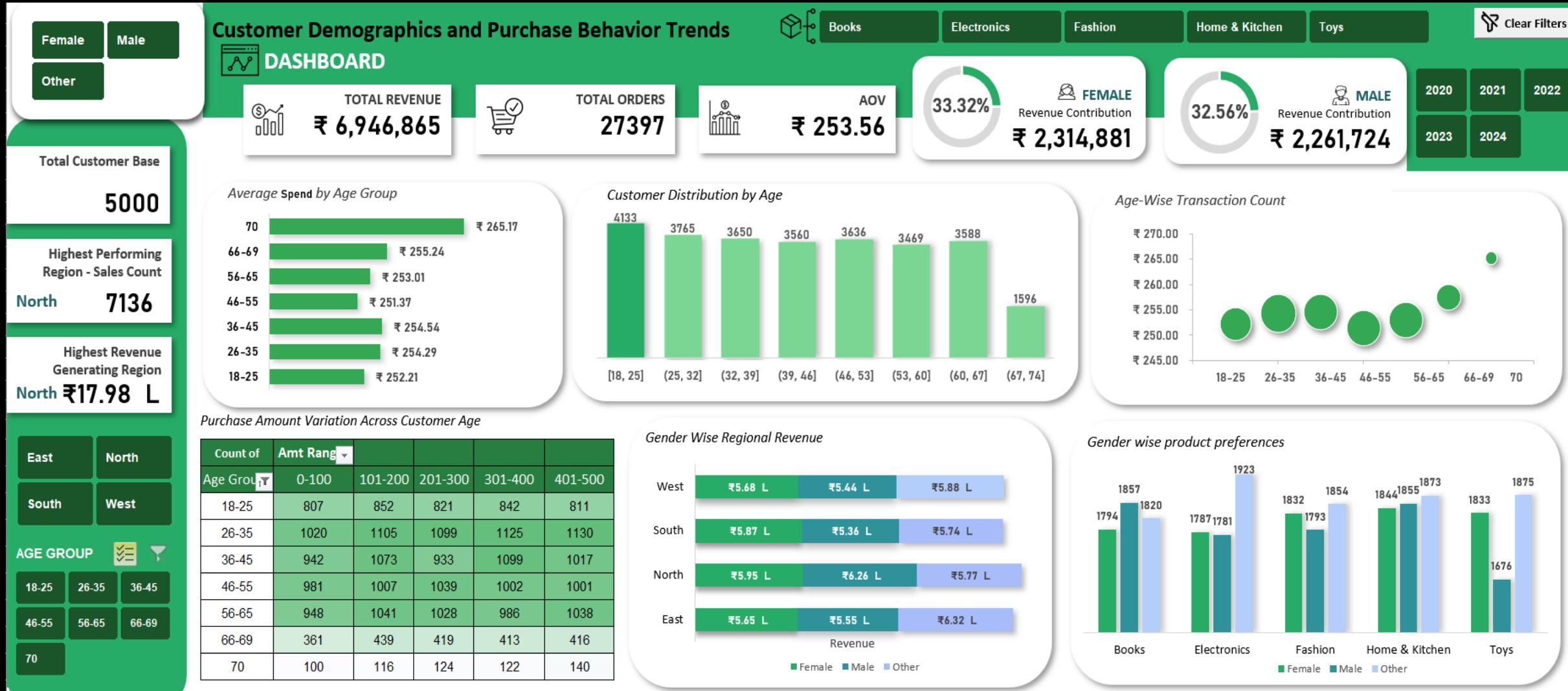# CUSTOMER DEMOGRAPHICS AND PURCHASE BEHAVIOR ANALYSIS

Presented By

A FAZMINA

INTRODUCTION & OBJECTIVE

Purpose

The objective of this analysis was to identify the purchase behavior trends across customer demographics and product categories to support data-driven marketing and inventory strategies

Methodology

Data from 2020-24 sales transactions was analyzed using Excel. Metrics such as Purchase Counts, Purchase amounts and demographic segmentation were examined to uncover patterns in purchasing behavior
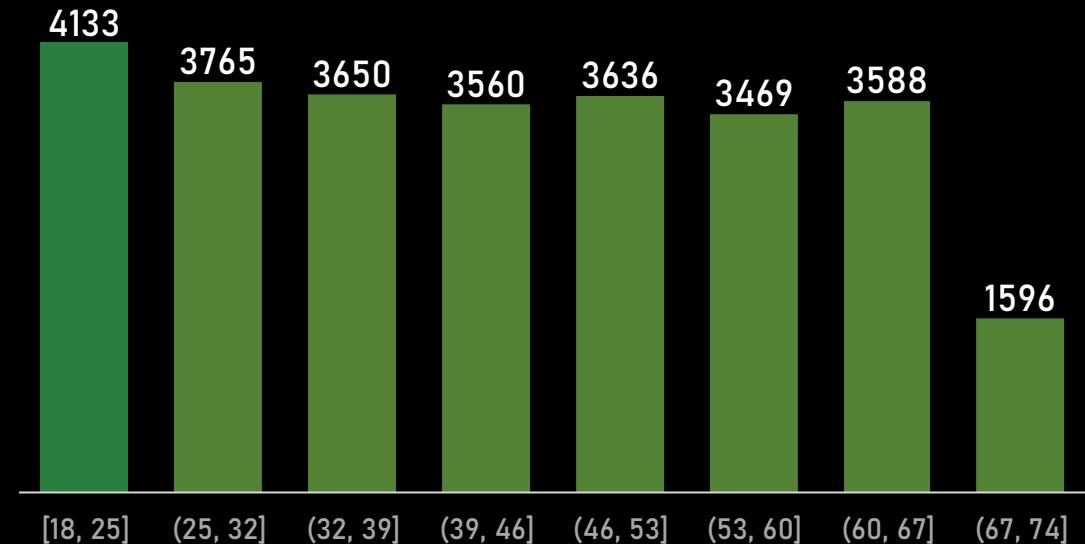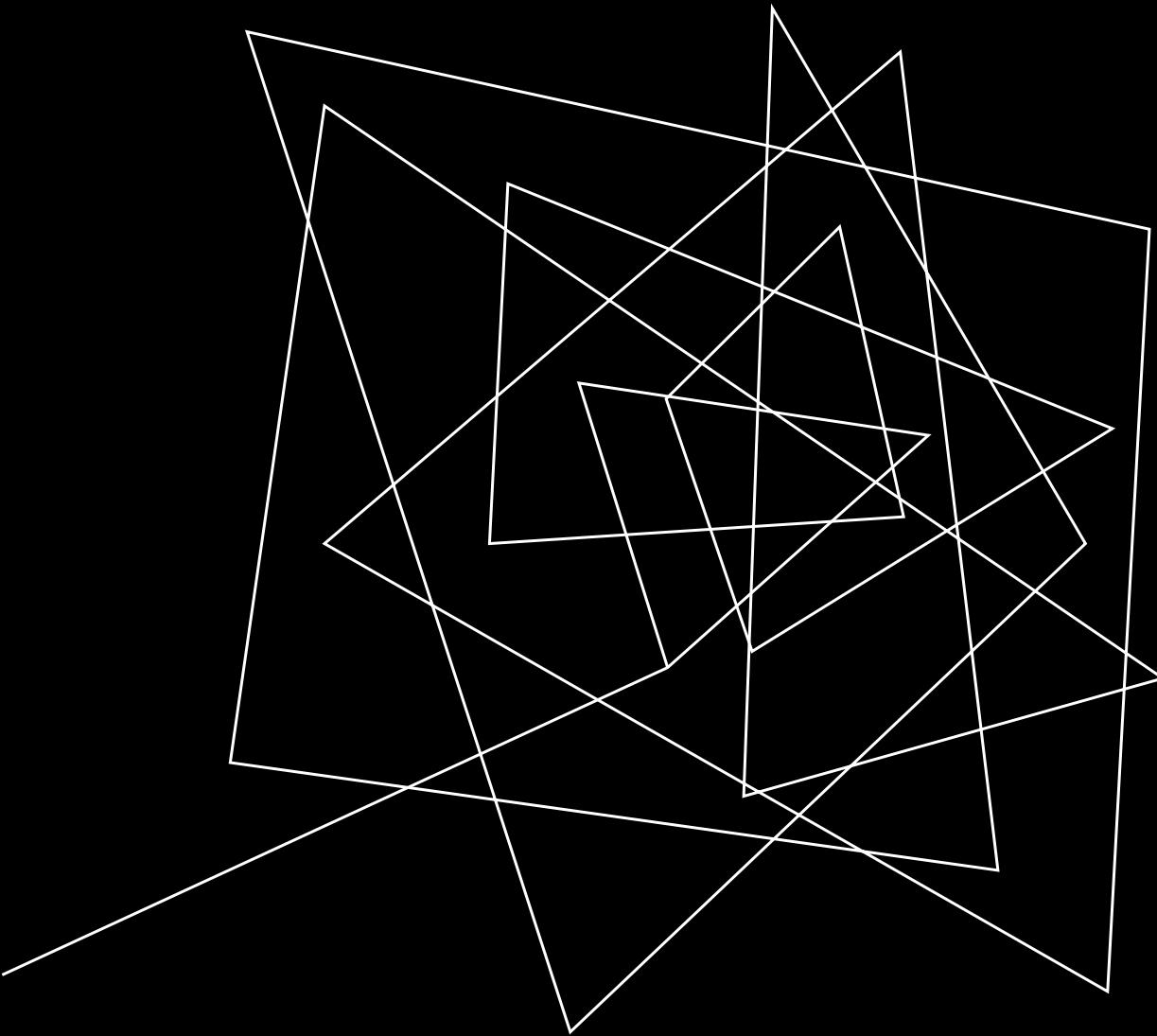
CUSTOMER DISTRIBUTION BY AGE

