Bike Dekho – Bike Sales Analysis

Project Overview: -

This Project explores sales trend in Bike Dekho – Bike purchase/Sales industry using Microsoft Excel. This project demonstrates how Excel can be effectively utilized for **data cleaning, transformation, analysis,** and **visualization** to drive meaningful business insights.

Project Objectives: -

- To clean and organize raw bike sales data for better usability.
- To perform exploratory data analysis (EDA) using Excel formulas and PivotTables.
- To uncover key patterns in customer demographics and bike purchases trend in different customer settings.
- To create an interactive and insightful **dashboard** for decision-makers.

Key Tasks Performed: -

1. **Data Cleaning and Preprocessing:**
   - Removed Duplicates.
   - Standardized column formats.
   - Created calculated columns like 'Age Group', 'Income Group' etc. for better usability.
2. **Exploratory Data Analysis:**
   - Used Pivot Table to analyse:
     - Number of Store Visitors, Number of buyers etc.
     - Bike purchase trend by marital Status.
     - Home Ownership and Number of cars vs bike purchase trend.
     - Bike purchases by gender, income, Region, Education, Occupation etc.
3. **Dashboard Creation**

❖ Demographic and buyer behaviour Analysis

Chart – 1:

Insights: -

- Among all categories, **single females** lead in bike purchases.
  - More personal freedom in financial decisions.
  - Possibly urban, independent lifestyle where biking is convenient and trendy.
- **Married males (123)** slightly surpass **single males (119)**.
  - Married men might purchase bikes for both commuting and family recreation.
  - Might reflect increased income stability or health-conscious behavior post-marriage.
- **Married females (108)** have the lowest bike purchases in the group.
  - Time constraints due to caregiving or household responsibilities.
  - May prioritize spending on family over personal items like bikes.
  - Safety or cultural factors might also play a role.
- **Single females (131)** slightly outpace **single males (119)** in purchases.
  - Increasing trend of independent, health-focused urban women embracing biking.
  - Growing infrastructure and social acceptance encouraging female ridership.

Strategic Implications:

- Target single females with urban, lifestyle-focused campaigns.
- Promote bikes as a recreational or fitness tool for married males.
- Encourage bike use among married females through family-friendly messaging.
- Gender-balanced ads with inclusive messaging.

Chart – 2

Insights:

- Single Users buy bikes slightly more than married users.
- This could be due to the fact that single users generally do not have partners or kids. They mostly buy bikes for office commutes or outings with friends.

Strategic Recommendation:

- Target slightly more on Single or "Non married" Customers.

Chart – 3:
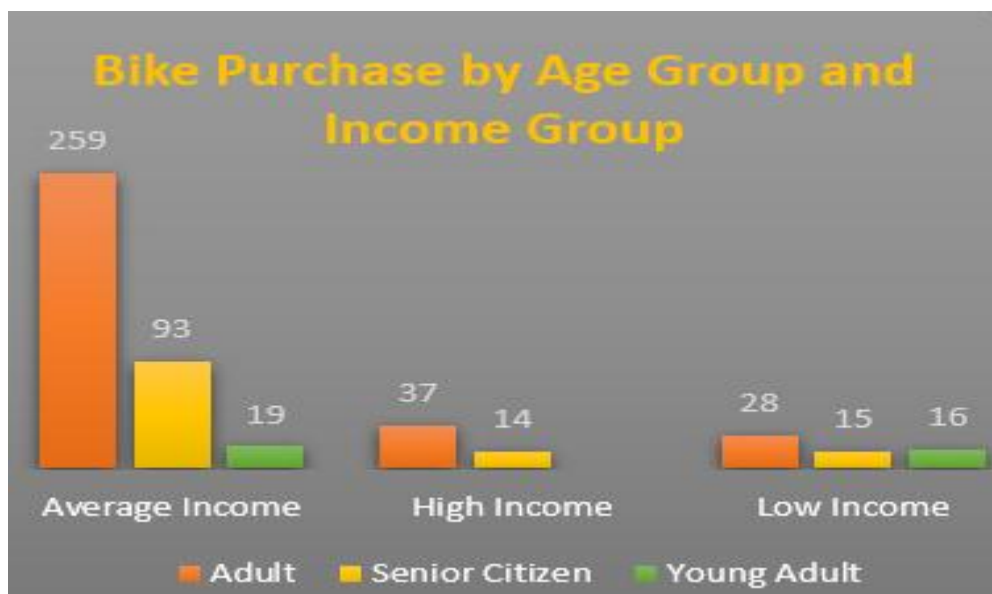
Insights:

- The **highest bike purchases (259)** come from **adults in the average income group**.
  - This could be due to balanced affordability and practical need (commuting, exercise).
  - Adults in this range may not afford cars or may prefer bikes for short-distance travel.
  - Strong alignment with working-class, urban lifestyles.
- **Senior citizens** buy **significantly more bikes (93)** in the average income group than in high (14) or low (15) income.
  - This is because Average-income seniors may have disposable income for leisure or fitness-related biking.
  - High-income seniors may prefer more comfortable or less physically demanding transport.
- **Young adults** are the **lowest buyers** across all income groups.
  - This is because of limited personal income or dependence on parents/guardians.
  - May not prioritize bike ownership—may use public transport or walk instead.
  - Some might be students or not yet in the workforce.
- High-income individuals make **fewer purchases overall.**
  - This is because they may prefer cars or high-end transport options.
  - Bikes may be seen as recreational rather than necessary.
  - Lifestyle may not require biking due to convenience of private vehicles.

Strategic implications

- Focus marketing on average-income adults.
- Position bikes for senior citizens in average income as wellness/leisure tools.
- Offer student discounts or financing for young adults.
- Avoid over-targeting high-income groups with standard bike models.

❖ Lifestyle and Assets Analysis

Chart – 4

Bike Purchases by Home Ownership and Cars
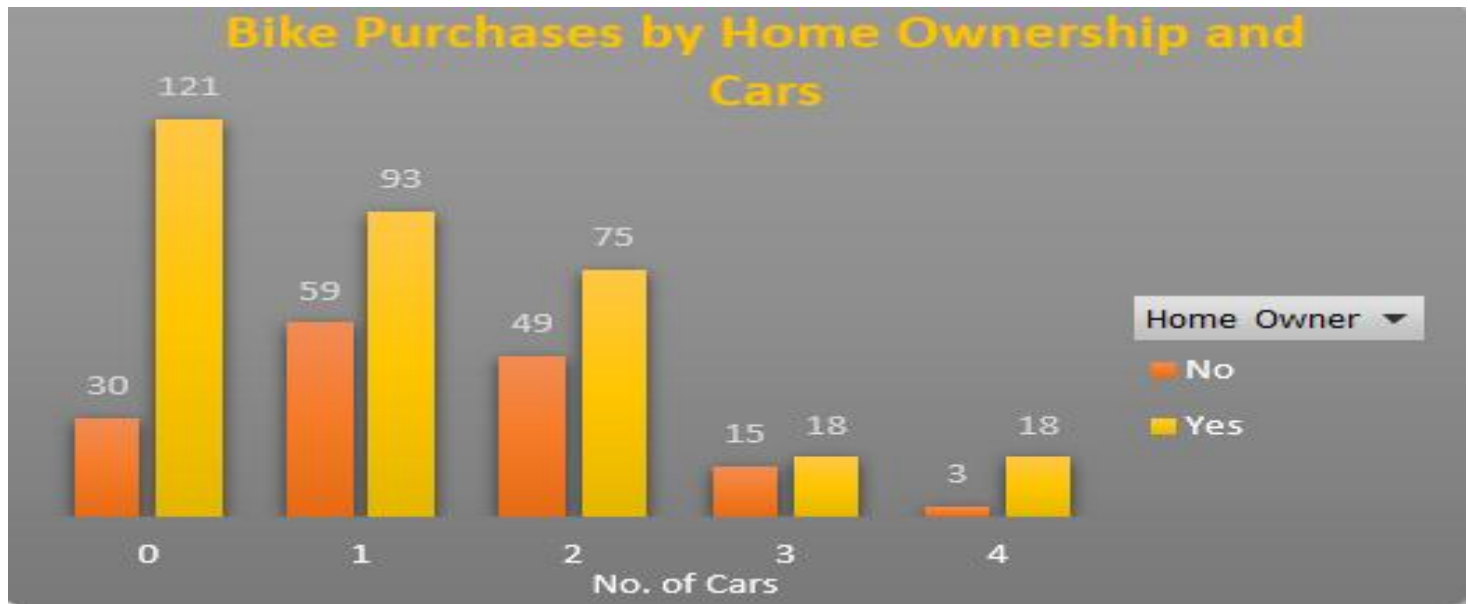
Insights: -

