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# Webinar

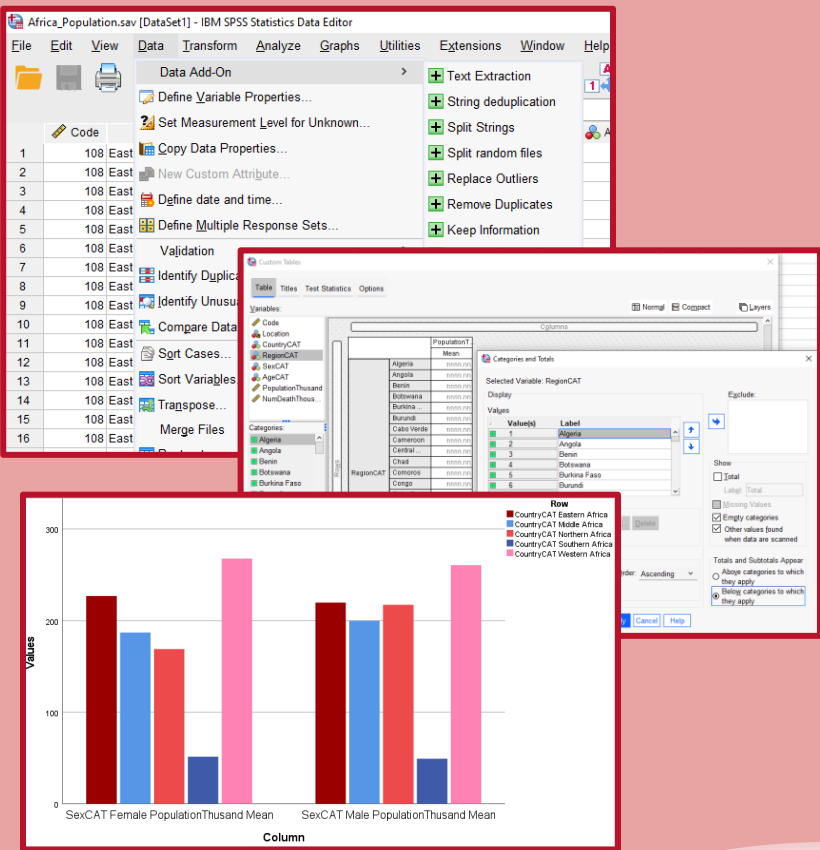
How to process questionnaire data with Statistics for Data Analysis

## Introduction

## Data Preparation and Data Analysis

## Example

## Questions and Answers

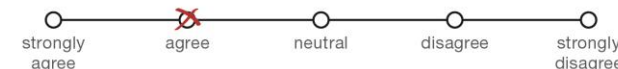


- Questionnaire are frequently used by many researcher as an instrument for statistical evaluation. Especially when the focus of the research is on people.
- Practical and Reliable Instrument.
- Ideal for big sample.

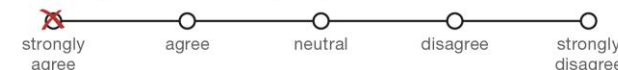
- Usually in Questionnaire are used scale (such as Likert), in these scale is required to express a preference regarding the question.
- Some scale are composed by many item, typically the items of a scale must be aggregated during data preparation.

## Example Likert Scale

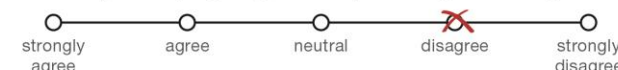
1. Wikipedia has a user friendly interface.



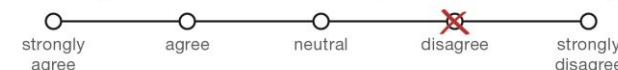
2. Wikipedia is usually my first resource for research.



