

Bike Dekho Sales Analysis

Excel Project

Overview:

The **Bike Dekho Sales Analysis** is a hands-on Microsoft Excel project focused on examining consumer trends and buying behaviors in the biking industry. This project showcases how Excel's powerful capabilities in data cleaning, transformation, analysis, and visualization can be harnessed to derive actionable business insights and create interactive dashboards for stakeholders.

Objectives:

- To clean and structure raw bike sales data for analysis.
- To perform Exploratory Data Analysis (EDA) using Excel functions and PivotTables.
- To identify key patterns in buyer demographics and behavior.
- To build an executive-style dashboard for strategic decision-making.

Key Tasks Performed:

Data Cleaning & Preprocessing:

1. Removed duplicate records and handled missing entries.
2. Standardized data types and formats (e.g., text fields, numeric values).
3. Created calculated columns including:
 - Age Group (Adult, Middle-Aged, Senior Citizen)
 - Income Group (Low, Middle, High)

Exploratory Data Analysis:

Performed using PivotTables and Excel formulas:

- Buyer vs Non-Buyer distribution analysis.
- Purchase trends across **Gender & Age groups**.
- **Occupation-wise** and **Region-wise** buyer segmentation.
- Influence of **Income Group** and **Commute Distance** on purchases.
- Correlation between **Marital Status** and **Education** among buyers.
- Applied **filter on 'Purchase Bike'** i.e "Yes" to derive buyers insights.

Data Visualization:

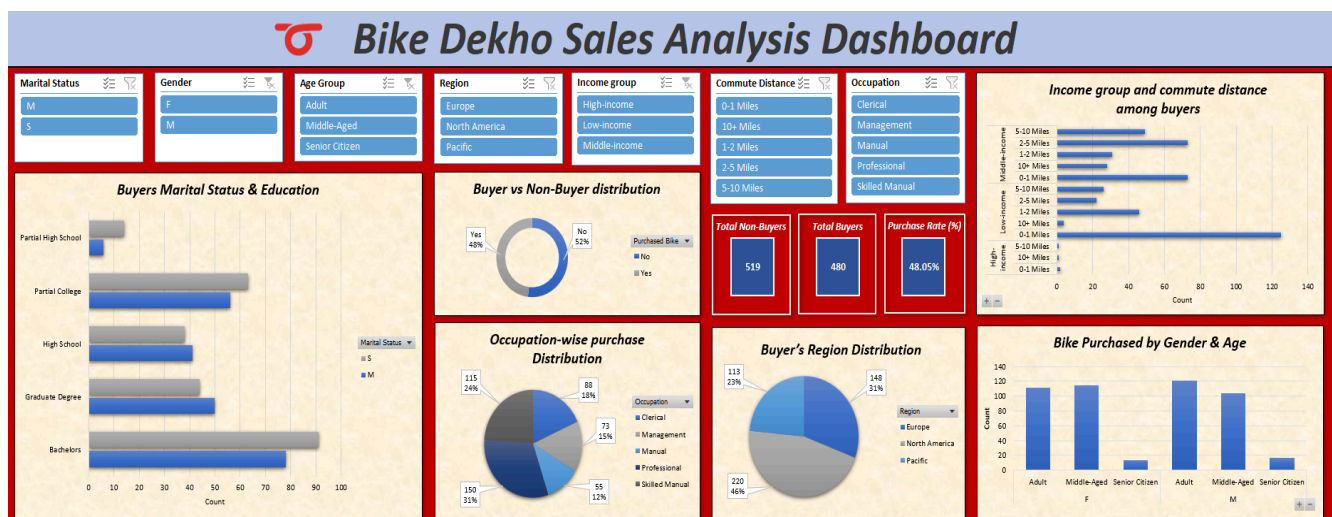
Used a variety of Excel visual elements:

- **Bar charts** for comparisons of education, gender, age, and commute behavior.
- **Pie charts** for buyer distribution by occupation and region.
- Clean, well-structured layout and red-accented KPI blocks for immediate insight.
- Interactive slicers for filtering across:
 - Gender
 - Marital Status
 - Age Group
 - Region
 - Income Group
 - Commute Distance
 - Occupation
- Visual charts representing:
 - Bike Purchased by Gender & Age
 - Income Group vs Commute Distance
 - Buyers' Education vs Marital Status
 - Buyers' Occupation and Region Distribution
 - Buyer vs Non-Buyer Split
- Custom KPI cards highlighting:
 - **Total Buyers: 480**
 - **Total Non-Buyers: 519**
 - **Purchase Rate: 48.05%**

Tools & Features Used:

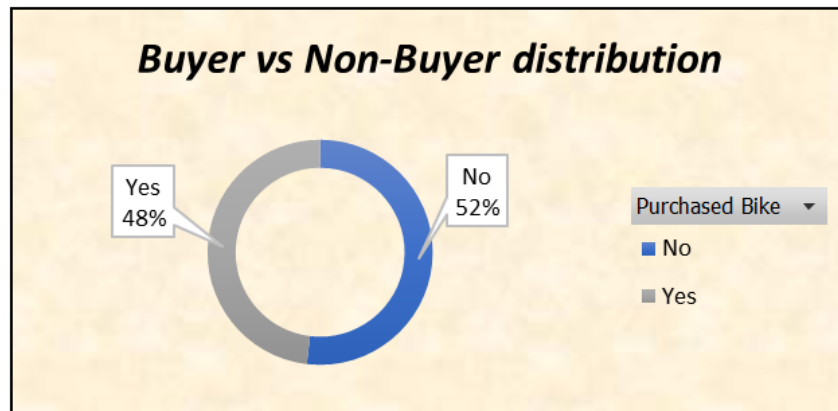
- Microsoft Excel:
 - PivotTables & PivotCharts
 - IF formula for calculated columns
 - Slicers
 - Data Validation
- Interactive Dashboard Design with color-coded panels

Dashboard Insights:



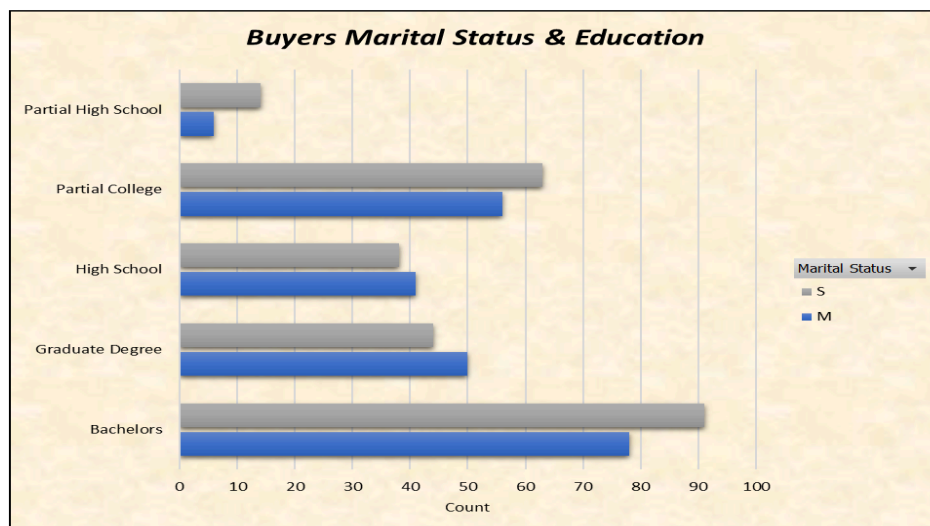
Based on the interactive **Bike Dekho Sales Analysis Dashboard**, here are the key findings:

1. Buyer vs Non-Buyer Overview:



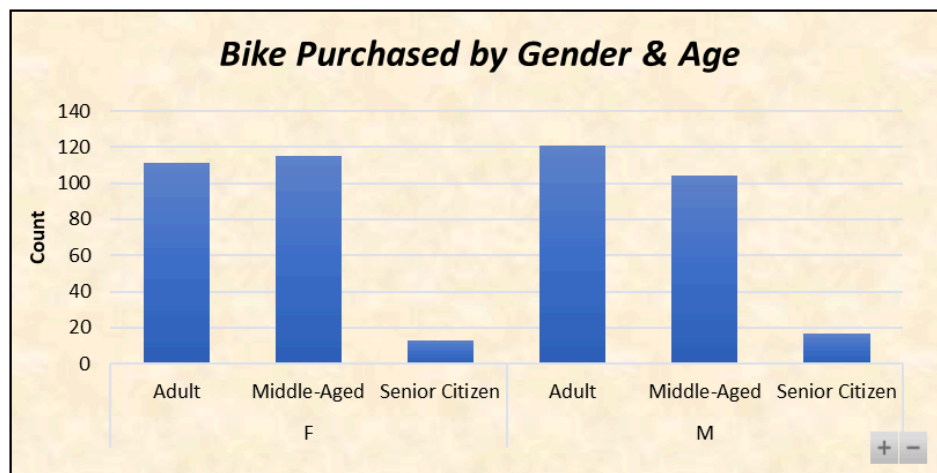
- **Total Buyers:** 480
- **Total Non-Buyers:** 519
- **Purchase Rate:** 48.05%
 - Nearly **half** of the **dataset population** proceeded with purchasing a bike.

2. Buyers by Marital Status & Education:



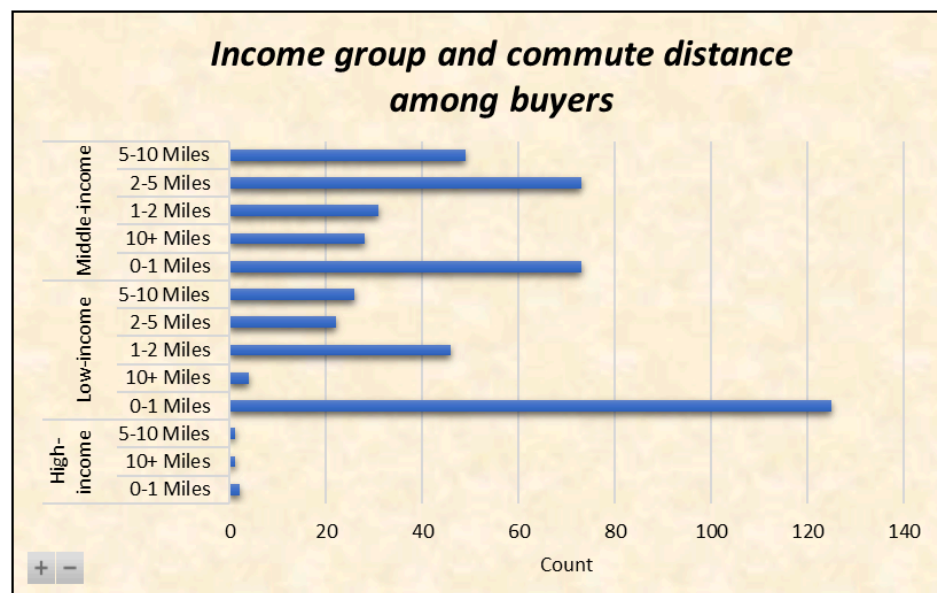
- **Married individuals with Bachelor's degrees** constitute the **highest count** of buyers.
- Among all education levels, **Bachelors** and **Partial College** are the most common among both married and single buyers.

