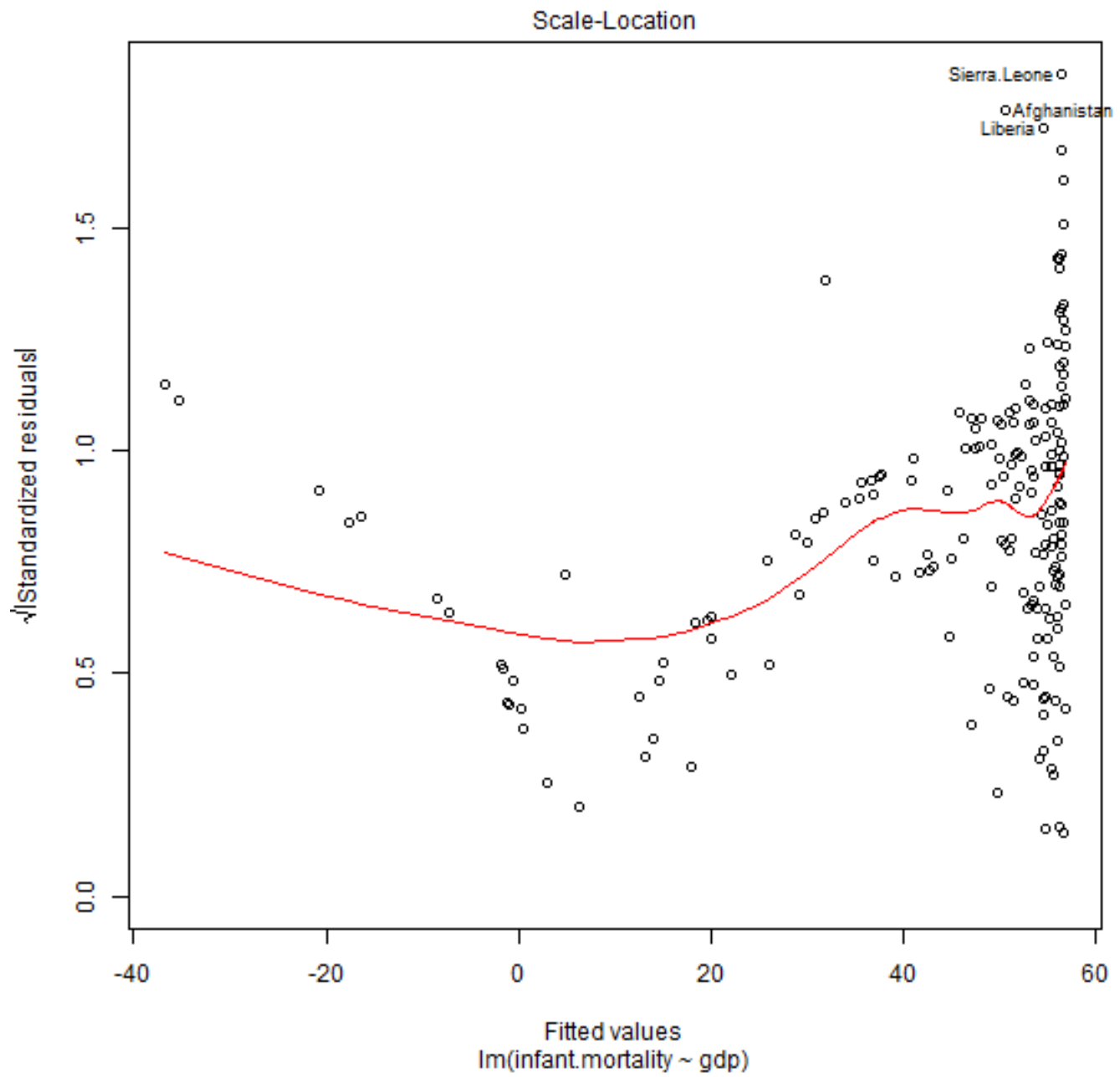
Residual standard error: 33.23 on 191 degrees of freedom
(14 observations deleted due to missingness)
Multiple R-squared:  0.261, Adjusted R-squared:  0.2571
F-statistic: 67.45 on 1 and 191 DF, p-value: 3.185e-14
