TITLE: Ecommerce Keymetric Analysis

SYNOPSIS:

This dataset encompasses key variables that provide insights into customer purchasing behavior and transaction dynamics. Each column represents a distinct attribute related to the customers and their purchases, making it a valuable resource for analysis in Power BI.

PROBLEM STATEMENT:

In a competitive retail landscape, understanding customer purchasing behavior and optimizing sales strategies is essential for business growth. The dataset comprises various attributes related to customer transactions, including demographic information, purchase details, and discount usage

OBJECTIVES:

To achieve the objective of enhancing customer understanding and optimizing sales strategies based on the dataset, a systematic approach to data analysis and visualization is essential. Here’s a structured plan outlining the key steps:

1. Data Analysis and Visualization:
   * To Ensure the dataset is clean and ready for analyse and visualize the mortality rates in Power BI, highlighting the significant differences between the them.
   * Remove duplicates and irrelevant entries, Handle missing values, Convert data types where necessary and Standardize categorical variables
   * Display the number of transactions by age group and gender to identify key demographics.
   * Analyze sales performance by purchase method and Compare total sales across online and in-store purchases and Show the proportion of sales attributed to each purchase method using charts
   * Analyze the relationship between total discounts given and overall sales revenue to ensure discount strategies are effective.

1. Comparative Analysis:
   * Compare total sales, number of transactions, and average spending across different age groups to identify which segments are the most profitable.
   * Compare the average net amount spent for each discount type to determine which promotions drive the most revenue.
   * Compare the gross amount and net amount to quantify the impact of discounts on overall revenue.
   * Compare total sales and transaction counts across different product categories to identify best-sellers and underperformers.
2. Methodology:

This methodology outlines the systematic approach to analyzing and visualizing the dataset regarding customer purchasing behavior and transaction dynamics. Each phase is designed to ensure clarity, accuracy, and actionable insights.

1. Tools and Techniques:
   * + Power BI: This is used to develop interactive dashboards and advanced visualizations.
     + Python/R: For advanced data analysis and statistical modeling (optional, depending on complexity).
     + Excel For initial data cleaning and basic analysis.
2. Summary Dashboards

* Create an interactive dashboard to present key insights.
* Combine various visualizations to create a comprehensive overview of customer behavior and sales performance.
* Use slicers to allow users to filter data by demographics, time periods, and product categories for deeper insights.

1. Approach
   * Data Collection and Analysis: The data is gathered from the Ecommerce Dataset of Cloths purchasing all over the world for Data and analyzed using PowerBI.

OUTCOME:

Recommendations for Improvement:

* + Comprehensive understanding of customer demographics and their purchasing behaviors.
  + Insights into the effectiveness of discount strategies and marketing efforts.
  + Identification of trends that inform inventory management and promotional scheduling.
  + Data-driven strategies for optimizing sales channels and enhancing customer experiences.