INSIGHTS

- Customer aged **18-25** form largest group

- Customers **66+** are the smallest group

- Young customers dominate the retails store's customer base

BUSINESS ACTIONS

- **Youth Engagement:** Create youth-focused marketing campaigns (student discounts).

- **Senior Attraction:** Explore reasons for low senior engagement (product relevance, accessibility, store experience)

- **Demographic Balance:** Run family-oriented promotions and offer bundled products appealing to multiple generations.

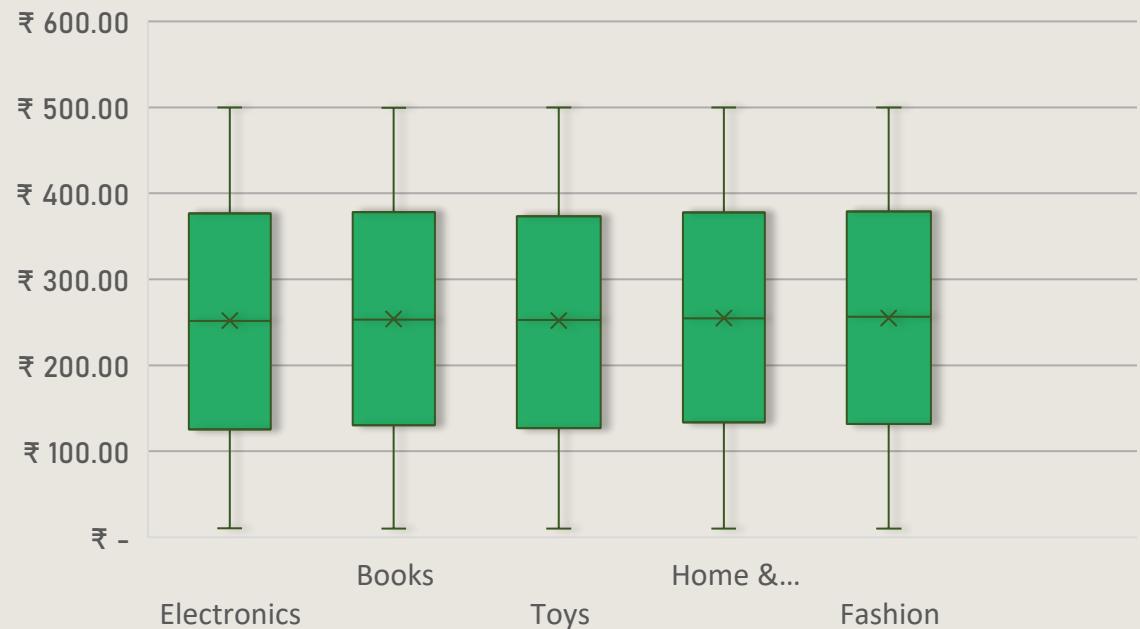VARIABILITY IN PURCHASE AMOUNTS ACROSS PRODUCT CATEGORY

INSIGHTS

Similar Distribution Across Categories

- **Median** purchase amounts are closely aligned (~₹252–₹256) across all categories.

- Price variability is consistent — similar **interquartile ranges and maximums** (~₹500).

Slightly Higher Entry Price in Home & Kitchen & Fashion

- **Q1** values are marginally higher (~₹133 vs ₹125 in Electronics).

Product Category	Q1	Median	Q3	Average	Maximum	Total Revenue	Revenue Share
Electronics	₹ 125.47	₹ 251.78	₹ 376.62	₹ 125.41	₹ 500.00	₹ 1,382,889	19.91%
Books	₹ 130.21	₹ 253.04	₹ 378.10	₹ 123.77	₹ 499.69	₹ 1,389,448	20.00%
Toys	₹ 127.14	₹ 252.59	₹ 373.15	₹ 123.16	₹ 499.90	₹ 1,355,855	19.52%
Home & Kitchen	₹ 133.80	₹ 254.66	₹ 377.97	₹ 121.60	₹ 499.82	₹ 1,421,337	20.46%
Fashion	₹ 131.87	₹ 256.45	₹ 378.99	₹ 122.72	₹ 499.99	₹ 1,397,337	20.11%

INSIGHTS

Revenue Leaders

- **Home & Kitchen** holds the highest share (20.46%) despite lower average purchase amount.

- All categories have evenly distributed revenue shares (~19.5–20.5%), indicating balanced contribution.

Average Purchase Amounts Are Lower Than Medians

- Suggests a presence of lower-value purchases pulling averages down.

BUSINESS ACTIONS

- **Price Optimization:**

  Electronics & Toys could explore increasing lower-end price points to lift Q1 values.

