



**Department of Computer Science and Engineering (Data Science)**

**Lab Manual**

**Subject: Foundations of Data Analysis Laboratory (DJ19DSL303)**

**Semester: III**

**Experiment 6**

**NAME: DEV PATEL**

**SAP ID: 60009200016**

**BATCH: K/K1**

**Aim:** Create an interactive data story.

**Theory:** In Tableau, a story is a sequence of visualizations that work together to convey information. You can create stories to tell a data narrative, provide context, demonstrate how decisions relate to outcomes, or to simply make a compelling case.

A story is a sheet, so the methods you use to create, name, and manage worksheets and dashboards also apply to stories (for more details, see Workbooks and Sheets). At the same time, a story is also a collection of sheets, arranged in a sequence. Each individual sheet in a story is called a story point.

“Statistics are rarely meaningful in and of themselves. Statistics will, and should, almost always be used to illustrate a relationship. It’s more important for people to remember the relationship than the number.”

Presenting dashboards by themselves can be great, but people are so overwhelmed with everything going on in their day and a myriad of data and facts being thrown around that they may gloss over your findings despite the amount of time you have put into making readable and insightful charts. You can drive home insights faster and better by tying your charts to a personal experience, a hypothetical data story, or something going on in the company. In fact, some of the best public speakers almost exclusively use stories to illustrate their points.

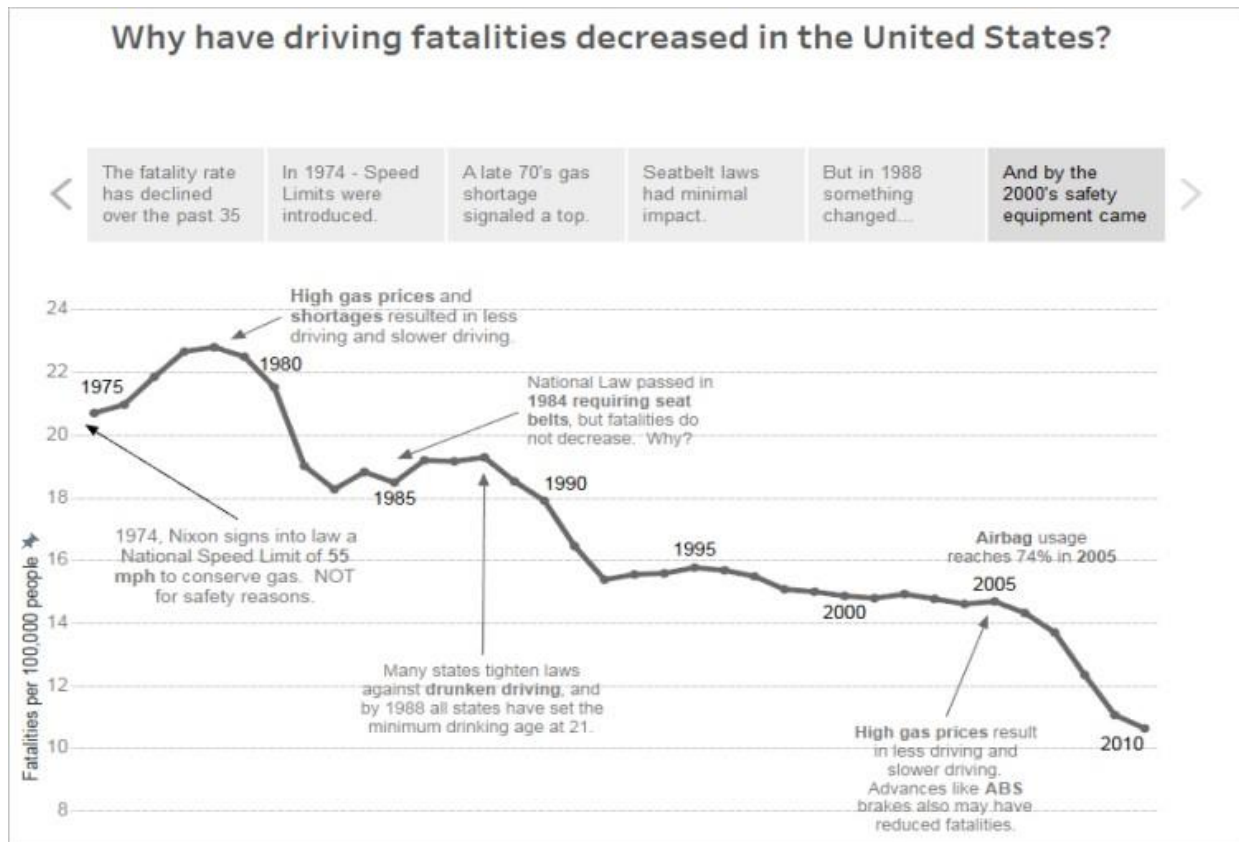
Telling a story with data and analytics can also bring your users through your thought process so that they arrive at the same conclusion that you did.

