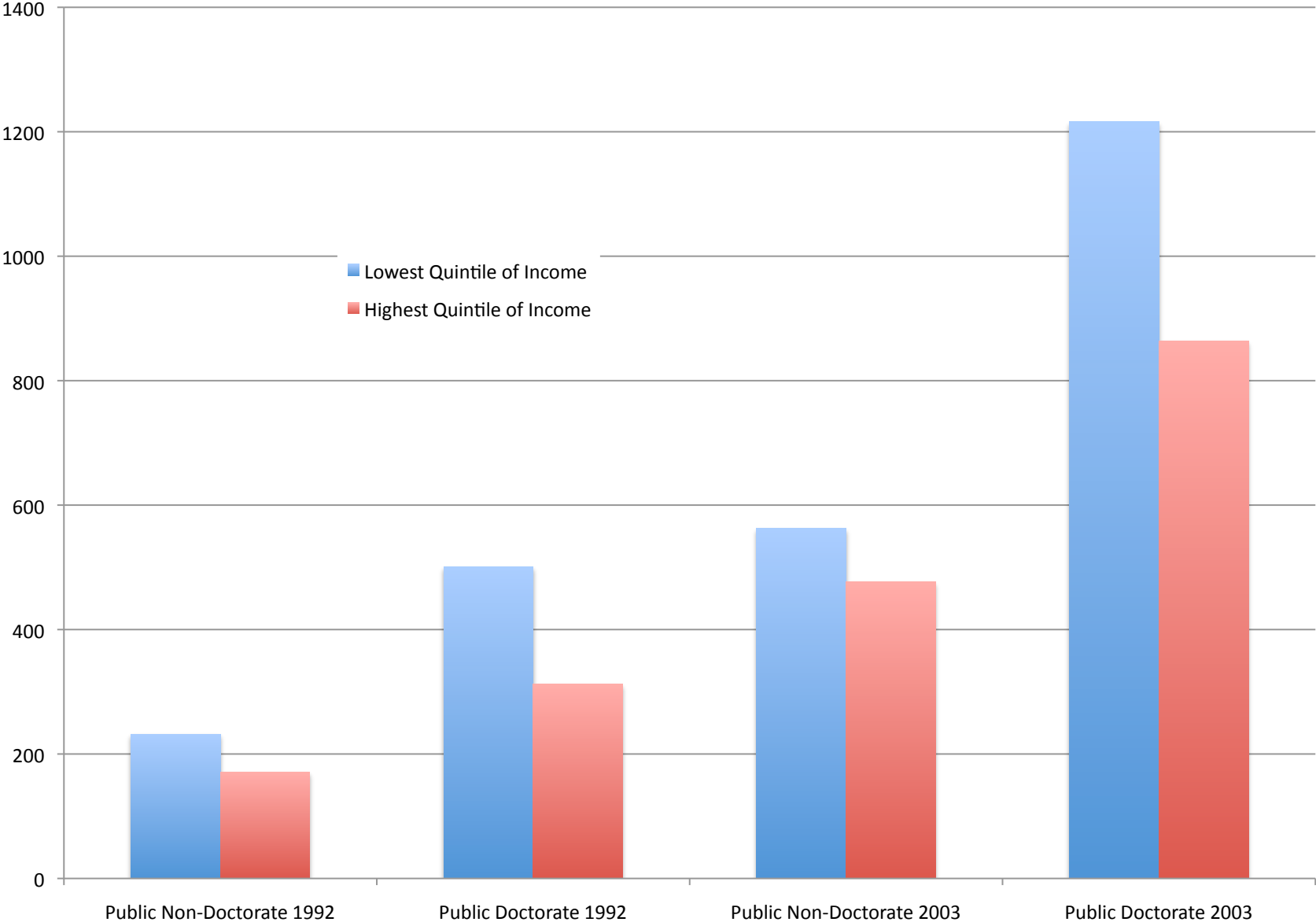


Changes in institutional aid
1992-2003: The evolving role of
merit aid

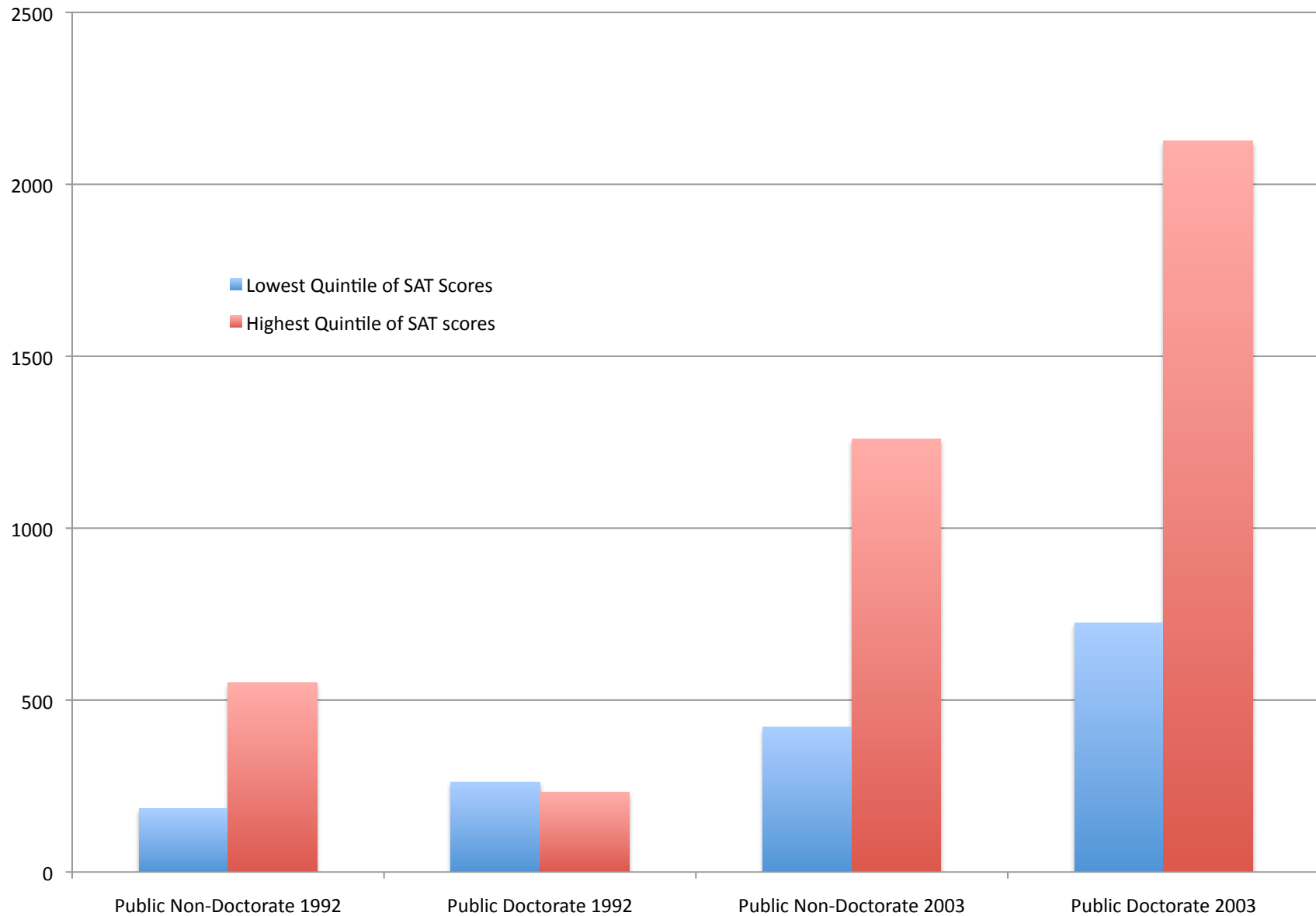
William R. Doyle
Vanderbilt University