3. Bike Purchase by Gender & Age:



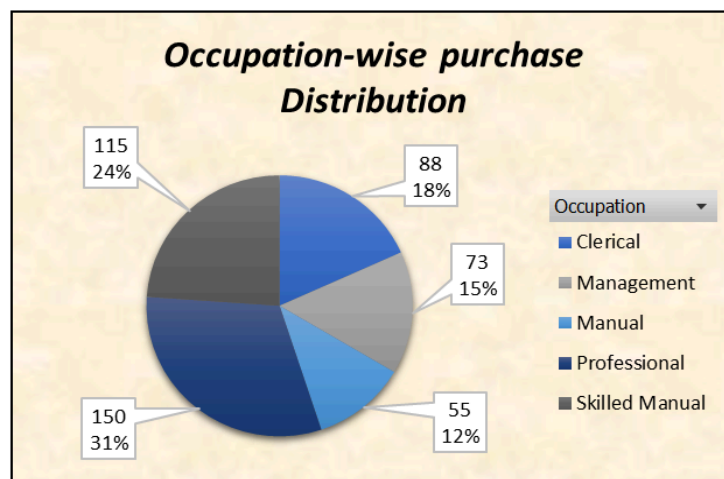
- **Adult males** show the **highest purchasing activity**.
- For females, the purchase count is almost equally distributed across **Adult** and **Middle-aged**, while **Senior Citizens** (both genders) have low purchases.

4. Income Group vs Commute Distance:



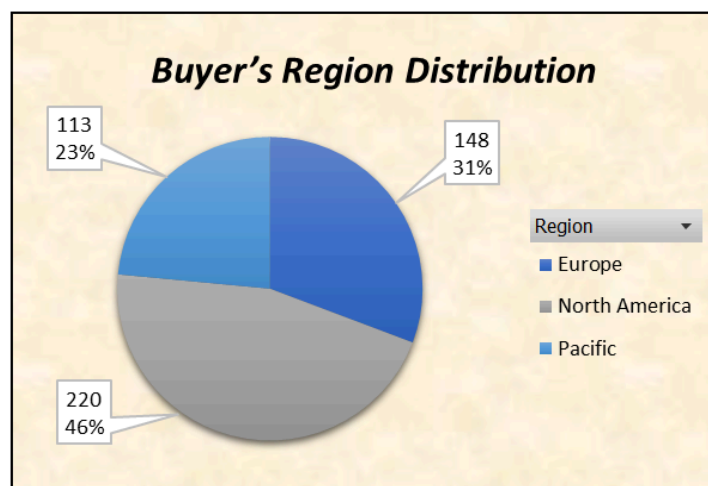
- **Low-income buyers commuting 0–1 miles** show the **highest count**.
- **Middle-income buyers** who commute **2–5 miles** and **0–1 miles** are the next most common.
- **High-income group buyers** are the lowest, regardless of commute distance.

5. Occupation-wise Purchase Distribution:



- Buyers are **fairly distributed across all occupational categories**, with **Professional** and **Skilled Manual** showing a slightly higher proportion.
- **Clerical and Management roles** contribute modestly, indicating potential targeting areas.

6. Buyers' Regional Distribution:



- **North America** has the largest buyer base, followed by **Europe** and the **Pacific region**.
- This suggests **regional preferences** may influence marketing strategies and promotions.

Business Insights Generated:

- Married males with Bachelor's degrees dominate the buyer segment.
- Purchase rate is 48.05%, showing a balanced split between buyers and non-buyers.
- Adult males are the highest bike purchasers among all demographics.
- Low-income individuals with short commute distances (0–1 miles) are most likely to purchase bikes.
- North America accounts for the highest number of buyers, followed by Europe.
- Occupation types like Professional and Skilled Manual are strongly represented among buyers.
- Senior citizens of both genders show minimal purchasing activity, highlighting an underserved segment.

Conclusion:

The Bike Dekho Sales Analysis reveals crucial insights into customer purchasing behavior. With a purchase rate of 48.05%, nearly half of the surveyed population are bike buyers—predominantly **married males with Bachelor's degrees** and **adult males**. **Low-income individuals** with **short commute distances** are the most active buyers, while **senior citizens** remain an untapped segment. **North America** leads regional sales, and occupations like **Professional** and **Skilled Manual** are key buyer profiles. These findings can guide targeted marketing, product positioning, and promotional strategies to enhance sales, customer engagement, and market penetration across demographics and regions.