3. Wikipedia pages generally have good images.



4. Wikipedia allows users to upload pictures easily.



5. Wikipedia has a pleasing color scheme.

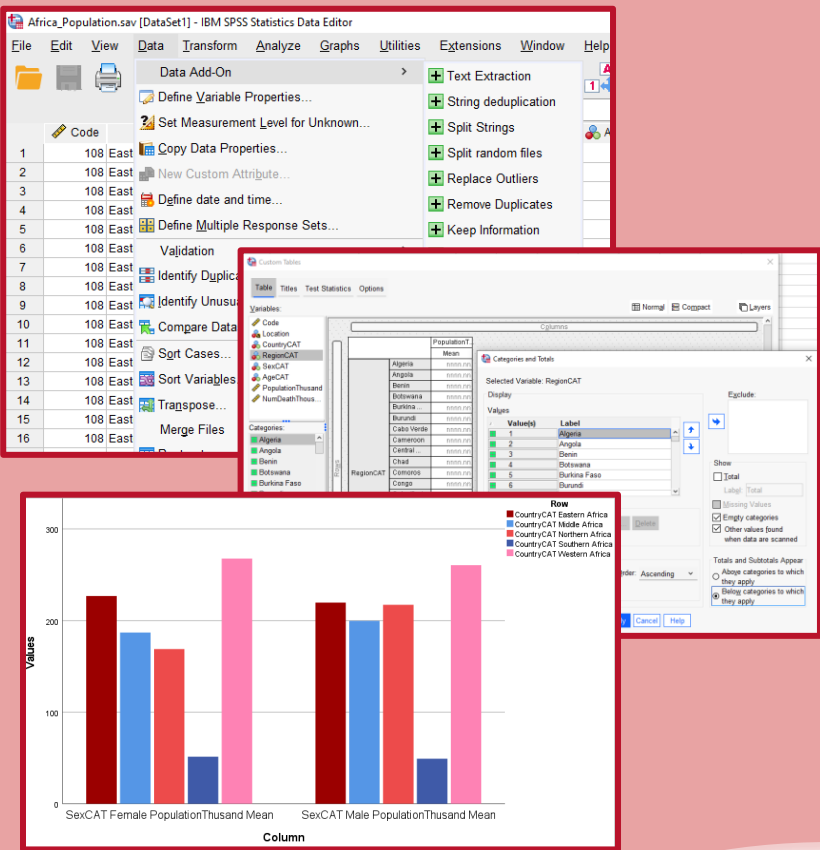


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The screenshot shows the IBM SPSS Statistics Data Editor with a dataset named 'BIG FIVE.sav'. The 'Compute Variable' dialog box is open, and the 'Target Variable' is 'Country [Country]'. The 'Numeric Expression' is 'EXTRAV + 1'. The 'Function group' is 'All'. The 'Functions and Special Variables' list is empty. The 'If...' button is highlighted.

# DATA preparation

\*BIG FIVE.sav [DataSet1] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Graphs Utilities Extensions Window Help

Compute Variable...  
Programmability Transformation...  
Count Values within Cases...  
Shift Values...  
Recode into Same Variables...  
Recode into Different Variables...  
Automatic Recode...  
Create Dummy Variables  
Visual Binning...  
Optimal Binning...  
Prepare Data for Modeling  
Rank Cases...  
Date and Time Wizard...  
Create Time Series...  
Replace Missing Values...  
Random Number Generators...  
Run Pending Transforms Ctrl+G

|    | CountryName | Ext  | Conscientiousness | Opening.Imagination | Usa.vs.Other | EXT1 | EXT2 | EXT2n | EXT3 | EXT4 | EXT4n |
|----|-------------|------|-------------------|---------------------|--------------|------|------|-------|------|------|-------|
| 1  | 22          |      | 3,20              | 4,50                | 0            | 4    | 1    | 5     | 5    | 2    | 4     |
| 2  | 42          |      | 3,70              | 3,70                | 0            | 3    | 5    | 1     | 3    | 4    | 2     |
| 3  | 22          |      | 3,40              | 4,10                | 0            | 2    | 3    | 3     | 4    | 4    | 2     |
| 4  | 22          |      | 2,50              | 3,70                | 0            | 2    | 2    | 4     | 2    | 3    | 3     |
| 5  | 35          |      | 4,80              | 4,80                | 0            | 3    | 3    | 3     | 3    | 3    | 3     |
| 6  | 58          |      | 3,70              | 4,20                | 0            | 3    | 3    | 3     | 4    | 2    | 4     |
| 7  | 66          |      | 3,30              | 3,90                | 1            | 4    | 3    | 3     | 4    | 3    | 3     |
| 8  | 42          |      | 4,50              | 4,30                | 0            | 3    | 1    | 5     | 5    | 2    | 4     |
| 9  | 22          |      | 2,78              | 4,70                | 0            | 2    | 2    | 4     | 3    | 3    | 3     |
| 10 | 20          |      | 1,70              | 3,50                | 0            | 1    | 5    | 1     | 3    | 5    | 1     |
| 11 | 64          |      | 2,40              | 4,60                | 0            | 3    | 3    | 3     | 2    | 3    | 3     |
| 12 | 49          |      | 3,60              |                     |              |      |      |       |      |      | 3     |
| 13 | 21          |      | 2,20              |                     |              |      |      |       |      |      | 2     |
| 14 | 22          |      | 3,90              |                     |              |      |      |       |      |      | 1     |
| 15 | 4           |      | 3,30              |                     |              |      |      |       |      |      | 1     |
| 16 | 30          |      | 3,50              |                     |              |      |      |       |      |      | 2     |
| 17 | 9           |      | 2,80              |                     |              |      |      |       |      |      | 4     |
| 18 | 44          |      | 2,90              |                     |              |      |      |       |      |      | 3     |
| 19 | 68          | 4,00 | 2,30              | 4,90                | 2,30         |      |      |       |      |      | 4     |
| 20 | 24          | 4,40 | 4,00              | 3,70                | 4,50         |      |      |       |      |      | 3     |
| 21 | 22          | 2,50 | 3,80              | 3,50                | 3,70         |      |      |       |      |      | 4     |
| 22 | 66          | 2,90 | 3,60              | 3,60                | 2,90         |      |      |       |      |      | 4     |
| 23 | 22          | 1,90 | 2,40              | 4,30                | 3,80         |      |      |       |      |      | 2     |
| 24 | 8           | 2,40 | 2,20              | 4,60                | 3,50         |      |      |       |      |      | 3     |
| 25 | 4           | 1,10 | 4,00              | 3,80                | 3,30         |      |      |       |      |      | 2     |
| 26 | 9           | 2,90 | 3,40              | 4,30                | 2,50         |      |      |       |      |      | 1     |
| 27 | 22          | 4,30 | 2,80              | 5,00                | 4,20         |      |      |       |      |      | 3     |
| 28 | 4           | 1,30 | 2,70              | 2,50                | 3,00         |      |      |       |      |      | 1     |
| 29 | 22          | 2,30 | 3,50              | 4,00                | 2,60         |      |      |       |      |      | 1     |
| 30 | 22          | 3,00 | 4,10              | 4,30                | 4,20         |      |      |       |      |      | 4     |
| 31 | 58          | 3,40 | 2,40              | 4,30                | 4,20         |      |      |       |      |      | 2     |
| 32 | 10          | 2,00 | 3,70              | 4,20                | 4,40         |      |      |       |      |      | 2     |
| 33 | 21          | 3,30 | 1,90              | 4,10                | 2,60         |      |      |       |      |      | 4     |

