# Two-Sample Hypothesis Test Exercise

A bank with a branch located in a commercial district of a city has the business objective of improving the process for serving customers during the noon-to-1 p.m. lunch period. To do so, the waiting time (defined as the number of minutes that elapses from when the customer enters the line until he or she reaches the teller window) needs to be shortened to increase customer satisfaction. A random sample of 15 customers is selected and the waiting times are collected and stored in Bank1. These data are:
4.21 5.55 3.02 5.13 4.77 2.34 3.54 3.20 4.50 6.10 0.38 5.12 6.46 6.19 3.79

Suppose that another branch, located in a residential area, is also concerned with the noon-to-1 p.m. lunch period. A random sample of 15 customers is selected and the waiting times are collected and stored in Bank2. These data are:
9.66 5.90 8.02 5.79 8.73 3.82 8.01 8.35 10.49 6.68 5.64 4.08 6.17 9.91 5.47

1. Is there evidence of a difference in the variability of the waiting time between the two branches? (Use a = 0.05.)
2. Determine the p-value in (a) and interpret its meaning.
3. What assumption about the population distribution of each bank is necessary in (a)? Is the assumption valid for these data?
4. Based on the results of (a), is it appropriate to use the pooled-variance t-test to compare the means of the two branches?