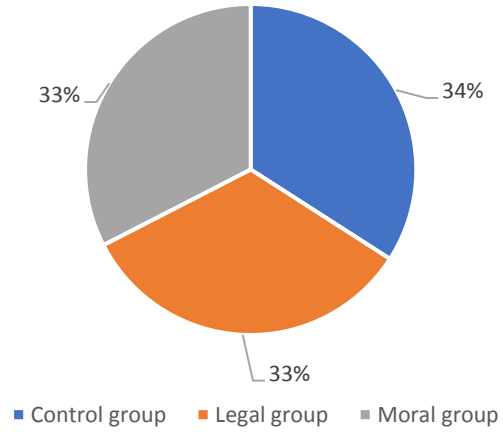
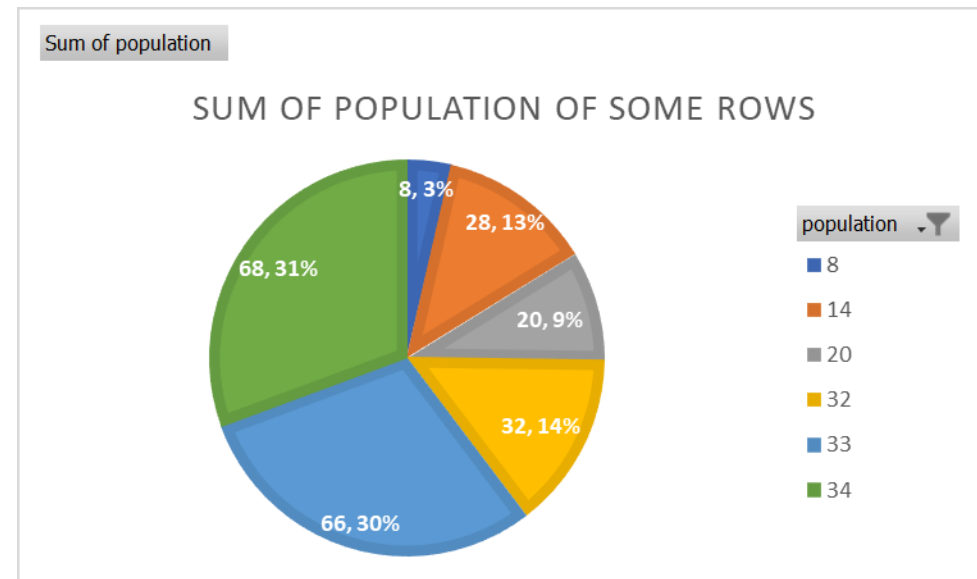
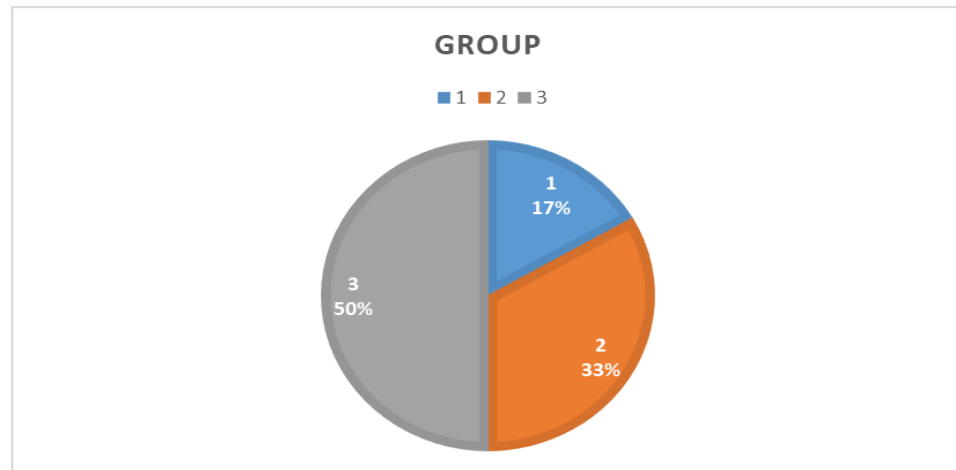
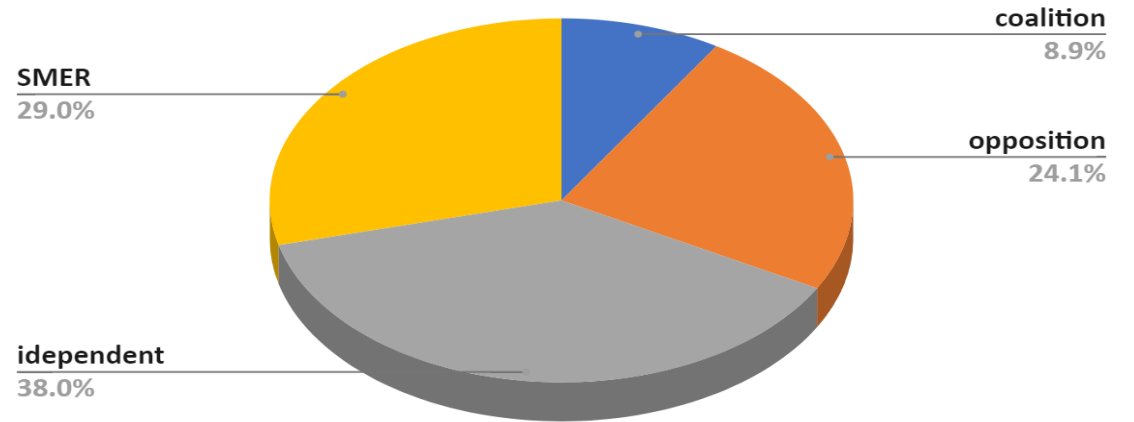


