Advanced Excel Project

Super Stores Sales Dataset Analysis

Insight Project Report

Submitted By

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DATA ANALYTICS & DATA SCIENCE

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Project Overview & Objectives

- **Identify Top-Selling Products**: Analyze the best-performing products, examine their sales trends, and understand the key factors driving their success.

- **Analyze Sales Dynamics**: Investigate the relationships between top-selling products, sales channels,

- discounts, and other relevant variables to gain deeper insights into overall sales performance.

- **Evaluate Low-Performing Products**: Identify the least-selling products, assess the reasons for

- their poor performance, and develop strategies to boost their sales.

- **Deliver Actionable Insights**: Provide practical recommendations to enhance sales performance,

- identify areas for improvement, and leverage growth opportunities.

Row Labels	Sum of Adjusted_sales
2014	406493.7423
2015	407671.3237
2016	528294.0311
2017	631962.6685
Grand Total	1974421.766

Row Labels	Sum of Adjusted_sales
Qtr1	444655.064
Qtr2	394939.7071
Qtr3	528527.736
Qtr4	606299.2584
Grand Total	1974421.766

Data Description and Preparation

Dataset Overview:

The dataset in question pertains to sales data from a superstore. It comprises a total of 9,995 individual records (rows) and 21 distinct attributes (columns). Each row represents a specific transaction or sale, while the columns capture various details related to those transactions, such as product information, sales figures, customer details, and more.

Data Cleaning Process:

To prepare the dataset for analysis, the Power Query Editor was utilized. The primary steps in the data cleaning process included formatting the data to ensure consistency and sorting the date entries in ascending order. This sorting ensures that the data is organized chronologically, making it easier to analyse trends and patterns over time. Additionally, the use of Power Query Editor allowed for efficient handling of any inconsistencies or errors in the dataset, ensuring that the data was clean and ready for further analysis.

Uncleaned Data:

	Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	Country	City	State	Postal Code	Region	Product ID	Category	Sub-Category	Prod
2	1	CA-2016-15215	08-11-2016	11-11-2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Henderson	Kentucky	42420	South	FUR-BO-100017	Furniture	Bookcases	Bush
3	2	CA-2016-15215	08-11-2016	11-11-2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Henderson	Kentucky	42420	South	FUR-CH-100004	Furniture	Chairs	Hon I
4	3	CA-2016-13868	12-06-2016	16-06-2016	Second Class	DV-13045	Darrin Van Huff	Corporate	United States	Los Angeles	California	90036	West	OFF-LA-100002	Office Supplies	Labels	Self-
5	4	US-2015-10896	11-10-2015	18-10-2015	Standard Class	SO-20335	Sean O'Donnell	Consumer	United States	Fort Lauderdale	Florida	33311	South	FUR-TA-100005	Furniture	Tables	Brett
6	5	US-2015-10896	11-10-2015	18-10-2015	Standard Class	SO-20335	Sean O'Donnell	Consumer	United States	Fort Lauderdale	Florida	33311	South	OFF-ST-100007	Office Supplies	Storage	Eldor
7	6	CA-2014-11581	09-06-2014	14-06-2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	FUR-FU-100014	Furniture	Furnishings	Eldor
8	7	CA-2014-11581	09-06-2014	14-06-2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	OFF-AR-100028	Office Supplies	Art	New
9	8	CA-2014-11581	09-06-2014	14-06-2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	TEC-PH-100022	Technology	Phones	Mitel
10	9	CA-2014-11581	09-06-2014	14-06-2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	OFF-BI-100039	Office Supplies	Binders	DXL
11	10	CA-2014-11581	09-06-2014	14-06-2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	OFF-AP-100028	Office Supplies	Appliances	Belki
12	11	CA-2014-11581	09-06-2014	14-06-2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	FUR-TA-100015	Furniture	Tables	Chro
13	12	CA-2014-11581	09-06-2014	14-06-2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	TEC-PH-100020	Technology	Phones	Konf
14	13	CA-2017-1144	15-04-2017	20-04-2017	Standard Class	AA-10480	Andrew Allen	Consumer	United States	Concord	North Carolina	28027	South	OFF-PA-100023	Office Supplies	Paper	Xero
15	14	CA-2016-16136	05-12-2016	10-12-2016	Standard Class	IM-15070	Irene Maddox	Consumer	United States	Seattle	Washington	98103	West	OFF-BI-100036	Office Supplies	Binders	Fello
16	15	US-2015-11898	22-11-2015	26-11-2015	Standard Class	HP-14815	Harold Pawlan	Home Office	United States	Fort Worth	Texas	76106	Central	OFF-AP-100023	Office Supplies	Appliances	Holm
17	16	US-2015-11898	22-11-2015	26-11-2015	Standard Class	HP-14815	Harold Pawlan	Home Office	United States	Fort Worth	Texas	76106	Central	OFF-BI-100007	Office Supplies	Binders	Store
18	17	CA-2014-10589	11-11-2014	18-11-2014	Standard Class	PK-19075	Pete Kriz	Consumer	United States	Madison	Wisconsin	53711	Central	OFF-ST-100041	Office Supplies	Storage	Stur-
19	18	CA-2014-16716	13-05-2014	15-05-2014	Second Class	AG-10270	Alejandro Grove	Consumer	United States	West Jordan	Utah	84084	West	OFF-ST-100001	Office Supplies	Storage	Fello
20	19	CA-2014-14335	27-08-2014	01-09-2014	Second Class	ZD-21925	Zuschuss Donate	Consumer	United States	San Francisco	California	94109	West	OFF-AR-100030	Office Supplies	Art	New
21	20	CA-2014-14335	27-08-2014	01-09-2014	Second Class	ZD-21925	Zuschuss Donate	Consumer	United States	San Francisco	California	94109	West	TEC-PH-100019	Technology	Phones	Cisco

