

# Case study your college week

[Science](#), [Statistics](#)



## Assignment: Week 2 Stat Case Study Your College Week 2 Stat Case Study

This report will examine whether there is an association between gender and job experience for the students. In other words, if students' gender and their job experience are independent (or dependent). For this purpose, a simple random sample of 100 high school seniors was selected from a large school district. The gender of students was recorded and their response for the question "Have you ever had a part-time job?" was recorded. If students answered yes to the previous question, their response for the question "Was your part-time job in the summer only?" was recorded.

### Analysis and Results

The sample represented male (48%) and female (52%) students approximately equally. Table 1 shows the cross-tabulation of students' gender and their response on the job experience. About half (52%) of the students said they never had a part-time job. 28% of the students said they had a part-time job during summer only and 20% of the students said they had a part-time job but not only during summer.

Table 1: Cross-tabulation of student gender and their job experience

Job Experience

Student Gender

Male

Female

Total

Never had a part-time job

21 (44%)

31 (60%)

52 (52%)

Had a part-time job during summer only

15 (31%)

13 (25%)

28 (28%)

Had a part-time job but not only during summer

12 (25%)

8 (15%)

20 (20%)

Total

48

52

100

Figure 1 shows the job experience for the students based on their gender. As shown in figure 1, there appears that there is an association between gender and job experience for the students.

Figure 1: Bar chart showing job experience for the students based on their gender

Figure 2 shows the conditional distribution of job experience for the male students. About 44% of the male students never had a part-time job, about 31% had a part-time job during summer only, and about 25% had a part-time job but not only during summer.

Figure 2: Conditional distribution of job experience for the male students

Figure 3 shows the conditional distribution of job experience for the female students. About 60% of the female students never had a part-time job, about

25% had a part-time job during summer only, and about 15% had a part-time job but not only during summer.

Figure 3: Conditional distribution of job experience for the female students

Thus, there appears a difference in the conditional distribution of job experience for the male and female students suggesting an association between gender and job experience for the students. In other words, students' gender and their job experience are not independent.

### Conclusion

In conclusion, about half of the students never had a part time job and about half of the students had a part-time job. The results indicated that there is an association between gender and job experience for the students.

### Reference

Lind, D. A., Marchal, W. G., & Wathen, S. A. (2011). *Statistical Techniques in Business and Economics* (15 ed.). New York: McGraw-Hill Irwin. ISBN: 9780077505011