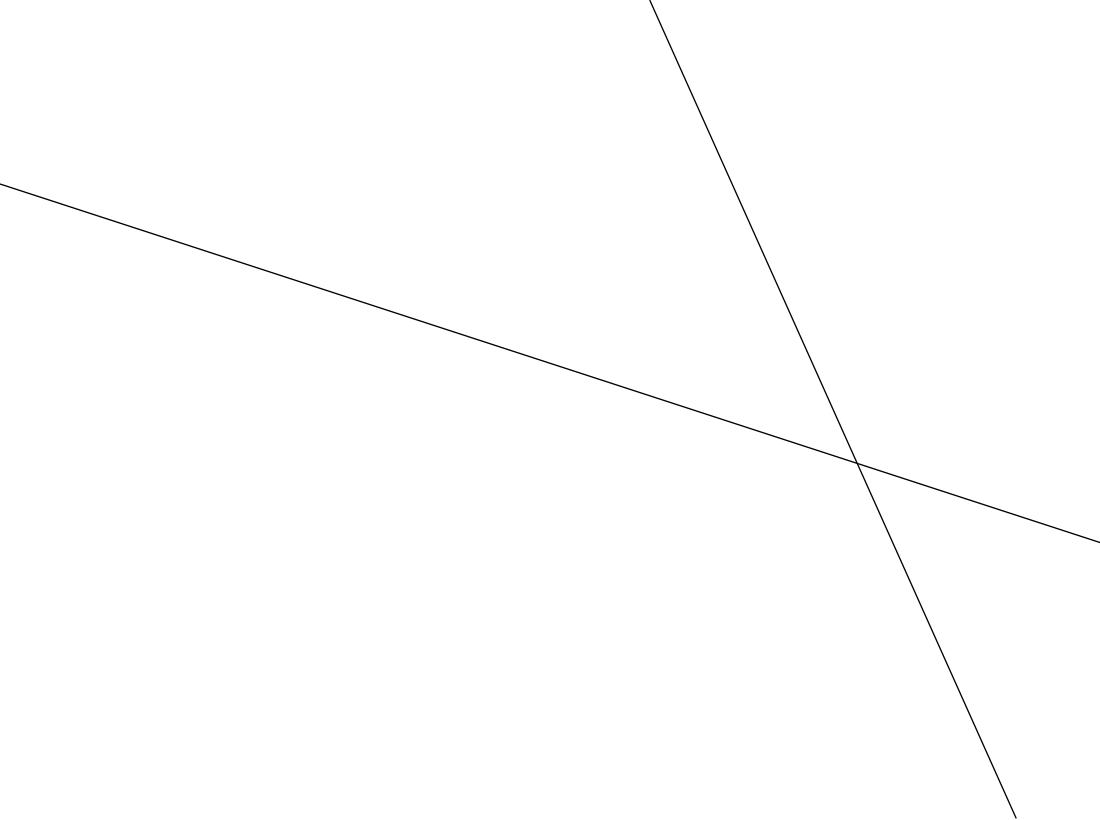- **Bundle & Upsell Strategies:**

  For categories with lower averages (Toys, Electronics), introduce bundles to increase per-transaction revenue.

- **Marketing Investment Allocation:**

  Home & Kitchen already leading in revenue — leverage cross-selling into **Fashion and Books**.

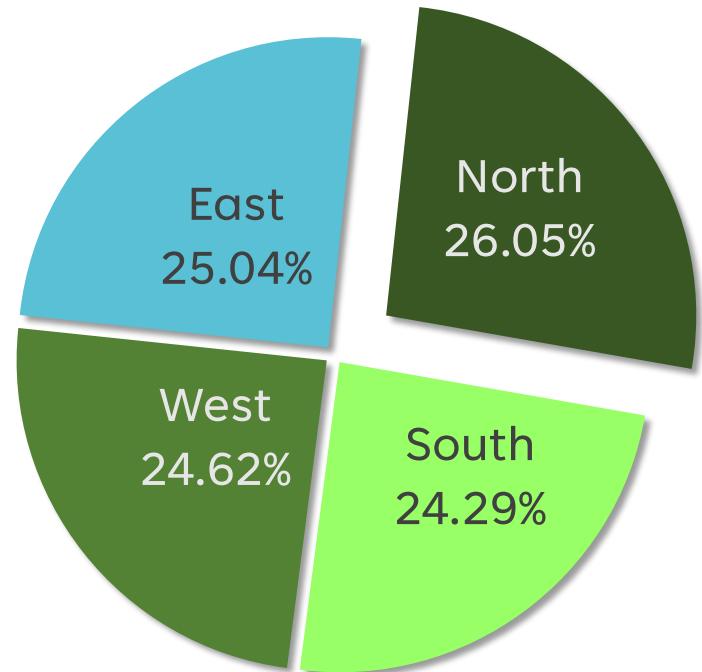- **Discount Strategy Review:**

  Too many low-value purchases may be due to deep discounts — assess profitability impact.

CUSTOMER DISTRIBUTION BY REGION

INSIGHTS

- **North** has the highest customer share (26.05%), slightly ahead of **East** (25.04%).

- **South** (24.29%) and **West** (24.62%) have slightly smaller customer bases, with only ~1.7% gap between highest and lowest.

East 25.04%

North 26.05%

West 24.62%

South 24.29%

BUSINESS ACTIONS

- **North (Leader)** - Maintain strong engagement through loyalty programs and exclusive deals to defend the lead.

- **East (Close Second)** - Launch targeted acquisition campaigns to overtake North's position.

- **South & West (Lagging)** - Boost awareness via localized marketing, partnerships, and regional promotions.
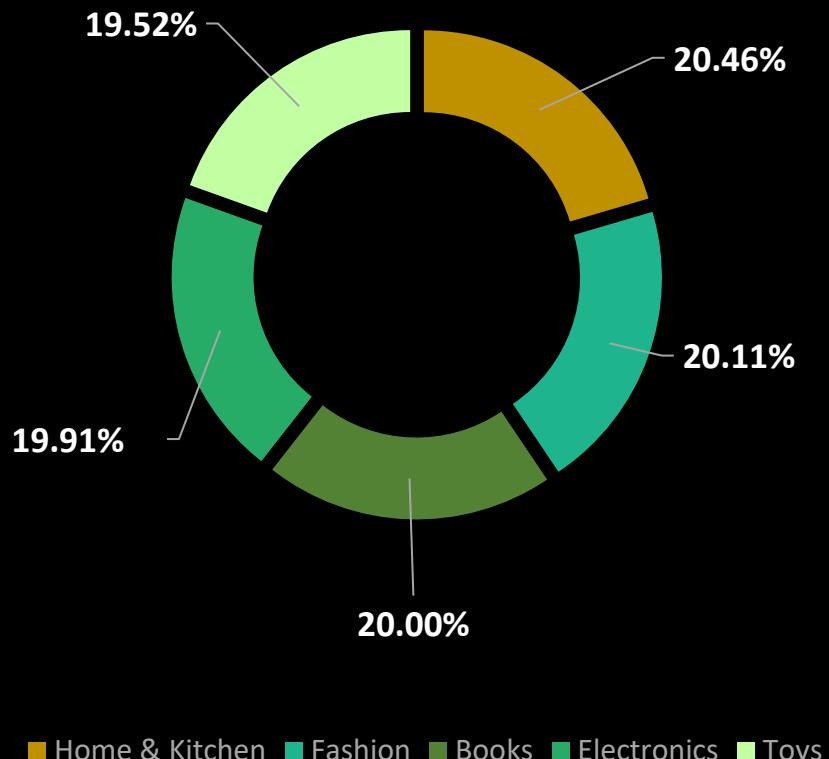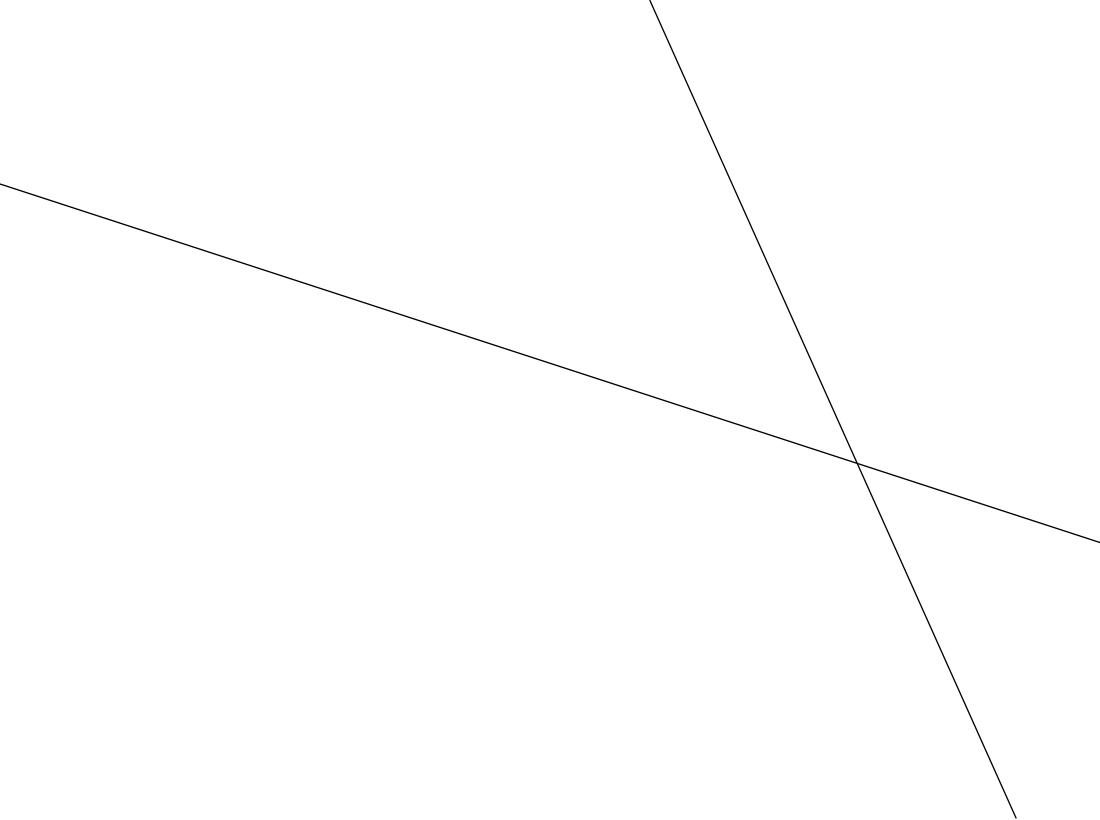
PRODUCT CATEGORY-WISE REVENUE DISTRIBUTION

INSIGHTS

- Revenue is quite evenly distributed across all product categories, each contributing ~19–20%.

