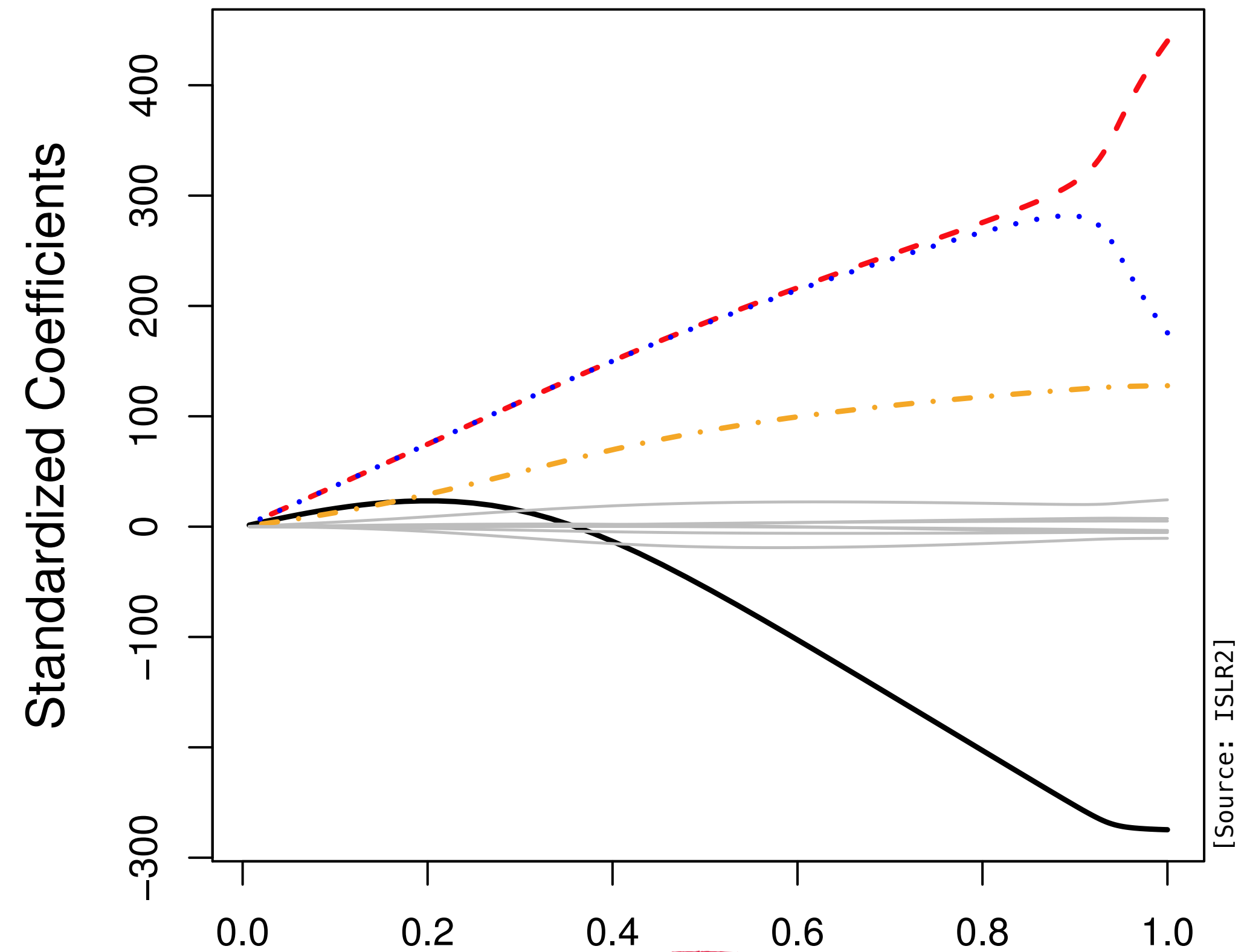
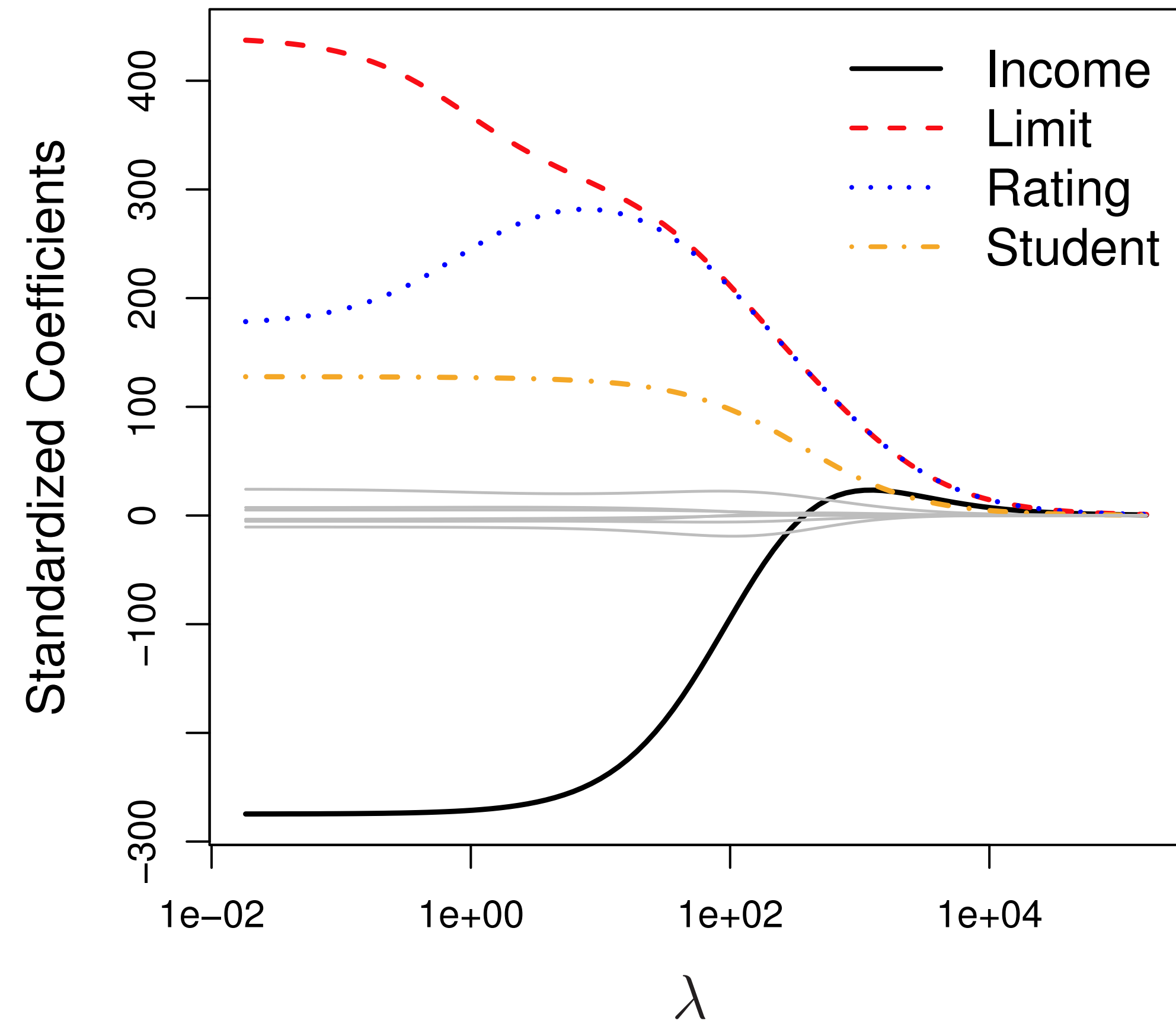


# Ridge Regression

## Regularization Paths



[Source: ISLR2]

$$\|\hat{\beta}_\lambda^R\|_2 / \|\hat{\beta}\|_2$$

$$\ell_2 \text{ norm} = \|\beta\|_2 = \sqrt{\sum_{j=1}^p \beta_j^2}$$

# Ridge Regression

## Advantage 1: Multicollinearity (a simulation study)

