Data Visualization with Tableau Project

Link to Tableau Workbooks

Link to tableau public workbook for first draft:

https://public.tableau.com/profile/damian.brunold#!/vizhome/EntwicklungAsylgesucheSchweiz1/Entwicklungdiskret

Link to tableau public workbook for second draft:

https://public.tableau.com/profile/damian.brunold#!/vizhome/EntwicklungAsylgesucheSchweiz2/AsylgesucheinderSchweizDashboard

Link to tableau public workbook for final version:

https://public.tableau.com/profile/damian.brunold#!/vizhome/RefugeeCountsinSwitzerlandandWorldEvents/Refugeecountsrelatedtoworldevents

Summary

The visualization shows the relation between the number of refugees seeking asylum in switzerland between the years 1986 and 2015 and regional world events (mostly wars).
The impact of various regional events is explored.

Design

First draft:

- I first tought about using a line diagram, since the data is essentially a time series. But since I wanted to show for each year the regional decomposition of refugee origin, I found that a stacked bar chart worked better while retaining most of the time series feel.
- The x axis spans the years 1986 to 2016. The y axis spans from 0 to a little more than the maximum refugee count (i.e. 50'000).

Second draft:

- The draft chart was way to hectic and colorful. Thus, I reworked the data to include only the top 10 origin countries for each year and I grouped these years into six large regions of origin (e.g. middle east, north africa, east africa, ...) This reduced the visual clutter substantially, while providing additional insight into the data. This makes sense, since most event that result in waves of refugees (e.g. wars) concern not only one country but rather a whole region.
- Add value labels to the stacked bars
- Order data so that "Other" is lowest and the other regions are consistently arranged.
- Add more descriptive axis labels
- Add more descriptive title and subtitle
- Add information about major event in this period (regional wars)
- Place the legend to the bottom of the dashboard

Final version

- I realized due to feedback from a udacity reviewer, that I was supposed to create a story that explained the data and not just to create a single visualization. This led me to rethink the whole project and I settled on a slightly different path.
- I solely use line charts. These work very well for time series data.
- I start with a line chart that shows the overall numbers. Then, in subsequent story panels, I focus on different regions of the world and explain the relation between peaks and event in the particular region.
- Finally, all the charts are combined in a stacked line chart. This chart does not have labels for the values, since it would be too cluttered. Also, the purpose of the chart is mainly to show the qualitative development of the values over time and their relation with world events.
- All charts share the same vertical axis, ranging from 0 to 50'000. This provides an immediate visual comparison of the various charts.

- Finally, I translated the whole visualization from german to english

Feedback

(Feedback was given orally by Nils. Nils is a colleague at work.)

Feedback for first draft:

Chart is too cluttered. The overall trend is visible, but it is difficult to see detail information.

Feedback for second draft:

Chart gives a good idea of the large refugee counts during the balkan wars.

Resources

- Course materials
- Knaflic, Storytelling with Data
- Staatssekretariat fuer Migration (SEM)

Data File

swiss-refugees-1986-2016-english.csv:

- Jahr: the year
- Land: country of origin
- Region: the region of origin
- Anzahl: the number of refugees for the given year and country