Visualization of relationship between variables

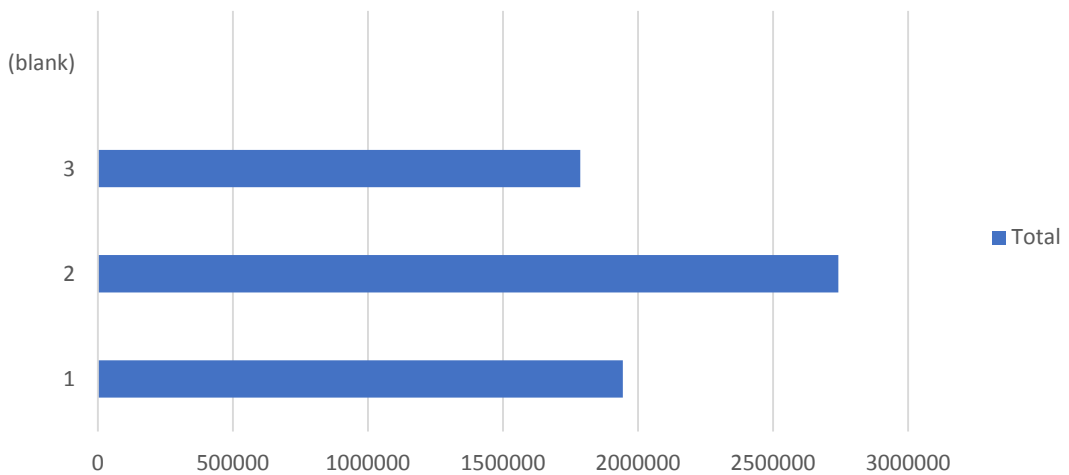
Distribution of experimental groups



Distribution of Mayor's Political Affiliations

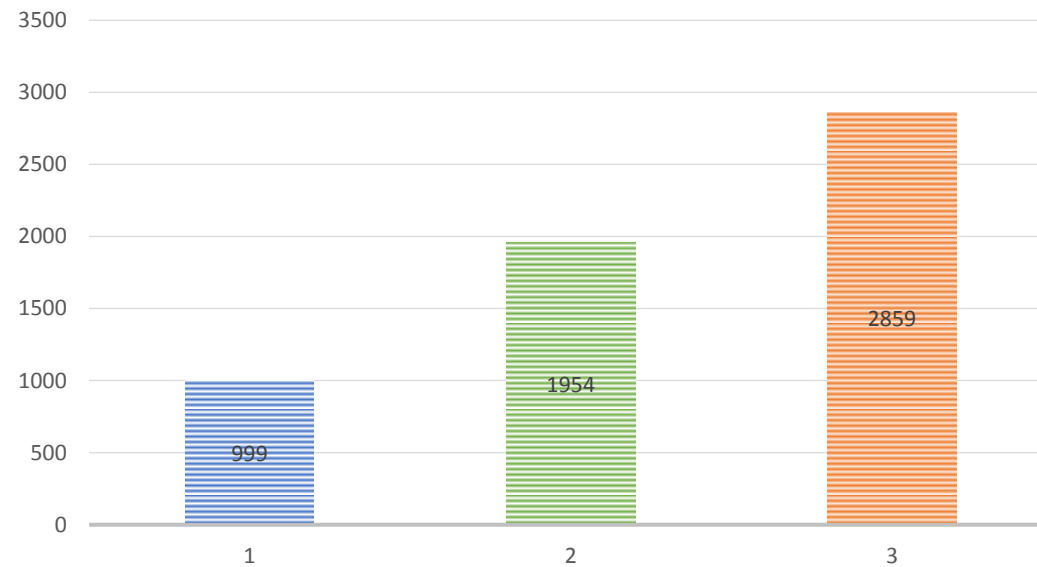