```

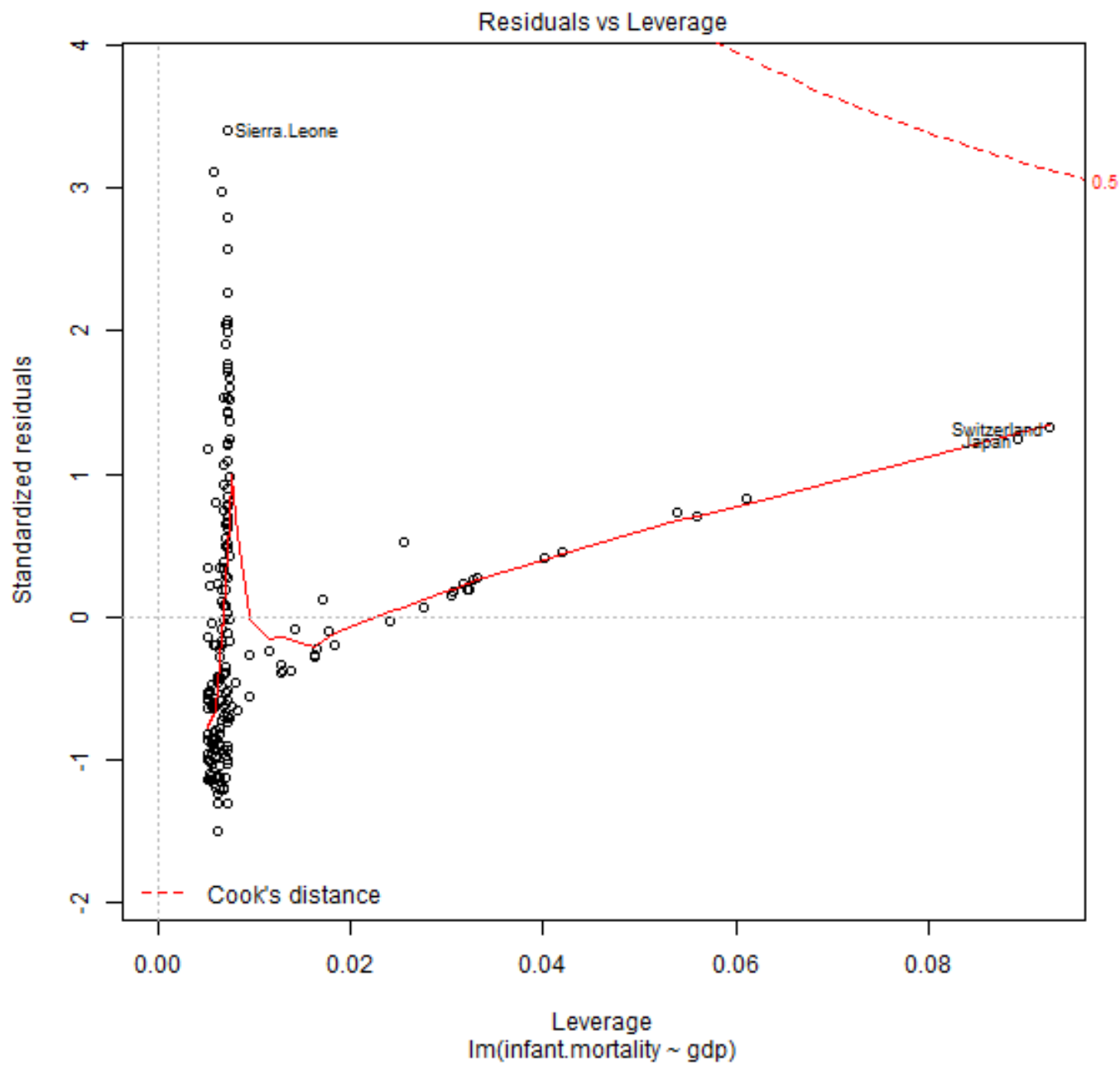
```
> oldpar <- par(oma=c(0,0,3,0), mfrow=c(2,2))
```

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



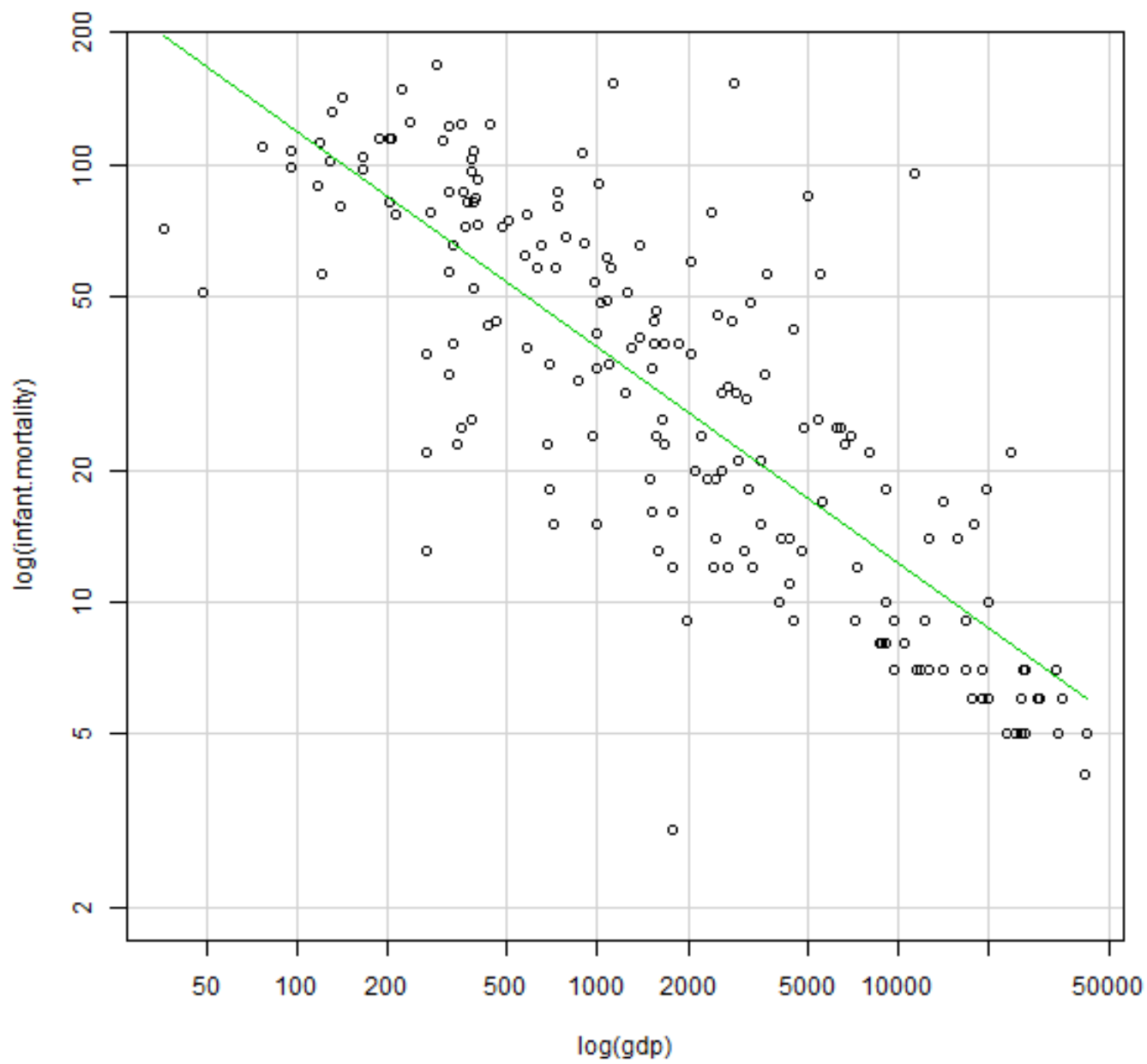






```
> par(oldpar)
```