- Homeowners with **no cars** make the most bike purchases.
  - Possibly urban dwellers who don't need cars due to proximity to work or amenities.
  - Bikes act as a primary mode of transport.
  - Owning a home but not a car might reflect eco-conscious or financially strategic lifestyles.
- There's a **clear decline in purchases** as car count rises, for both homeowners and non-homeowners.
  - This is because More cars reduce the need or urgency for a bike.
  - Bike becomes more recreational than essential with higher car access.
- Across all car categories, **homeowners consistently buy more bikes** than non-homeowners.
  - This is because financial stability associated with homeownership may allow for discretionary spending on bikes.
  - Homeowners may have space for storing bikes.
- Non-homeowners without cars also have significant bike purchases (**30**), second only to the top category.
  - This is because Bikes are a **cost-effective** commuting alternative for those who can't afford a car or housing.
  - Could reflect student or lower-income demographics in urban areas.

Strategic Implications:

- Target bike marketing at homeowners with 0–2 cars.

- Promote budget or utility bikes to non-homeowners with 0 cars.
- Offer premium/recreational models to homeowners with 2+ cars.
- Include home storage tips in marketing.

Chart – 5:

Insights: -

- People with **0 children** bought the most bikes.
  - This is because they likely have more **disposable income** and **free time**.
  - Greater lifestyle flexibility to use bikes for fitness, commuting, or leisure.
  - No need to manage logistics or safety concerns related to children.
- There's a **steady decline** in purchases from 0 → 5 children
  - More children usually mean **higher family expenses**, limiting spending on non-essential items.
  - Logistical challenges: Parents may find it harder to use bikes when managing multiple children.
  - Preference for cars/minivans to transport family.
- Slight plateau between 1 and 2 children.
  - With 1–2 kids, families may still manage bike-friendly lifestyles.
  - Could involve shared family biking, bike trailers for kids, or couples using bikes while kids are young.

Strategic implications:

- Target singles and couples without kids.
- Offer family-friendly bike options to households with 1–2 kids.

- Provide budget-friendly and bundled deals for larger families.
- Avoid focusing premium models on large-family households.

Chart – 6

Insights:

- Most bike purchases are by people with 0–1 mile commute.
  - Short distances are ideal for biking—convenient, fast, and efficient.
  - These users likely live close to work, school, or public transit.
  - No need for expensive vehicles or public transport for such short trips.
- Moderate interest is seen in mid-range commute distances:
  - These are still bikeable distances, especially with hybrid or electric bikes.
  - Commutes may be bike-friendly or within urban areas with bike lanes.
- Very few purchases for commutes over 10 miles.
  - Long distances are not practical for regular biking.
 - People with long commutes prefer cars or public transport.