Total

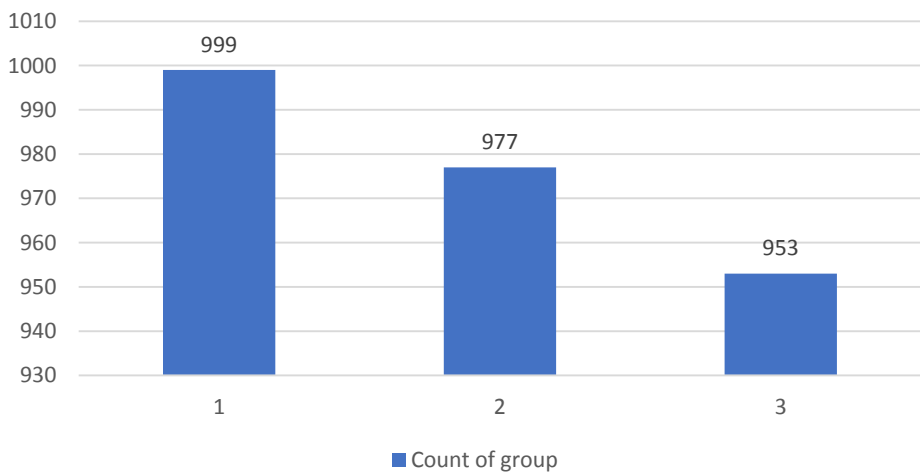


Count of Municipalities by Group

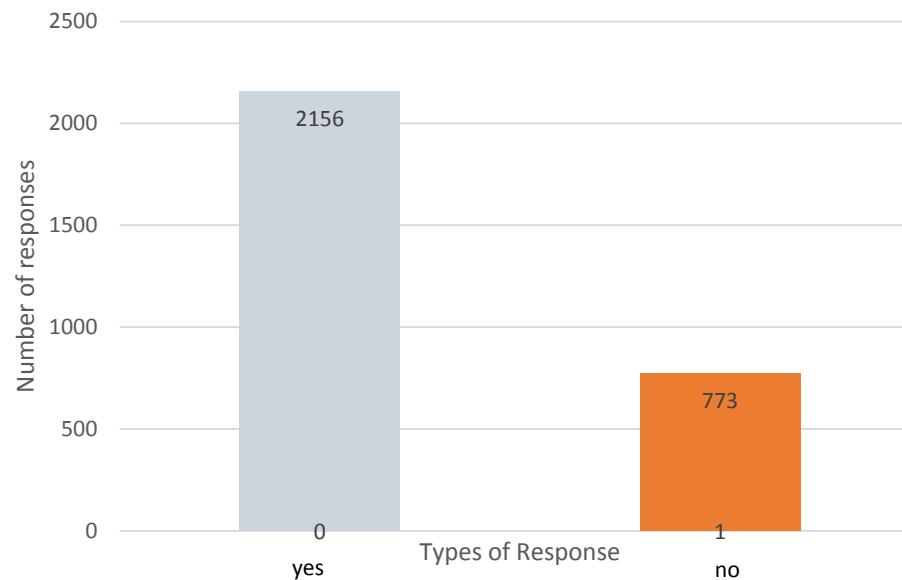
EXPERIMENTAL GROUPS



Count of group



Response from Municipalities



Proportions of Hungarians in Municipalities