```
> scatterplot(infant.mortality~gdp, log="xy", reg.line=lm, smooth=FALSE,
+ spread=FALSE, boxplots=FALSE, span=0.5, ellipse=FALSE, levels=c(.5, .9),
+ xlab="log(gdp)", ylab="log(infant.mortality)", data=UN)
```



```
> LinearModel.2 <- lm(log(infant.mortality) ~ log(gdp), data=UN)
> summary(LinearModel.2)
```



```
Call:
lm(formula = log(infant.mortality) ~ log(gdp), data = UN)

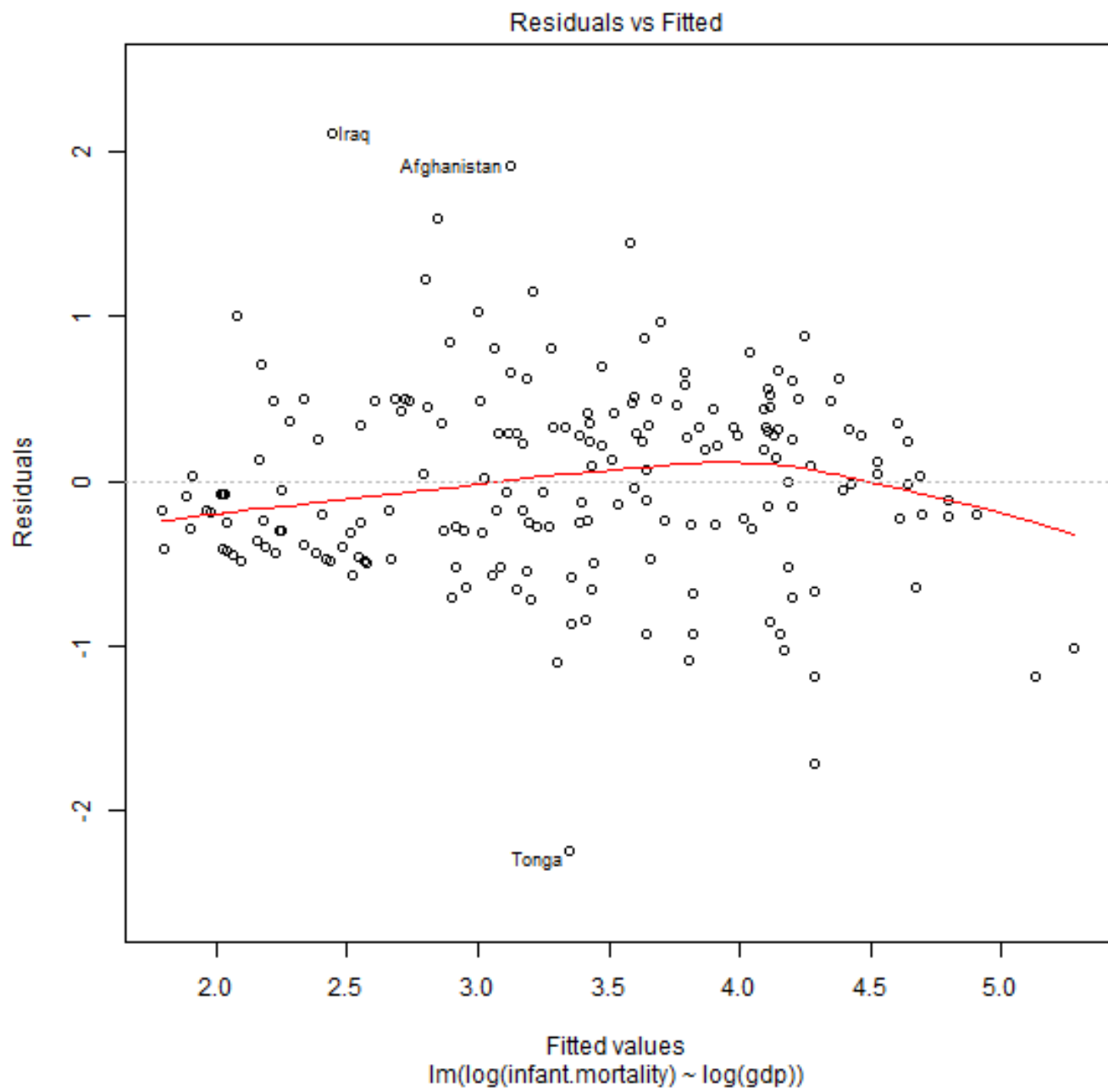
Residuals:
    Min       1Q   Median       3Q      Max
