

ASSIGNMENT -1

DATA VISUALIZATION

ABSTRACT

Presentation for THE WEALTH OF NATIONS,
A visual report that shows the data in the
form of charts and maps using Excel,
Tableau to the clients requirements.

Parvathavardini Murugan.

GLA DATA 1

Date: 27/10/2022

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Task 1

The wealth of nations



Image Source : <https://artuk.org/discover/artworks/the-wealth-of-nations-297157>

The Wealth of Nations is prevailing view was that gold and silver was wealth, and that countries should boost exports and resist imports in order to maximize this metal wealth.

What is data policies?

A Data Protection Policy is a statement that sets out how organisation protects personal data.

It is a set of principles, rules and guidelines that informs how you will ensure ongoing compliance with data protection laws.

List of Policies and Procedures:

- Computer Misuse Act 1990
- Government technology standards and guidance
- The copyright Regulations 1992
- Data Protection Act 2018(GDPR compliance)
- PCI Compliance

Computer Misuse Act 1990 - An Act to make provision for securing computer material against unauthorised access or modification; and for connected purposes.

Government technology standards and guidance - This is collated guidance from government websites and independent bodies to help you follow the technology code of practice.

The copyright Regulations 1992 - The Copyright (Computer Programs) Regulations 1992 extended the rules covering literary works to include computer programs.

Data Protection Act 2018 - is the UK's implementation of the General Data Protection Regulation (GDPR). Everyone responsible for using personal data has to follow strict rules called 'data protection principles'.

PCI Compliance - adhering to the Payment Card Industry Data Security Standard (PCI DSS) as defined by the defined by the Payment Card Industry Security Standards Council.

Some examples of policies should be:

1. Encryption policies
2. Acceptable use policies
3. Password policies - advice on creating strong passwords
4. Email policies
5. Data processing policies

To adhere data policies the employee training is key to success and need reviewed on a regular basis and where necessary.

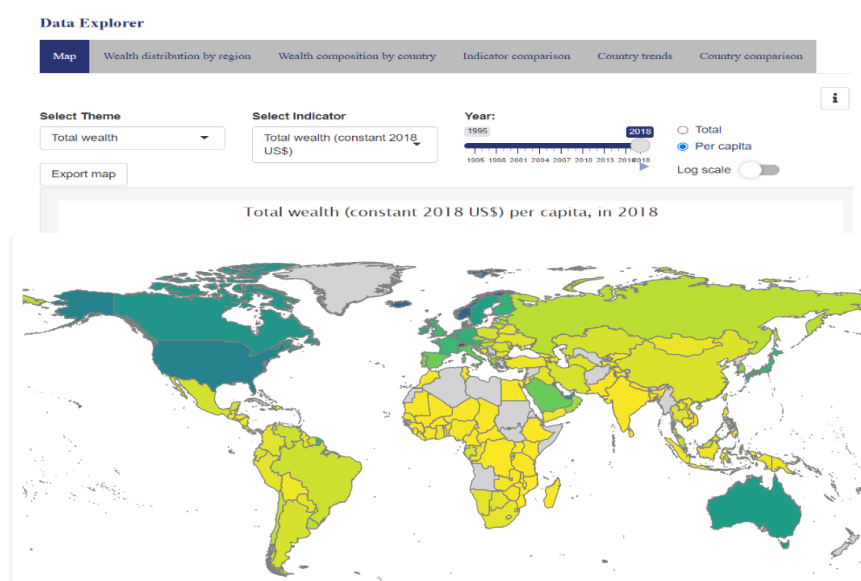
Why these policies need to be adhered to while using this data?

1. Encryption is only accessible or understandable to approved users
2. It's about keeping your employees away from malware and viruses
3. Help set expectations with your website visitors
4. Good data protection also makes good economic sense because it saves you time and money
5. The kind of information that can be disclosed via email these policies can prevent from email based fraud.

Why it is important to be aware of these rules as a data analyst ?

These policies are important and helps to deliver secured reports for executive leadership that effectively communicate trends, patterns, and predictions using relevant data.

For example “The Wealth of Nations 2021” provides an updated database and rich analysis of the world’s wealth accounts spanning 146 countries, annually from 1995 to 2018. It contains the widest set of assets covered so far, including human capital broken down by gender, as well as many different forms of natural capital, spanning minerals, fossil fuels, forests, mangroves, marine fisheries and more.