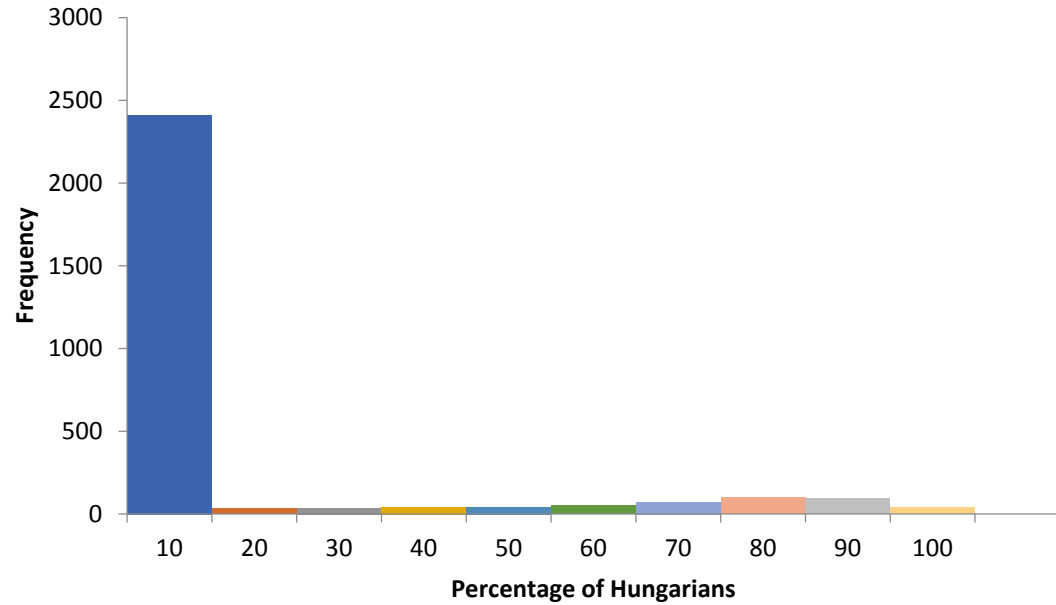
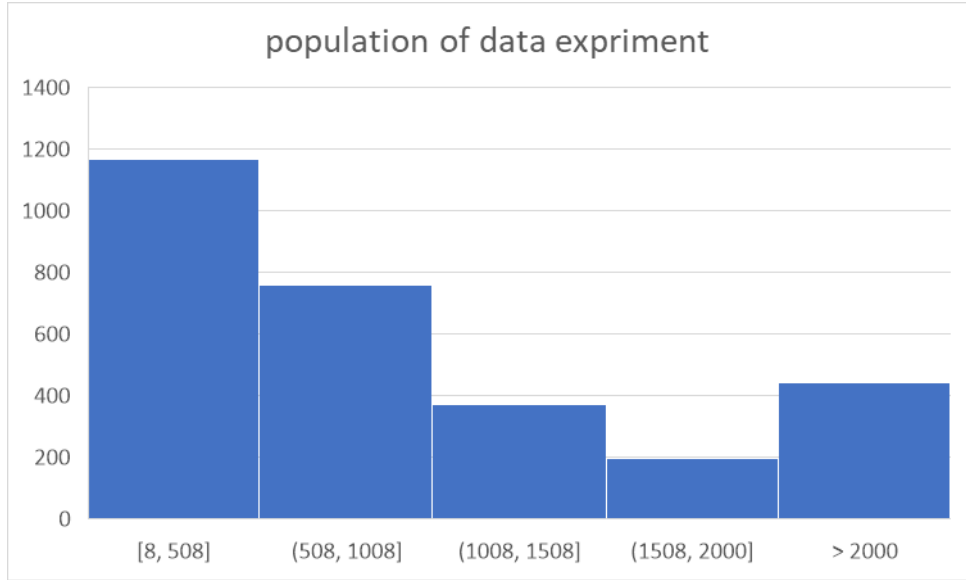
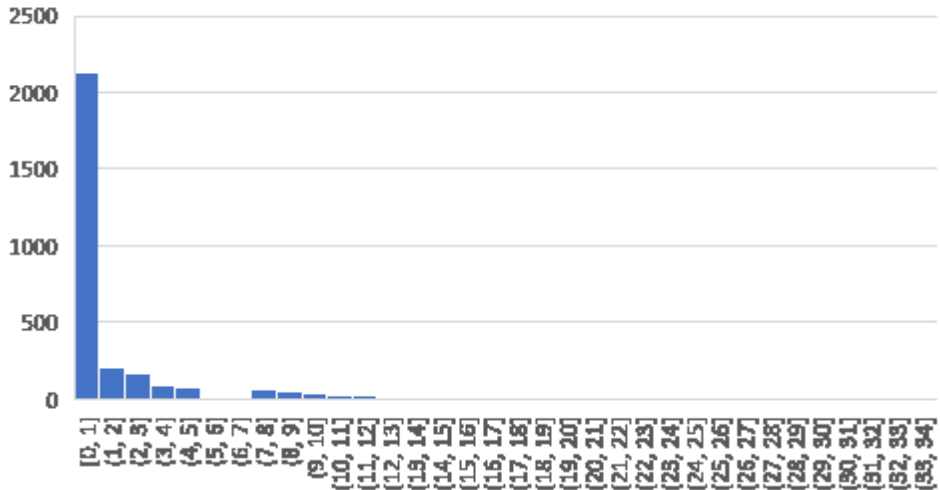
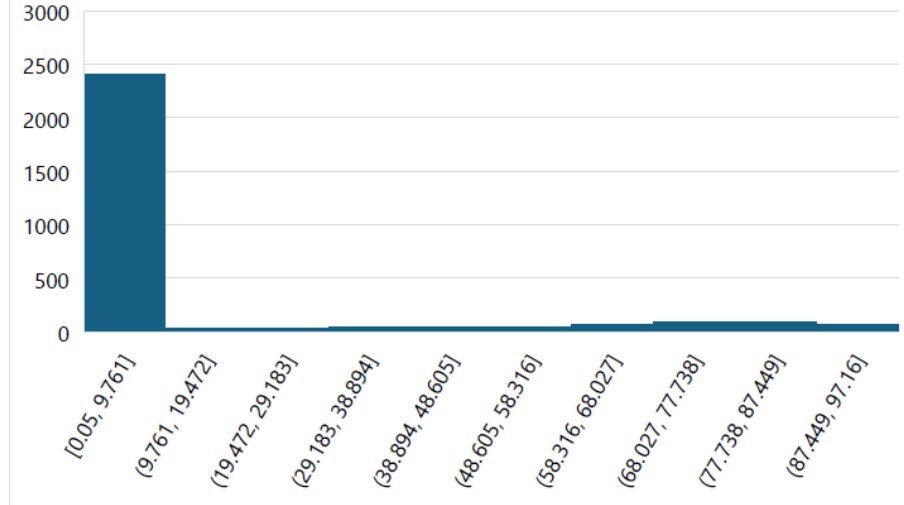


Chart Title



Histogram: Distribution of Hungarian Population Percentage Across Municipalities



Two types of relationship

- Correlation – two things are going together
- Causation – one thing causes the second one
 - Only advanced methods can reveal causation