Aid by Income, Public Four Year Institutions, 1992 and 2003



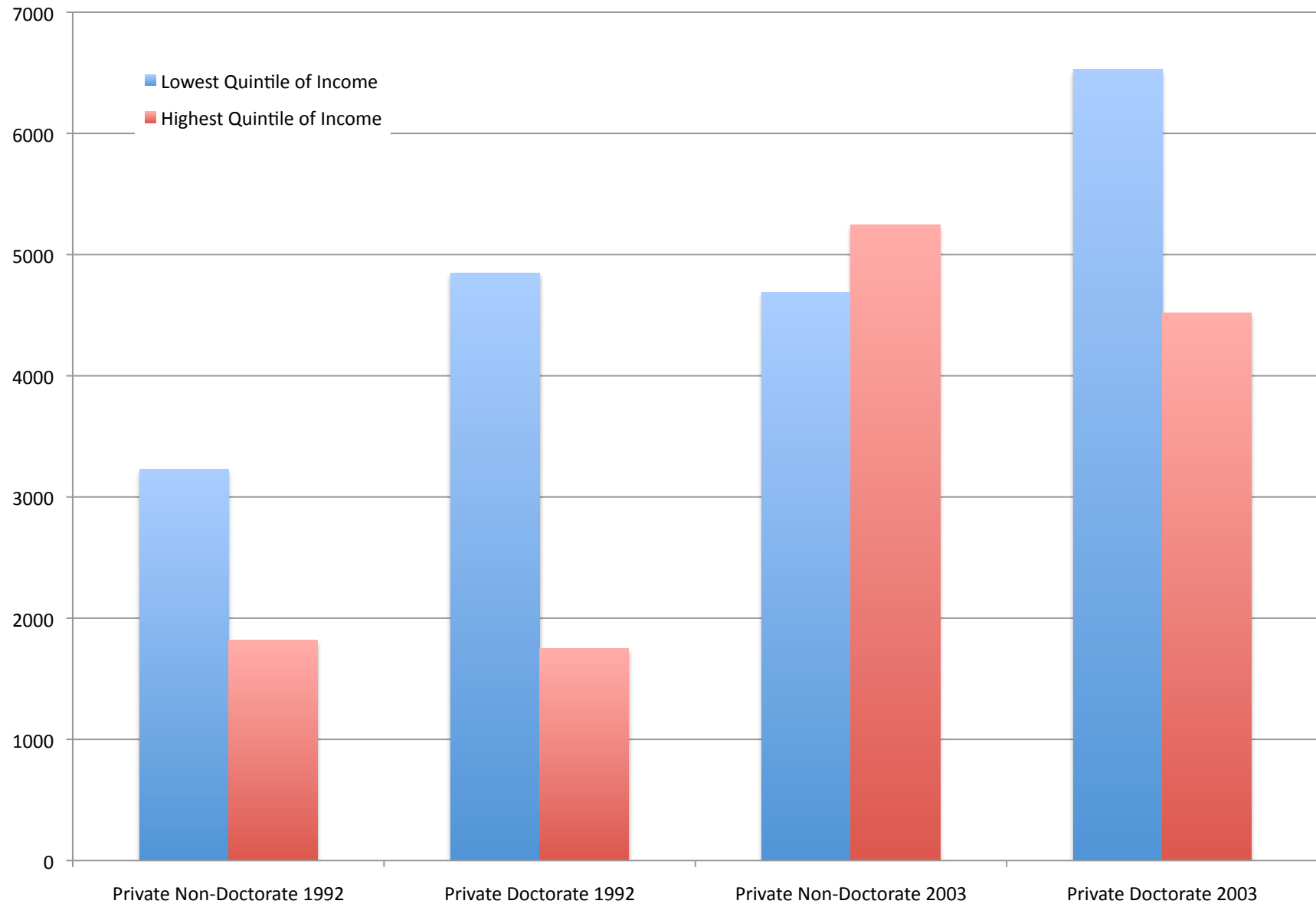
Source: Author's tabulations from NPSAS 1992, 2003. Figures are inflation adjusted to 2004 dollars

