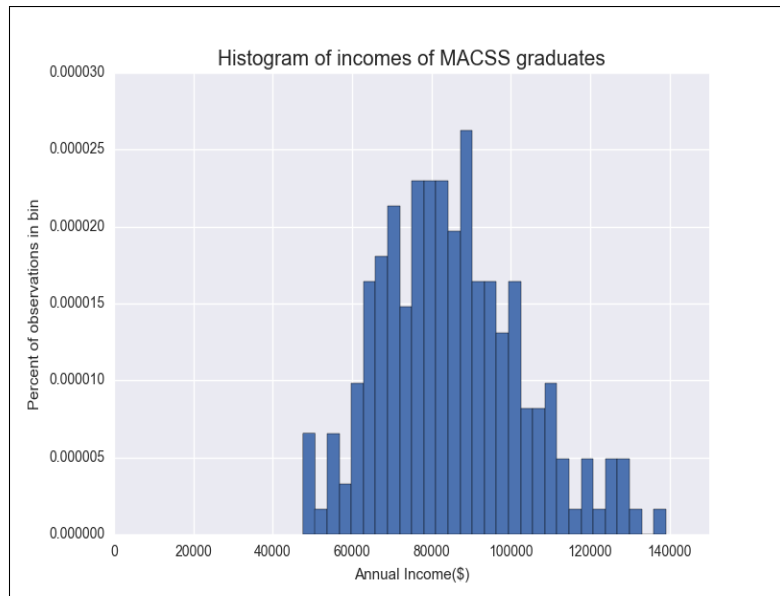


Problem Set #4
MACS 30100, Dr. Evans
Jingyuan Zhou

Problem 1
Part (a).



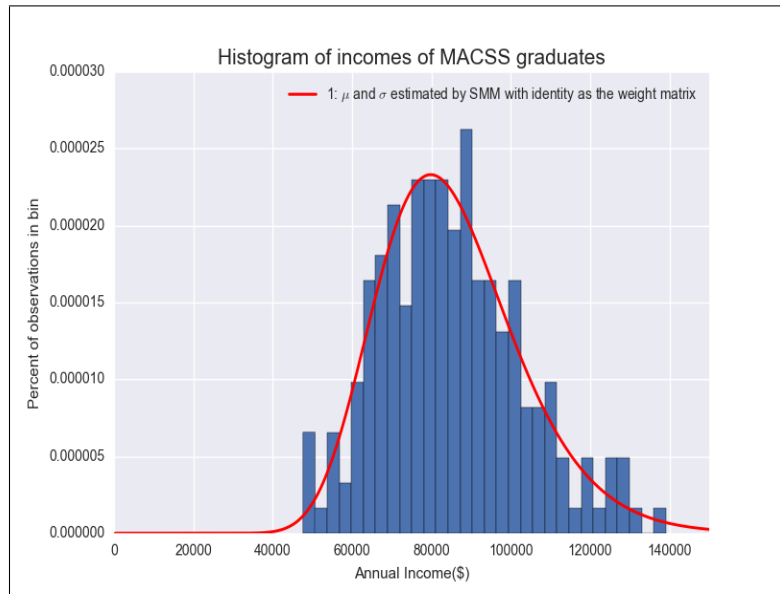
Part (b). $\begin{bmatrix} 0.0019079 & 0.00123533 \\ 0.00217547 & 0.0019646 \end{bmatrix}$

Part (c). SMM estimate with identity matrix of μ : 11.3314567228, estimate of σ : 0.209768867979

Value of the SMM criterion function at the estimated parameter values: 3.85522620e-11

Mean of points = 85276.82360625811 , variance of points = 323731572.2295289

Mean of model = 85276.9696588603 , variance of model = 323729640.14695907



Part (d). Two-step SMM estimate of μ : 11.3314577406, estimate of σ : 0.209769340622

Value of the SMM criterion function at the estimated parameter values: 0.01067756

Mean of points = 85276.82360625811 , variance of points = 323731572.2295289

Mean of model = 85277.06492854505 , variance of model = 323731850.40836734