- Correlation \neq Causation

Combinations of variables

- **Categorical x categorical – stacked bar chart, series of pie charts**
- Categorical x cardinal – set of boxplots
- Cardinal x cardinal - scatterplot

How to recognize relationship

- **Categorical x categorical – charts are different for each category**
- Categorical x cardinal – charts are different for each category
- Cardinal x cardinal – there is some pattern in scatterplot

=countif

- =COUNTIFS(B:B, 1; C:C, 1)

Column with
variable survival

Only rows where
survival = 1 are
counted

Column with
variable Pclass

Only rows where
Pclass = 1 are
counted

- Same logic for sumif, averageif, etc
- One conditionIF
- More condition ...IFS

File Home **Insert** Page Layout Formulas Data Review View Automate Developer Help LightPDF Acrobat

PivotTable Recommended PivotTables Table Pictures 3D Models Shapes SmartArt Icons Screenshot Checkbox Recommended Charts

Tables Illustrations Controls

8

A B C D E F G H I

2-D Column

3-D Column

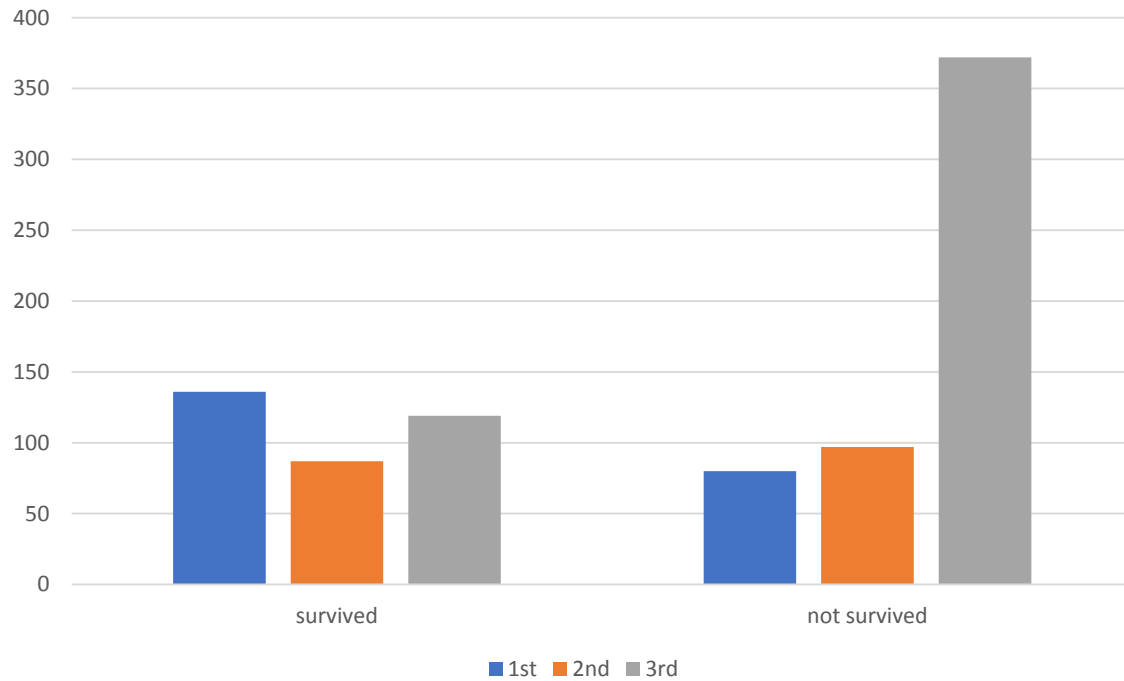
Home Insert Page Layout Formulas Data Review View Automate Developer Help LightPDF Acrobat **Chart Design** Format

Chart Quick Layout Change Colors Chart Styles Switch Row/Column Select Data Change Chart Type Move Chart