Strategic Implications:

- Focus marketing on urban users with 0–5-mile commutes
- Promote e-bikes for 5–10-mile users

- Create campaigns around health, convenience, and environment for mid-range commuters
- Avoid focusing heavily on 10+ mile commuters for regular bikes

## ❖ Geographic and Professional Insights

Chart – 7
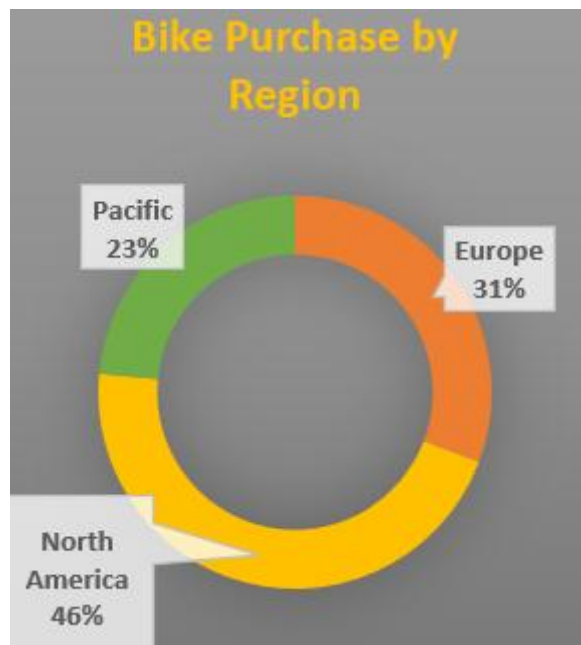
Insights:

- North America has the highest percentage of bike purchases (46%).
    - This could be due to favourable road networks and laws of North America's vast road network and open highways encourage long distance motorcycle riding.
    - Also, consumers may be more willing to invest in high performance motorcycles for long distance travel and touring.
    - North America's high income allows consumers to spend more on high- end bicycle and motorcycles.
- Pacific has lowest percentage of bike purchases.
    - This could be due to changing customer behaviour: Consumer are increasingly looking at motorcycles as leisure product rather than a primary mode of transportation, especially in some regions.
    - In some regions, poor road infrastructure can make riding motorcycles less appealing.

Strategic Implications:

- Target more in North America.
- Europe seems to be an emerging market for bikes. Launching market campaigns may bring in more customers.
- In Pacific Region, people tend to buy less bikes. Targeting this area by marketing campaigns consisting deals on bike, or launching budget friendly bikes can increase the sales performance.