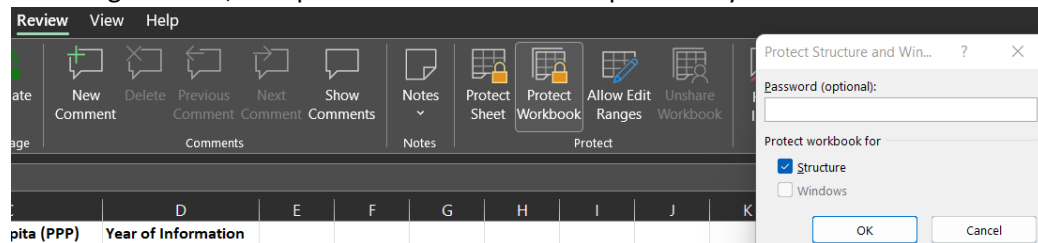


Task 2

The Wealth of nations data with excel:

1. Set a password to protect the workbook

To Protect My workbook I used Review Tool bar then got a **Protect workbook** option following the click, DB opened I used Password to protect my workbook



2. Highlight column C and change the data to display in British Pound symbol

To change British pound symbol First I turned values to Table for that I used Insert Toolbar. I changed everything to **Table** form.

Then highlighted C column used **Accounting number format** changed the value to pounds.

3. Turn the GDP sheet into a table

Rank	Country	GDP - per capita (PPP)	Year of Information
1	Monaco	\$190,513.00	2019
2	Liechtenstein	\$180,367.00	2018
3	Macau	\$123,965.00	2019
4	Luxembourg	\$115,874.00	2020
5	Singapore	\$97,341.00	2019
6	Qatar	\$90,044.00	2019
7	Ireland	\$86,781.00	2019

GDP - per capita (PPP)	Year of Information
\$190,513.00	2019
\$180,367.00	2018
\$123,965.00	2019
\$115,874.00	2020
\$97,341.00	2019
\$90,044.00	2019
\$86,781.00	2019
\$84,600.00	2014
\$81,798.00	2019
\$71,549.00	2018
\$70,800.00	2015

Rank	Country	GDP - per capita (PPP)	Year of Information
1	Monaco	£ 190,513.00	2019
2	Liechtenstein	£ 180,367.00	2018
3	Macau	£ 123,965.00	2019
4	Luxembourg	£ 115,874.00	2020
5	Singapore	£ 97,341.00	2019
6	Qatar	£ 90,044.00	2019
7	Ireland	£ 86,781.00	2019
8	Isle of Man	£ 84,600.00	2014
9	Bermuda	£ 81,798.00	2019

4. Filter the table to display only the information for 2019

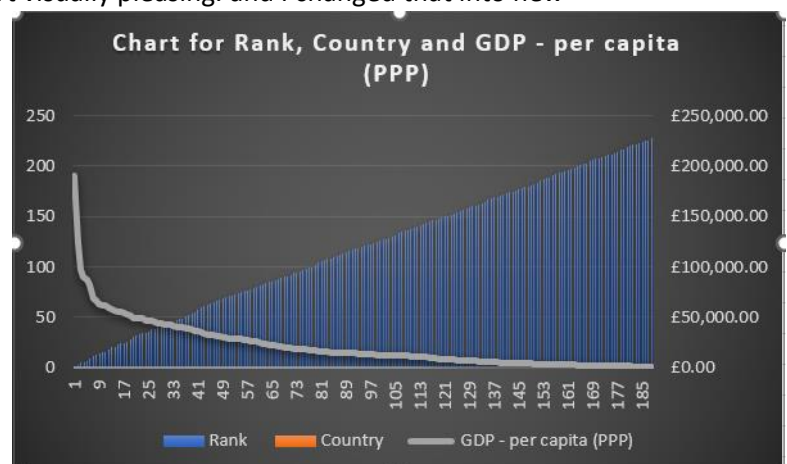
To Filter 2019 I went to down arrow option in Year of information D column heading, It shows me list of years I filtered 2019 year. It gives exact Information.