- Home & Kitchen leads slightly at **20.46%**, followed by Fashion and Books.

- Toys has the lowest share at **19.52%**

19.52%

20.46%

20.11%

20.00%

19.91%

■ Home & Kitchen ■ Fashion ■ Books ■ Electronics ■ Toys

BUSINESS ACTIONS

- **Home & Kitchen:** Introduce premium SKUs or bundle offers to lift the average purchase amount while retaining the high volume.

- **Toys: Run seasonal promotions (e.g., festivals, holidays).**

  - Evaluate product mix - maybe introduce trending or educational toys to increase demand.

- **Fashion & Books:** Since they're mid-level and stable, focus on loyalty programs to maintain repeat purchases.

GENDER-WISE REGIONAL REVENUE

INSIGHTS

By Region

- **North** leads in total revenue (₹1.80M), followed by **East** (₹1.75M).

- **South** and **West** are slightly lower (~₹1.70M each) and have room to improve - total revenue gap is ~₹100k compared to North.

By gender:

- **Male** customers spend the most in **North**.

- **Other** (gender not mentioned) has high revenue in **East** and **West**.

- **Female** spending is relatively consistent across all regions

Region	Female	Male	Other
West	₹5.68 L	₹5.44 L	₹5.88 L
South	₹5.87 L	₹5.36 L	₹5.74 L
North	₹5.95 L	₹6.26 L	₹5.77 L
East	₹5.65 L	₹5.55 L	₹6.32 L

Revenue

■ Female ■ Male ■ Other

BUSINESS ACTIONS

- **North - Male Focus**

  - Push **Home & Kitchen** bundles and **Book promotions** targeting male customers.

  - Seasonal campaigns (festive cookware sets, bestseller book offers) could maximize this high-spend male base.

- **East – 'Other' Gender Focus**

  - Promote **Electronics** & **Home & Kitchen** with targeted ads on platforms popular with diverse customer groups.

  - Loyalty programs for repeat purchases in these categories.

- **South – Female Focus**

  - Strengthen **Books** & **Home & Kitchen** promotions.

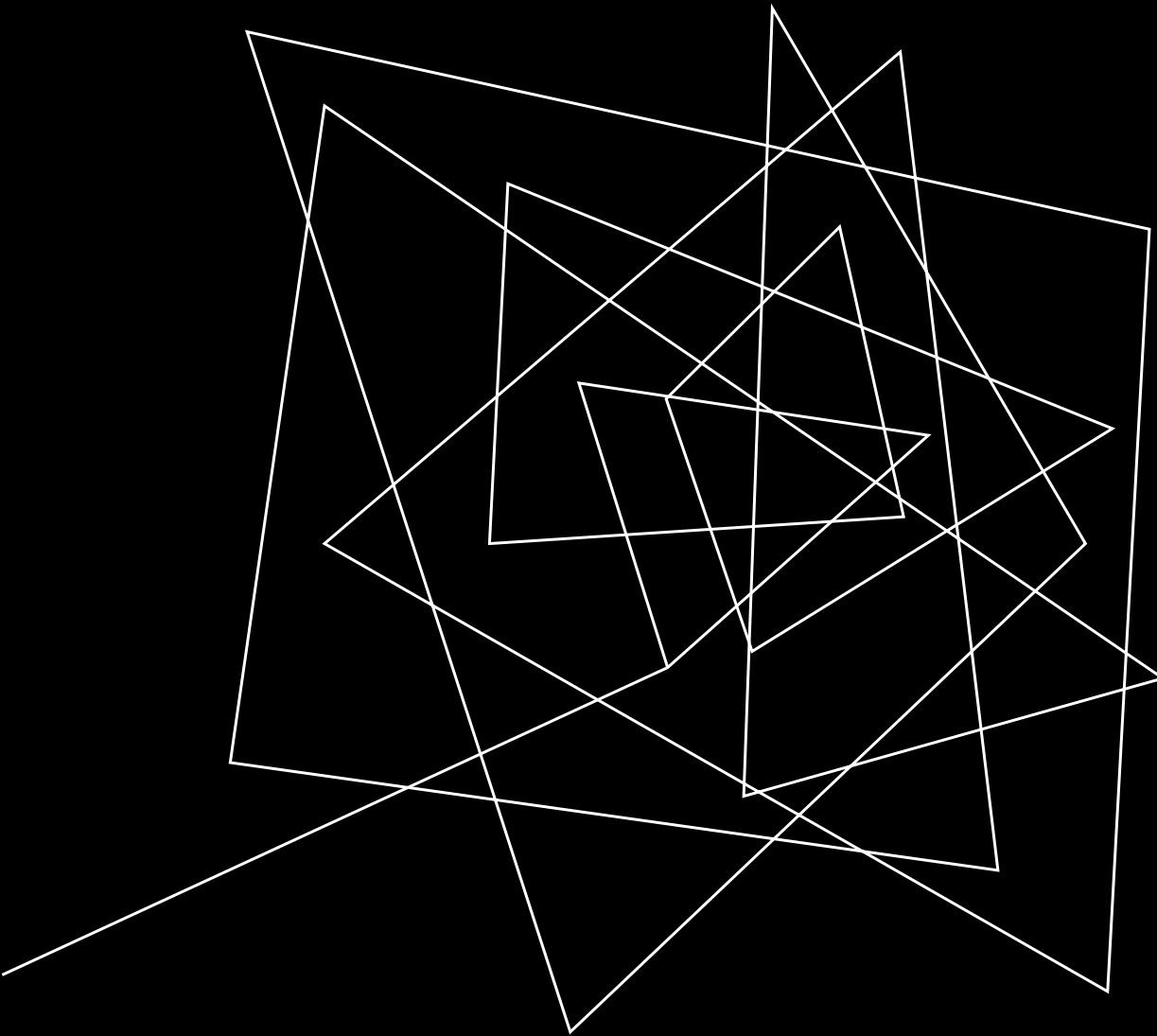 - Host community engagement events (cooking contests, book clubs) to deepen brand connection.

BUSINESS ACTIONS

- **West – Mixed Strategy**

  - Promote **Fashion** and **Electronics** for 'Other' gender segment through influencer marketing.

