**Statistical Analysis**

A panel dataset is a dataset that contains observations on multiple individuals (also known as "panel members") over multiple time periods. Some common descriptive statistics that can be used on a panel dataset include:

**Means and standard deviations**: These statistics can be used to describe the overall level and variability of the variables in the dataset. These statistics provide a general sense of the average level and variability of the variables in the dataset, which can be useful for comparing different groups or time periods.

**Frequency distributions:** These can be used to describe the distribution of the variables across the different individuals and time periods, which can be useful for identifying patterns or outliers in the data.

**Cross-tabulations**: These can be used to examine the relationship between two or more variables in the dataset, which can be useful for identifying patterns or associations in the data.

**Autocorrelation and heteroscedasticity tests**: These tests can be used to check for temporal dependencies and non-constant variances in the data, which can affect the validity of certain statistical models

**Panel-specific statistics**: Like fixed effects, random effects, and first differences can be used to account for unobserved individual-specific characteristics and temporal dependencies in the data. These statistics are useful for accounting for unobserved individual-specific characteristics and temporal dependencies in the data, which can improve the accuracy and interpretability of the estimates.

**Panel Data Hausman Test**

This method is used to test whether a panel data fixed effects model or a panel data random effects model is more appropriate for a given dataset. The hypothesis for this test is that the fixed effects model is more appropriate for the given dataset.

The results of this test show that the p-value for the Hausman test is less than 0.05, indicating that the fixed effects model is more appropriate for the given dataset. The visualization of the results is a histogram showing the distribution of the test statistic.

Conclusion: The panel data Hausman test results indicate that the fixed effects model is more appropriate for the given dataset.

similarities between some country(s) against Ireland, apply parametric and non-parametric inferential statistical techniques to compare them (e.g., t-test, analysis of variance, Wilcoxon test, chi-squared test, among others). You must justify your choices and verify the applicability of the tests. Hypotheses and conclusions must be clearly stated. You are expected to use at least 5 different inferential statistics tests.

Q: Price of Wheat in Ireland vs Croatia (similar in size to Ireland by population).

Note: The Croatian War of Independence was fought from 1991 to 1995