C	D
GDP - per capita (PPP)	Year of Information
£ 190,513.00	2019
£ 123,965.00	2019
£ 97,341.00	2019
£ 90,044.00	2019
£ 86,781.00	2019
£ 81,798.00	2019
£ 68,628.00	2019
£ 67,119.00	2019
£ 63,633.00	2019
£ 62,530.00	2019
£ 62,100.00	2019
£ 59,848.00	2019
£ 57,804.00	2019
£ 56,935.00	2019
£ 56,188.00	2019
£ 55,874.00	2019
£ 53,919.00	2019
£ 53,240.00	2019
£ 51,934.00	2019
£ 49,854.00	2019
£ 49,854.00	2019
£ 49,031.00	2019
£ 48,668.00	2019

5. Next create a chart that will only display the following data 'Rank, Country and GDP – per capita (PPP). To create chart I went to Insert toolbar and used Insert combo chart.

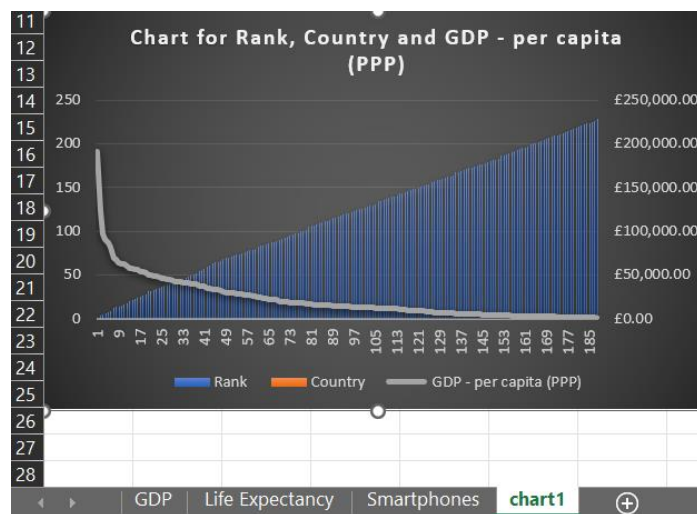
6. I changed Titles and styles to create chart visually pleasing. and I changed that into new style.

Country	GDP - per capita (PPP)	Year of Information
Monaco	£ 190,513.00	2019
Qatar	£ 123,965.00	2019
Singapore	£ 97,341.00	2019
Switzerland	£ 90,044.00	2019
United Arab Emirates	£ 86,781.00	2019
United Kingdom	£ 81,798.00	2019
United States	£ 68,628.00	2019
United States	£ 67,119.00	2019



- Move the chart to a new sheet tab and label with a suitable name

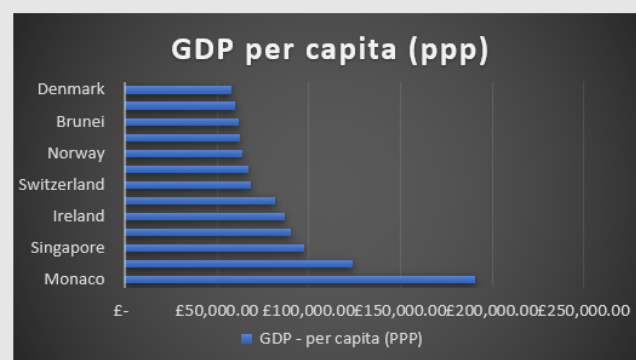
I moved the chart into new sheet using sheet tabs. Copied and pasted the charted.



