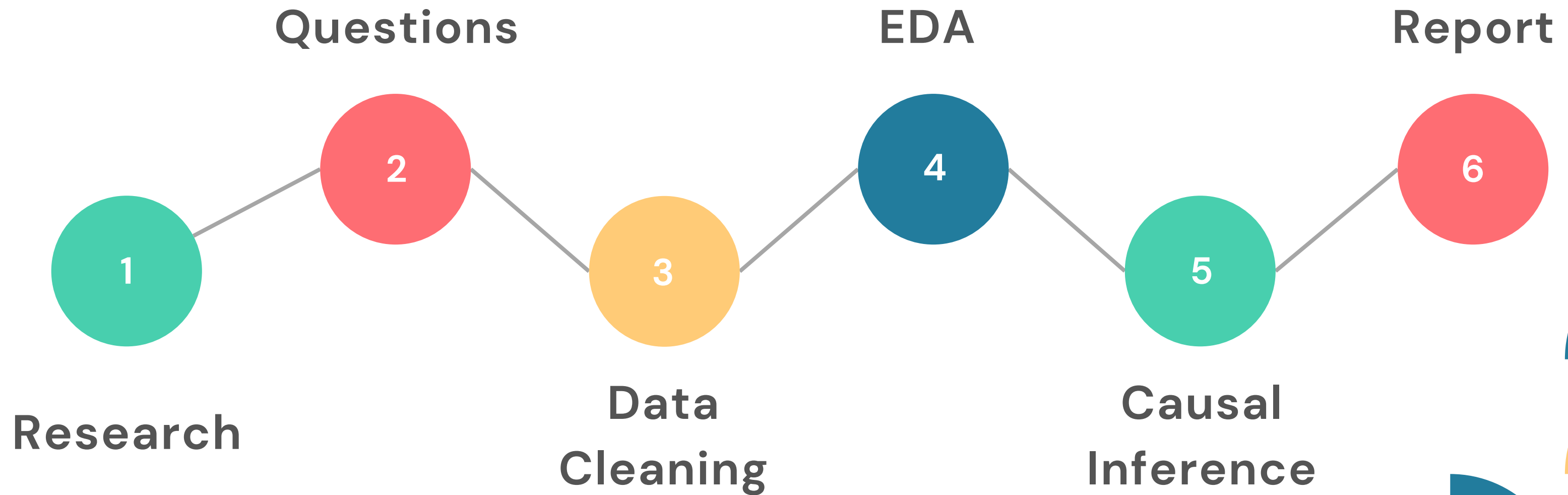




PAKISTAN'S LARGEST ECOMMERCE DATASET

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Uzayr Ali

PROJECT TIMELINE



PROJECT INTRODUCTION

E-Commerce in Pakistan

- Data as the foundation for understanding customer behaviour and trends.
- Exponential growth of Pakistan's e-commerce sector offers valuable insights.

Focus Questions

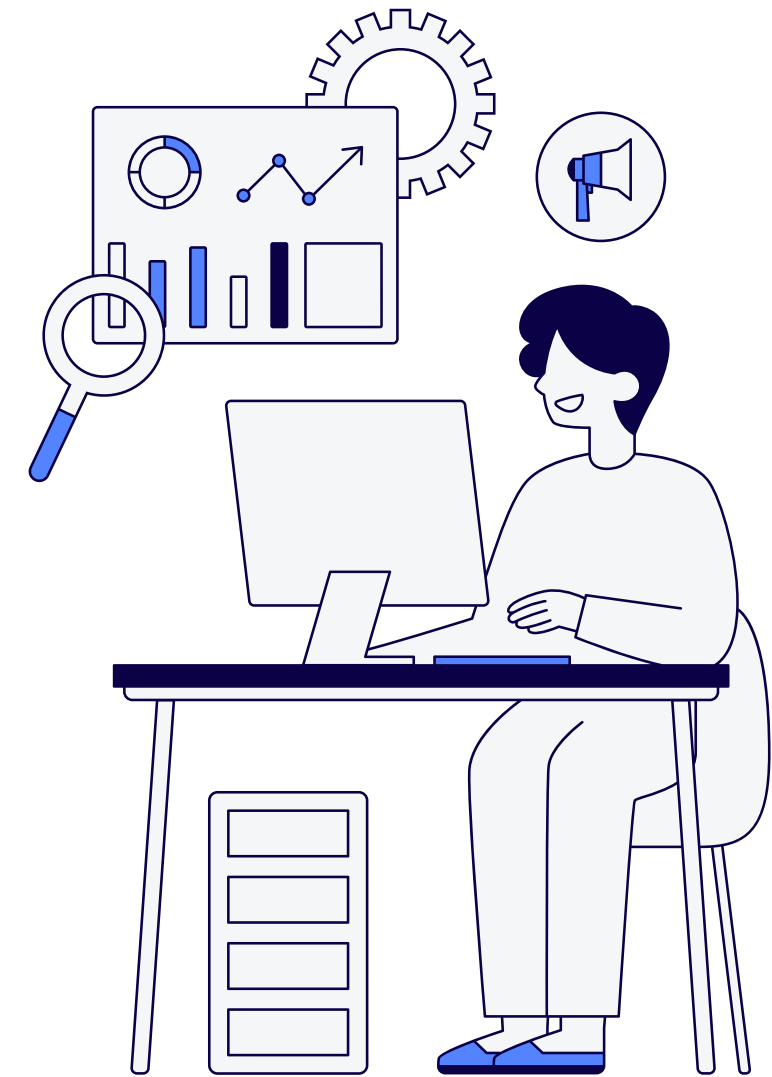
- How to segment customers based on buying patterns?
- How do discounts, temporal patterns, and commissions influence sales and revenue?

