



Mega Mart Data Analysis

KEY INSIGHTS AND RECOMMENDATIONS

Major category for key insight and recommendations

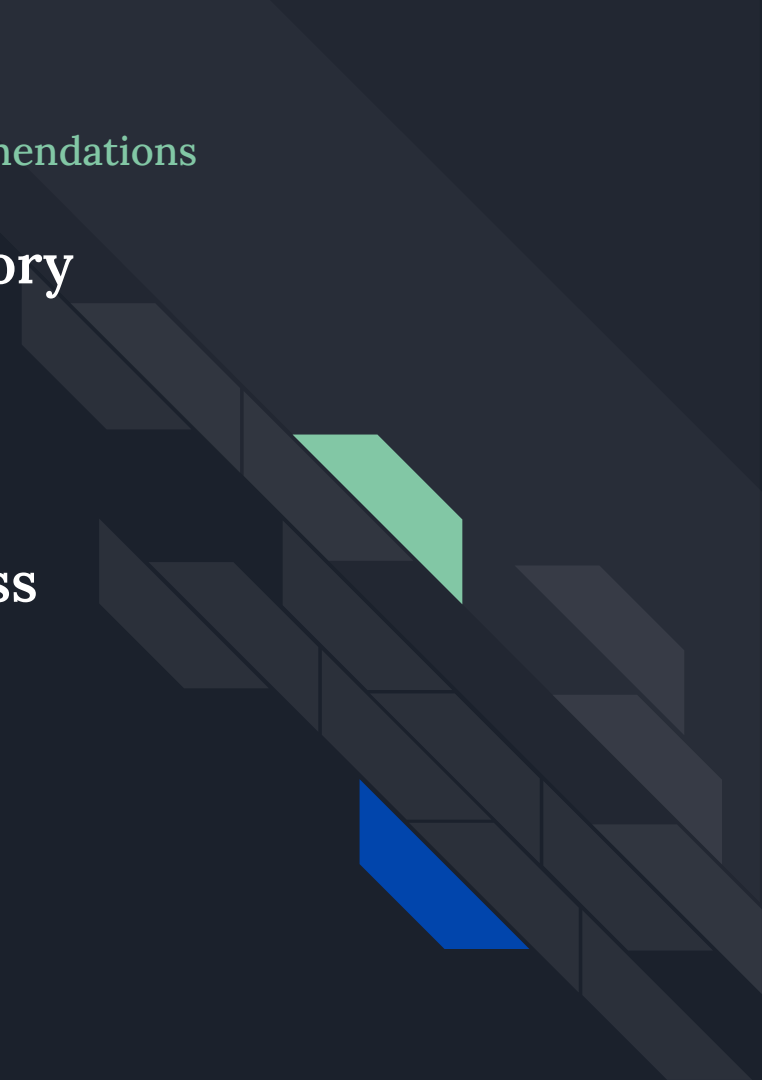
1. Sales by Product Category

2. Channel Performance

3. Promotion Effectiveness

4. Customer Behavior

5. Product Performance





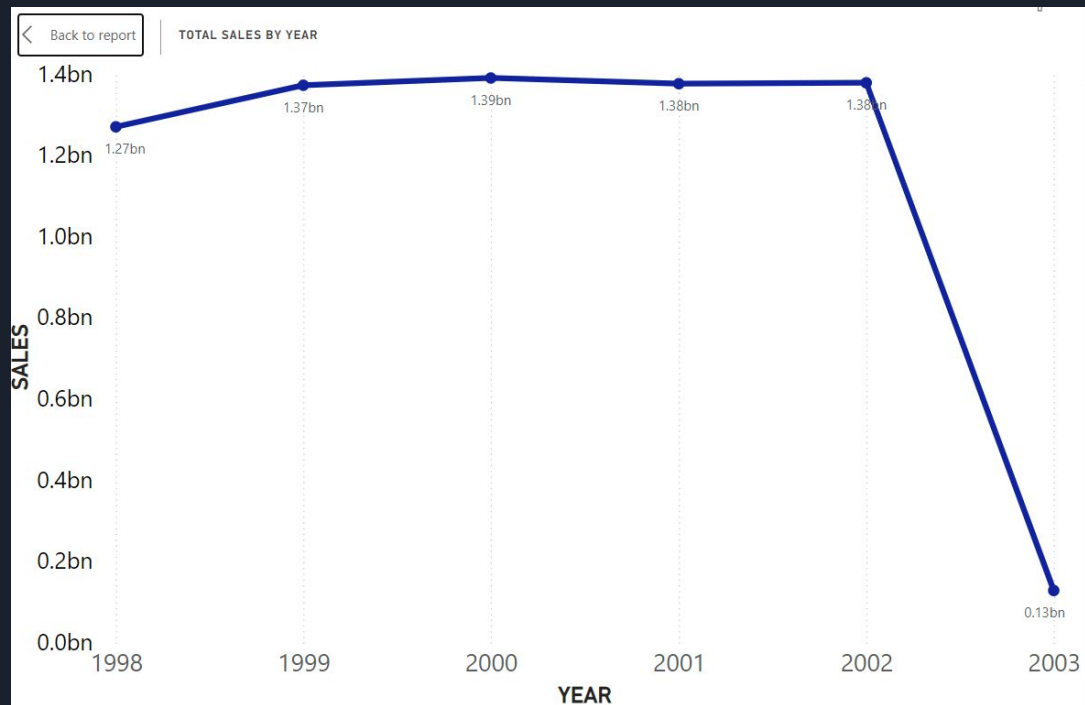
1. Sales by Product Category

- **Insight**
Certain product categories, such as electronics, shoes and music, consistently generate the highest revenue across all sales channels (web, store, and catalog).
- **Data**
Music account for 30% of total sales, followed by shoes at 25%
- **Implications**
These high-performing categories are driving a significant portion of revenue, and their continued success is essential for overall business growth.



	Category string	Sales newdecimal
	Filter	Filter
>	Music	1103608403.26
>	Women	1056247874.40
>	Home	1054308727.32
>	Children	1048525115.27
>	Men	1052807934.00
>	Electronics	1063595086.92
>	Jewelry	1032149185.97
>	Sports	1055512876.77
>	Books	1043331669.86
>	Shoes	1086478629.50

Sales by Category



Year wise sales



2. Channel Performance

- **Insight**

Web sales are steadily growing year-over-year, accounting for 30% of total sales, with an annual growth rate of 10%. Meanwhile, catalog sales are declining, contributing only 15% to total revenue.

- **Data**

The growth of web sales shows an increasing customer preference for online shopping.