Aid by SAT Score, Public Four Year Institutions, 1992 and 2003



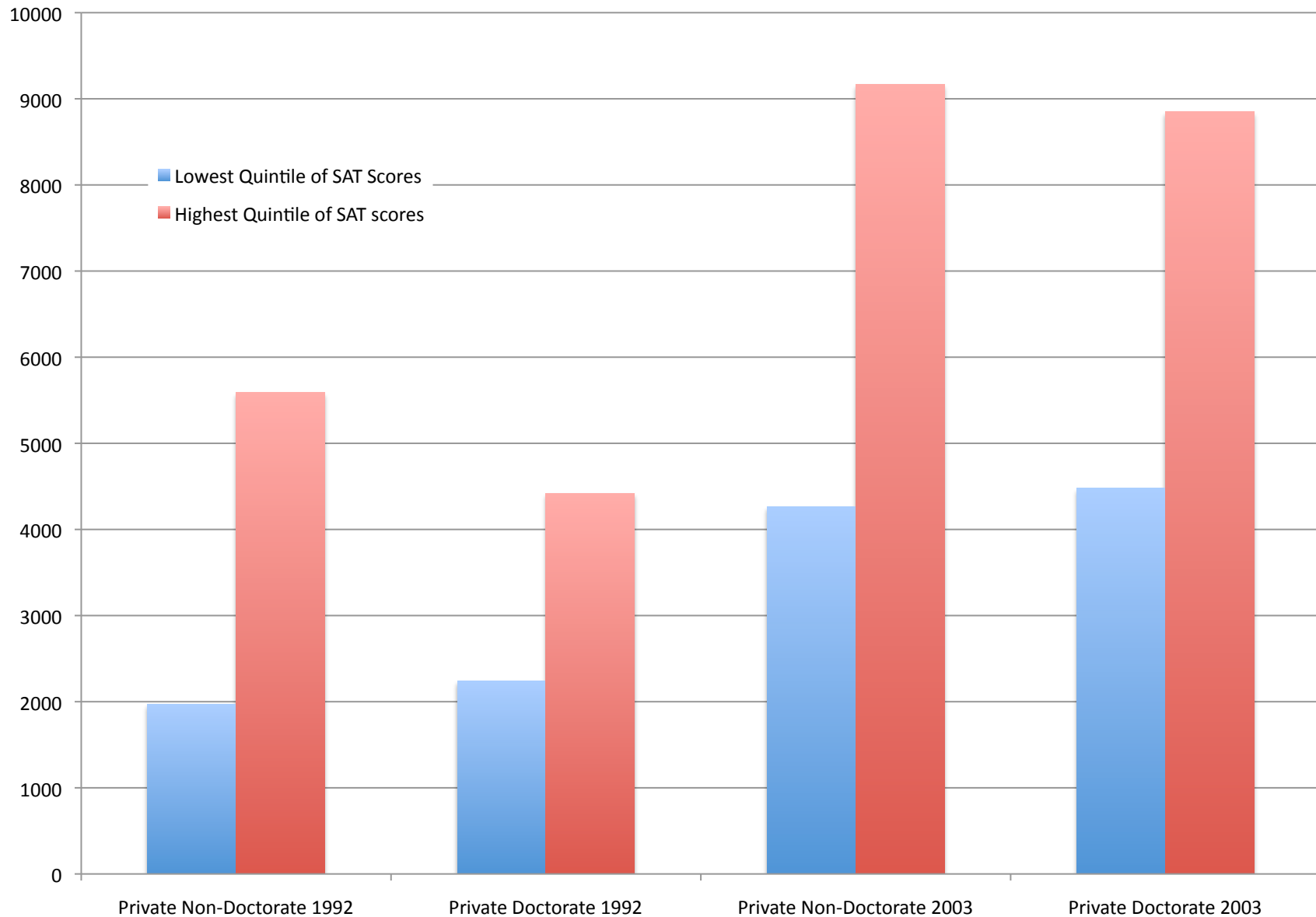
Source: Author's tabulations from NPSAS 1992, 2003. Figures are inflation adjusted to 2004 dollars

Aid by Income, Private Four Year Institutions, 1992 and 2003



Source: Author's tabulations from NPSAS 1992, 2003. Figures are inflation adjusted to 2004 dollars

Aid by SAT Score, Private Four Year Institutions, 1992 and 2003



Source: Author's tabulations from NPSAS 1992, 2003. Figures are inflation adjusted to 2004 dollars

Basic Model

$$y_i^* = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} + \epsilon_i$$

y_i^* is the amount of demand for the student

β_0 is a constant term

β_1 is the coefficient on student income

x_{1i} is the amount of income for student i

β_2 is the coefficient for the student's demonstrated academic ability

x_{2i} is some indicator of student academic ability, such as test scores.

ϵ_i is an error term.

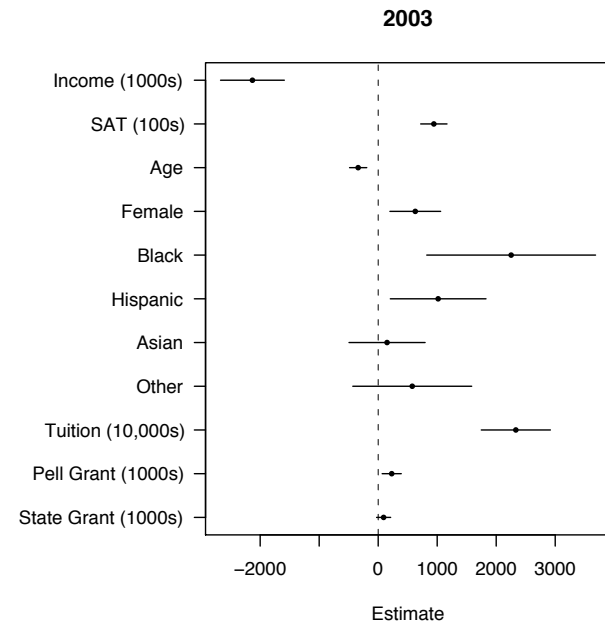
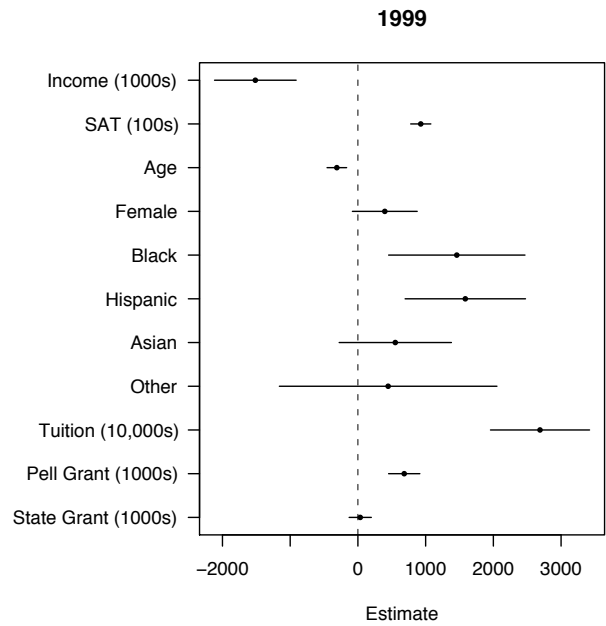
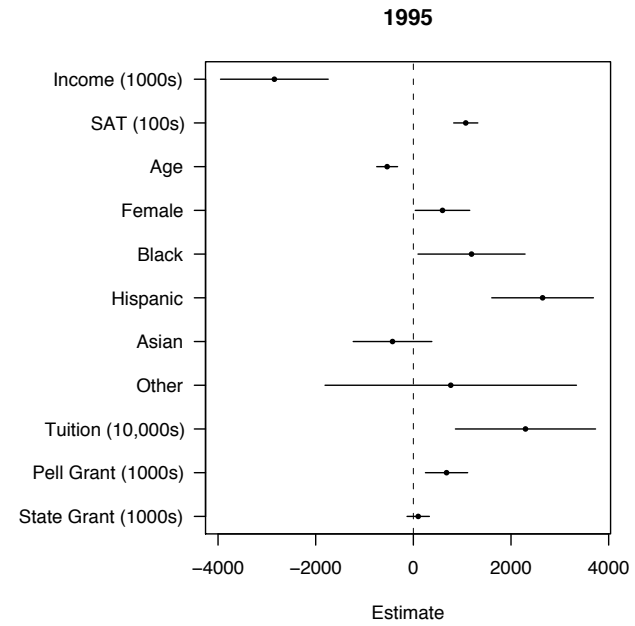
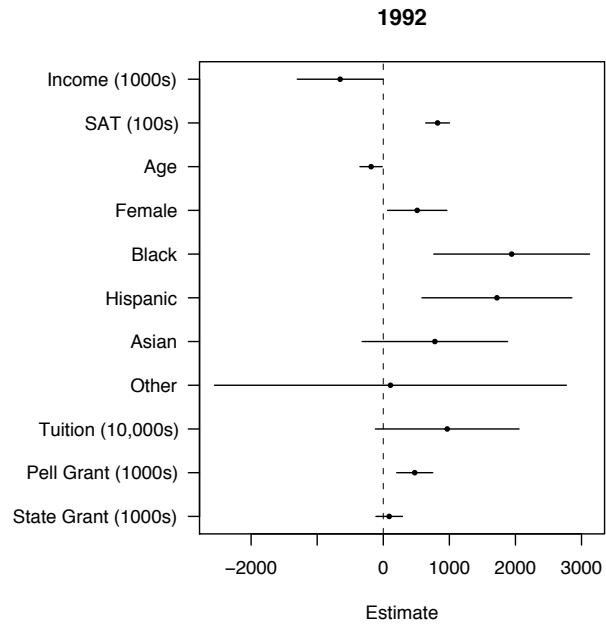
Estimation

