

BUS 230: Business and Economics Research and Communication
Instructor: Dr. James Murray
SPSS Handout: Estimating Relationships

1 Correlation

Example: Public Expenditure

- Data from 1960! about public expenditures per capita, and variables that may influence it:
 - Economic Ability Index
 - Percentage of people living in metropolitan areas.
 - Percentage growth rate of population from 1950-1960.
 - Percentage of population between the ages of 5-19.
 - Percentage of population over the age of 65.
 - Dummy variable: Western state (1) or not (0).
 - Is there a statistically significant linear correlation between the percentage of the population who is young and the public expenditure per capita?
 - Is there a statistically significant linear correlation between the public expenditure per capita and whether or not the state is a western state?
1. Open the dataset *publicexp.sav* in SPSS.
 2. For a parametric test (Pearson correlation):
 3. Select **Analyze** menu, select **Correlate**, then select **Bivariate**.
 4. Select at least two variables (it will do all pairwise comparisons) on the left and click right arrow button.
 5. Select check-box for **Pearson** and/or **Spearman**.
 6. Click OK!

2 Chi-Squared Test for Independence

Unsatisfied Customers: Reason for Hotel Guests' Stay vs. Reasons They will Not Return

| Reason for Stay | Reason for Not Returning | | |
|-------------------|--------------------------|----------|-----------|
| | Price | Location | Amenities |
| Personal/Vacation | 48 | 47 | 10 |
| Business | 20 | 47 | 27 |

Using SPSS:

- Dataset: `hotel.sav`.
- First column, `ReasonStay`: 0=Personal/Vacation, 1=Business.
- Second column, `NoReturn`: 0=Price, 1=Location, 2=Amenities.
- Go to **Analyze, Descriptive Statistics, Crosstabs**.
- Put one of the variables in the **Row(s)** box.
- Put the other variable in the **Column(s)** box.
- Click **Statistics** button.
- Check the box for **Chi-square**.
- Click **Continue**
- Click **Cells** button.
- Click on the **Row percentages** checkbox.
- Click **Continue**
- Click **OK!**