  - Improve **Toys** category for males with trend-based toy lines.
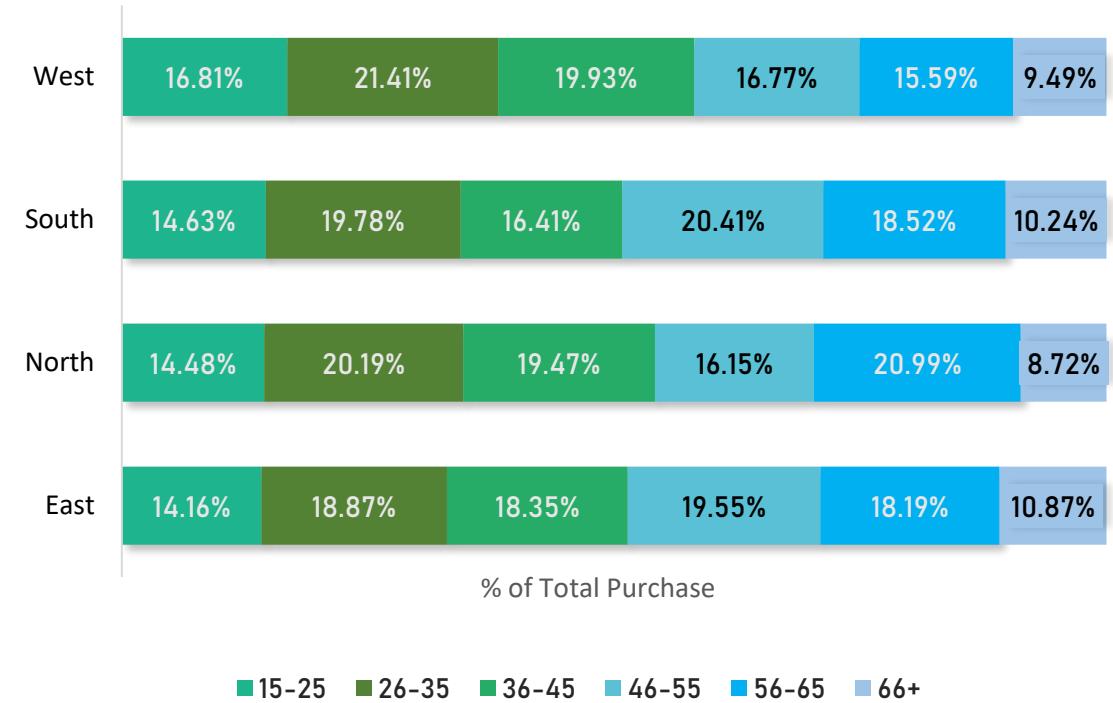
- **Cross-region action**

  - **Toys category revamp** — especially in South (male) and West (male) segments — through trending product lines, bundling, and seasonal offers.

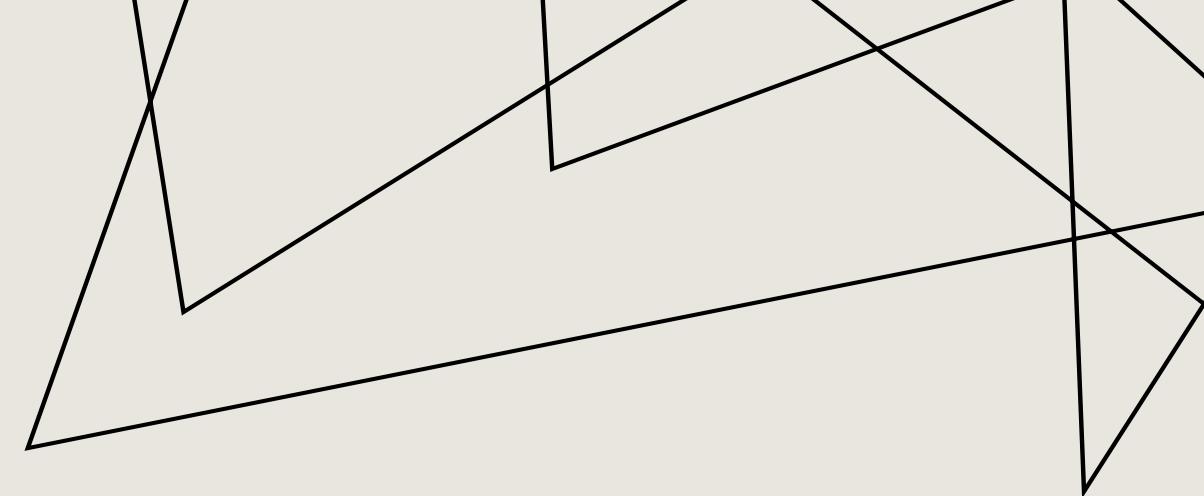AGE WISE PURCHASE
DISTRIBUTION ACROSS
REGIONS

INSIGHTS

- **West** - Strongest 26–35 (21.41%) & balanced mid-age (36–45 at 19.93%). Weak senior share (66+ at 9.49%).

- **South** – Leads in 46-55 (20.41%) and high 55-65 (18.52%), mature customer base

- **North** – Highest 56-65 share (20.99%), solid 36-45 (19.47%), weak 66+ (8.72%)

- **East** – Even spread across 26-45 & 46-55, above average 66+ (10.87%)

- **All region** – youth (15-25) low, limited penetration

	15-25	26-35	36-45	46-55	56-65	66+
West	16.81%	21.41%	19.93%	16.77%	15.59%	9.49%
South	14.63%	19.78%	16.41%	20.41%	18.52%	10.24%
North	14.48%	20.19%	19.47%	16.15%	20.99%	8.72%
East	14.16%	18.87%	18.35%	19.55%	18.19%	10.87%

% of Total Purchase

■ 15-25 ■ 26-35 ■ 36-45 ■ 46-55 ■ 56-65 ■ 66+

BUSINESS ACTIONS

- **West** - Focus on 26–35 with tech/lifestyle offers; launch senior engagement.

- **South** - Target mature customers with health, wellness, and premium comfort products.

- **North -** Use loyalty for 56–65; boost 66+ via senior discounts.

- **East** - Maintain balance; run multi-generational bundles.

- **All** - Digital-first youth campaigns to close 15–25 gap.
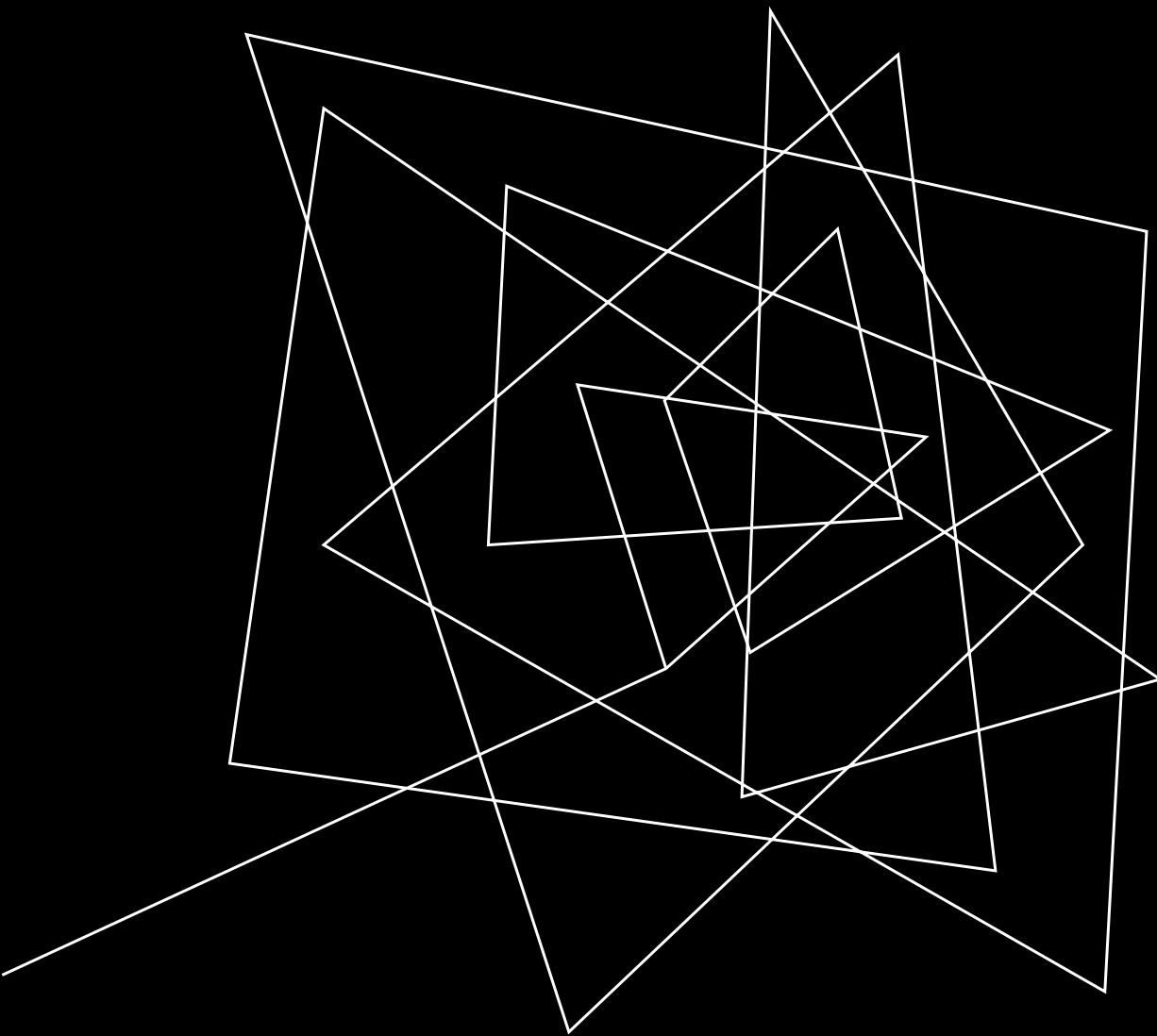
PRODUCT CATEGORY-WISE MONTHLY REVENUE