Tobit Model:

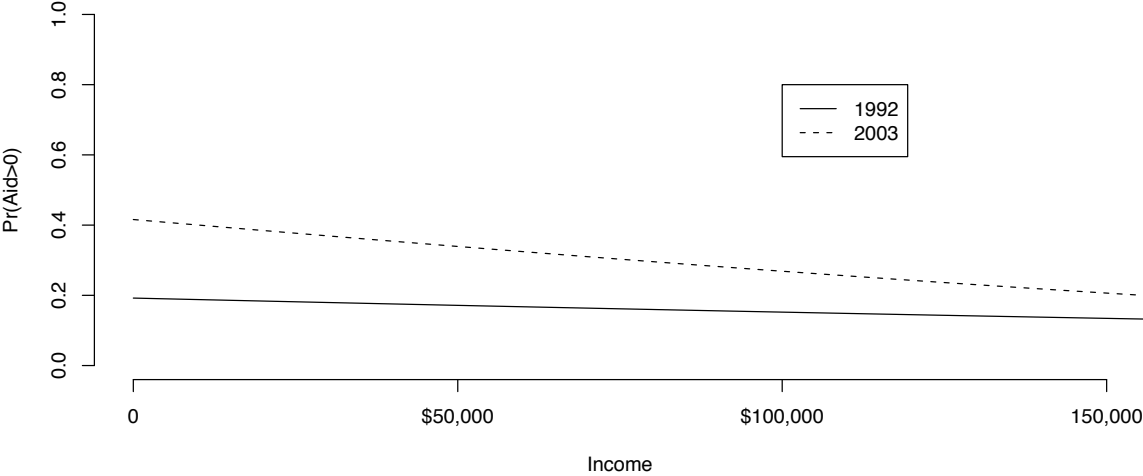
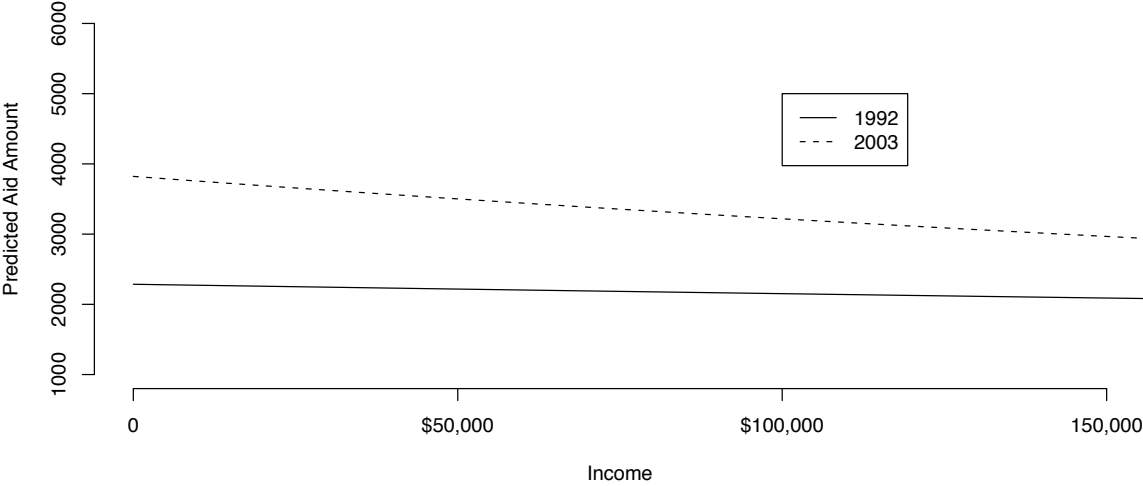
$$y_i = \begin{cases} 0 & \text{if } y_i^* < 0 \\ y_i^* & \text{if } y_i^* > 0 \end{cases}$$

$$\ln L(\beta, \sigma^2 | \mathbf{y}, \mathbf{X}) = \sum_{\text{Uncensored}} \ln \frac{1}{\sigma} \phi\left(\frac{y_i - \mathbf{x}_i \beta}{\sigma}\right) + \sum_{\text{Censored}} \ln \Phi\left(\frac{-\mathbf{x}_i \beta}{\sigma}\right)$$

