Business Question and Visualization Report

Date	02 OCT 2025
Team ID	PNT2022TMIDxxxxxx
Project Name	Malnutrition Analysis and Forecasting using Power BI
Maximum Marks	5 Marks

Visualization development refers to the process of creating graphical representations of data to facilitate understanding, analysis, and decision-making. The goal is to transform complex datasets into visual formats that are easy to interpret, enabling users to gain insights and make informed decisions. Visualization development involves selecting appropriate visual elements, designing layouts, and using interactive features to enhance the user experience. This process is commonly associated with data visualization tools and platforms, and it plays a crucial role in business intelligence, analytics, and reporting

Business Questions and Visualisation

The process involves defining specific business questions to guide the creation of meaningful and actionable visualizations in Power BI. Well-framed questions help in identifying key metrics, selecting relevant data, and building visualisation that provide insights.
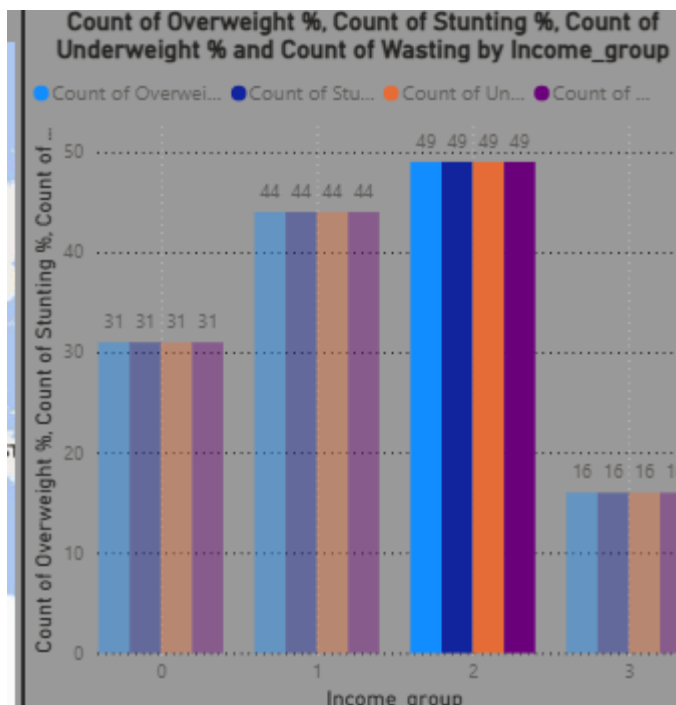
1. **What is the global average of malnutrition indicators (Stunting, Wasting, Underweight, Overweight)?**
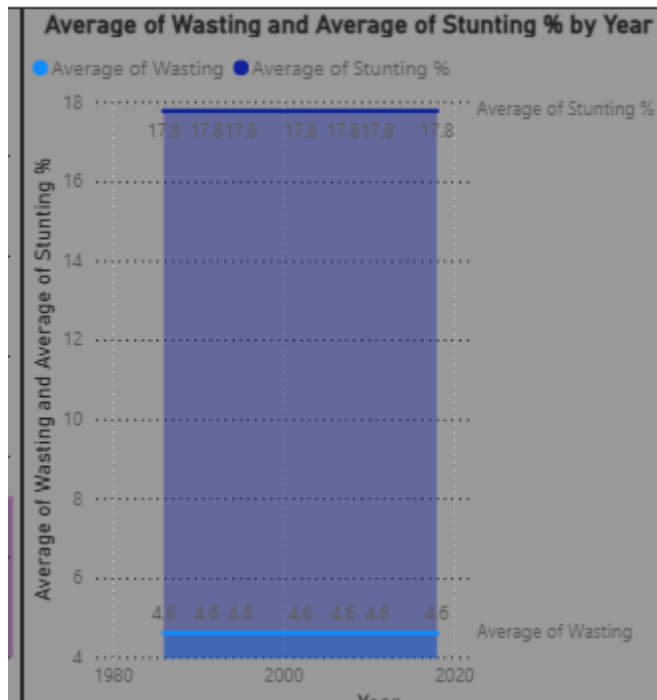   o **Visualization**: KPI Cards showing global averages

2. **Which regions/countries have the highest stunting prevalence?**
   o **Visualization**: World Map with countries color-coded by Stunting %

