

Collinearity?

- We can apply the `vif()` function to our model - it will work out the VIF values for each of our variables - `vif()` is in the `car` package so don't forget to load that...

```
> vif(steplimitsboth)
      Crime Population 
1.000012  1.000012
```

- As a rule of thumb VIF greater than 10 suggests a multicollinearity issue (although greater than 5 has been suggested too - more conservative).
- For our case, we don't have a collinearity problem as the VIF values are low.

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	1.736e+05	1.243e+04	13.973	< 2e-16	***
Crime	-3.343e+02	1.147e+02	-2.915	0.00388	**
Population	6.662e-01	2.442e-01	2.729	0.00682	**

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

- Using these regression coefficients, we could write our regression equation as something like:

House price = 173,600 - 334.2 (Crime) + 0.6662 (Population) + residual

- So, crime has a *negative* influence on house prices (more crime = lower prices) while population size has a *positive* influence on house prices (more people = higher house prices).