DATA CLEANING

**CLEANED DATA AND
CONVERTED DATES FOR
BETTER ANALYSIS.**

**EXTRACTED YEAR/MONTH
COLUMNS FOR TEMPORAL
TRENDS.**

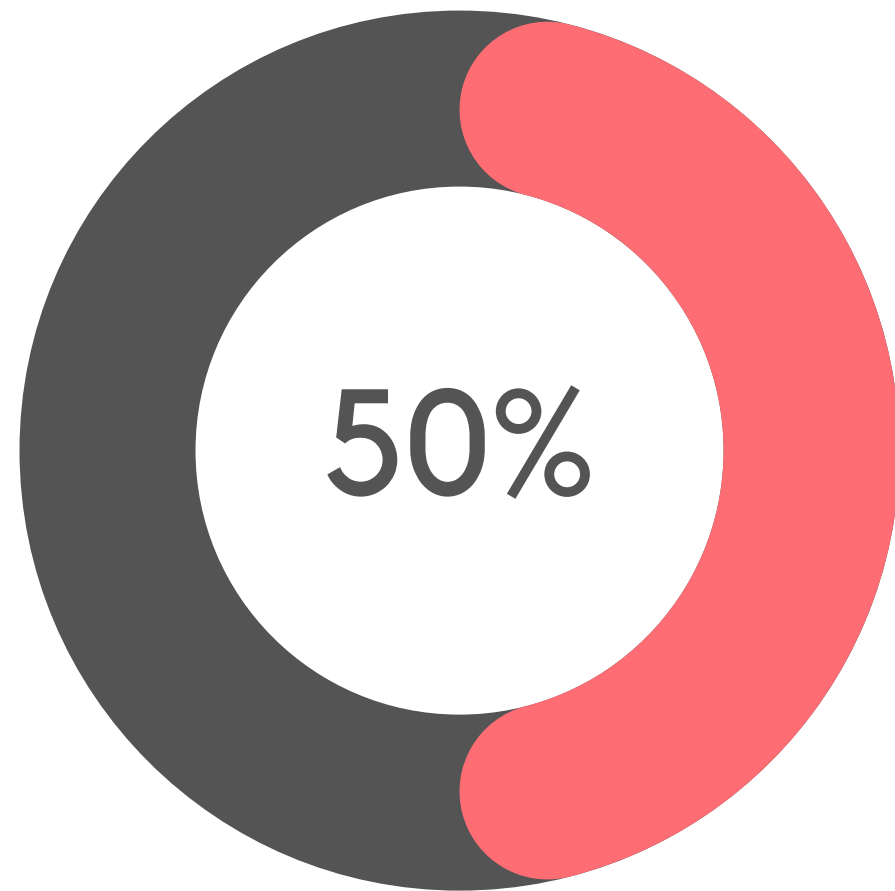
**CALCULATED DESCRIPTIVE
STATS LIKE MEAN, MEDIAN,
AND PERCENTILES.**



CUSTOMER SEGMENTATION

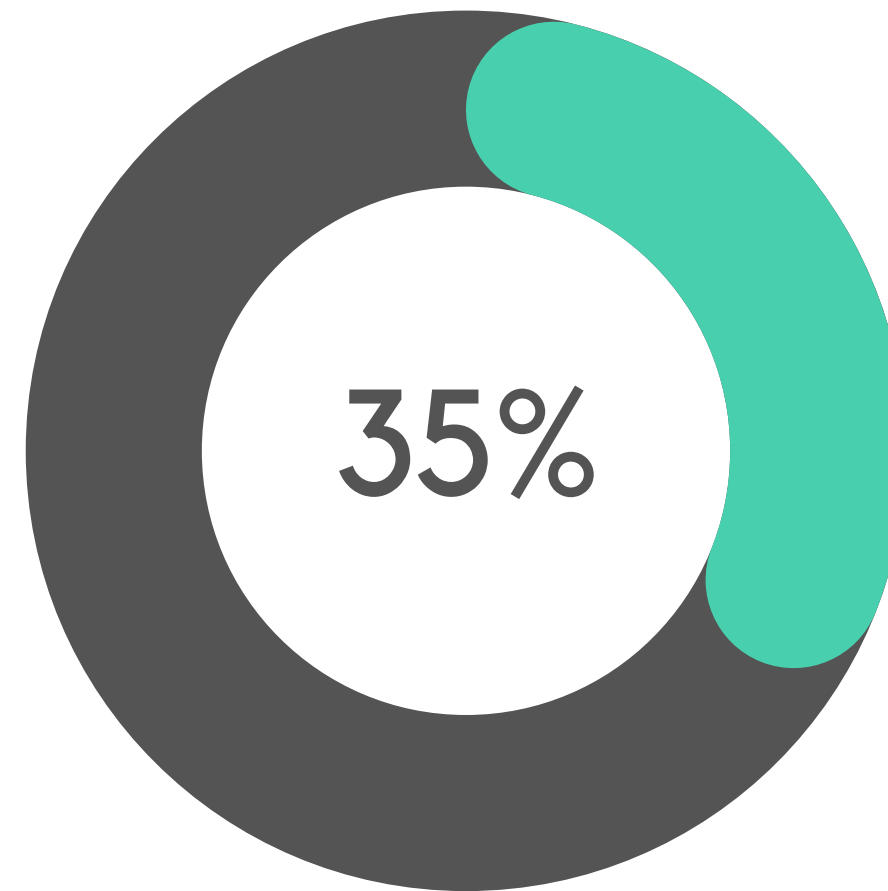


*Charts/graphs for presentation purposes only



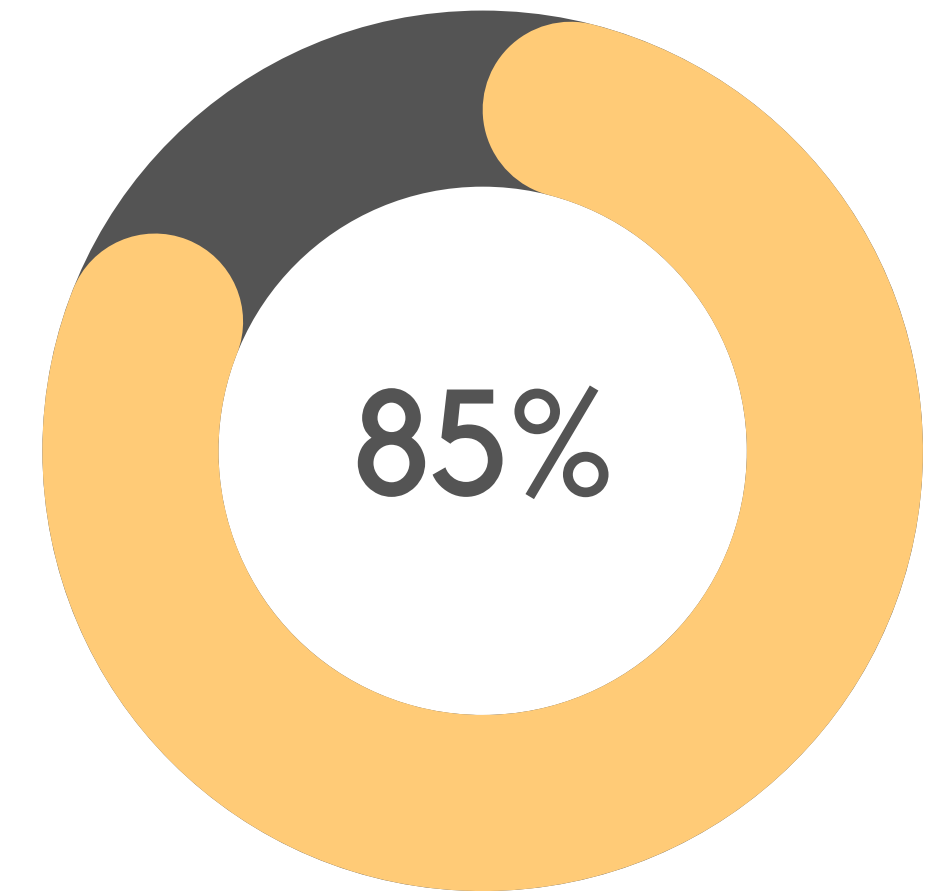
MODERATE FREQUENCY

Balanced order size and frequency.



LOW FREQUENCY

Infrequent but large orders.



HIGH FREQUENCY

Small but consistent orders.

CAUSAL ANALYSIS

- Used **dowhy** library for causal inference.

Key Relationships:

- Discounts → Smaller cart sizes (drives lower-priced items).
- Commissions → Larger cart sizes in some categories (e.g., Computing).



