

Figure 1: Comparison of the average asymptotic variance over the interval $[0.1, 0.9]$ for a structural regression spline with smoothing penalty “scaled shrinkage factor” $\times n \times \text{var}(W)$. Here W and X are normally distributed, with $\mu_x = .5$, $\sigma_x = 0.25$ and $\sigma_u^2 = (3/7)\sigma_x^2$. The regression function is $m(x) = 1000x^3(1 - x)^3I(0 < x < 1)$, and the standard deviation for Y given X is 0.0015.

Mixture Estimation: Skew Normal + Normal

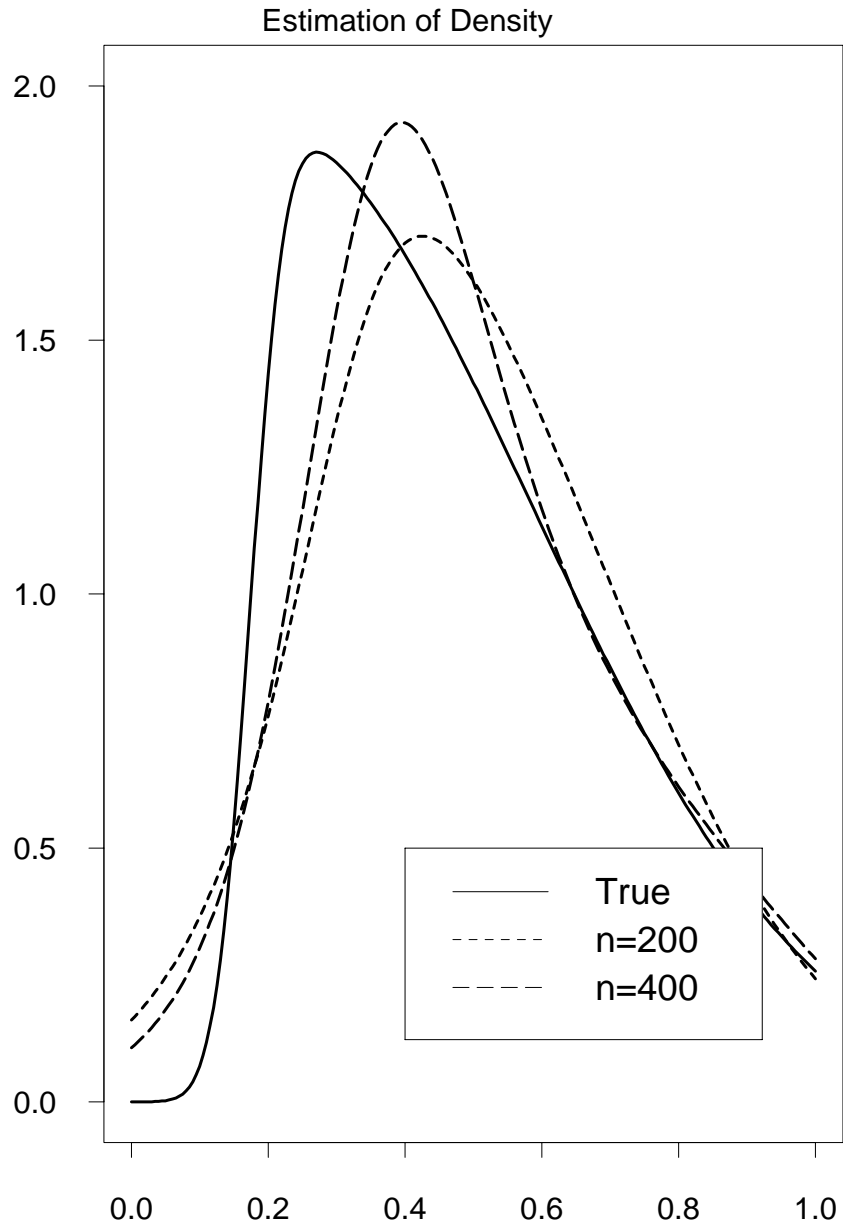


Figure 2: The true and average of simulation estimates with $n = 200$ and $n = 400$ for the density of the skew normal distribution used in the simulations. Here the skew normal has index $\alpha = 10$, with mean $\mu_x = 0.5$ and standard deviation $\sigma_x = 0.25$. The measurement error is normally distributed with mean zero and $\sigma_u^2 = (3/7)\sigma_x^2$.