Recode into Same Variables

Variables:

Country [Countr...]  
Extraversion [E...]  
Emotional Stabi...  
Agreeableness ...  
Conscientiousn...  
Intellect/Imagin...  
Usa vs. Other  
EXT1  
EXT2  
EXT2n

Old and New Values...

If... (optional case selection condition)

OK Paste Reset Cancel Help

- **EXAMPLE:**
- Correlation
- Linear Regression
- ANOVA

- **Linear Regression** is a technique that is use to study and quantify the effect of one ore more **indipendent variables** on the **dependent variable**.
- The variables of used in linear regression must be **quantitative**.

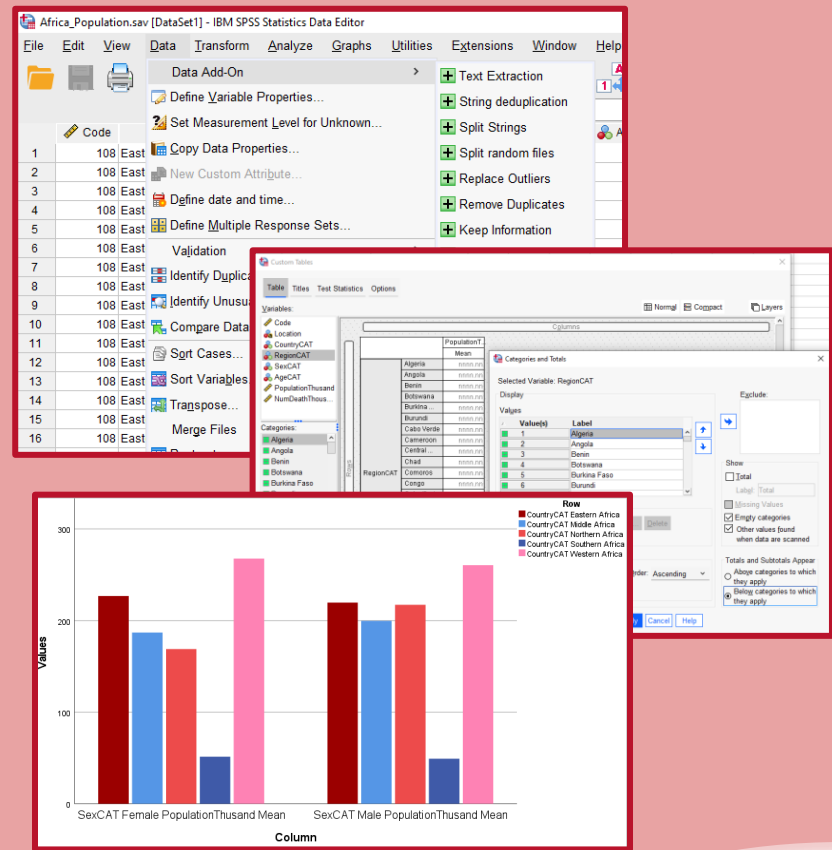
- ANOVA allows to estimate the effects of **qualitative** variables (Ordinal and Nominal).
- ANOVA is an extension of t-test and is used when the groups are more than two.  
The **dependent variable** must be **quantitative**, the independent variables must be **qualitative**.

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- Personality Test (Big Five):  
online at <https://openpsychometrics.org/tests/IPIP-BFFM/>

Extraversion – Introversion;

Emotional Stability - Neuroticism;

Agreeableness – Antagonism;

Conscientiousness – Negligence;

Open to experience – Close to experience .