Average of Stunting % by Country

3. **How do malnutrition indicators vary across income groups (Low, Middle, High)?**
    o **Visualization**: Clustered Column Chart comparing average % by Income Group
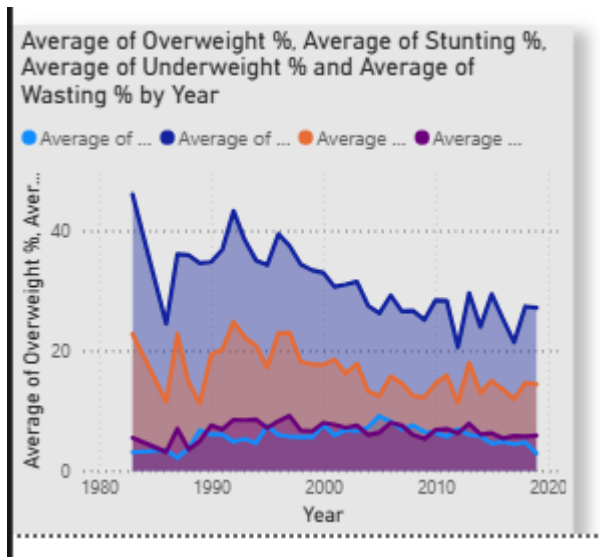

Count of Overweight %, Count of Stunting %, Count of Underweight % and Count of Wasting by Income_group

4. **What are the global trends of stunting and wasting over time?**
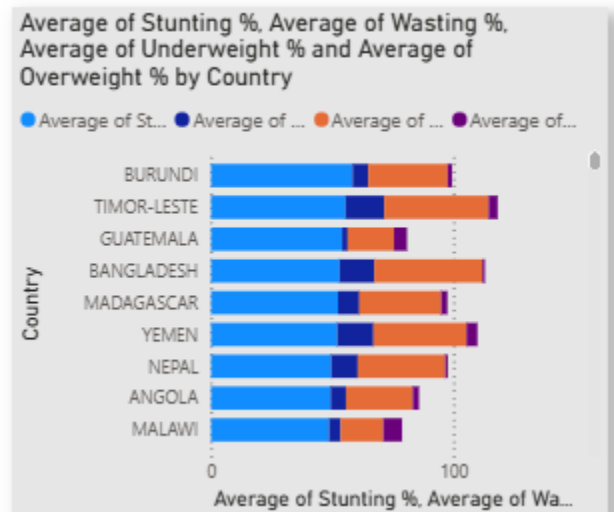   o **Visualization**: Line Chart (Year vs Stunting %, Wasting %)

Average of Wasting and Average of Stunting % by Year

5. **What is the malnutrition profile of a selected country?**
   o **Visualization**: KPI Cards + Line Chart filtered by slicer (Country, Year)

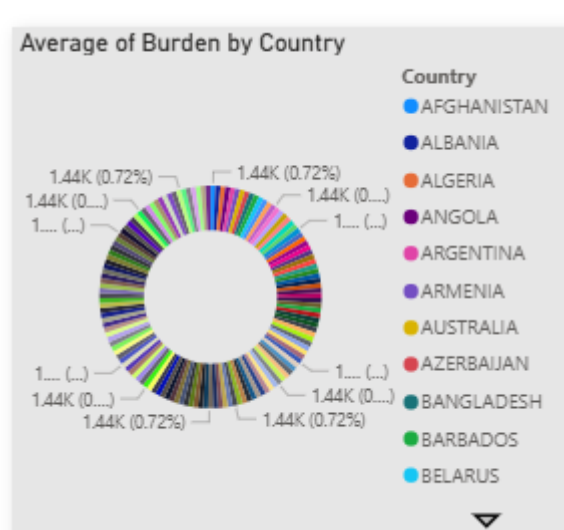6. **How does a country compare to the global average and its income group average?**
   o **Visualization**: Bar Chart comparing Country vs Global vs Income Group