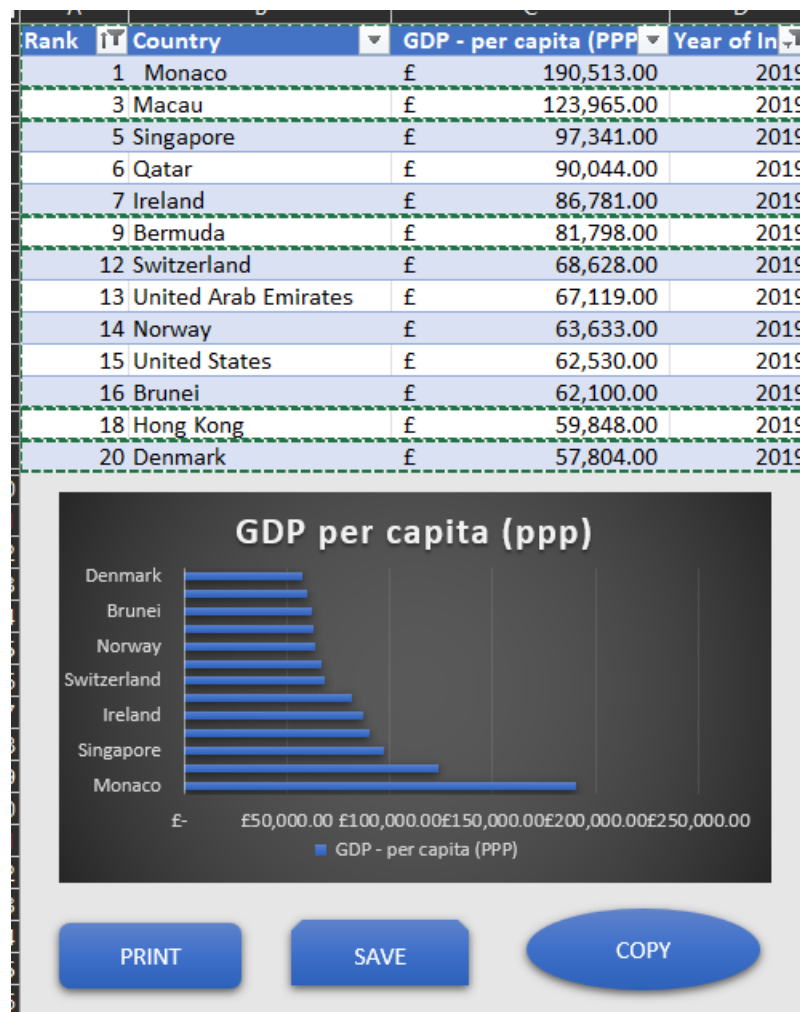
- Create a sort for the top 20 highest ranking countries
- Next create a new Bar chart to display the 20 highest ranking countries from your sort and then move the chart to be underneath the table, as shown below.
- Colour the background by highlighting the area underneath the table as shown below. Find the add a fill colour icon and select a colour.

I used sorting from right click on A column I selected top 20, accordingly my chart was changed. I dragged that chart into below the table. I used **background fill** to highlight underneath area.

Rank	Country	GDP - per capita (PPP)	Year of Inf
1	Monaco	£ 190,513.00	2019
3	Macau	£ 123,965.00	2019
5	Singapore	£ 97,341.00	2019
6	Qatar	£ 90,044.00	2019
7	Ireland	£ 86,781.00	2019
9	Bermuda	£ 81,798.00	2019
12	Switzerland	£ 68,628.00	2019
13	United Arab Emirates	£ 67,119.00	2019
14	Norway	£ 63,633.00	2019
15	United States	£ 62,530.00	2019
16	Brunei	£ 62,100.00	2019
18	Hong Kong	£ 59,848.00	2019
20	Denmark	£ 57,804.00	2019



11. The next task is to create 3 macro buttons, print the sheet, Save the file and Copy the sheet. To get a 3 macros I used **Insert** toolbar **illustrations** menu to get a buttons I used Developer toolbar to record macros. 3 macros worked well.



12. Using the copy macro, copy the sheet and then paste it into a new word document keeping the formatting. Give the page a title 'GDP (Gross domestic product)' .

13. Save your document as 'Word Gross domestic product report 1'

I Created new document and saved as 'Word Gross domestic product report 1' and title given 'GDP (Gross domestic product)' .

GDP (Gross domestic product)

Rank	Country	GDP - per capita (PPP)	Year of Inf
1	Monaco	£ 190,513.00	2019
3	Macau	£ 123,965.00	2019
5	Singapore	£ 97,341.00	2019
6	Qatar	£ 90,044.00	2019
7	Ireland	£ 86,781.00	2019
9	Bermuda	£ 81,798.00	2019
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14	Norway	£ 63,633.00	2019
15	United States	£ 62,530.00	2019
16	Brunei	£ 62,100.00	2019

