Examples of Spurious Regression

("Regression that does not make any sense.")

Typical symptom: "High R², 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)

> $\hat{Y} = 179.9 - .2952 I - .0439 M,$ (16.63) (-2.32) (-4.26) $R^2 = .918, D/W = .4752, F = 95.17$ Corr = .8858, -.9113, -.9445

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

> $\hat{Y} = -2943. + 45.7974 X,$ (-16.70) (17.76) $R^2 = .916, D/W = .3599, F = 315.2$ Corr = .9570

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

 $\hat{Y} = -368.99 + .0179 X,$ (-11.34) (16.75) $R^2 = .940, D/W = .4069, F = 280.69$ Corr = .9694

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

> $\hat{Y} = -24569 + 628.9 X,$ (-6.03) (9.04) $R^2 = .811, D/W = .5061, F = 81.72$ 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, R	$a^{2} = .974,$	D/W = .3037,	F = 696.96
(59.44) (26.4	40) C	orr = .987	3	