Every Story Point contains one Worksheet or Dashboard. Selections (Filtering, etc) made in the Story point are saved specifically to that story point, and do not apply to other Story Points. Since you can select one Worksheet for one Story point and another for the next, they are highly flexible.



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Best Practices Tableau: [https://help.tableau.com/current/pro/desktop/en-us/story\\_best\\_practices.htm](https://help.tableau.com/current/pro/desktop/en-us/story_best_practices.htm)



An Example Data Story (Single Story Point).



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### **Assignment:**

#### **Dataset Download:**

<https://data.world/annjackson/world-indicators-tableau>

#### **Alternate Dataset Link:**

<https://drive.google.com/file/d/13-O1LoZzCSqFsHNit-u60xH1IOO8Lp9X/view?usp=sharing>

Create an Interactive Data Story with the World Indicators. The Data Story should highlight effects of world events. World Indicators contain Information on Health (Life Expectancy, Infant Mortality, etc), Business, Development and Much More. The data pertains mainly to the 2000's.

For Example: An Analysis on African Countries affected by Wars, and how it affected the Economy, Mortality. E.G: Sierra Leone Civil War, The Congo War, Libya, South Sudan, etc. (Google can be helpful to get a list of such events!)

Or: Analyse the correlation between the ease of business and the GDP per Capita.

Stories will be graded based on Originality of Work, Originality of Idea, and final means of conveying your idea.

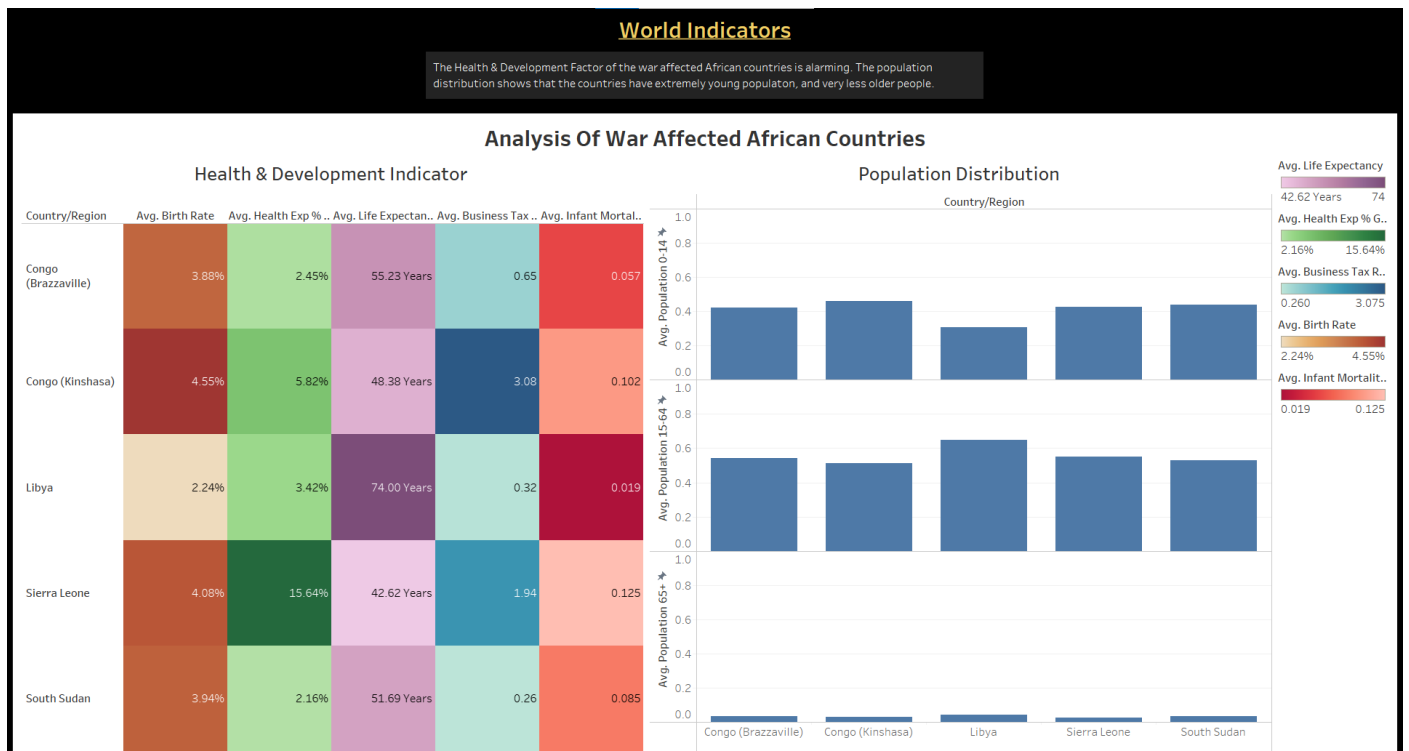
It may be worth working on this one a bit extra, as it can be a great talking point during Internship interviews, etc.