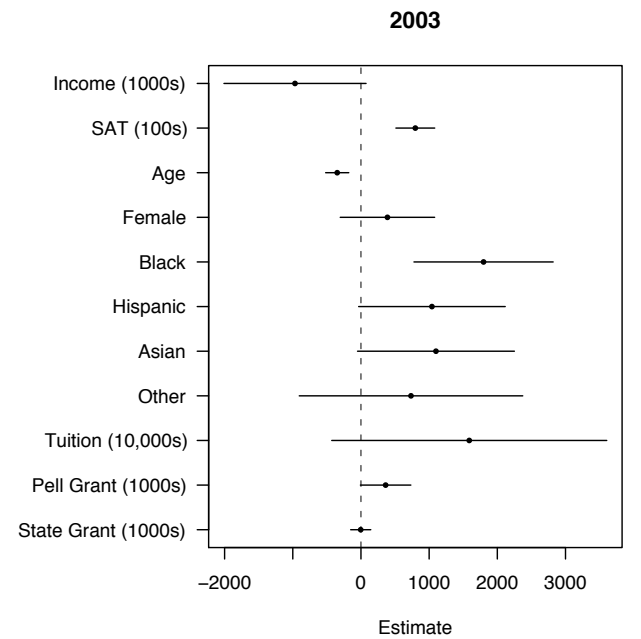
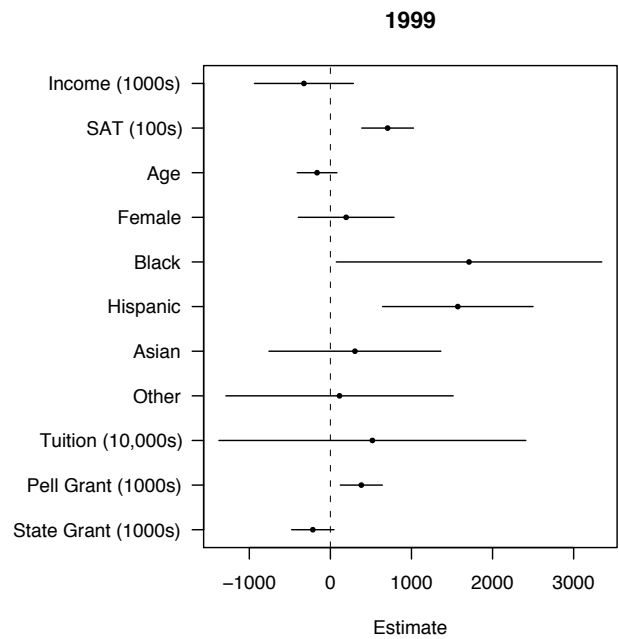
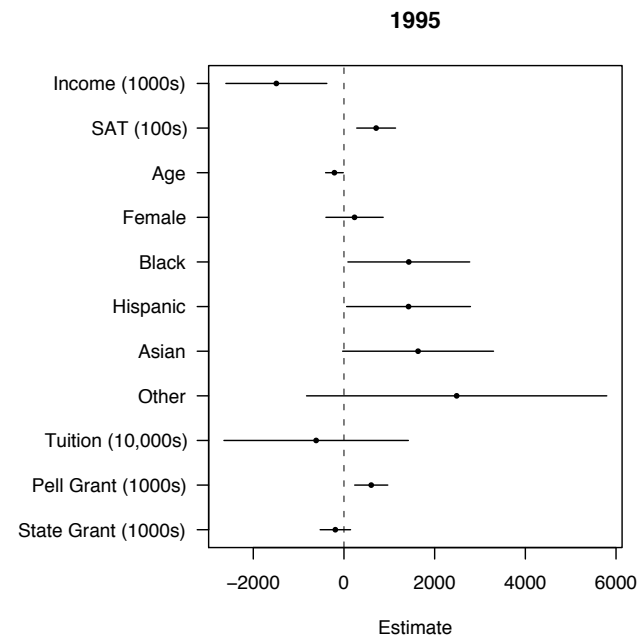
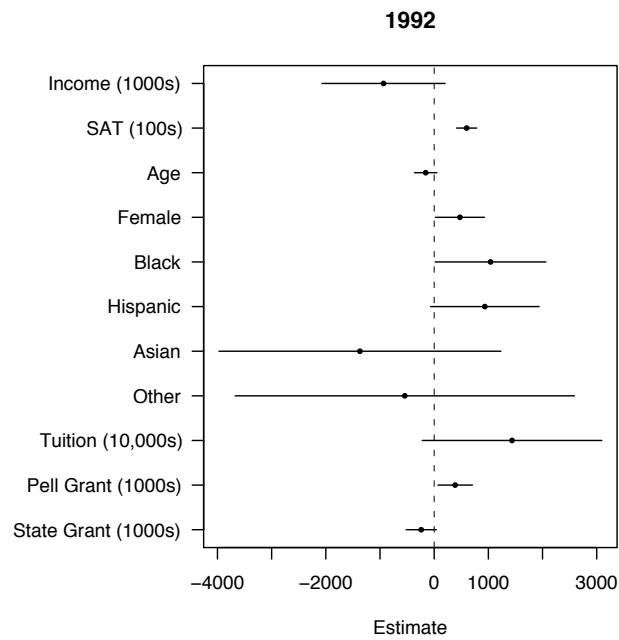
Results for Public Four Year Doctoral Institutions