INSIGHTS

- **Consistent Leaders:**
  Books maintained steady sales, peaking at ₹1.26L in Jan & strong in Sep–Oct.

- **Seasonal Spikes:**
  Toys saw the highest jump in Oct (₹1.36L), likely festive-driven.

- **Mid-Year Dip:**
  Electronics, Fashion, and **Home & Kitchen** saw minor declines around Apr–Jul.

- **End-of-Year Drop:**
  Most categories experienced declines in Dec,
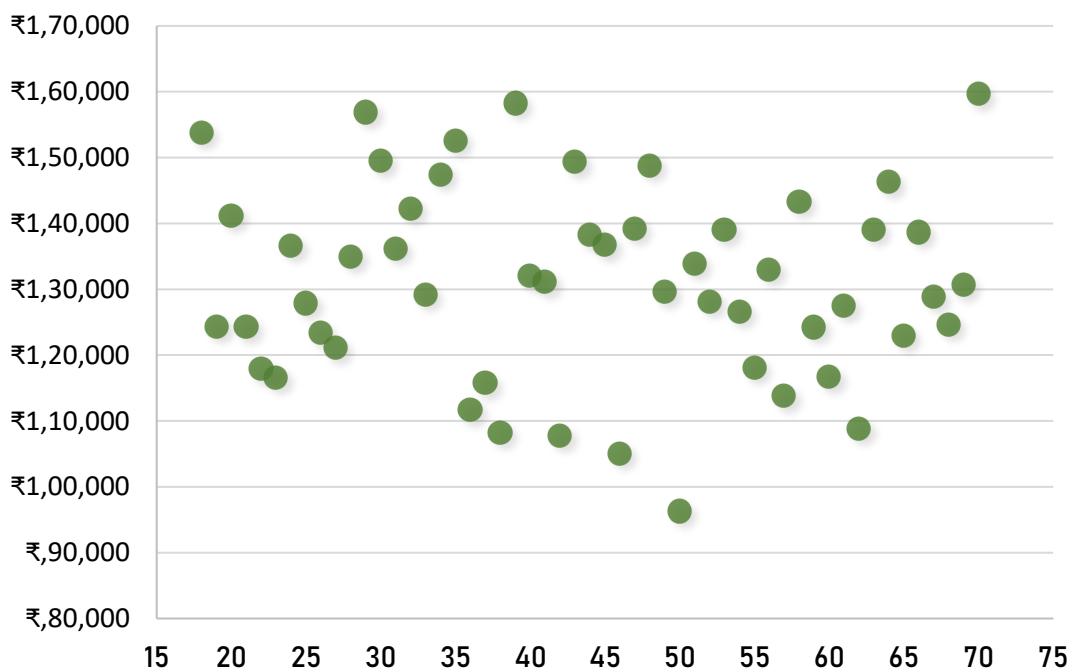
BUSINESS ACTIONS

- **Leverage Festive Peaks:** Boost inventory & marketing for **Toys** before Oct to maximize seasonal demand.

- **Stabilize Mid-Year:** Introduce promotions in **Apr–Jul** to offset seasonal dips.

- **Address Year-End Drop:** Plan **December** clearance events or bundles to sustain sales.

- **Cross-Sell Opportunities:** Use **Books** as a traffic driver to upsell related categories.
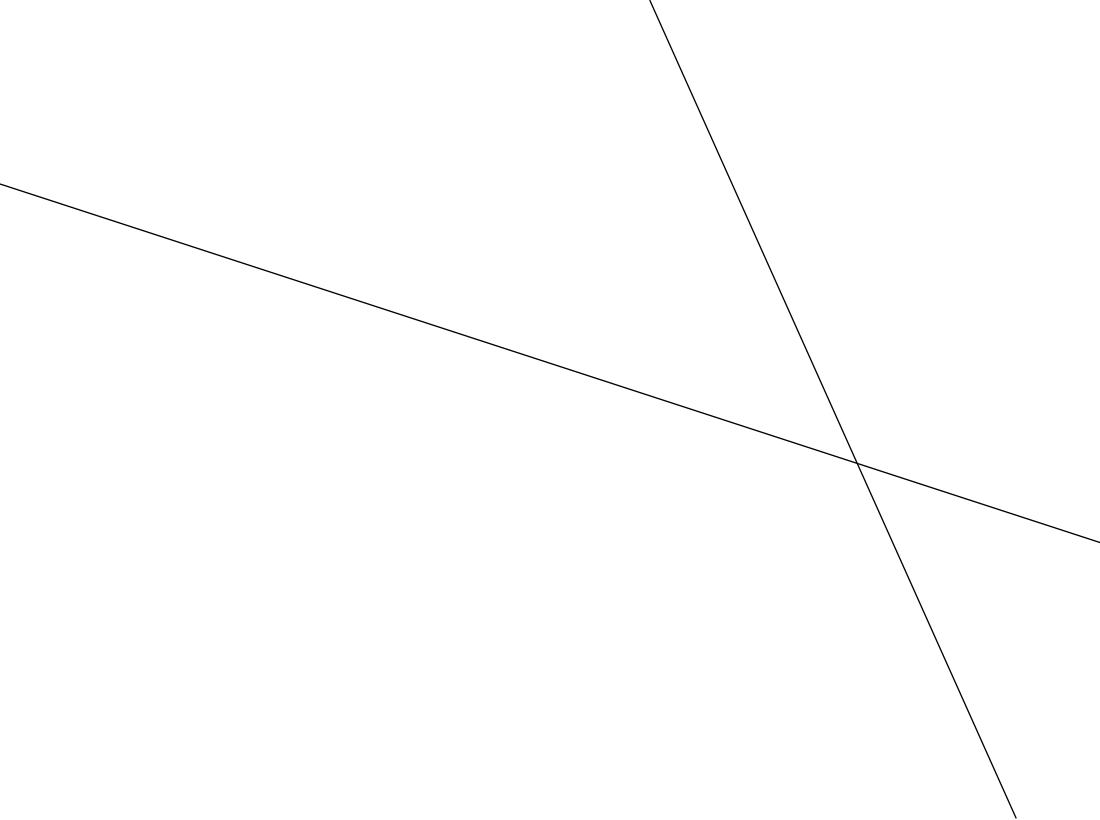
AGE - PURCHASE
AMOUNT RELATIONSHIP

INSIGHTS

- **18 years**: Noticeable high purchase margin - likely early-stage adopters or gift-driven spending.

- **30–40 years**: Consistently high purchase amounts - strong earning stage with higher discretionary spend.

- **40–69 years**: Stable but **mid-range spending**; minimal spikes, indicating steady but not premium purchases.

