

Compensation for Sales Professionals

Suppose that a local chapter of sales professionals in the greater San Francisco area conducted a survey of its membership to study the relationship, if any, between the years of experience and salary for individuals employed in inside and outside sales positions. On the survey, respondents were asked to specify one of the three levels of years of experience: low (1-10 years), medium (11-20 years), and high (21 or more years). The complete data set, consisting of 120 observations, is contained in the accompanying data file BAN_602_Case_4.csv.

The chapter is interested in knowing if there are any significant differences in annual salary of the sales professionals due to their position, years of experience and the interaction of those two.

Managerial Report

Prepare a managerial report that addresses the following questions.

1. Use descriptive statistics to summarize the data by experience and sales positions. Is this a controlled experiment? (5 + 2 = 7 points)
2. Develop a 95% confidence interval estimate of the mean annual salary for all salespersons, regardless of their experience and type of position. (5 points)
3. Use analysis of variance to test for any significant differences in annual salary due to years of experience, ignoring the effect of position. Use a 0.05 level of significance. (10 points)
4. Use analysis of variance to test for any significant differences in annual salary due to position, ignoring the effect of years of experience. Use a 0.05 level of significance. (10 points)
5. At the 0.05 level of significance test for any significant differences in annual salary due to position, years of experience, and the interaction of those two. Explain your findings. (5 + 5 + 5 + 3 = 18 points)

Format of the deliverables:

1. The typed managerial report must be in Microsoft Word or PDF format and uploaded on Blackboard by the due date. Each group must upload only one report.
2. The typed managerial report must **not** contain any R code.
3. Please do not copy the questions from the case to your report. You should just answer the questions without typing the questions in your report. The report must answer all the questions separately.
4. You must include graphs and/or tables as asked in the question, followed by a written analysis and interpretation.
5. All computations must be done in R and the executable R script file must be uploaded on Blackboard as well.
6. All computations must be carried out and displayed up to three decimal places unless specifically stated otherwise in a question.
7. You must mention your group number on the first page of your report.
8. The report must be in Times New Roman font with font size 12 and single-line space.
9. The number of pages in the report must not exceed five (5) excluding any cover page.