Global Malnutrition Trends: A Power BI Analysis (1983-2019)

CHAPTER-1

INTRODUCTION

Date	25-12-25
Project Name	Global Malnutrition Trends: A Power BI Analysis (1983-2019)

Introduction:

Malnutrition encompasses both under nutrition (stunting, wasting, and underweight) and over-nutrition (overweight and obesity), representing a double burden of disease that impacts individual health, national productivity, and global economic growth. Even with advancements in food production and healthcare, millions of children under the age of five continue to face malnutrition caused by persistent inequalities in income, education, and access to nutritious food.

To better understand these global patterns, this Power BI project analyzes malnutrition trends from 1983 to 2019, offering insights into underweight, overweight, and stunting rates across different countries and income classifications. The data used for this analysis is derived from global malnutrition estimates and country-wise averages, representing survey data from over 140 countries and 11 million sample points.

By leveraging Power BI's interactive visualization capabilities, the analysis transforms complex datasets into meaningful insights that highlight both improvements and ongoing challenges in global nutrition over the past four decades. This project aims to support evidence-based decision-making for policymakers, researchers, and organizations dedicated to achieving global nutrition equity and advancing the United Nations Sustainable Development Goal (SDG 2 – Zero Hunger).

1.1. Project overviews:

The Global Malnutrition Trends Dashboard consolidates and visualizes malnutrition data across 140 countries and a sample of over 11 million individuals. Using datasets on country-wise averages and malnutrition estimates, this project highlights the evolution of

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underweight, overweight, and stunting rates over time, segmented by income classification and geographic distribution.

Key components of the Power BI dashboard include:

- Summary Metrics: Displays the count of under-five (U5) population, total survey samples, and total underweight cases.
- Country-Level Insights: Shows the sum of overweight individuals by country, identifying regions with higher or lower prevalence rates.
- Income-Based Analysis: Compares malnutrition indicators (underweight, overweight, and stunting) across different income groups.
- Correlation Visualization: Illustrates the inverse relationship between income classification and malnutrition prevalence — where lower-income groups tend to have higher rates of stunting and underweight, while higher-income groups exhibit increasing overweight trends.