Wealth of Nations

Assignment 1 – Tableau & Excel

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Contents

Data Protection
Policies and procedures

Data policies and procedures are primary governed by Data Protection laws and regulations. These policies and procedures are essential to ensure the integrity, security, and ethical use of data.

The most significant and well-known data protection law in the United Kingdom is the **General Data Protection Regulation (GDPR)** which is in line with the **Data Protection Act 2018** and this act controls how your personal information is being used by organisations, business, or the government.
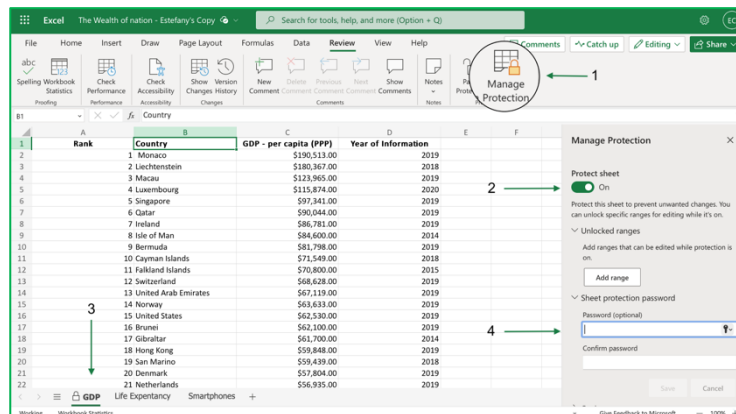There are other key data policies and procedures in the UK, such as:

- **Data Protection Impact Assessment (DPIA):** Which are conducted to identify and mitigate data protection risks associated with processing operations.
- **Data Subject Rights:** Individuals have the right to access, rectify, erase, and restrict the processing of their personal data. The importance to follow these rights is crucial for respecting individuals' privacy and ensuring data accuracy.
- **Data Security and Encryption:** Implementing security measures, such as encryption, is essential to protect data from unauthorized access. Data breaches can result in significant financial penalties and damage an organization's reputation.
- **International Data Transfers:** Organizations must ensure that international data transfers comply with GDPR's strict requirements.
- **Data protection Officer (DPO):** A DPO helps organizations to ensure compliance with data protection laws and regulations.
- **Records of Processing Activities (RoPA)**: Which proves accountability and transparency in data processing.

When working with data is important to be aware of and adhere to these regulations as failure to follow these policies can result in legal consequences, including fines, penalties, and lawsuits. Additionally, violating these policies can harm the reputation of both the data analyst and the organization they work for. Demonstrating a commitment to data policies promotes trust among stakeholders, including clients, customers, and the public. Following the policies ensures that the data stays accurate, secure, and reliable developing integrity and responsibility.

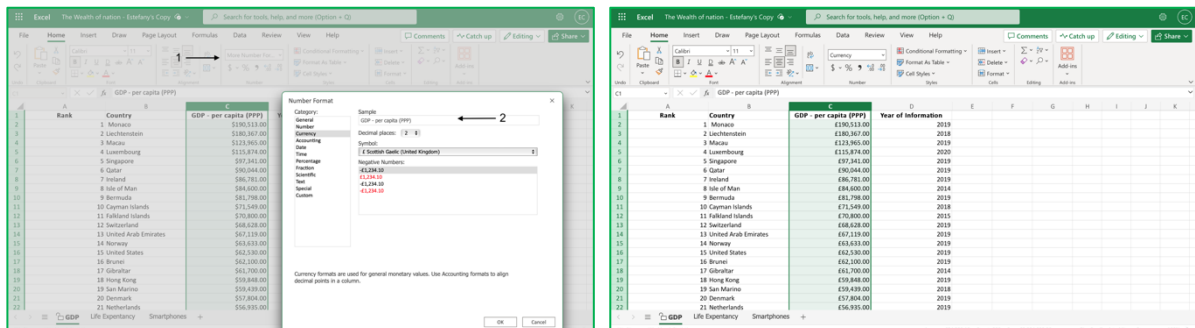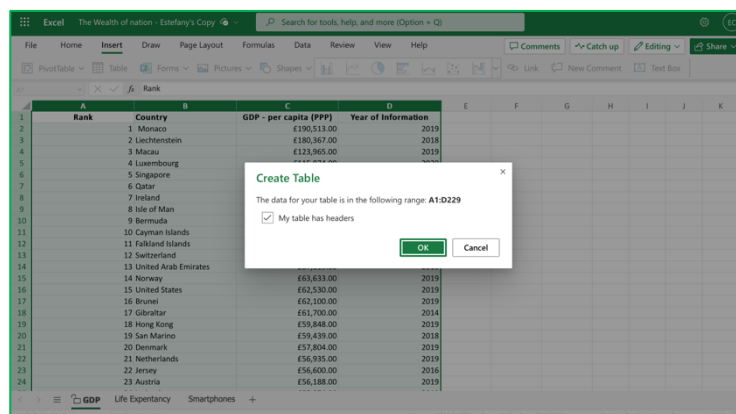# Excel & The Data
GDP Tasks:

  1. To set a password to protect the workbook, I followed the next steps: I selected the sheet I wanted to protect. I went to the "Review"(1) tab in the Excel ribbon. I clicked on "Protect Sheet" (2); a lock will appear next to the sheet name to indicate that has been protected (3). I entered a password for the sheet in the dialog box (4) then I re-entered the password to confirm. I finally saved the file to apply the sheet protection with the password.
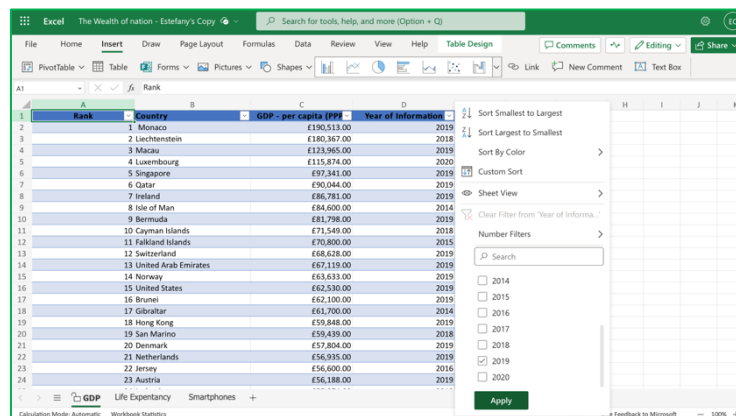

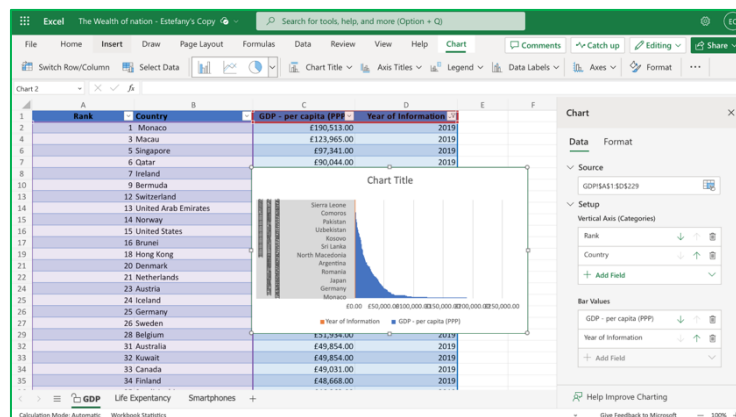**2.** Turning currency (1) from **$** to **£** using the Number Format (2).