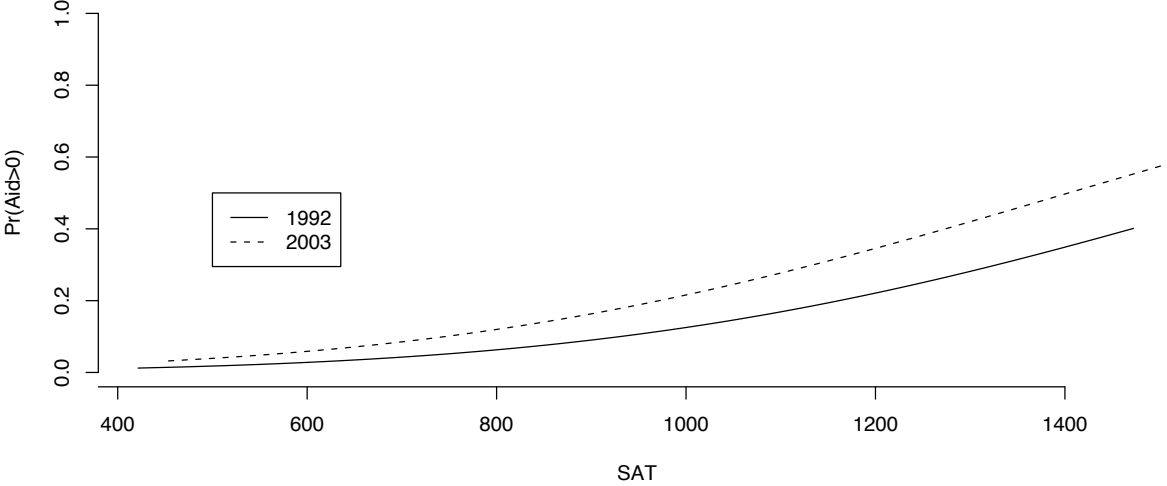
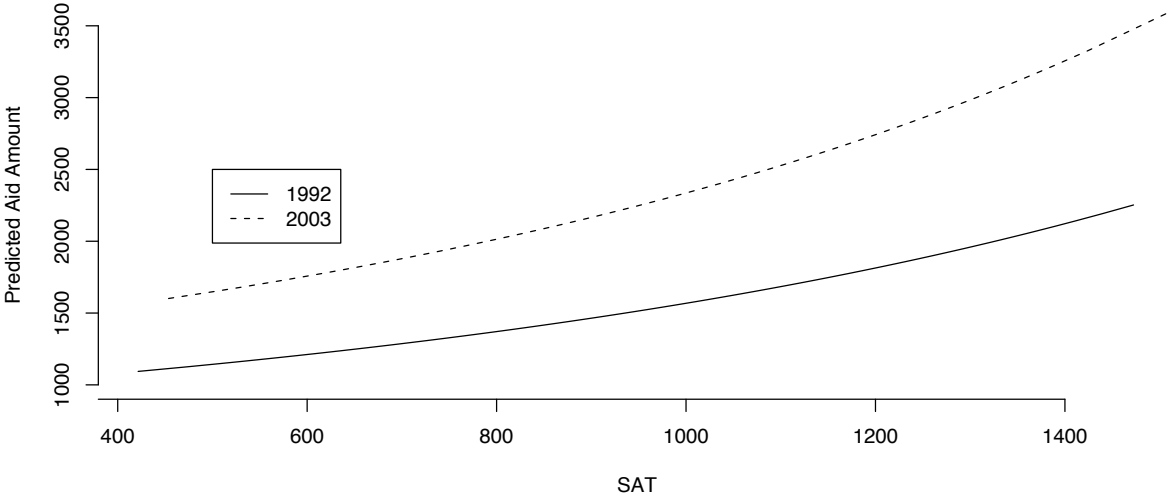
Probability of Receiving Aid and Predicted Aid Among Recipients, Public Doctoral Institutions



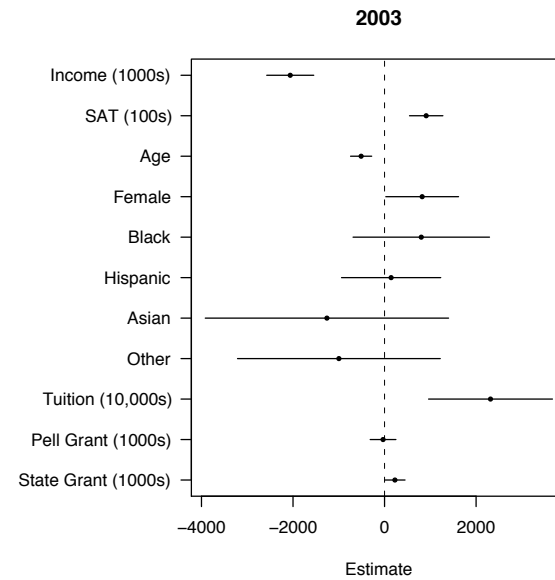
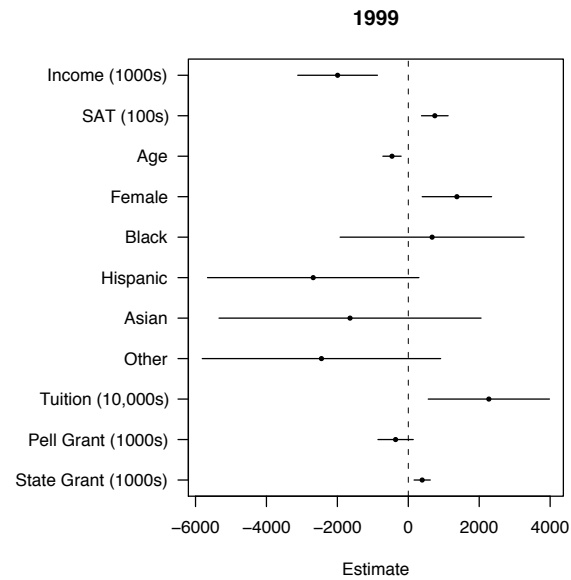
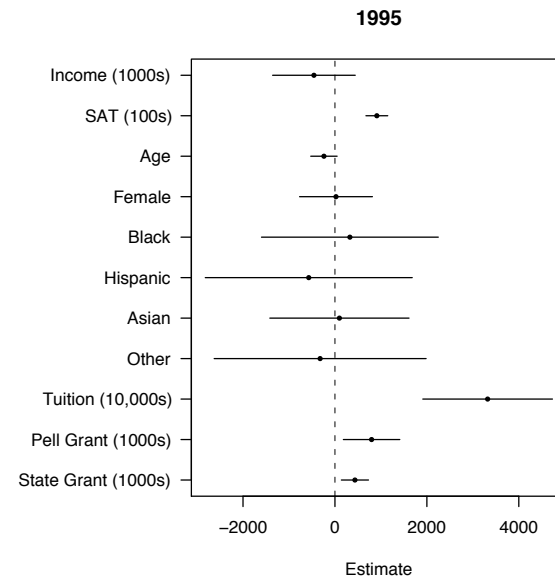
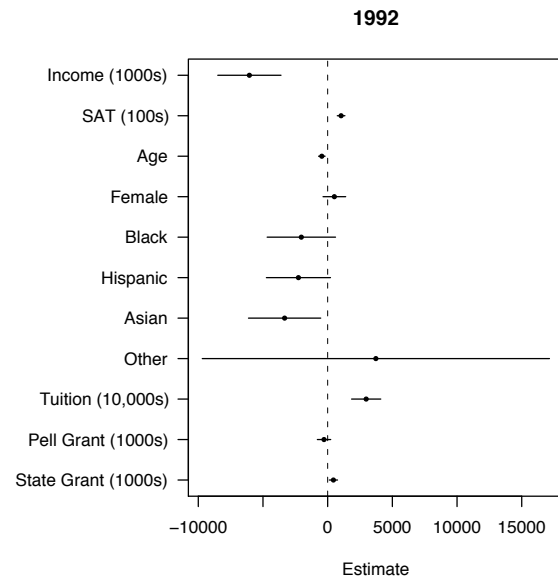
Results for Public Four Year Non-Doctoral Institutions