Chart – 8
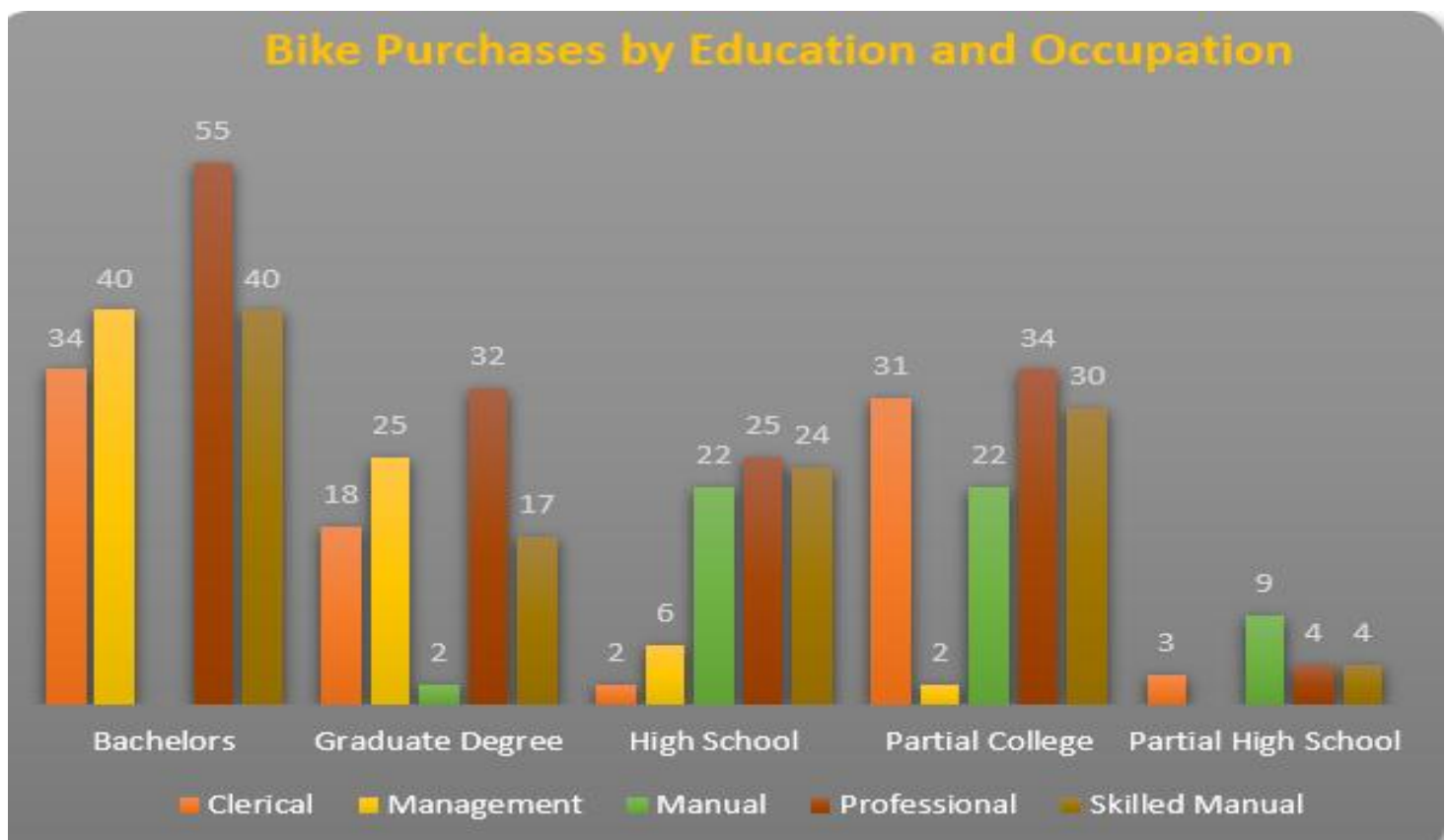
Insights:

- Most bikes are purchased by bachelors who are "Professionals" in their occupation.
    - This could be due to high disposable income which allows them to afford bikes for different purposes.
    - Bikes can be convenient and efficient way to navigate urban areas, avoiding traffic congestions.
- Also, buyers who are professionals, are more likely to buy the bikes, than the users with other occupations.
    - This shows professional buyers have more disposable income irrespective of their education.
- Manual and Skilled manual occupations buy fewer bikes.

- o This could be due to lower income levels, less perceived need for affordability, or Manual labourers might prioritize other transport modes.
- Partial High School Group has the lowest overall bike purchase
  - o This is because lower education often correlates with lower income and awareness.
- Graduate Degree holders buy fewer bikes overall, except in Professional and Management
  - o This is because: They might rely more on cars due to high- income jobs or older age groups are possibly less inclined towards biking.
- Partial College shows balanced purchases across occupations
  - o This group may be early – career individuals exploring eco – friendly or budget conscious transportation.

Strategic Implication:

- Target marketing to Bachelors and Professionals.
- Promote budget models to Partial High School/ Manual Workers.
- Create tailored campaigns for partial College group
- Position premium models to Graduate Degree Professional Segment.

Conclusion: -

The bike market is driven primarily by urban, average-income, single professionals—especially females and bachelors—with short commutes, no children, and limited car ownership. By aligning marketing and product strategies with these user personas, **Bike Dekho** can boost engagement, sales, and brand resonance across the right customer segments.