3. Turning GDP sheet into a table from the Insert tab using columns A – D as references.
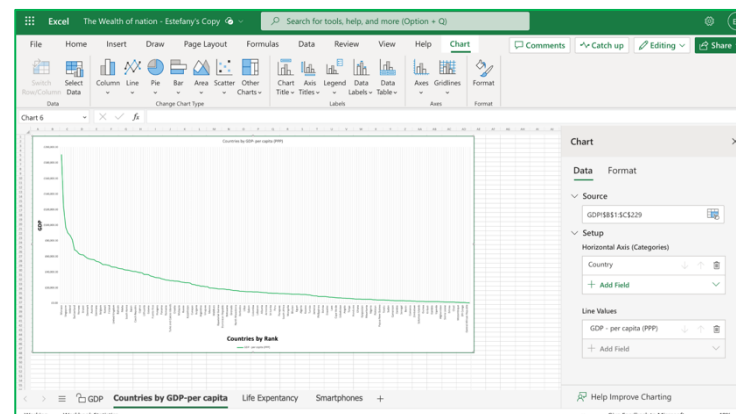
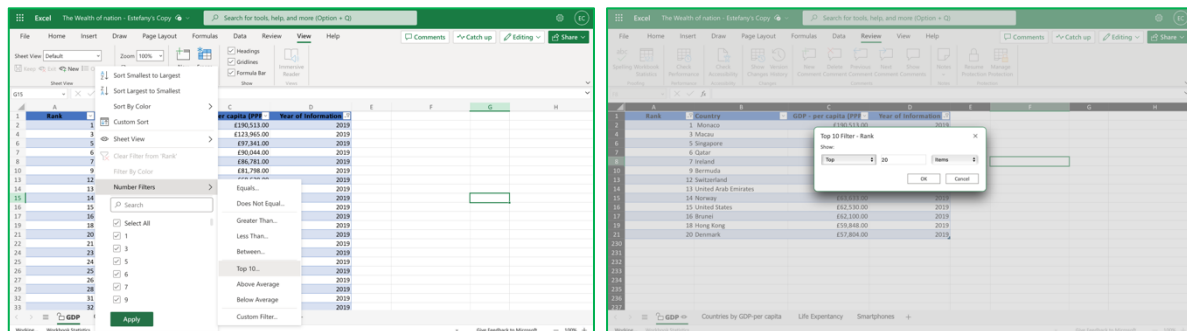**4.** Displaying only the information for 2019 from the filtering button on the table.

5. By using the table as a reference, I was able to create a chart that would only display the following data 'Rank, Country and GDP -per capita (PPP)' from the "Insert Tab".
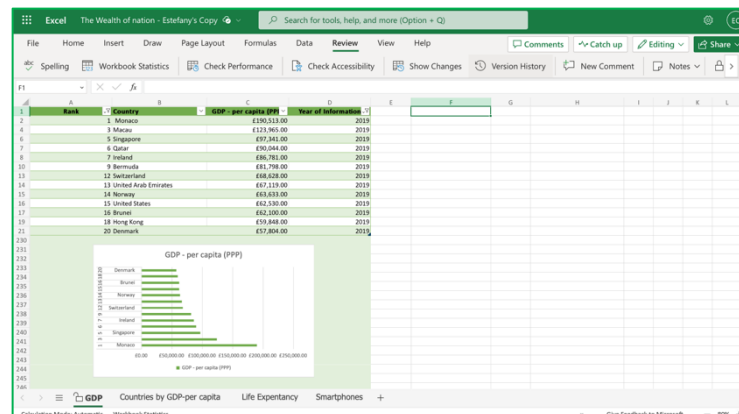

6 & 7. When you have many data points to display on a chart with 200+ values in this case being the countries in rank order on the y-axis, it is essential to choose the right chart type and consider various strategies to ensure the data is presented effectively this is the reason why a line chart is suitable for showing trends over time or across a continuous range, making them a good choice for large datasets. Lastly the chart was moved to a new sheet that has been renamed – Countries by GDP- per capita (PPP).

