

Foodservers' tips in restaurants may be influenced by many factors, including the nature of the restaurant, size of the party, table location in the restaurant, and so forth. To make appropriate assignments for the foodservers, restaurant managers need to know what these factors are. They must avoid either the substance or appearance of unfair treatment of the foodservers, for whom the tips are a major component of pay. In one restaurant, a foodserver recorded the following data on all customers he had served during an interval of two and a half months in early 1990. The restaurant, located in a suburban shopping mall, was one of a national chain and served a varied menu. Pursuant to local law, the restaurant offered seating in a non-smoking section to patrons who requested it. The data was recorded on those days and during those times when the foodserver was routinely assigned to work.

The restaurant manager thought the data might provide a means of assessing what sorts of things affected tips and in a way which might be seen as objective. The server had worked at a variety of assignments on different days and times during the data gathering period and had been happy to cooperate. Are there any patterns of which you think the foodserver or the restaurant manager should be aware, either in the total bills or in the tips? What other variables might be useful, if the experiment were to be repeated?

The data are available in file TIPS.

### Definitions

TOTBILL	Total bill, including tax, in dollars
TIP	Tip in dollars
SEX	Sex of person paying bill (0 = male, 1 = female)
SMOKER	Smoker in party? (0 = no, 1 = yes)
DAY	3 = Thursday    5 = Saturday 4 = Friday      6 = Sunday
TIME	(0 = day, 1 = night)
SIZE	Size of party

This case describes a real situation. The data were provided by Thomas J. Kientz, President, Colorado National Bank, Aurora, Colorado, and Sean Schneider.