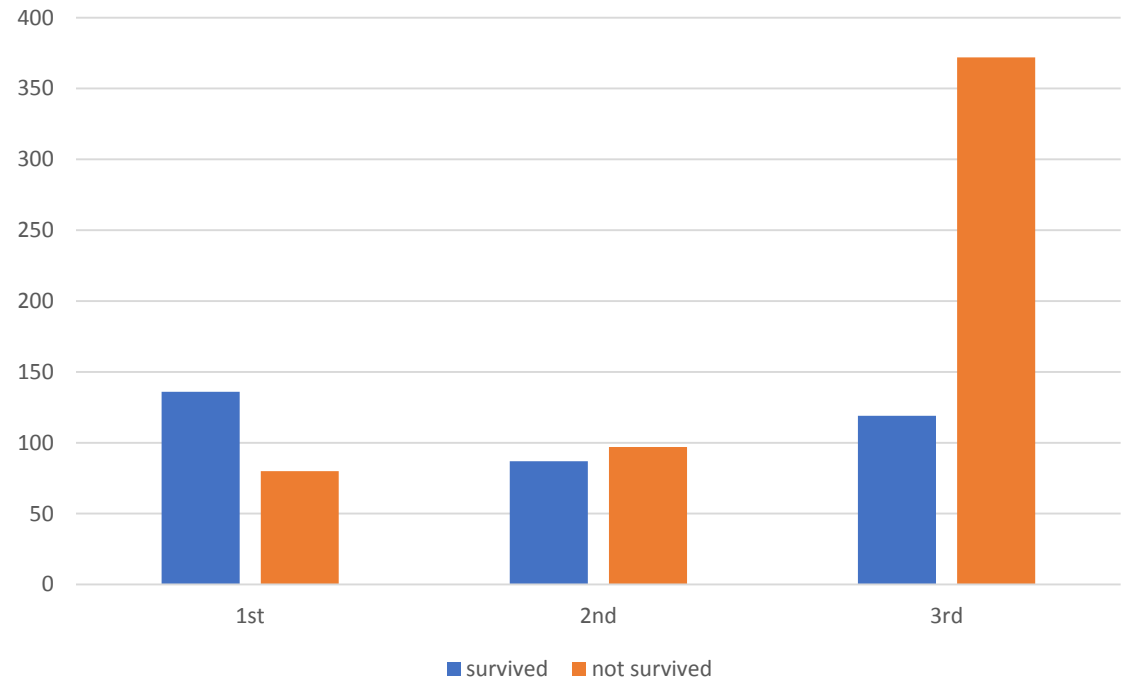
Chart Layouts Chart Styles Data Type Location