- **50 years**: **Lowest purchase amount** across all ages - possible disengagement or spending constraints.

- **70 years**: **Highest purchase amount** - peak margin spenders, likely due to lifestyle and disposable income.
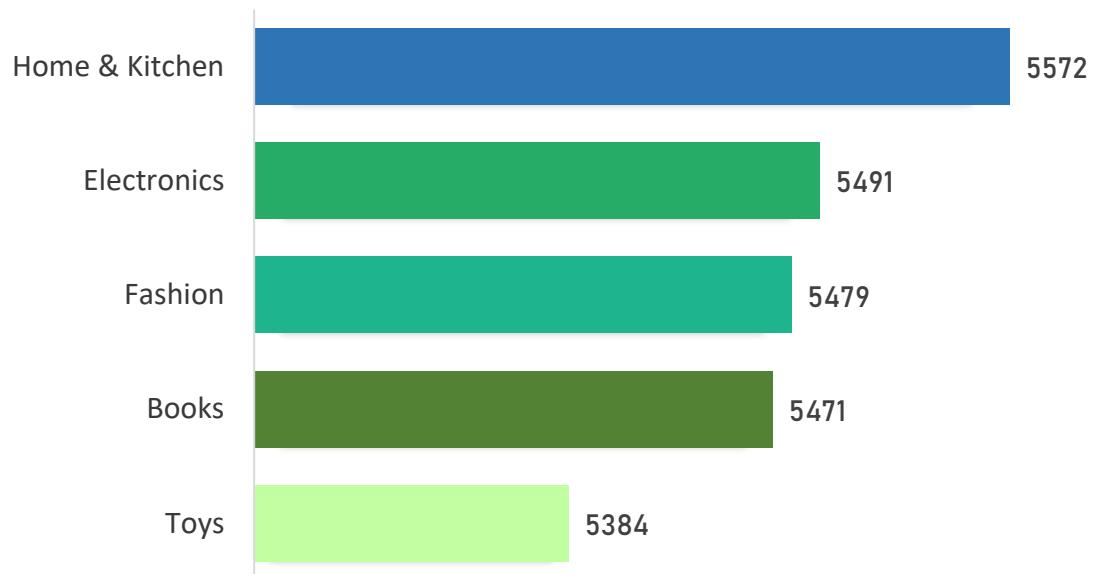
BUSINESS ACTIONS

- **Youth-focused campaigns** for 18-year segment - trend-driven offers, influencer marketing.

- **Upsell & cross-sell** for 30–40 segment - premium product bundles, loyalty rewards.

- **Reactivation strategy** for 50-year-olds - targeted offers, re-engagement surveys.

- **Senior premium targeting** for 70+ group - luxury, wellness, travel, and gifting-focused promotions.

- Maintain **steady-value offers** for 40–69 bracket to retain baseline revenue.
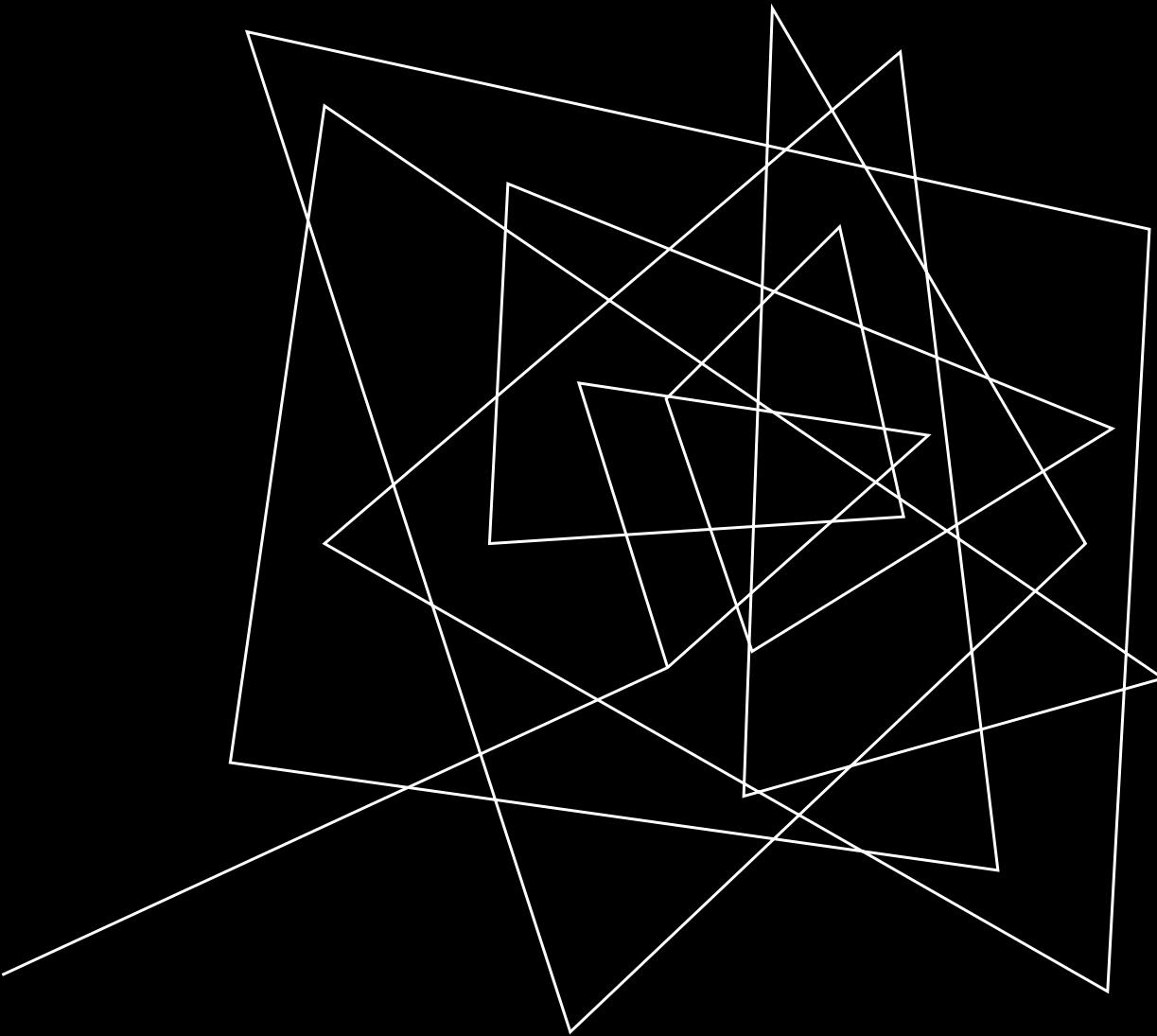
PRODUCT CATEGORY - WISE PURCHASE COUNT

INSIGHTS

- **Home & Kitchen** leads with **5,572 purchases**, indicating the highest consumer interest.

- **Electronics**, **Fashion**, and **Books** are closely competitive with purchase counts in the **5,470–5,490 range**.

- **Toys** has the **lowest purchase count** at **5,384**, though the gap between categories is not very large.

- Purchase volumes are fairly balanced, suggesting a **diverse demand spread across categories**.

Category	Purchases
Home & Kitchen	5572
Electronics	5491
Fashion	5479
Books	5471
Toys	5384

BUSINESS ACTIONS

- **Maintain strong stock** and marketing in *Home & Kitchen* to capitalize on demand.

- Explore **cross-selling** opportunities between Electronics, Fashion, and Books due to similar purchase volumes.

- For **Toys**, consider:
  - ✓ **Promotional offers** or bundles to boost interest.
  - ✓ **Targeted marketing** for parents and gift seasons.

- Continue **broad product variety** to retain balanced demand across categories.

