**2020-1 Midterm Exam**

**(All the data are in the lecture note)**

1. **Open convenience store fiel and run cross tabulation analysis.**

**<문제>**

1. Build null hypothesis and opposite hypothesis.
2. Is there a difference in store visit for different sex? And Why?

**II. Open travel data file**

**<문제>**

1. Set 3 hypotheses (2 main hypotheses and one interaction hypothesis)
2. Which variable(s) are significant? and Why?
3. Which pairs of group means of travel visit are different out of three pairs in tour frequency. Which statistic did you use?
4. Use graph in order to interpret how travel frequency affects travel attitude for different sex?

1. **Open salary data**

-Run Regression analysis.

- Dependent variable: salary

- Indendent varibles: sex, job experience, number of years of education.

- Use ‘Enter’ option

- dummy coding: male: 1, female: 0

**questions**

1. wright regression equation. (line)

2. How much variation is explained by three independent variables collectively? Which statistic did you use?

3. Wright the order of importance of the independent variables.?

4.Is there a sex discrimination?

5. Estimate the salary for a person who is male, got education for 15 years, and worked for 14 years. (just equation)

**IV. Open city data file and excute MDS. (2 dimensional, ALSCAL)**

**Questions**

1. How is the performance of the MDS?
2. What are the coordinates of Chicago?
3. What is the **estimated distance** between Chicago and LA? (just equation)
4. Interpret dimension 1 and dimension 2.

**V. Cluster Analysis**

-Open toothpaste-1.sav

-Each value represent the importance weighted given by each respondent.

- Run 3 group cluster analysis and use ANOVA option.

**문제:**

* + - 1. Describe the characteristics of each cluster. And which statistic did you use?
      2. Predict each market’s market share (use number of members in each group)?
      3. Is there any significant difference among groups in package, taste, performance, and taste? And why? (Use ANOVA)