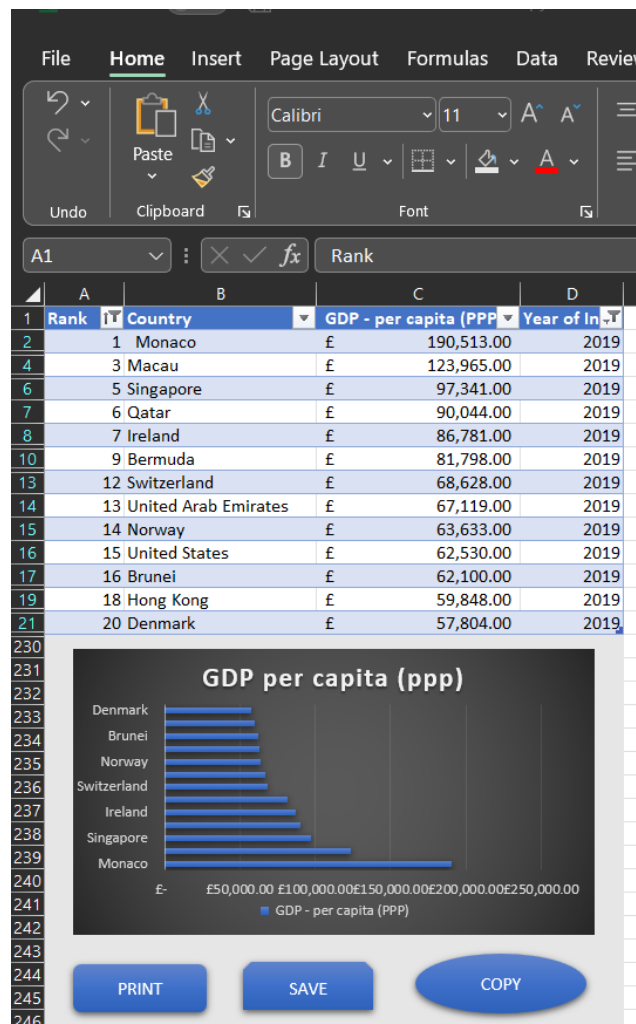
14. I used **view** toolbar to go page layout then I created header and footer

Parvathavardini		Murugan		GLA DATA1	
Rank	Country	GDP - per capita (PPP)	Year of Info		
1	Monaco	£ 190,513.00	2019		
3	Macau	£ 123,965.00	2019		