Average of Stunting %, Average of Wasting %, Average of Underweight % and Average of Overweight % by Country
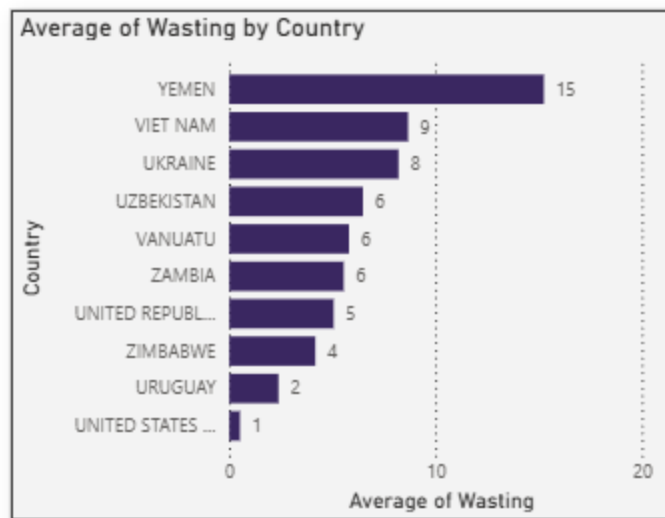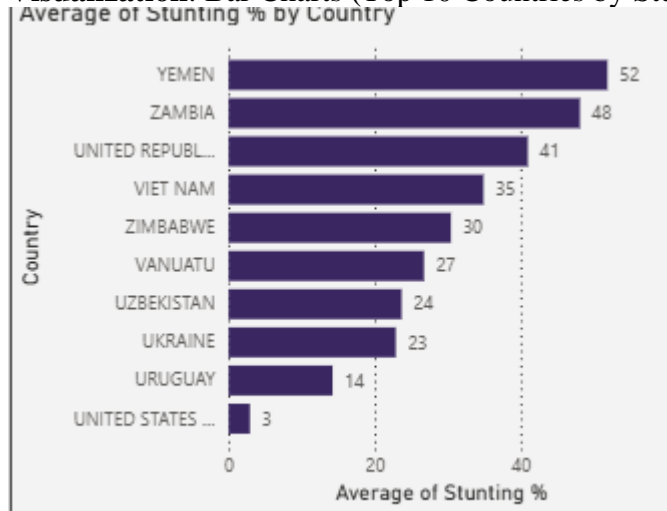
7. **What is the contribution of a country to the global burden of stunting?**
   o **Visualization**: Donut/Pie Chart (Country's burden % of global total)
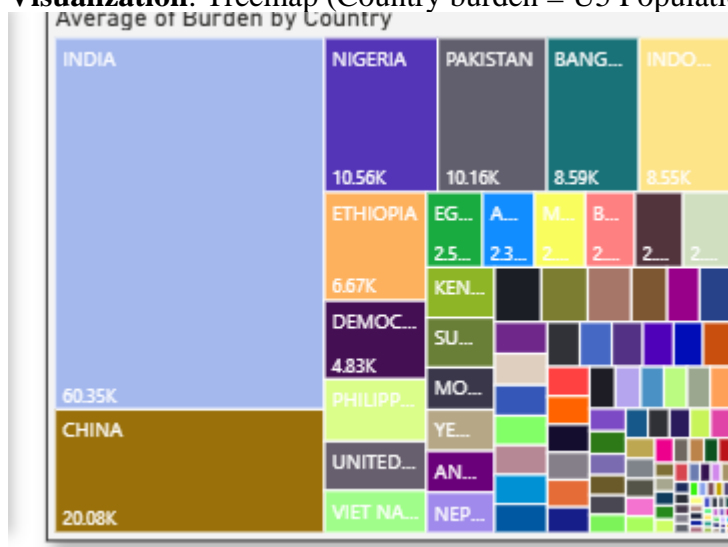

Average of Burden by Country

8. **Which are the top 10 countries with the highest stunting and wasting rates?**

- **Visualization**: Bar Charts (Top 10 Countries by Stunting %, by Wasting %)

Average of Stunting % by Country

Country	Average of Stunting %
YEMEN	52
ZAMBIA	48
UNITED REPUBL...	41
VIET NAM	35
ZIMBABWE	30
VANUATU	27
UZBEKISTAN	24
UKRAINE	23
URUGUAY	14
UNITED STATES ...	3

Average of Wasting by Country

Country	Average of Wasting
YEMEN	15
VIET NAM	9
UKRAINE	8
UZBEKISTAN	6
VANUATU	6
ZAMBIA	6
UNITED REPUBL...	5
ZIMBABWE	4
URUGUAY	2
UNITED STATES ...	1

9. **Which countries contribute the most to the global child malnutrition burden (absolute numbers)?**
   - **Visualization**: Treemap (Country burden = U5 Population × Stunting %)

Average of Burden by Country

INDIA 60.35K	NIGERIA 10.56K, PAKISTAN 10.16K, BANG... 8.59K, INDO... 8.55K
CHINA 20.08K	ETHIOPIA 6.67K, EG... 2.5..., A... 2.3..., M... 2..., B... 2..., 2... ; DEMOC... 4.83K, KEN..., SU..., MO..., YE..., PHILIPP..., UNITED..., AN..., VIET NA..., NEP...

10. **How are different indicators related (e.g., Stunting vs Underweight)?**

- **Visualization**: Scatter/Bubble Chart (X=Stunting %, Y=Underweight %, Size=U5 Population, Color=Income Group)