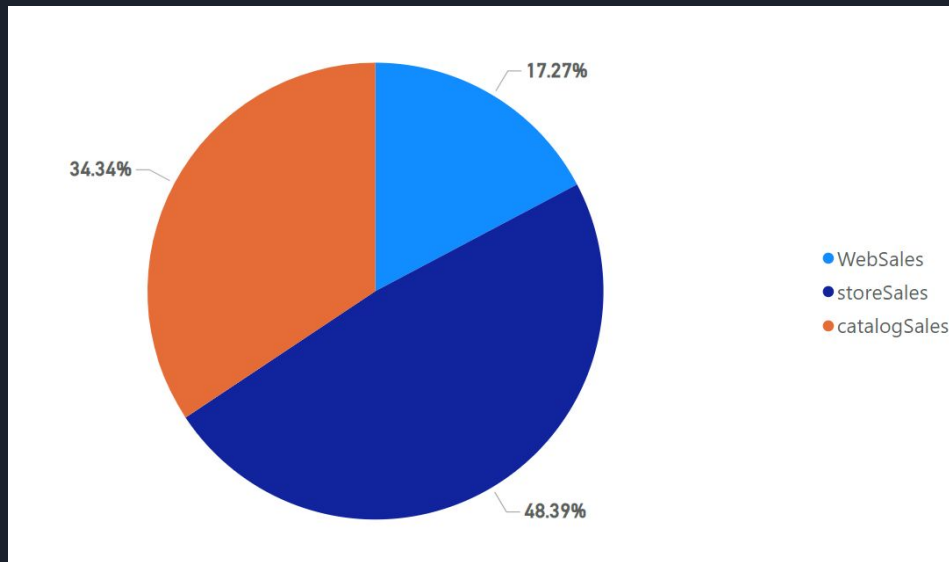
- **Implication**

The shift in consumer behavior towards e-commerce presents an opportunity to further expand digital channels.

☰

Q	channel varchar	sales newdecimal	contribution newdecimal
	Filter	Filter	Filter
>	Web	1834574423.87	17.26600
>	Store	5141904166.52	48.39400
>	Catalog	3648626287.69	34.34000

Channel wise sales distribution



Channel wise sales distribution

Q	month varchar	web_total_sales newdecimal	online_growth_rate newdecimal	store_total_sales newdecimal	store_growth_rate newdecimal
	Filter	Filter	Filter	Filter	Filter
>	2001-April	18073774.54	(NULL)	49011022.35	(NULL)
>	2001-August	39578737.00	118.984346	111177265.10	126.841351
>	2001-December	64407857.67	62.733484	170038351.52	52.943456
>	2001-February	17497902.75	-72.832658	45231643.33	-73.399152
>	2001-January	18527057.64	5.881590	54376278.84	20.217341
>	2001-July	18335204.64	-1.035529	51024857.57	-6.163388
>	2001-June	17630929.94	-3.841106	48835998.55	-4.289790
>	2001-March	18400412.08	4.364388	46457840.17	-4.869683
>	2001-May	18416466.51	0.087250	49300703.08	6.119232
>	2001-November	59981721.53	225.696145	159992822.26	224.524423
>	2001-October	40464842.58	-32.538044	114820112.45	-28.234210
>	2001-September	41750467.91	3.177142	107290392.60	-6.557841

Comparison of sales growth between online and store



3. Promotion Effectiveness

- **Insight**


Promotional campaigns led to an average sales uplift of 18% across all channels, with web promotions showing the largest uplift at 25%, while catalog promotions had the lowest at 10%.

- **Data**

Email promotions had the highest ROI of 35% on average.

- **Implication**

Digital promotions, particularly email campaigns, are more effective than traditional catalog promotions..



	Q	p_promo_id string	total_sales_promo newdecimal	expected_sales_non_promo newdecimal	p_cost newdecimal	net_revenue_from_promo newdecimal	roi_percentage newdecimal
		Filter	Filter	Filter	Filter	Filter	Filter
>		AAAAAAAAMBAAAA	3261.26	282081.080965	(NULL)	-278819.820965	(NULL)
>		AAAAAAAAPBAAAA	6397.65	193852.277586	1000.00	-187454.627586	-18845.4627586000
>		AAAAAAAADCAAAA	3954.81	176479.325841	1000.00	-172524.515841	-17352.4515841000
>		AAAAAAAIDAAAA	10144.31	358066.808871	1000.00	-347922.498871	-34892.2498871000
>		AAAAAAAEEAAAA	7444.95	306248.087650	1000.00	-298803.137650	-29980.3137650000
>		AAAAAAAEEFAAAA	34277.60	337859.242875	1000.00	-303581.642875	-30458.1642875000
>		AAAAAAAJGAAAA	13462.55	300751.683880	1000.00	-287289.133880	-28828.9133880000
>		AAAAAAAOGAAAA	13847.55	298181.488680	1000.00	-284333.938680	-28533.3938680000
>		AAAAAAAHAHAHA	13528.88	335655.642787	1000.00	-322126.762787	-32312.6762787000
>		AAAAAAAAPHAAAA	5567.67	283582.471620	1000.00	-278014.801620	-27901.4801620000
>		AAAAAAAAPIAAAA	5487.03	172104.187266	1000.00	-166617.157266	-16761.7157266000
>		AAAAAADJAAAA	4149.28	434819.059849	1000.00	-430669.779849	-43166.9779849000
>		AAAAAGJAAAA	20098.39	402124.982504	1000.00	-382026.592504	-38302.6592504000
>		AAAAAAAKJAAAA	12223.16	187423.044540	1000.00	-175199.884540	-17619.9884540000
>		AAAAAABKAAAA	35366.69	363360.948888	1000.00	-327994.258888	-32899.4258888000
>		AAAAAAAFKAAAA	9994.46	301204.306336	1000.00	-291209.846336	-29220.9846336000