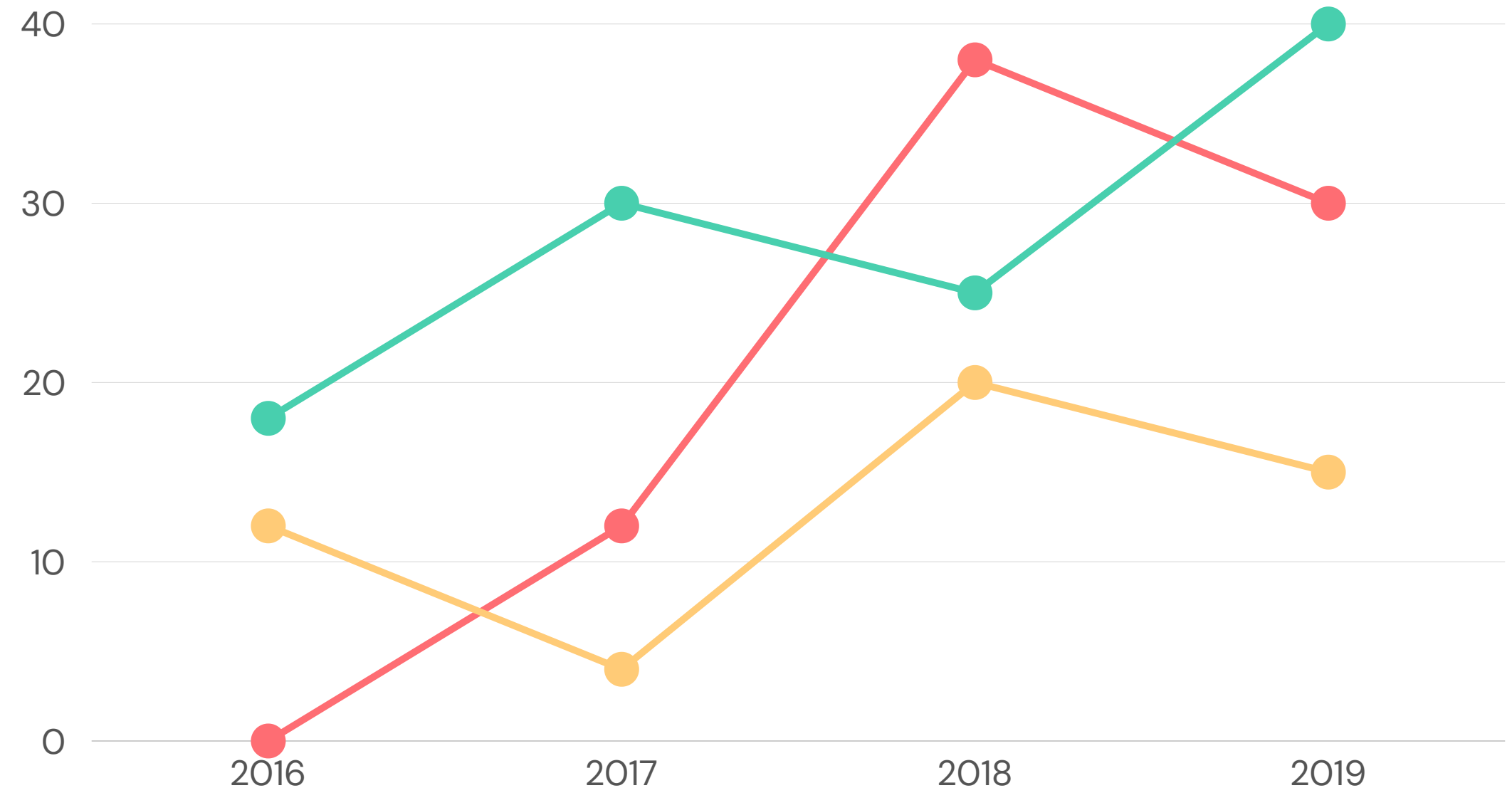
FORECASTING

Top 3 future trends in Pakistani ecommerce are:

01 - MOBILES & TABLETS

02 - APPLIANCES

03 - ENTERTAINMENT



*Charts/graphs for presentation purposes only

FINDINGS FROM ATE ANALYSIS

Impact of Strategies on Cart Size:

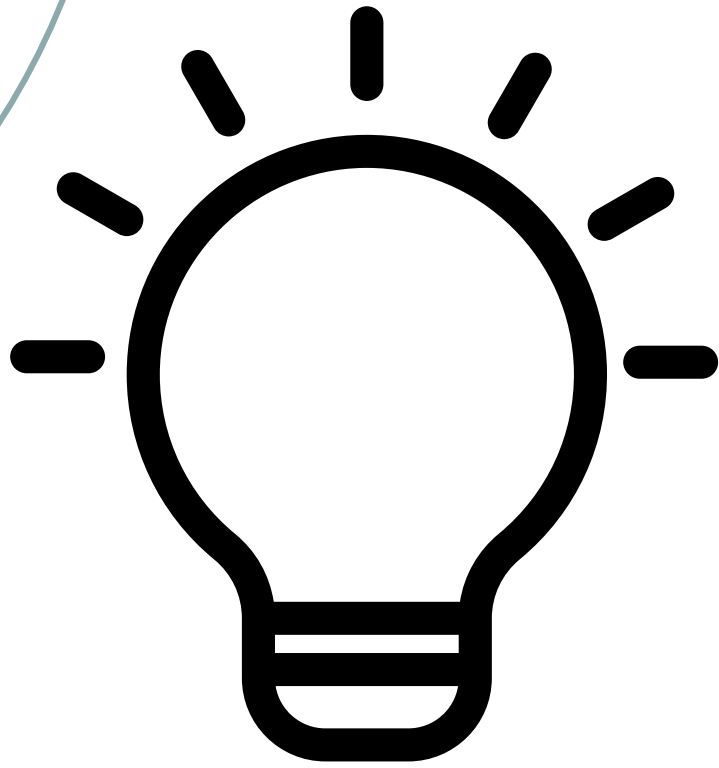
- Discounts: Small cart sizes.
- Commissions: Larger cart sizes in low-frequency customers.

Key Insight:

Mixed strategies (discounts + commissions) maximize order counts.

*Charts/graphs for presentation purposes only





WE REJECT THE NULL HYPOTHESIS

It shows a strong relationship
between customer type and
product preference.

NULL HYPOTHESIS

*No relationship between
customer and product
categories.*

ALTERNATE HYPOTHESIS

*There is a strong relationship
between customer and
product categories.*

CONCLUSION

1. Customer Segmentation:

- Identified distinct purchasing behaviours for targeted strategies.

2. Causal Insights:

- Discounts and commissions have significant but different impacts.

3. Forecasting:

- Mobiles & Tablets will continue dominating sales.
- Actionable Framework: Combine segmentation, causal analysis, and forecasting to optimize strategies.

The background features four decorative geometric patterns in the corners. The top-left corner has a series of parallel diagonal lines. The top-right corner contains a cluster of overlapping semi-circles in yellow, red, teal, and blue. The bottom-left corner also features a cluster of overlapping semi-circles in red, teal, blue, and red. The bottom-right corner has a large, faint semi-circle outline with several parallel diagonal lines inside it.

THANK YOU