

Empirical Exercise: Chapter 2

The spreadsheet **Age_HourlyEarnings**, which contains the joint distribution of age (Age) and average hourly earnings (AHE) for 25- to 34-year-old full-time workers in 2015 with an education level that exceeds a high school diploma. Use this joint distribution to carry out the following exercises. (*Note:* For these exercises, you need to be able to carry out calculations and construct charts using a spreadsheet.)

1. Compute the marginal distribution of Age .
2. Compute the mean of AHE for each value of Age ; that is, compute, , and so forth.
3. Compute and plot the mean of AHE versus Age . Are average hourly earnings and age related? Explain.
4. Use the law of iterated expectations to compute the mean of AHE ; that is, compute $E(AHE)$.
5. Compute the variance of AHE .
6. Compute the covariance between AHE and Age .
7. Compute the correlation between AHE and Age .
8. Relate your answers in (f) and (g) to the plot you constructed in (c).