Information Visualisation
Channelling Hans!
Assignment Description

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1 What Is the Purpose of Your Visualisation?

The visualisation indicates three effect factors of life expectancy, including government health spending, GDP and poverty headcount ratio. At the political level, the government health spending in total spending is a key element of the quality of living for all the citizens. On the economical aspect, the increasing of GDP is a key element of extending of life expectancy. Poverty headcount ratio indicates the social factor in an opposite respect. Because of the changing of these three factors in different countries and different years, the life expectancy shows different development trends.

2 What Similar Visualisations Exist?

In Hans Rosling, the wealth and health of nation are mapped based on varies of respects, including life expectancy, GDP region and etc. In this visualisation, more details and more effect factors are able to explored. The similar visualisation is *online abuse of politicians around the world* in Guardian data blog. In this research, the bar chart and bubble chart are used to indicate effect factors, for example, population, gender breakdown and politicians. The different type of charts, colours of elements and size to show the consequences of research.

3 Why Is Your Visualisation A Good Solution?

In *Life Expectancy*, there are trends of life expectancy of six countries (from different Continents on different development levels) from 1994 to 2013. The beginnings of life expectancy start from different values and the tendency of changing shows clearly by using line gragh.

In *Life Expectancy with GDP*, the relationship between GDP and life expectancy is showed by ten countries from on different development level. The height of bar shows the value of life expectancy, the colour of bar shows the GDP (the darker, the higher). The bars arrange by height, which shows that there is no positive correlation between these two elements.

In *Government Spending on health,* it demonstrates the government health spending in total spending of two countries with different development level and different population from 1995 to 2010. It's easy to compare in the same year or in the same country.

In *Countries Poverty Headcount Ratio*, each pie chart shows poverty headcount ratio of various countries for each year and text shows the largest ratio in every year.

In *Sum Headcount Ratio for Years*, it describes the poverty headcount from a different aspect. The size of bubble is the sum of poverty headcount of all the countries. The colour of bubble shows the year (the lighter, the longer). The poverty headcount in each period could be learned clearly.

4 What Data Manipulation Was Required To Create Your Solution?

In *Life Expectancy*, "pivot" is used to union data between years so that there are two elements in the new dataset, year and life expectancy.

In *Life Expectancy with GDP*, "inner join" is used to join two datasets, one is for GDP , the other one is for life expectancy. These two elements from two datasets are showed on the bar chart.

In *Government Spending on health,* "pivot" is used to union data between years and create two new elements, year and government health spending.

In *Countries Poverty Headcount Ratio* and *Sum Headcount Ratio for Years,* "pivot" is used to union the data between years and two factors (years and values) are created.

5 What d3 Resources Did You Use To Create Your Visualisation?

In *Life Expectancy*, the dataset is "life expectancy at birth", which contains years and life expectancy.

In *Life Expectancy with GDP*, the datasets are "gross domestic product converted to international dollars using purchasing power parity rates" and "life expectancy at birth", which has two factors, years and values.

In *Government Spending on health,* the dataset is "General government expenditure on health as percentage of total government expenditure". It contains two elements, years and countries.

In *Countries Poverty Headcount Ratio* and *Sum Headcount Ratio for Years,* the dataset is "Poverty headcount ratio a day (% of population)", which has two factors years and ratio.

Link:

https://public.tableau.com/profile/publish/Assignment1_275/Story1#!/publish-confirm