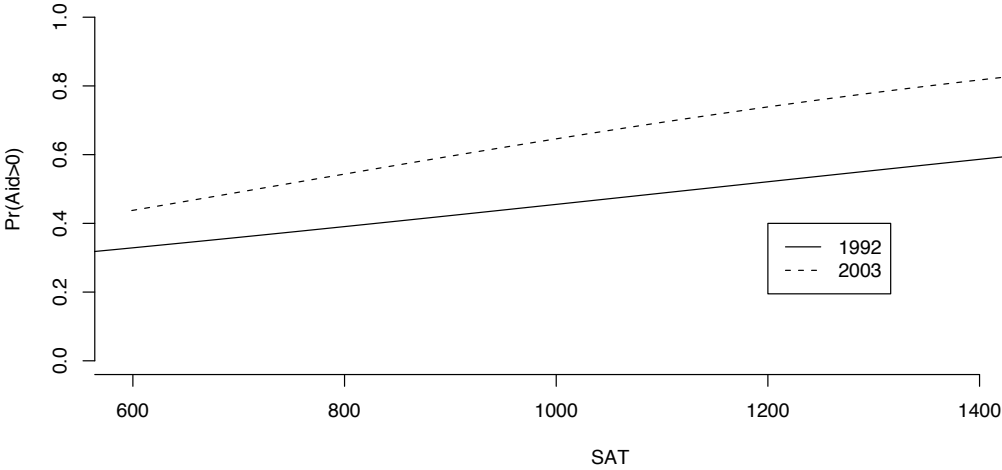
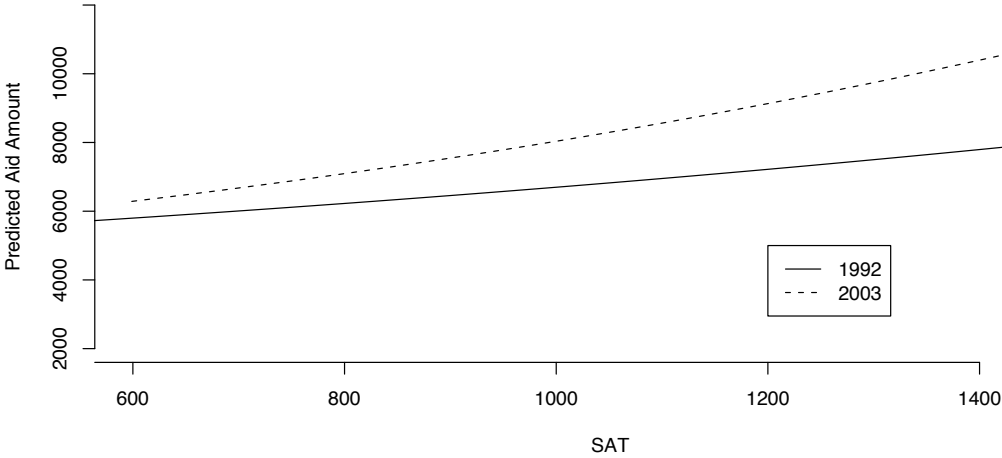
Probability of Receiving Aid and Predicted Aid Among Recipients, Public Non-Doctoral Institutions