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### Visualisations:

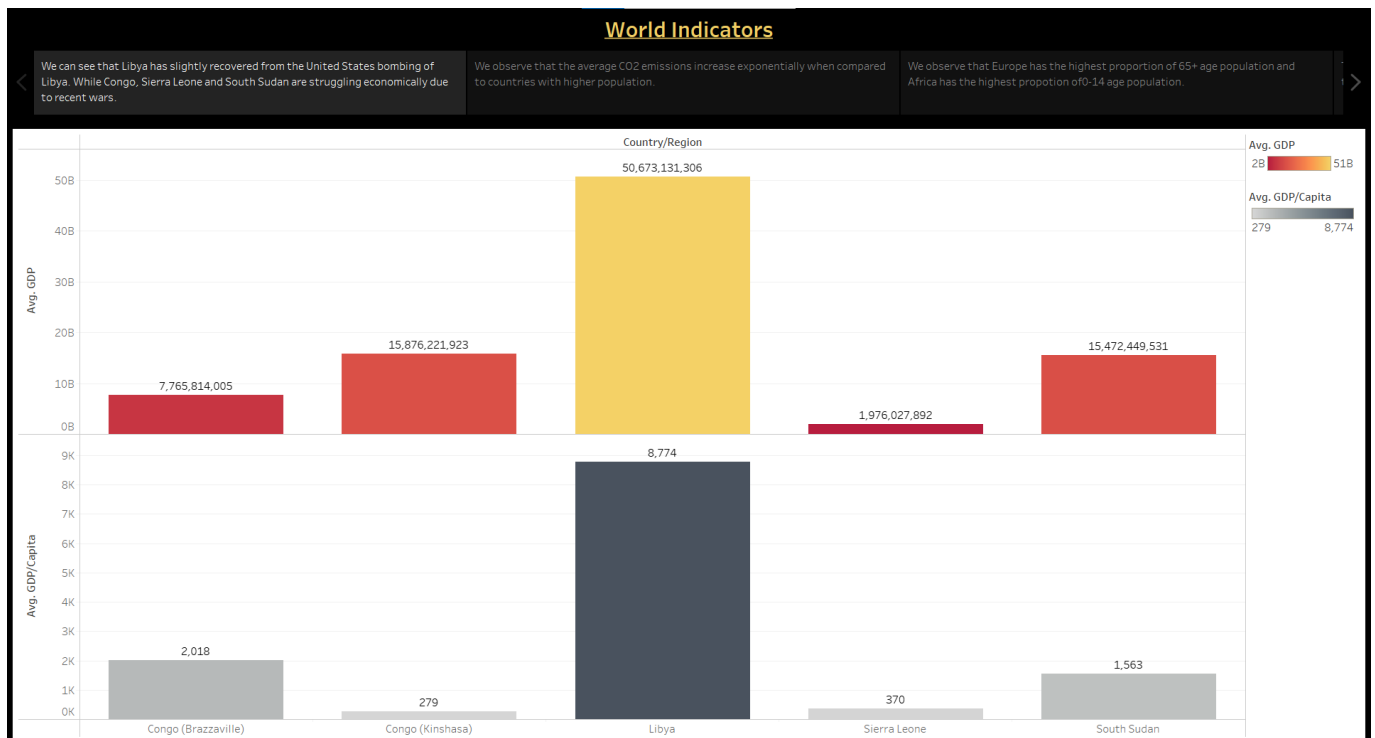
A data story with World Indicators has been created. In the 2000s, Libya was suffering from the US Bombing. Congo was reeling under due to the effects of the Second Congo War, Sierra Leone and South Sudan Civil Wars caused disruption in the respective countries. The first page of the story shows the Health and Development Index of these countries during the adverse times.





