

Examples of Spurious Regression

(“Regression that does not make any sense.”)

Typical symptom: “High R^2 , t-values, F-value, but **low D/W**”

1. Egyptian infant mortality rate (Y), 1971-1990, annual data,
on Gross aggregate income of American farmers (I)
and Total Honduran money supply (M)

$$\hat{Y} = 179.9 - .2952 I - .0439 M, \quad R^2 = .918, \quad D/W = .4752, \quad F = 95.17$$

(16.63) (-2.32) (-4.26) Corr = .8858, -.9113, -.9445

2. US Export Index (Y), 1960-1990, annual data,
on Australian males' life expectancy (X)

$$\hat{Y} = -2943. + 45.7974 X, \quad R^2 = .916, \quad D/W = .3599, \quad F = 315.2$$

(-16.70) (17.76) Corr = .9570

3. US Defense Expenditure (Y), 1971-1990, annual data,
on Population of South African (X)

$$\hat{Y} = -368.99 + .0179 X, \quad R^2 = .940, \quad D/W = .4069, \quad F = 280.69$$

(-11.34) (16.75) Corr = .9694

4. Total Crime Rates in the US (Y), 1971-1991, annual data,
on Life expectancy of South Africa (X)

$$\hat{Y} = -24569 + 628.9 X, \quad R^2 = .811, \quad D/W = .5061, \quad F = 81.72$$

(-6.03) (9.04) Corr = .9008

5. Population of South Africa (Y), 1971-1990, annual data,
on Total R&D expenditure in the US (X)

$$\hat{Y} = 21698.7 + 111.58 X, \quad R^2 = .974, \quad D/W = .3037, \quad F = 696.96$$

(59.44) (26.40) Corr = .9873