Mixture Estimation of Uniform + Normal

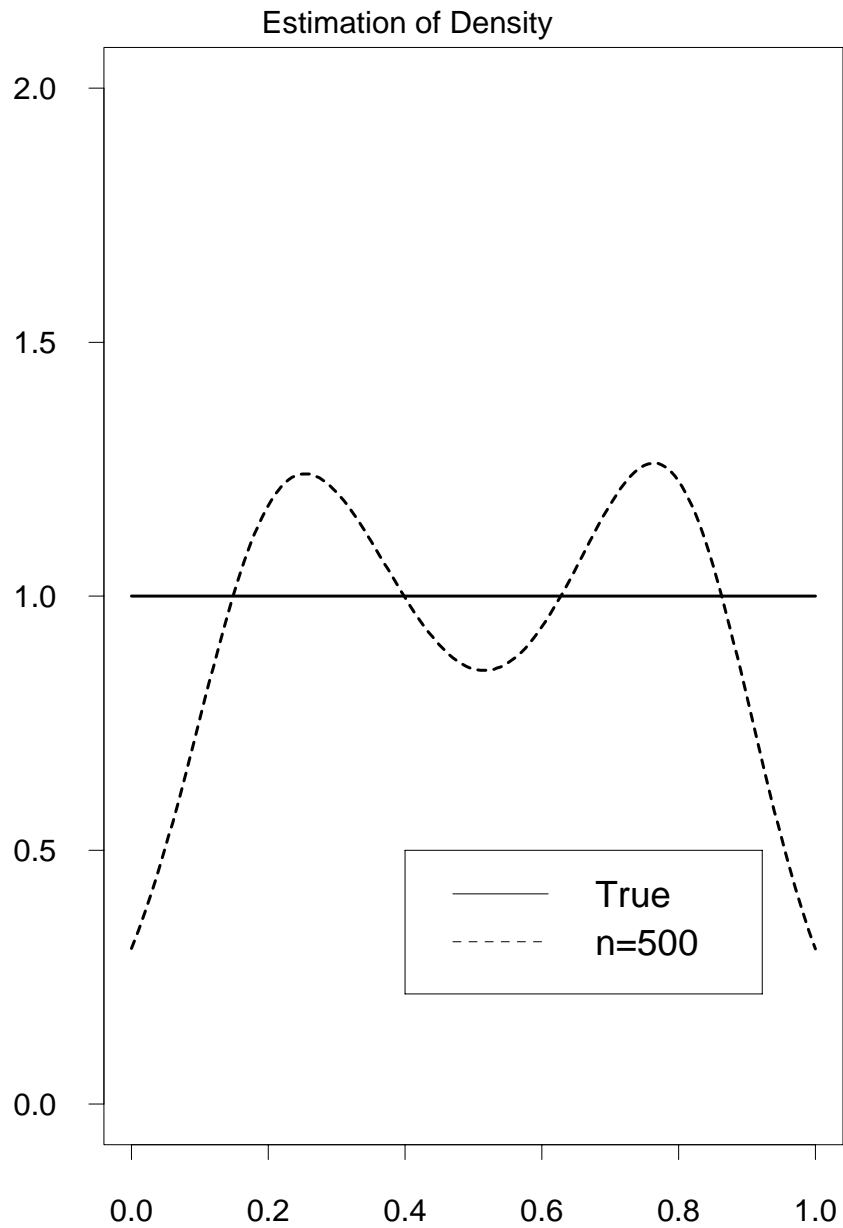


Figure 3: *The true and average of simulation estimates with $n = 500$ for the uniform density used in the simulations. The measurement error is normally distributed with mean zero and $\sigma_u^2 = .02$.*