-2.25334 -0.39580 -0.05258  0.35598  2.11187

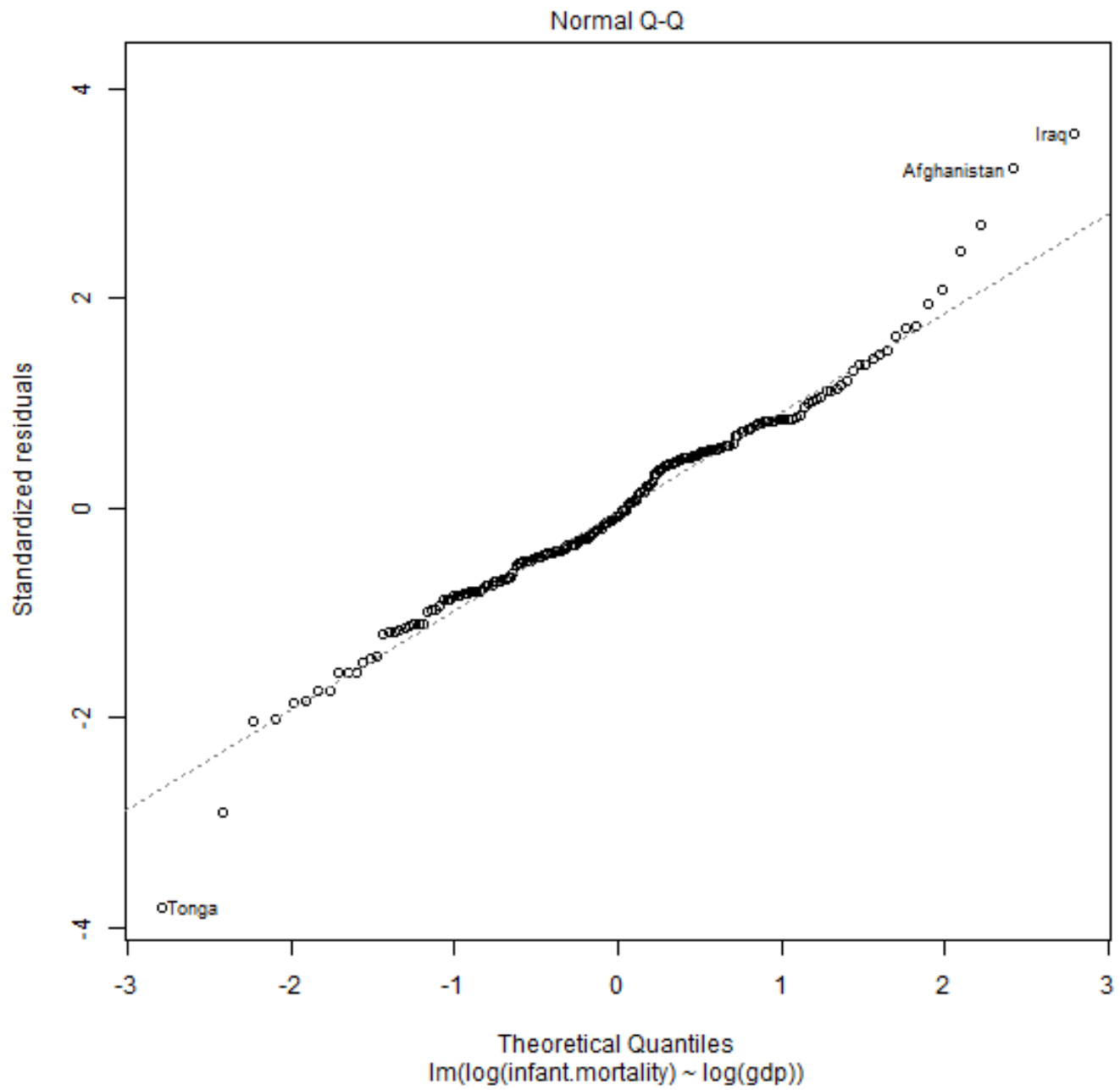
Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  7.04520    0.19914   35.38  <2e-16 ***
log(gdp)     -0.49320    0.02586  -19.07  <2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

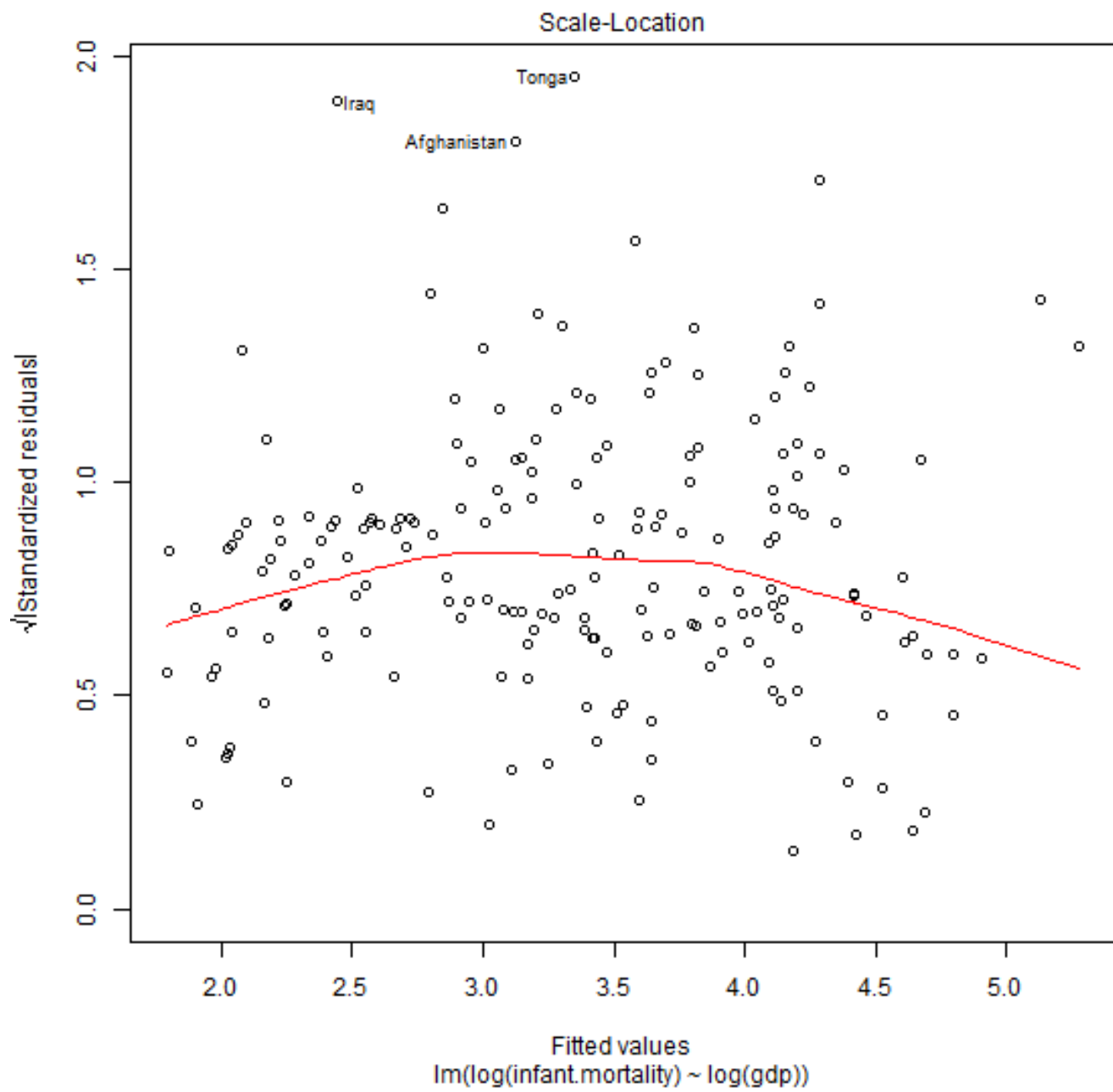
Residual standard error: 0.5938 on 191 degrees of freedom
(14 observations deleted due to missingness)
Multiple R-squared:  0.6556,    Adjusted R-squared:  0.6538