ROI for each promotional campaign



4. Customer Behavior

- **Insight**

A small percentage of customers (the top 10%) contribute to over 50% of total sales, indicating a strong reliance on high-value customers.

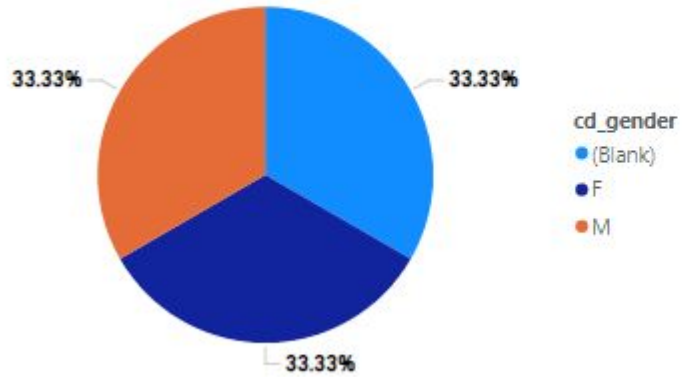
- **Data**

Repeat customers are twice as likely to respond to promotional offers than first-time buyers, especially in the web channel.

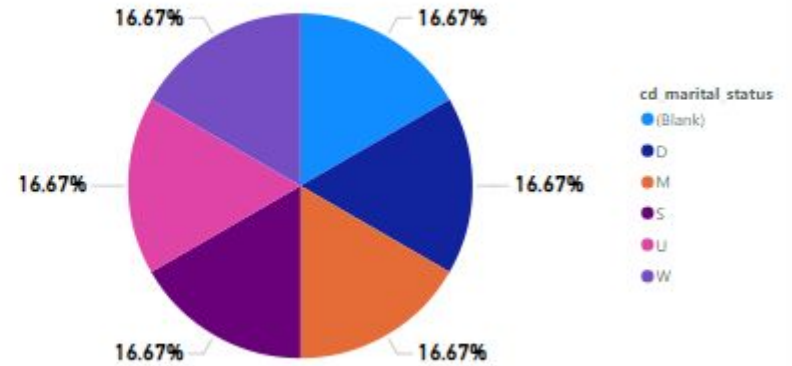
- **Implication**

High-value and repeat customers are driving revenue, highlighting the importance of customer retention strategies.

GENDER WISE DISTRIBUTION



MARRIAGE WISE DISTRIBUTION



Customer demographic distribution



Q			customer_id int	avg_purchase_freq newdecimal
	Filter		Filter	
>	2		0.0850	
>	3		0.0580	
>	4		0.0380	
>	6		0.0620	
>	8		0.0140	
>	9		0.0340	
>	11		0.0590	
>	13		0.0100	
>	15		0.0760	
>	16		0.0860	
>	17		0.0560	
>	18		0.0440	
>	19		0.0480	
>	20		0.0860	