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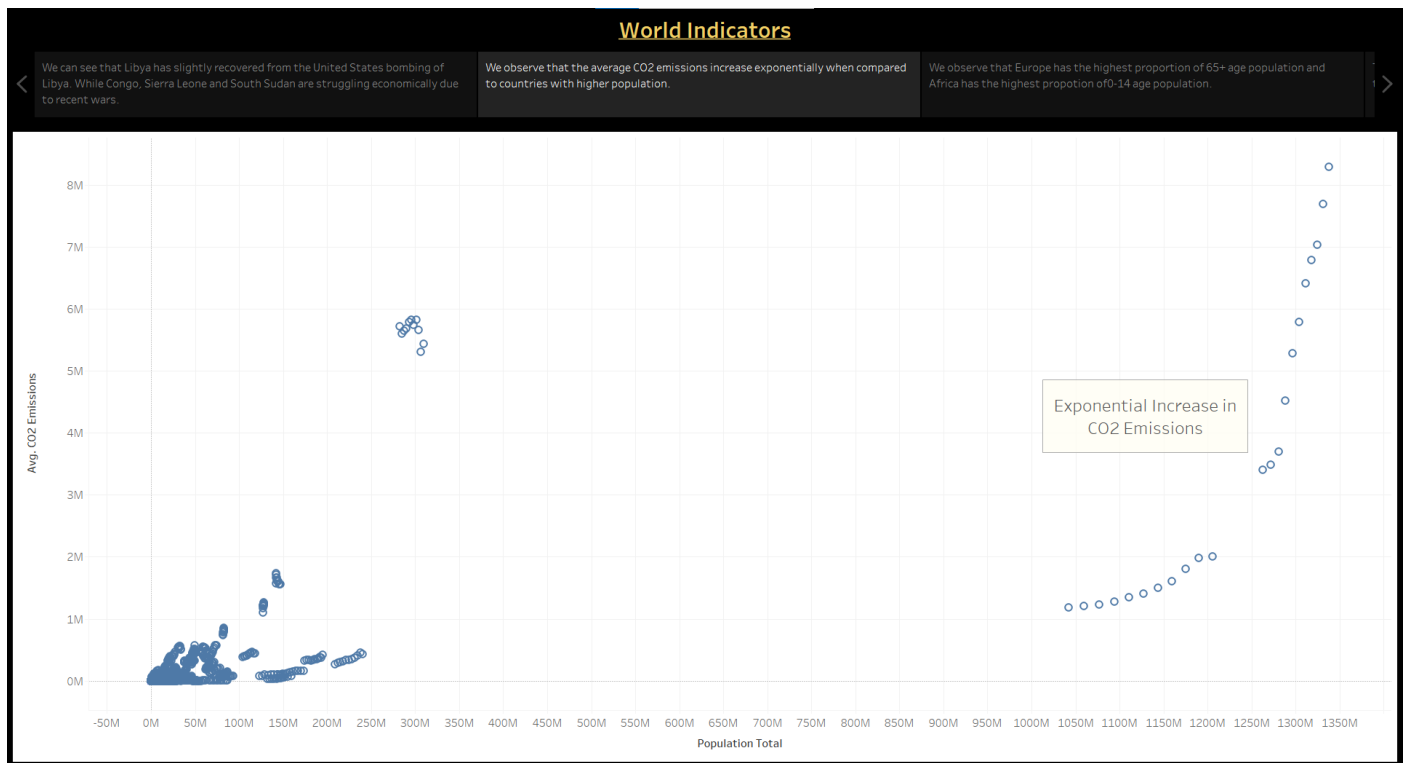
The second page shows the GDP and the GDP per capita of these 5 African countries. Libya seemed to have been recovering quickly from the wars while the other countries were struggling to make ends meet.