F-statistic: 363.7 on 1 and 191 DF,  p-value: < 2.2e-16
```

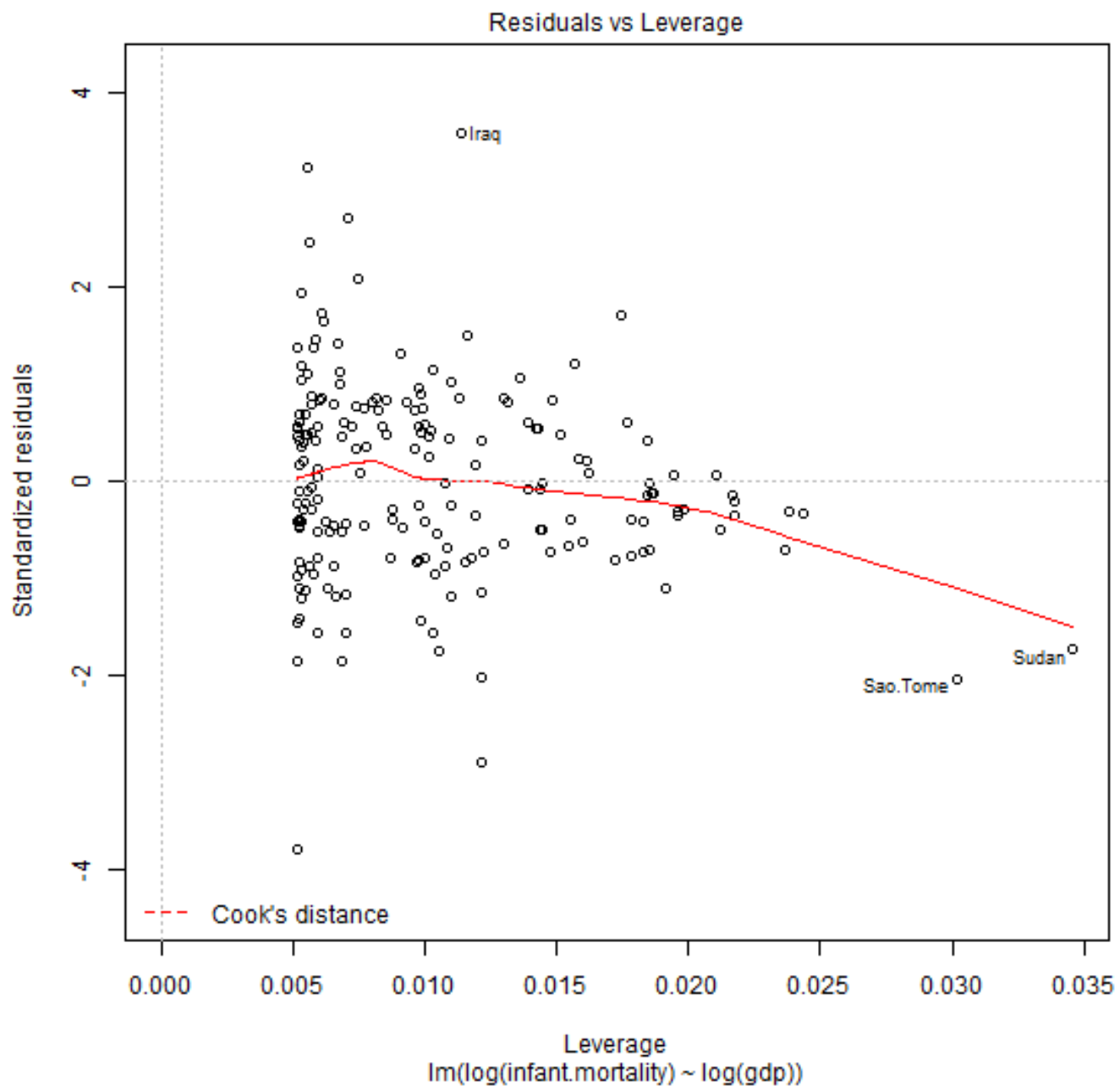
```
> oldpar <- par(oma=c(0,0,3,0), mfrow=c(2,2))
```

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









```
> par(oldpar)
```