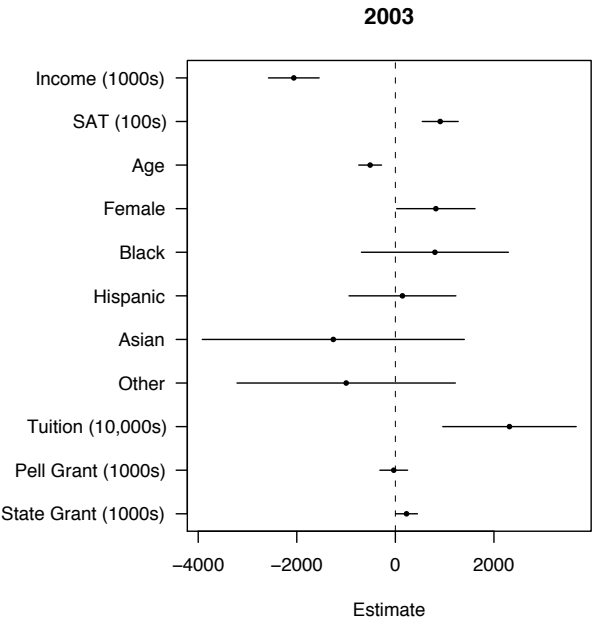
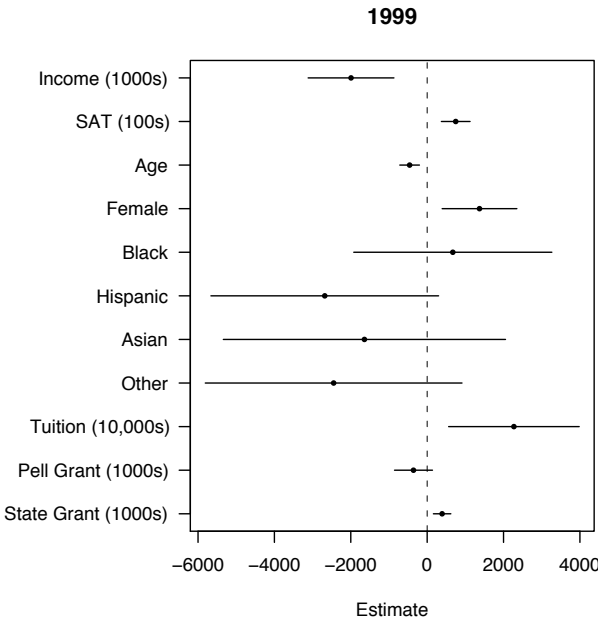
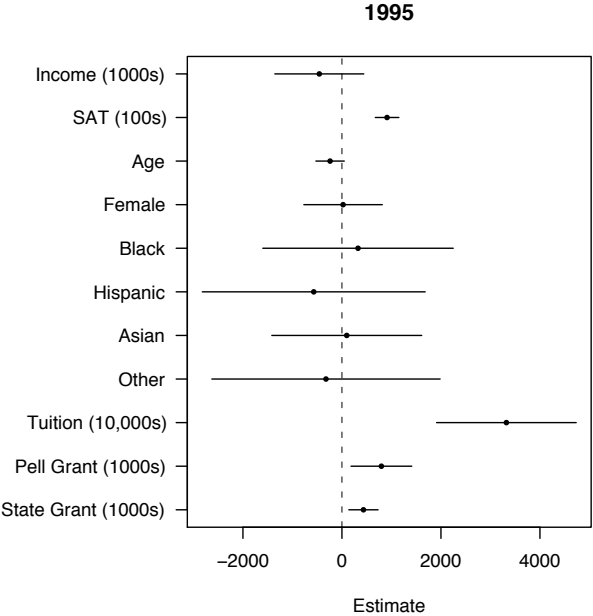
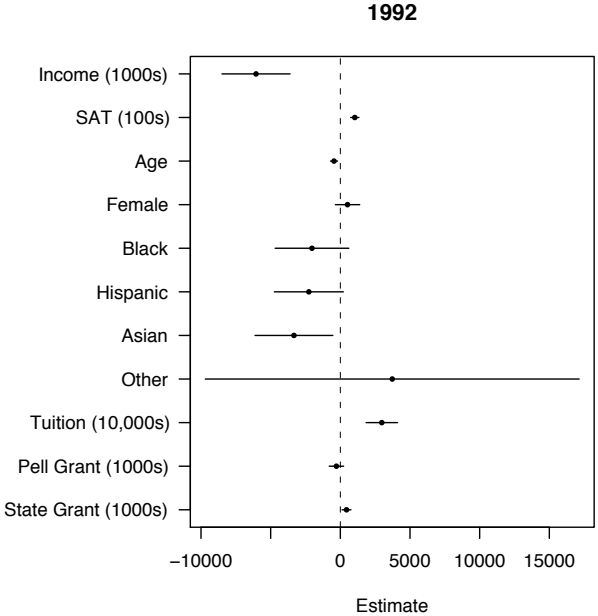
Results for Private Non-Doctoral Institutions



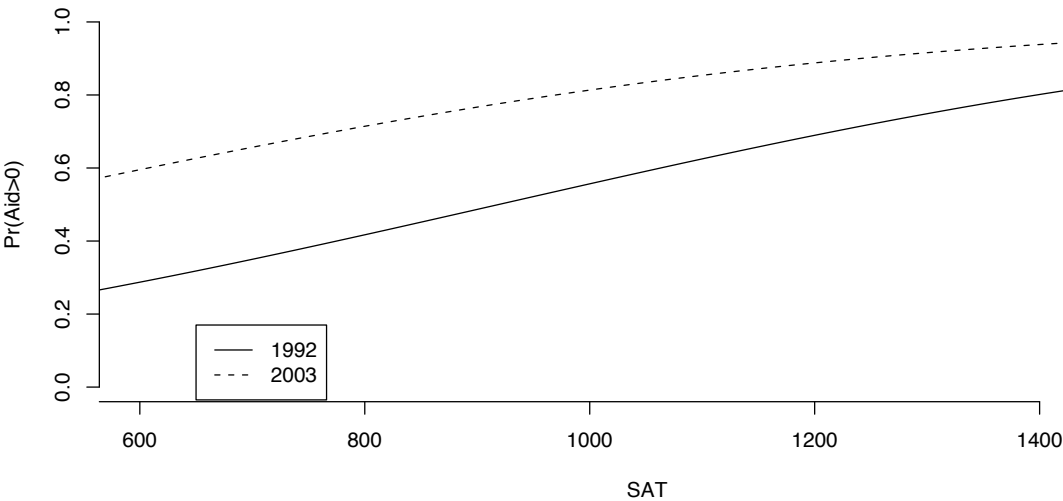
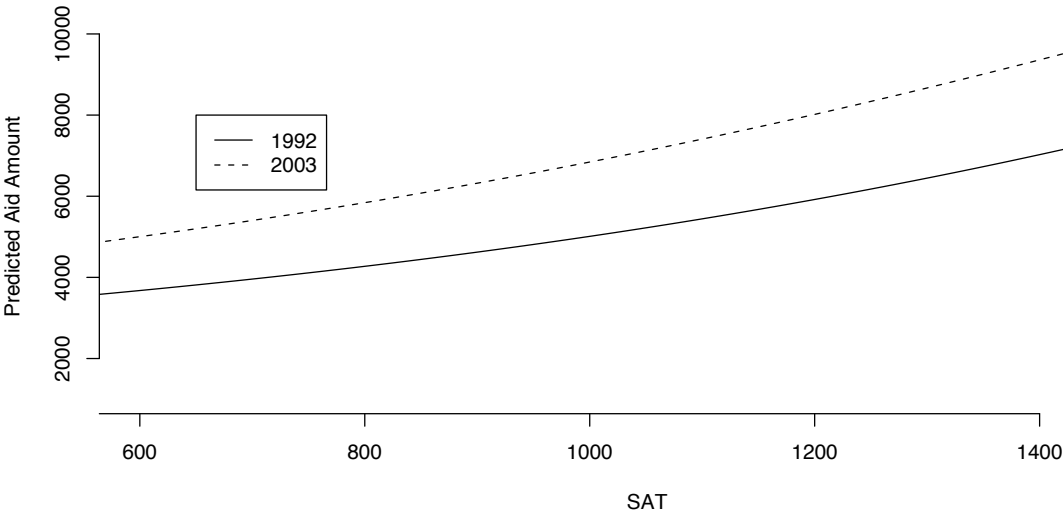
Probability of Receiving Aid and Predicted Aid Among Recipients, Private Doctoral Institutions



Results for Private Four Year Non-Doctoral Institutions



Probability of Receiving Aid and Predicted Aid Among Recipients, Private Non-Doctoral Institutions



<http://www.vanderbilt.edu/lpo/doyle/meritchange.pdf>