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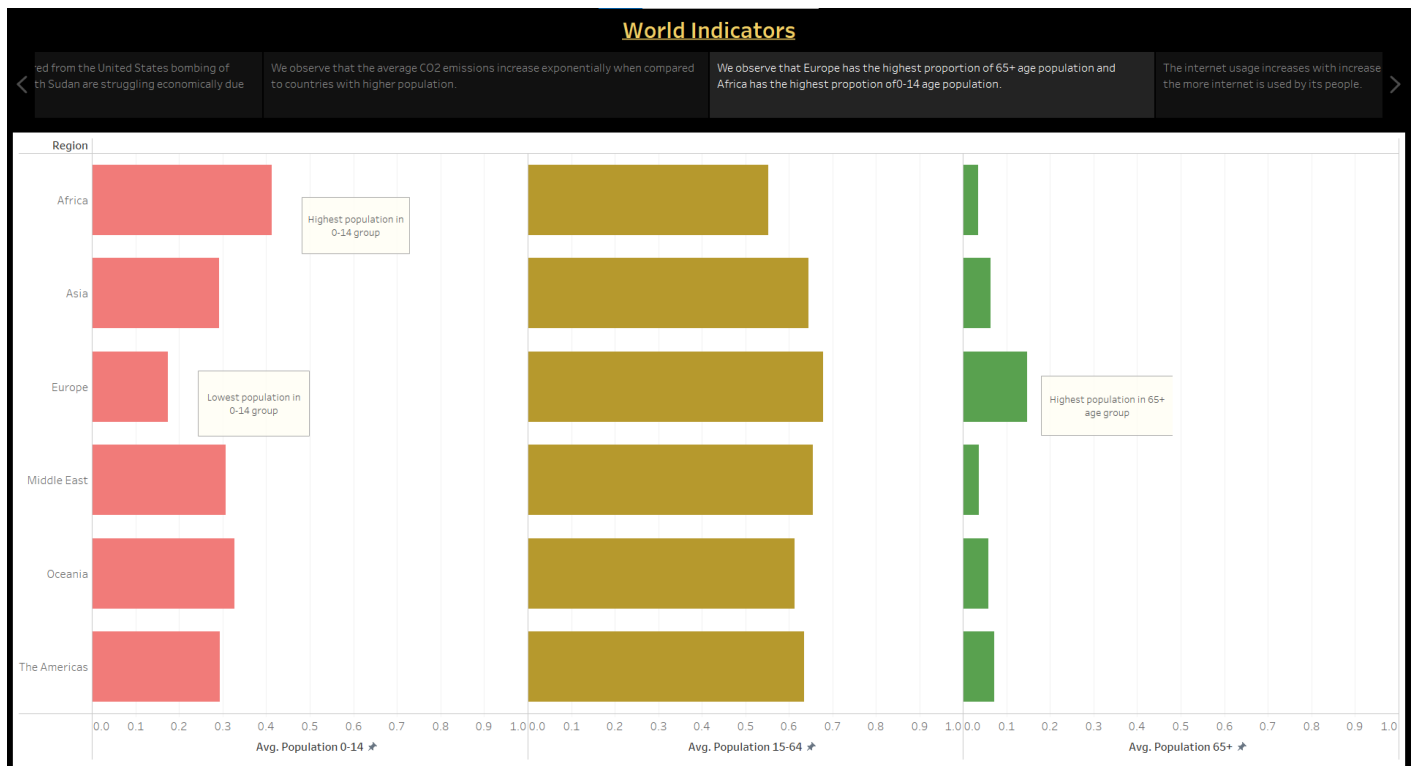
Moving on from the wars in Africa, we observed a trend in the average CO2 emissions from the country and its population. The amount of population seemed to increase exponentially with the increase in population.





