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Gathering and Collecting Data
Finger Exercises due Oct 17, 2016 05:00 IST

Bandwidth In Kernel Functions - Quiz

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Question 1

1 point possible (graded)

The set of figures shown presents the kernel probability density estimates from data sampled from a standard normal distribution. What parameter is changing from figure a → figure b → figure c?

Figure A:

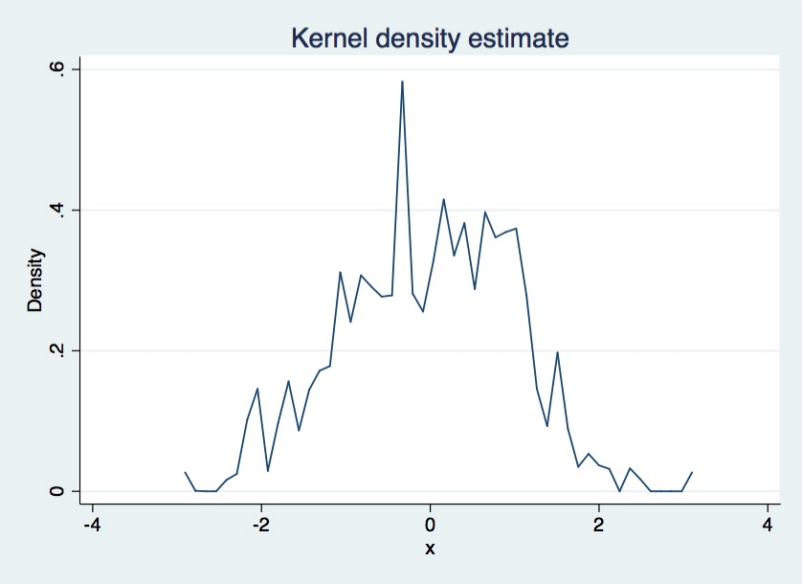


Figure B:

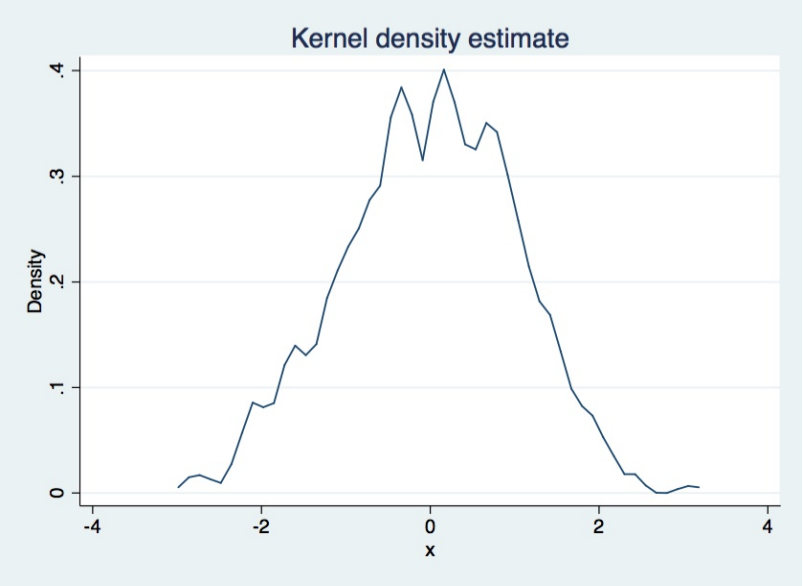
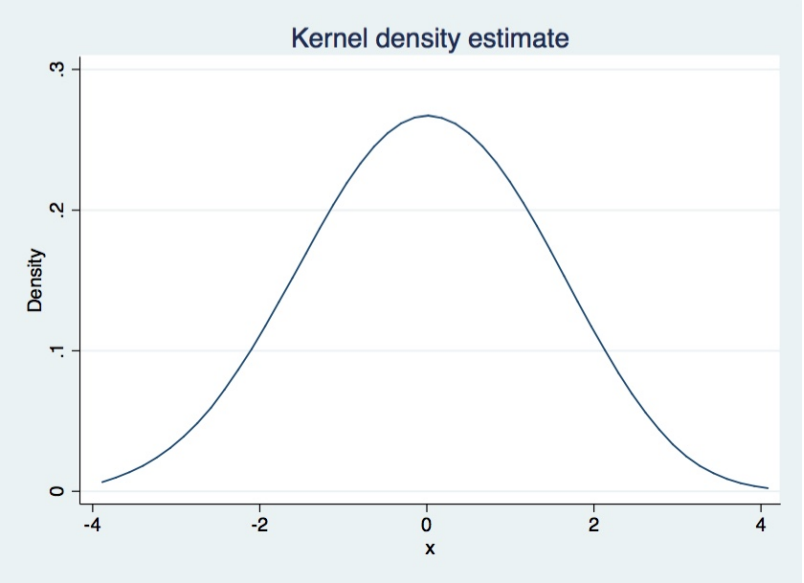


Figure C:



- a. the bandwidth is decreasing
- b. the kernel function is different.
- c. the bandwidth is increasing
- d. The kernel function is different, and the bandwidth is increasing.

Explanation

Instrumental Variables, and Experimental Design

- Exit Survey
- Final Exam

As discussed in this segment, the parameter h, the bandwidth of the estimating function, controls the smoothness and corresponds to the bin width of the histogram If h is too small, the estimate is too rough; if it is too large, then the resulting estimate of the function is too smooth, since it obscures the shape, and spreads the probability mass out too much, and hence, is biased.

Submit You have used 0 of 2 attempts

Question 2

1 point possible (graded)

True or False: Minimizing the mean squared error is a good way to determine the optimal bandwidth.

- True
- False

Explanation

The mean squared error is equal to the squared distance between the observed values and the predicted values of a random variable. This is a combination of variance and bias, both of which are determined by the choice of bandwidth, and hence is a good way to determine the optimal bandwidth.

Submit You have used 0 of 1 attempt

Discussion
Topic: Module 3 / Bandwidth in Kernel Functions - Quiz

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