

Dataviz exam simulation - Practice 11

Analysis

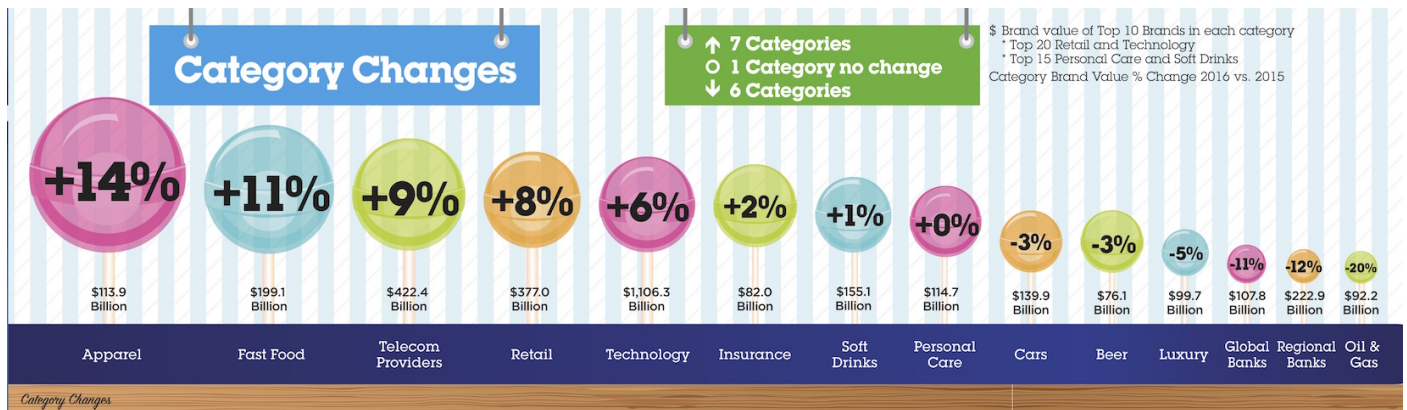


Figure 1: BrandZ

Analyze the above graph according to the following criteria.

Question

Which one of the following questions represents the purpose of this visualization?

- *What is the change in the value of some categories of brands from 2015 to 2016?*
- *What is the absolute value of some categories of brands in 2015?*
- *What is the trend of the value of some categories of brands over several years?*
- *What is the category of business associated with the highest revenues?*
- *What is the most representative color associated with some categories of brands?*

Data

Is the data quality appropriate? Select true answers only.

- *The values associated with each category are too similar to be accurate.*
- *The data is accurate because percentages and absolute values are appropriate for this task.*
- *The data is not complete because the absolute value does not refer to the overall value of the category.*
- *The data is complete because all possible categories of brands have been reported.*
- *The data is consistent as similar categories of brands are considered.*
- *The data is not consistent because only the top 10/15/20 brands are considered.*
- *The data used in this visualization has been collected before 2015.*
- *The visualization clearly explains what are the sources of the data.*
- *Understandability is not appropriate because the text explaining the data is not very clear.*
- *Precision is not appropriate, percentages should have two decimal digits at least.*

Visual

Proportionality

Are the values encoded in a uniformly proportional way?

The percentage change values are not reported with a uniform proportion in the size of the bubbles. There is a zero value that theoretically should correspond to a zero dimension. Negative values are represented as smaller, without a clear proportionality or coding rule. The position of the bubble centers relative to the base of the graph could potentially represent the value, however this is not explicit.

Utility

All the elements in the graph convey useful information?

There are several purely decorative elements that distract from the quantitative message: the striped background, the stylized reflections on the bubbles (lollipops), the sticks that support the bubbles, the wood effect strip at the base of the graphic. The sign with information on how many rise / fall or are stable could be deduced from the graph and it is essentially redundant. The variable font size with the percentages is of little use in transmitting relative values.

Clarity

Are the data in the graph clearly identifiable and understandable (properly described)?

The legend on the values shows the two measures in inverse order: at the top it mentions the absolute value in \$ which is at the bottom while at the bottom the % of variation that is at the top. Negative percentages are reported with a very small font size. In the hypothesis that the position of the bubbles represents the variation values, a possible vertical axis and a line corresponding to zero are missing. Furthermore, the label with the absolute value, shown on the vertical section, may suggest that the height represents this value instead (but it is not).