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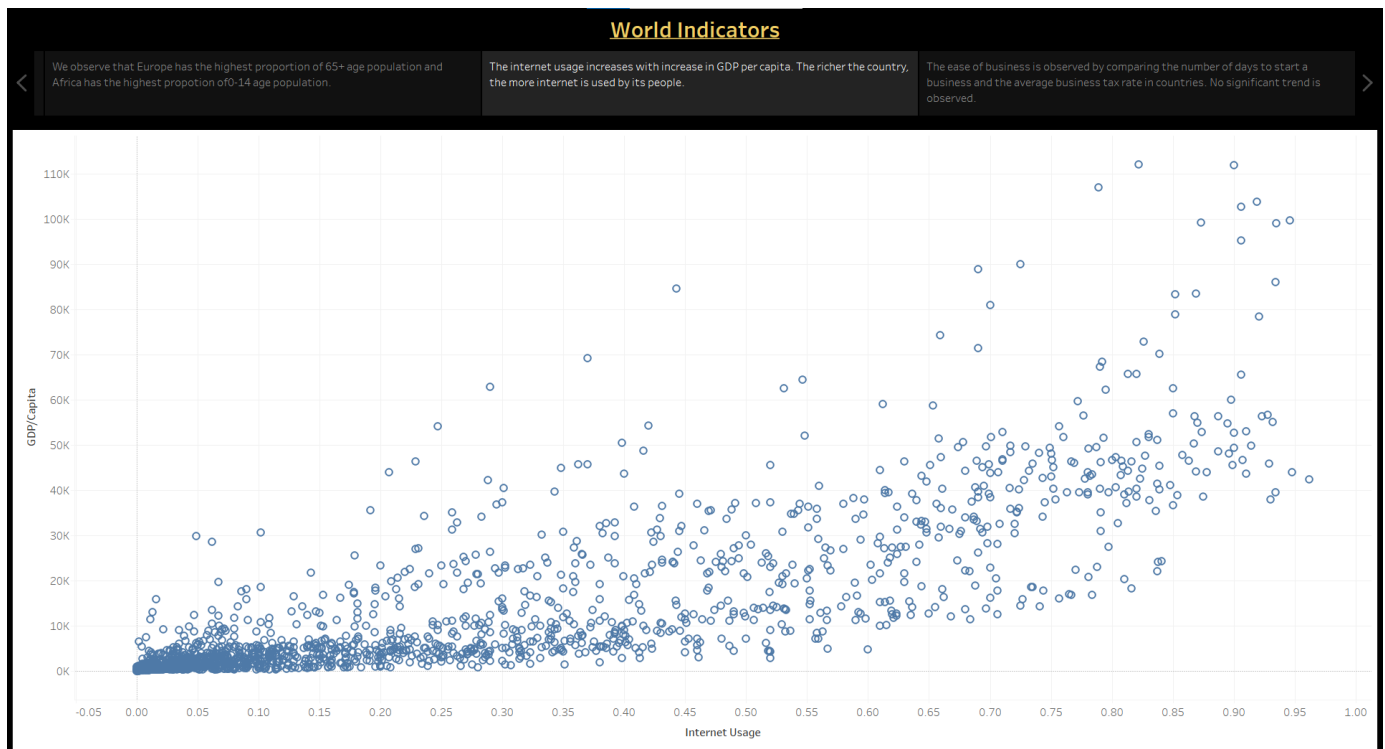
Then, we see the proportion of population according to the various age groups region-wise. We observed that Africa had the highest proportion of young population and Europe had the biggest fraction of people in the 65+ year age group.





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A weak trend was observed in the next comparison. It seems as the Internet Usage of the country increases with higher GDP per capita. It makes sense because internet is a non-essential commodity and the poorer countries are somehow just about making ends meet, so the richer the country, the higher the internet usage proportion.







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The next comparisons were made to see the correlation between the ease of business and the GDP per capita. The countries with higher GDP per capita have low business tax rate and the number of days to start a business are also low. Whereas, the countries with low GDP per capita seem to follow no significant trend, as some countries do well in that aspect and some struggle.