15. I edited all the columns to give details

DATE 28/10/2022	Assignment 1	Data visualization			
Footer					

17. I Returned my view to normal and saved the sheet in name o Excel Gross domestic product report 1

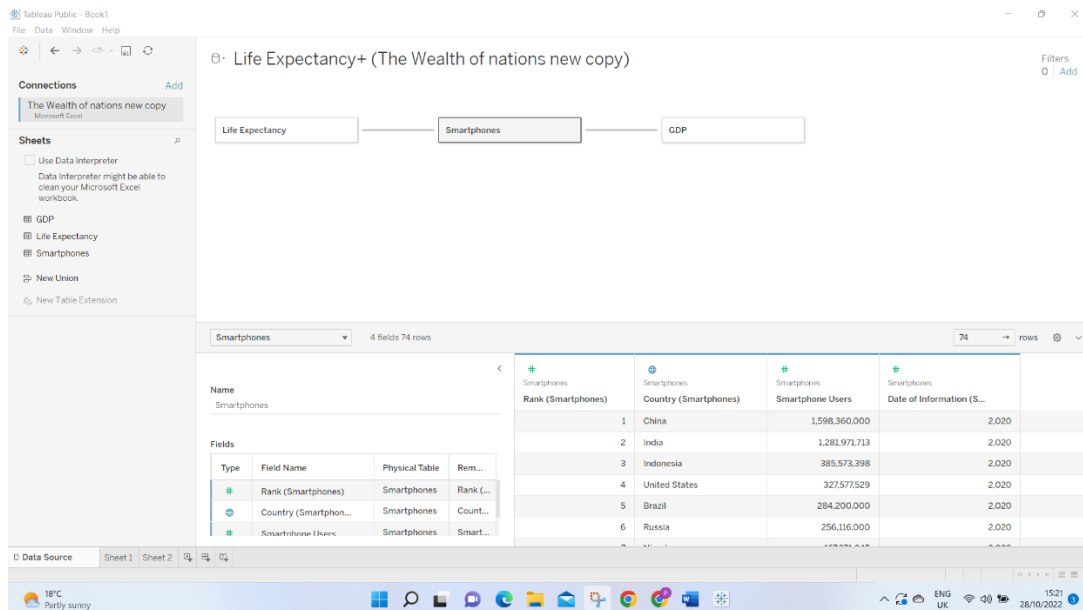


Task 3

The wealth of nations Data visualizations in Tableau

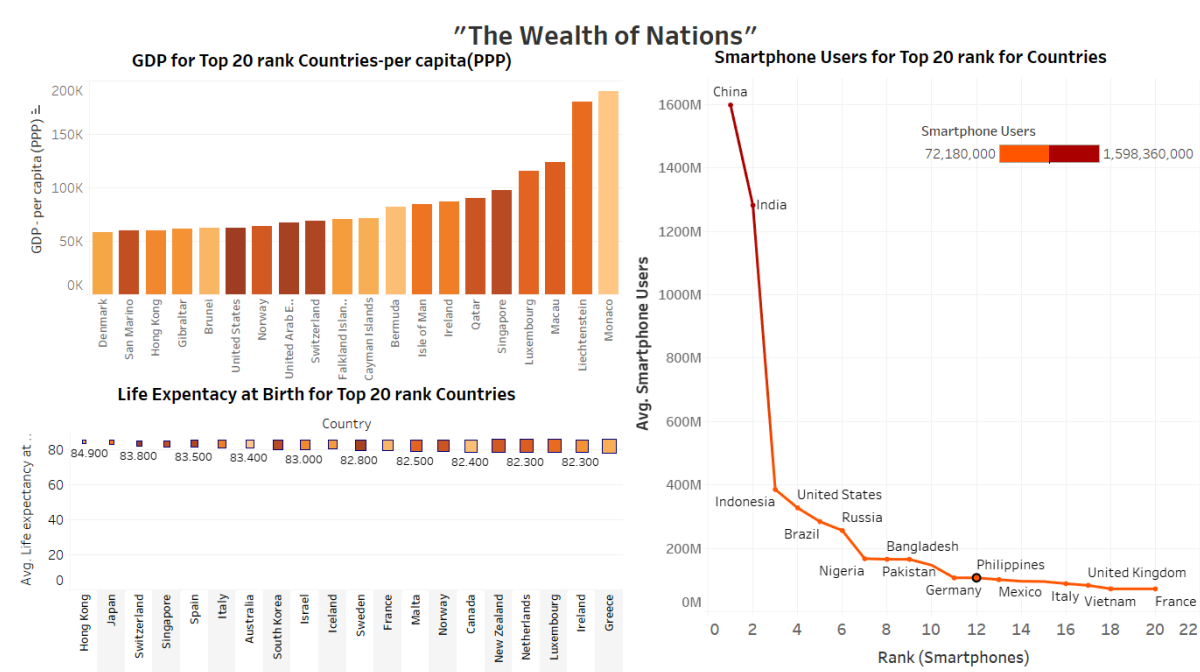
- 1) Import data
- 2) Set relationships:

I imported data and gave relationship in order. I checked the values.



- 3) I built blind friendly charts for GDP, Life expectancy, Smartphones usages for Top 20 rank countries.

Some of Chart Analysis for Top 20 countries.



In the below chart have showed

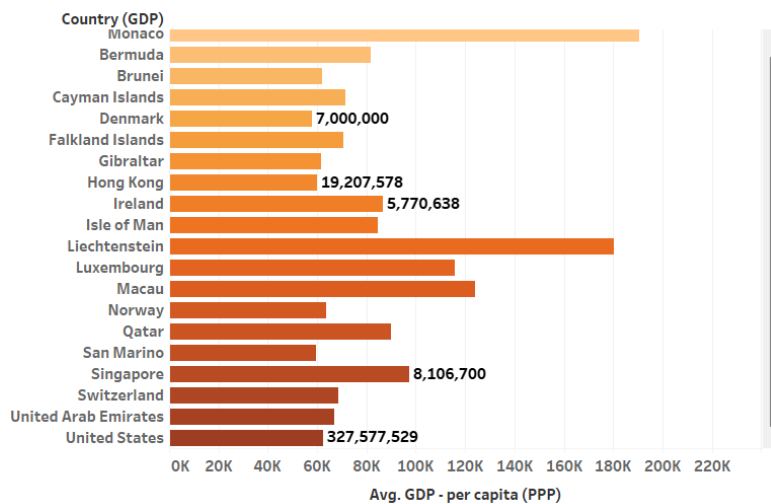
I used blind friendly colours for the charts.

"The wealth of Nations"

Map shows Top 20 Rank countries for GDP



Top 20 Countries(GDP) with Avg.Smartphone Users.



Here is the link for Tableau charts:

https://public.tableau.com/views/assignment1_16669713672710/Dashboard2?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link