Bar chart

Survival in different passanger classes on Titanic

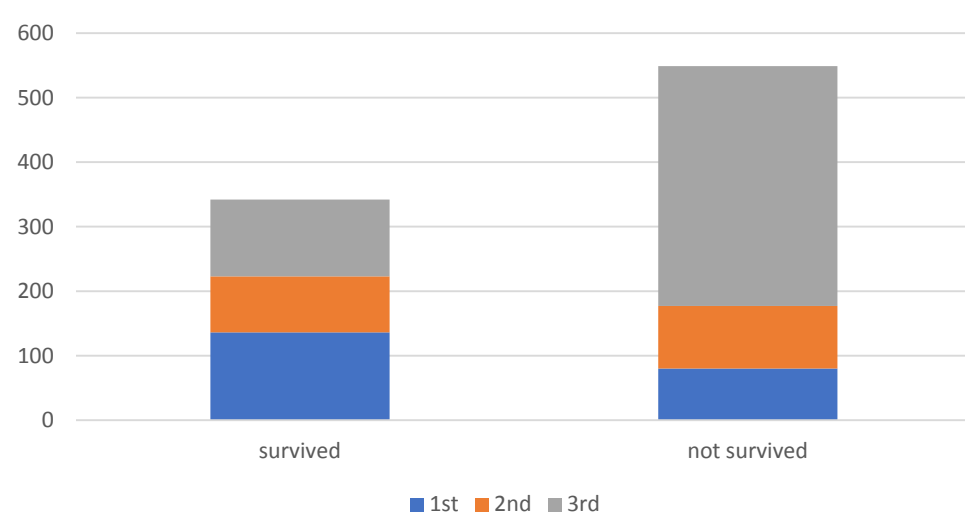


Survival in different passanger classes on Titanic

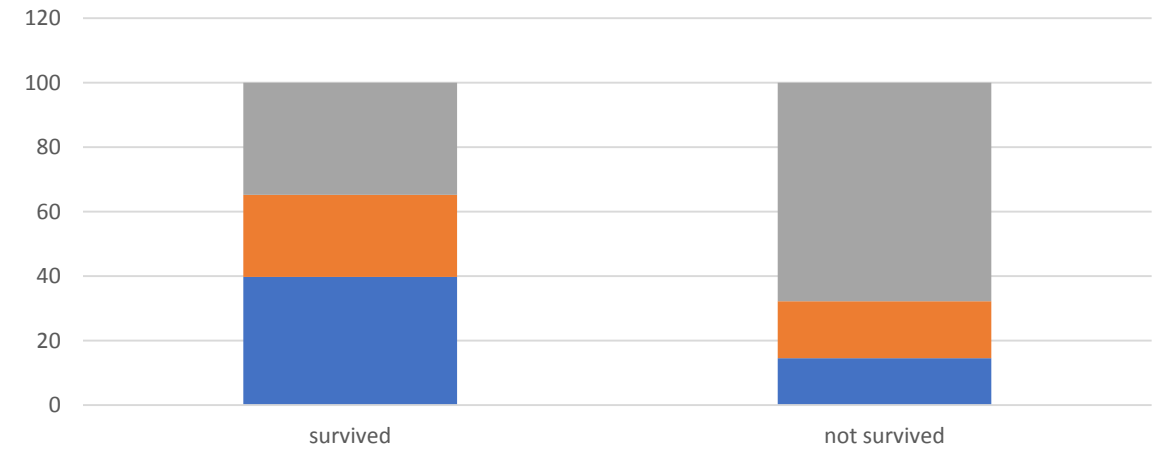


Stacked bar chart

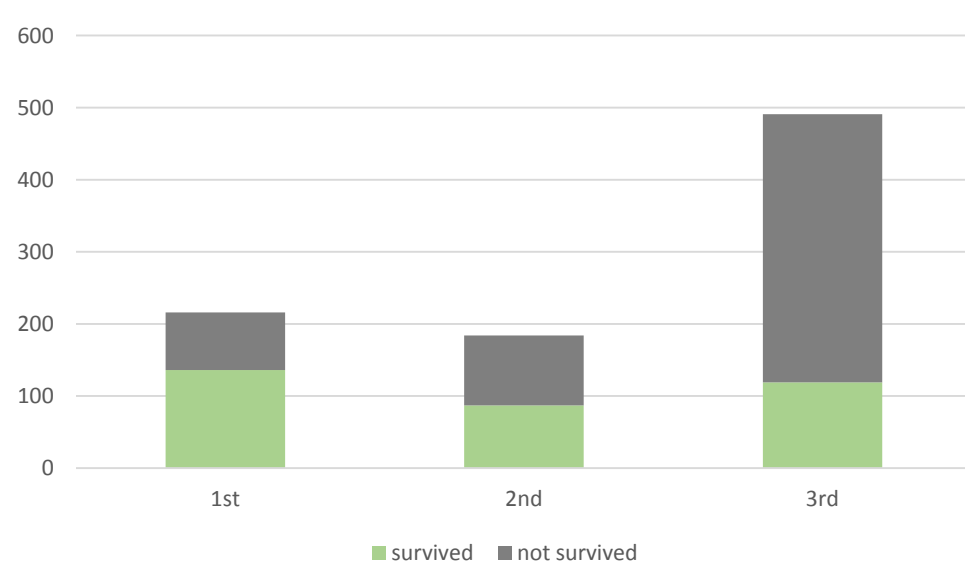
Survival in different passanger classes on Titanic



Survival in different passanger classes on Titanic



Survival in different passanger classes on Titanic



Survival in different passanger classes on Titanic

