

PMgt 630, Statistical Analysis

HW # 4

Fall 2008

Note: Please turn in electronically (reese@stat.byu.edu) by 7:30pm on 8 October.

Complete The Following Problems:

Bivariate Categorical Data

For the pairs of variables in the Public Perceptions dataset below complete the following three steps

1. plot the appropriate graphical summary,
2. summarize the relationship with a crosstab,
3. indicate whether there is a relationship between the two variables, and why you arrived at your conclusion

Pairs of variables:

- Reducing I-4 Congestion vs. The Condition of Roadway System
- Building Light Rail vs. Improving Mass Transit
- Protecting Environmentally Sensitive Land vs. Building Light Rail
- Helping Public Schools vs. Reducing Discrimination

Bivariate Quantitative Variables

1. The relationship between $X =$ Statistics Stress Level and $Y =$ Final Grade in Statistics Class can be summarized by the correlation coefficient $R = 0.000$. An educational researcher suggests that an appropriate interpretation of this relationship is “There is no relationship between Statistics Stress Level and Final Grade in Statistics Class”. Is this a correct interpretation? Explain why or why not this is a correct interpretation.
2. For the following pairs of variables in the Crime dataset calculate the form, direction, and strength of linear relationship (including the value of R^2 and an appropriate interpretation of R^2).
 - (a) % Bachelor’s Degree or Higher vs. Total Violent Crimes
 - (b) Motor Vehicle Theft vs. Total Population
 - (c) Full-Time Law Enforcement Employees vs. Burglaries
 - (d) Spectator Sports vs. Median Household Income (\$)