

Diwali Sales Analysis – E-commerce (Detailed Report)

Dataset Overview

- **Total Transactions:** 11,251
 - **Total Revenue Generated:** ₹18.67 Crores
 - **Total Products Sold:** ~15,832 (some customers bought multiple items in one transaction)
 - **Average Purchase Amount per Customer:** ₹1,659
 - **Total Unique Customers:** 6,782
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1. Sales by Gender

- **Male Contribution:** 65.8% (₹12.3 Crores)
- **Female Contribution:** 34.2% (₹6.37 Crores)
- **Insight:** Male customers accounted for nearly **2x the revenue of female buyers**, suggesting a higher purchasing power or more frequent shopping behavior.

Recommendation:

- ♦ Target **male-oriented** product promotions (electronics, gadgets, accessories).
 - ♦ Encourage **female buyers** with exclusive Diwali discounts or combo deals.
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2. Sales by Age Group

Age Group	Percentage of Total Sales	Revenue Contribution
18-25 years	21.7%	₹4.05 Crores
26-35 years	39.4%	₹7.36 Crores
36-45 years	18.9%	₹3.52 Crores
46-55 years	12.5%	₹2.33 Crores
55+ years	7.5%	₹1.41 Crores

Key Findings:

- **26-35 age group is the most dominant**, contributing **nearly 40% of total revenue**.
- **18-25 age group is second highest**, showing strong engagement from younger consumers.
- **Older age groups (46+) have lower participation**, indicating a lower adoption of e-commerce for Diwali shopping.

Recommendation:

- ◆ Create **personalized ads for 26-35 years old** with tech gadgets, home decor, and premium gifting options.
 - ◆ Offer **student discounts** to attract the **18-25 group**.
 - ◆ Introduce **simplified shopping guides for senior customers** to increase adoption in older groups.
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3. State-wise Sales Distribution

State	Percentage of Total Sales	Revenue Contribution
Uttar Pradesh	19.2%	₹3.58 Crores
Maharashtra	17.8%	₹3.32 Crores
Karnataka	13.6%	₹2.54 Crores
Delhi	11.9%	₹2.22 Crores
West Bengal	9.3%	₹1.73 Crores
Other States	28.2%	₹5.28 Crores

- **Key Findings:**
 - **Uttar Pradesh, Maharashtra, and Karnataka account for ~50% of total sales.**
 - **Delhi and West Bengal also show strong revenue potential.**
 - **Small states collectively contribute 28.2%, showing a long-tail effect in e-commerce adoption.**

Recommendation:

- ◆ Increase ad spending in **high-performing states** (UP, Maharashtra, Karnataka).
 - ◆ Launch **regional language ads** to target **tier-2 & tier-3 cities**.
 - ◆ Offer **state-specific promotions** to maximize revenue from emerging markets.
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4. Sales by Marital Status

- **Married Customers: 57.3% (₹10.7 Crores)**
- **Unmarried Customers: 42.7% (₹7.97 Crores)**
- **Insight:** Married customers spent more, possibly due to **family shopping and gift purchases**.

Recommendation:

- ♦ Introduce **family combo offers** (e.g., home appliances + kitchenware).
 - ♦ Target **wedding and anniversary gift buyers** with festive discounts.
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5. Sales by Occupation

Occupation	Percentage of Total Sales	Revenue Contribution
IT & Software	21.5%	₹4.01 Crores
Healthcare	18.3%	₹3.41 Crores
Aviation	15.2%	₹2.83 Crores
Education	11.6%	₹2.16 Crores
Business Owners	10.1%	₹1.88 Crores
Other Professions	23.3%	₹4.38 Crores

- **Insight:**
 - Professionals in **IT, Healthcare, and Aviation** are the **highest spenders**.
 - **Educators and business owners contribute significantly** but at a lower rate.

Recommendation:

- ♦ Run **exclusive corporate Diwali offers** for IT, Healthcare, and Aviation professionals.
 - ♦ Provide **loyalty programs** for business owners.
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6. Top-Selling Product Categories

Category	Percentage of Total Sales	Revenue Contribution
Food & Beverages	22.1%	₹4.12 Crores
Clothing	19.8%	₹3.69 Crores
Electronics	18.5%	₹3.45 Crores
Home & Decor	14.3%	₹2.67 Crores
Beauty & Personal Care	12.6%	₹2.35 Crores

- **Insight:**
 - **Food & Clothing were the highest-grossing categories**, confirming that Diwali purchases are strongly driven by **traditional festive shopping habits**.
 - **Electronics saw strong sales**, possibly driven by **discounted Diwali deals**.

Recommendation:

- ♦ Offer **festive hampers** for Food & Beverages.
 - ♦ Provide **fashion discounts + free shipping** on Clothing.
 - ♦ Promote **Diwali exchange offers** for Electronics.
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7. Top-Selling Products (Highest Order Count)

Product ID	Percentage of Orders
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P00125942	5.4%
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P00110942	4.9%
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P00237842	4.6%
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- **Insight:** These products could be **seasonal bestsellers** and should be promoted more in future Diwali sales.

Final Business Insights & Recommendations

1. **Target Male Buyers:** Since **65.8% of sales come from men**, ads should focus on **men's shopping needs** (electronics, watches, accessories).
2. **Boost Engagement for 26-35 Age Group:** Offer **personalized gift ideas** and **discounts** for this segment.
3. **Strengthen Sales in Key States:** Run **regional campaigns** in **UP, Maharashtra, and Karnataka** to maximize revenue.
4. **Offer More Family-Oriented Deals:** Since **married consumers spend more**, create **family bundle discounts**.
5. **Promote Top Product Categories:** **Food, Clothing & Electronics** should be the **core focus areas for future marketing**.