Design

Design the visualization based on the following data structure.

Field	Dim./Measure
Category	Dimension
Percentage	Measure
Value	Measure

Design schema

Schema	Details
Rows	Category
Columns	SUM(Percentage), SUM(Value)
Type	Bar
Color	Stepped color with 2 steps for SUM(Percentage), one color for SUM(Value)
Size	Default value
Label	No label

Sketch of the resulting graph

Category changes

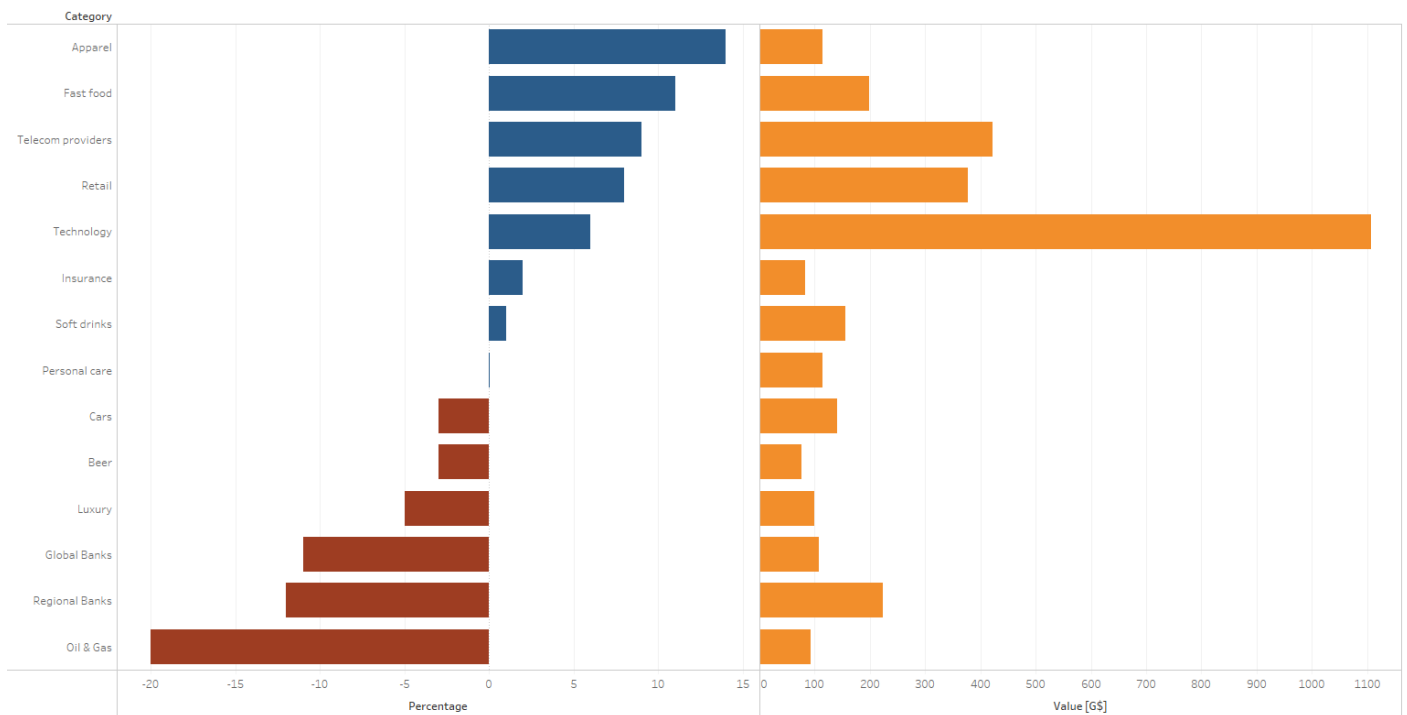


Figure 2: Redesign

Theory

If a variable represents heights of people and a data point is “0.002 km”, we are observing an issue of:

- *Precision*
- Accuracy
- Understandability
- Consistency
- Completeness