HOW DIFFERENT AGE
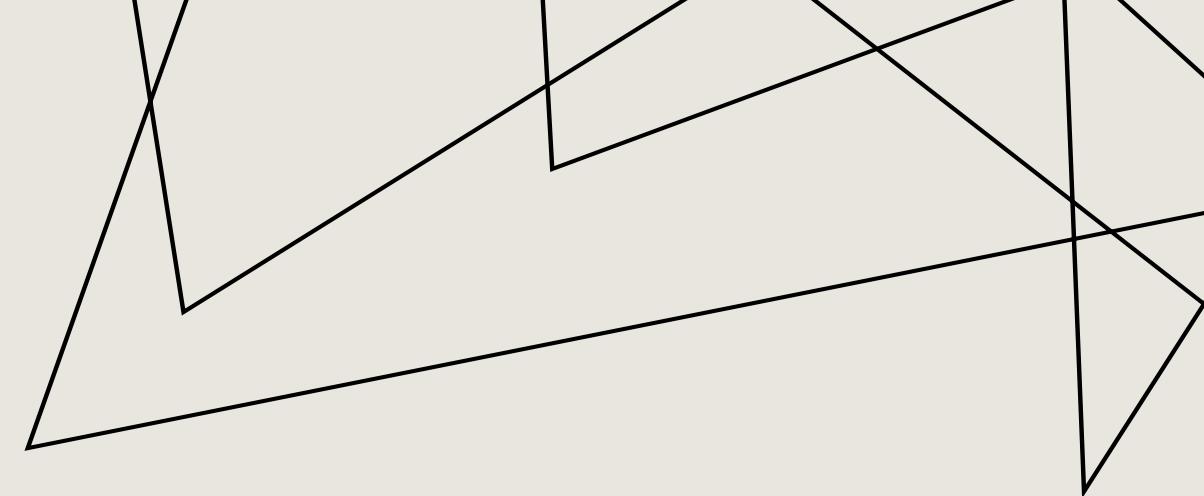GROUPS SPEND?

HEATMAP ANALYSIS

INSIGHTS

- **26–35 years** -> Highest purchases across all ranges, peak at **₹401–500** range.

- **66+ years** -> Lowest purchases in all ranges, sharp drop in **₹0–100** range but **strong second in ₹401–500**, suggesting a preference for **high-margin products**.

- **36–65 years** -> Steady moderate spending, no extreme peaks or dips.

- **15–25 years** -> Active buyers but less likely to make high-value purchases.

Count of	Amount Ranges				
Age Groups	0-100	101-200	201-300	301-400	401-500
15-25	807	852	821	842	811
26-35	1020	1105	1099	1125	1130
36-45	942	1073	933	1099	1017
46-55	981	1007	1039	1002	1001
56-65	948	1041	1028	986	1038
66+	461	555	543	535	556

BUSINESS ACTIONS

- **Premium targeting** for **26–35** with high-value bundles & loyalty rewards.

- **Upsell campaigns** for **15–25** & **36–45** to move them into higher ranges.

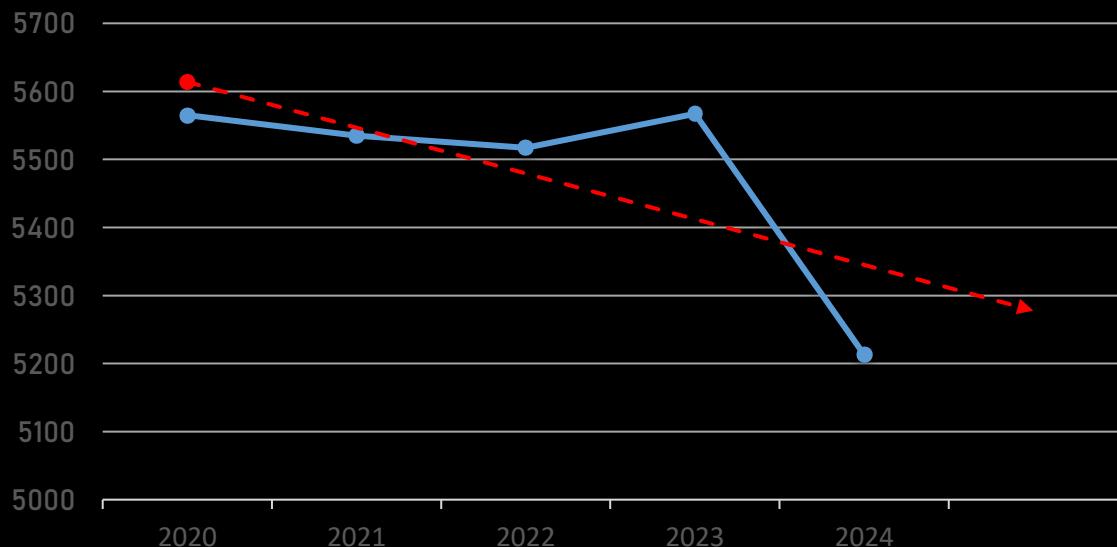- Position **high-margin offers** to **66+** (luxury, quality-focused products).

MONTHLY PURCHASE TREND

INSIGHTS

- **Overall Downward Trend**: Purchases have declined from ~5,560 in 2020 to ~5,220 in 2024.

- **Short-Term Recovery in 2023**: Slight rebound seen in 2023 before a sharp drop in 2024

- **2024 Decline is Significant**: Largest year-over-year drop observed between 2023 and 2024.

- **Q4 2024**: Purchases fell below 1200 — the lowest in the 5-year period.

- **Dec 2024**: The sharp decline in Q4 2024 is **entirely due to December**

- **Only 12 days data is available for December month showing decline**

- **Stable Performance Until Oct 2024**: Jan–Oct 2024 follows a normal range, indicating no gradual deterioration.

Trendline Impact: The **entire downward bend in the yearly/quarterly trendline** is due to this single month's data point.

BUSINESS ACTIONS

- **Root Cause Analysis: December 2024**

  - Audit operations, campaigns, inventory, customer support, etc., specific to Dec.

  - Cross-check for system errors or supply chain breakdowns.

- **Mitigation Strategy for Future Peaks**

  - Create business continuity plans for high-dependency months.

  - Build redundancy in fulfillment/logistics for Q4 months.

KEY FINDINGS

Core customers: Ages **26–35** (and 36–45) are the revenue backbone across regions — highest purchase counts and strong presence in premium bins.

High-value microsegment: Age 70 is the top spending single-age cohort; category spend for 70s is highest in **Home & Kitchen** and **Fashion,** with strong gift behavior (Books, Toys).

Mid-life dip: ~50 shows the lowest purchase amounts — a re-engagement gap.

Home & Kitchen leads nationally: highest purchase count and revenue share (~20.5%) — consistent across regions.

Books > Electronics (per-revenue): Books generate higher revenue per unit than Electronics even with similar counts → Books have higher ASP.

Toys trailing in volume: lowest purchase count overall but strong seasonally (Oct); opportunity for seasonal promotions.

West: youngest skew (26–35 dominant) → Fashion & Electronics should be prioritized here (digital channels).

North: large customer base + higher older-age share (56–65) → Home & Kitchen and senior-friendly products perform well; loyalty programs will pay.

East: balanced but slightly higher senior share → Books, Home & Kitchen and gifting bundles resonate.

South: higher 46–55 share → family & comfort product messaging (Home & Kitchen, Fashion family bundles).

Seasonality: predictable peaks in **May/Jun** and **Oct** (Toys/Fashion), Dec 2024 appears artificially low (incomplete data) — do not act on Dec without cleaning.

RECOMMENDATIONS

Validate and pilot a "70-plus" premium offer (curated bundles and loyalty perk).

Re-engage the ~50 age cohort with tailored offers + survey (diagnose product/price fit and test incentives).

Raise AOV with smart bundling across categories (mixed bundles: Books + accessory, Electronics + home add-ons).

Premiumize Electronics mix — add high accessories, warranties; reduce heavy discounting on low-margin items.

Use Home & Kitchen as traffic anchor for cross-sell (promote higher-margin add-ons at checkout).

Focus on south region – Promote Fashion products- High potential to increase revenue

Seasonal readiness for May/Jun/Oct — align inventory and marketing for Toys & Fashion (pre-order & bundles).

Targeted retention & acquisition by region-age mix (West = digital youth; North = seniors + loyalty; East/South = mid-age family offers).

THANK YOU