

## **B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS**

Statistical analysis refers to a variety of methods used to collect data, describe data, explore and understand new patterns and relationships in data, test hypotheses, make inferences about a population, and predict future behavior based on sample datasets.

### **Illustrative Scenario**

Process data collected.

### **Use Case**

Using tools, TTP collaborates with HFPP partners to: quickly explore data sets, identify missing or anomalous data, prepare data for analysis, and produce statistically significant findings that are relevant to business needs.

### **Technical Aspects**

- Design of experiments
- Forecasting, regression analysis, and time series analysis
- Factor analysis, principal component analysis, and structural equations modeling
- Classification, discriminate analysis, and clustering
- Sensitivity/uncertainty Analysis
- Common methods include time series analysis, regression and ANOVA providing a mathematical representation for exploration and prediction, sampling methods, and hypothesis testing.

### **Example Tools**

SAS, R, SPSS, Strata, Matlab