8. To sort the list to the top 20 highest ranking countries using a Number filter in Excel I followed these steps. In the "Sort & Filter" group, I clicked on the "Filter" button to enable filters in the headers of your columns. On the filter dropdown in the "Ranking" column header I chose the "Number Filters" option, then selected "Top 10...". In the "Top 10 AutoFilter" dialog, I set it to display the top 20 items, then finally click "OK" to apply the filter. The table will now display the top 20 highest-ranking counties based on the "Ranking" column.
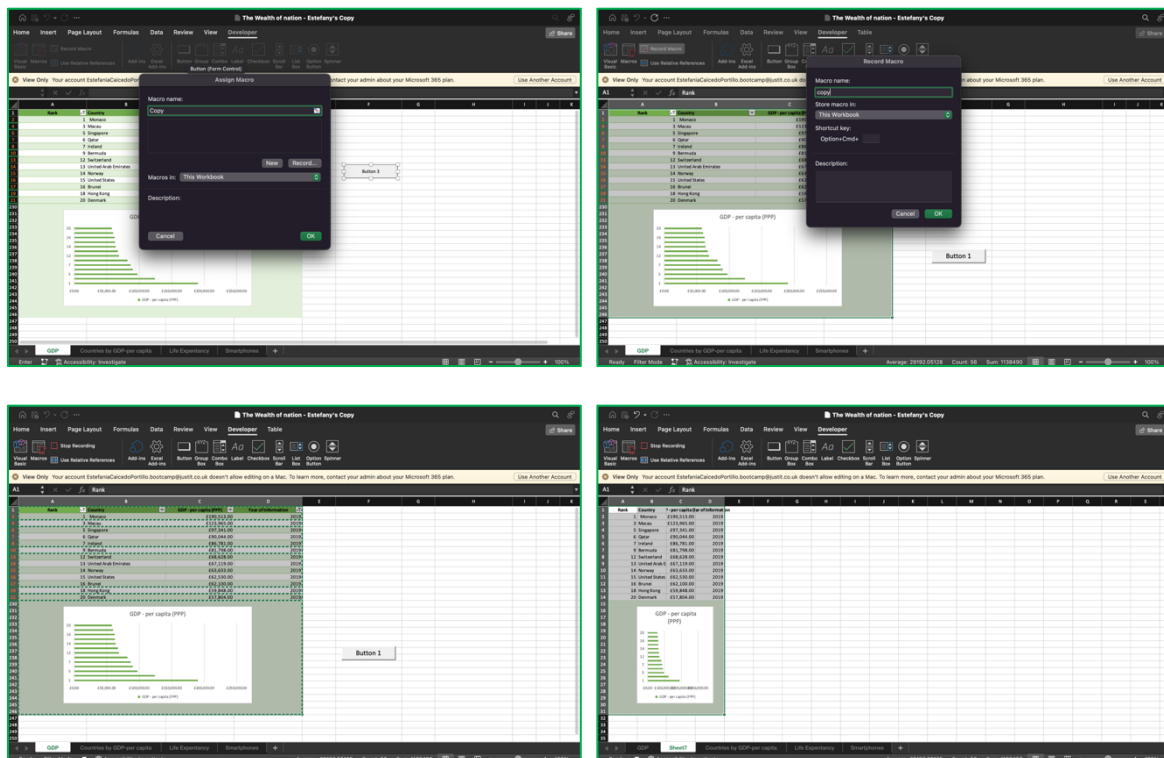

9 & 10. To create the following chart, I highlighted the 20 highest-ranking countries in the "County" and "Ranking" columns. I went to the "Insert" tab and in the "Charts" group, I selected "Bar Chart". With the chart selected, I clicked the "Chart Design" tab in the Excel ribbon to access chart design and formatting options. After customizing the titles and colours, I then dragged the chart to move it underneath the table. To colour the background, I had selected the cells underneath the table. In the "Home" tab of the Excel ribbon, I clicked the "Fill colour" icon to open the colour palette and select a background colour for the cell. This will provide the coloured background for the chart.
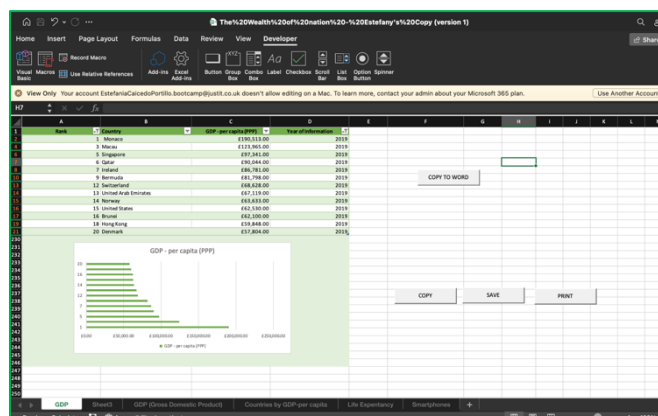
Macros:

To create macros in excel, I begin to add buttons from the "Developer" tab. After clicking the button option, I then place it to the desired location on the worksheet, this button is yet to be assigned to an action. To assign an action to the copy macro, I selected the button created, making sure that the properties are correct. I clicked on the "Record Macro" tab. I proceeded to highlight the area that needs copying and pasted it to a new sheet. After this I pressed stop recording.
The same steps were followed for the "Print" and "Save" Macros assigning to their respective actions.
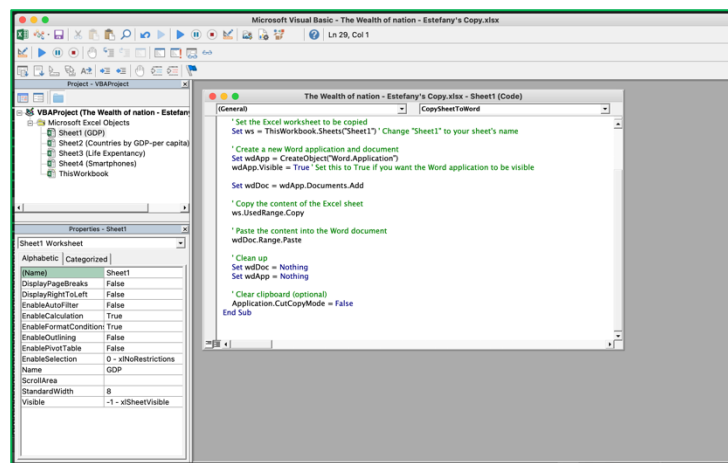
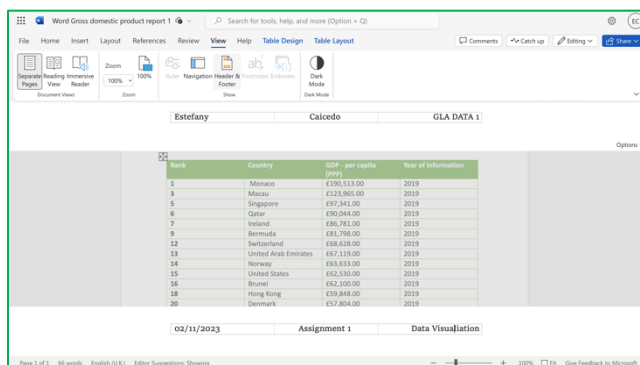## Copy Macro:

Save and Print Macro:

VBA Macros:

To create a VBA macro that copies a sheet from Excel to a new Word document, I first open Excel and press Alt + F11 to open the VBA editor then I inserted a new module by clicking "Insert" > "Module." I followed this by copying and pasting the VBA code into the module.

I then closed the VBA editor and returned to my Excel worksheet. To run the macro pressed Alt + F8, selecting "CopySheetToWord," and clicking "Run."
The macro will create a new Word document, copying the content of the specified Excel sheet to that document, and opening the Word application with the copied content. Finally, I customised the formatting and layout in the Word document and saving it as 'Word Gross domestic product report 1'.
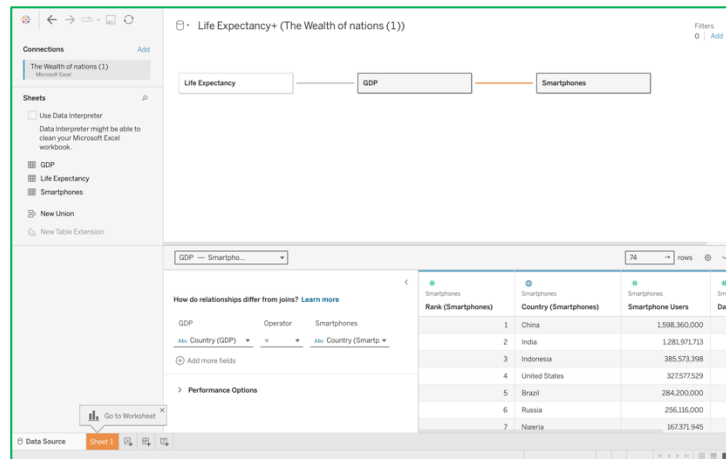

Customising layout by adding header and footer to the table and saving as 'Excel Gross domestic product report 1'.

Tableau

Tableau is a powerful data visualization and business intelligence tool that allows users to create interactive and informative visual representations of their data.

1. Importing Data from Excel to Tableau and creating a relation by the common column "Country".

As the client is Colour blinded the use of blue would make it easy to differentiate contrast in the elements.
The following will provide information in different categories about the top 20 highest ranking countries.