Customer wise average purchase frequency

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5. Product Performance

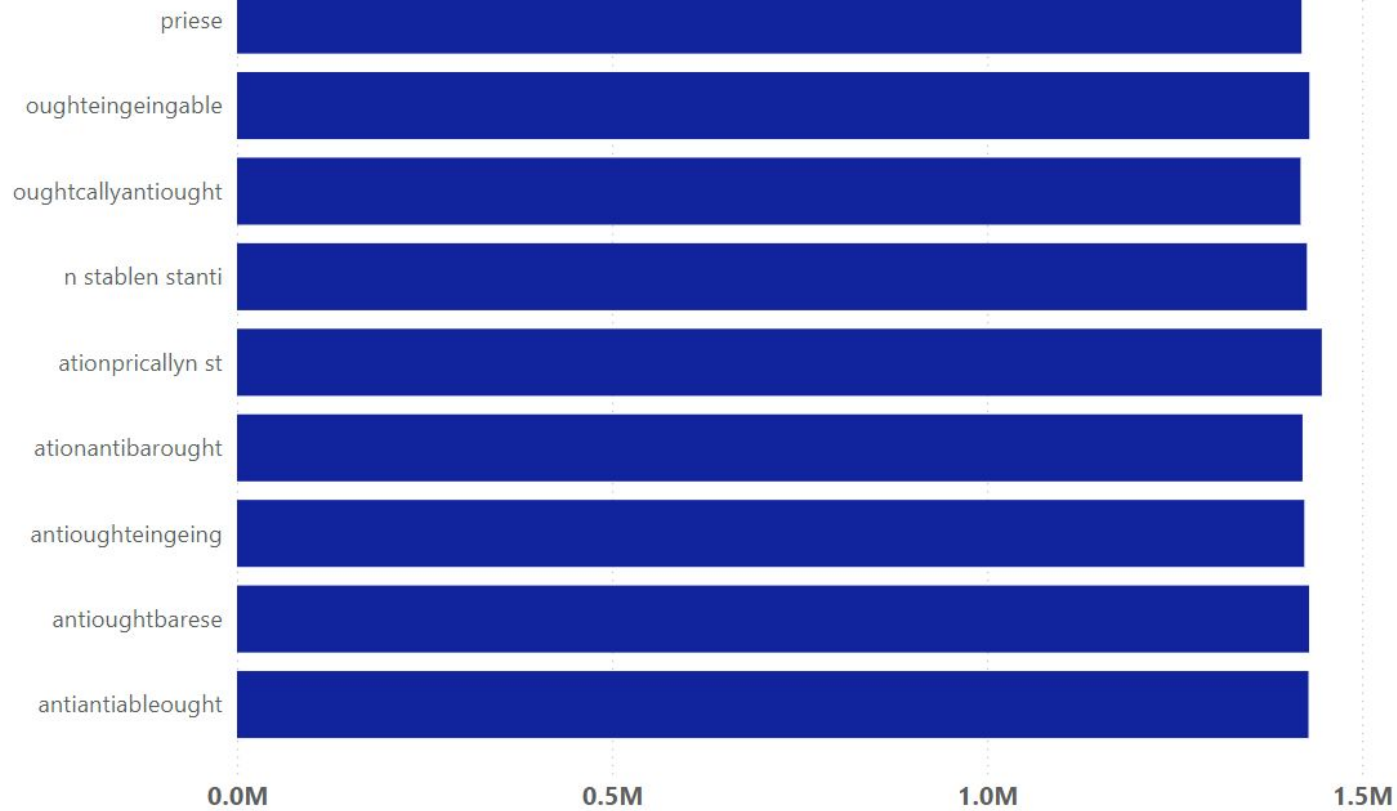
- **Insight**
The top 20% of products contribute to 80% of sales, while the remaining 80% of products contribute relatively little to overall revenue.
- **Data**
This distribution shows a strong concentration of revenue among a small subset of high-performing products.
- **Implication**
Focusing resources on promoting these top products will yield better results.



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TOP 10 PRODUCTS

ProductName



Total Sales

Top 10 product sales wise



Recommendations

1. Invest in E-commerce Infrastructure
2. Focus on High-ROI Promotional Channels
3. Launch Loyalty Programs for High-Value Customers
4. Optimize Inventory Based on Demand
5. Expand Digital Marketing in Underperforming Regions



Thank you