Cleaned Data:

	Row_ID	Order_ID	Order_Date	Ship_Date	Ship_Mode	Customer_ID	Customer_Name	Segment	Country	City	State	Postal_Code	Region	Product_ID
2	541	CA-2014-140795	02-01-2014	02-03-2014	First Class	BD-11500	Bradley Drucker	Consumer	United States	Green Bay	Wisconsin	54302	Central	TEC-AC-100014
3	5714	US-2014-143707	03-01-2014	03-05-2014	Standard Class	HR-14770	Halle Redmond	Home Office	United States	New York City	New York	10035	East	TEC-PH-100036
4	6548	CA-2014-113880	03-01-2014	03-05-2014	Standard Class	VF-21715	Vicky Freyman	Home Office	United States	Elmhurst	Illinois	60126	Central	FUR-CH-100008
5	6549	CA-2014-113880	03-01-2014	03-05-2014	Standard Class	VF-21715	Vicky Freyman	Home Office	United States	Elmhurst	Illinois	60126	Central	OFF-PA-100030
6	7948	CA-2014-131009	03-01-2014	03-05-2014	Standard Class	SC-20380	Shahid Collister	Consumer	United States	El Paso	Texas	79907	Central	OFF-FA-100043
7	7949	CA-2014-131009	03-01-2014	03-05-2014	Standard Class	SC-20380	Shahid Collister	Consumer	United States	El Paso	Texas	79907	Central	FUR-CH-100012
8	7950	CA-2014-131009	03-01-2014	03-05-2014	Standard Class	SC-20380	Shahid Collister	Consumer	United States	El Paso	Texas	79907	Central	FUR-FU-100010
9	7951	CA-2014-131009	03-01-2014	03-05-2014	Standard Class	SC-20380	Shahid Collister	Consumer	United States	El Paso	Texas	79907	Central	OFF-ST-100014
10	158	CA-2014-104269	03-01-2014	03-06-2014	Second Class	DB-13060	Dave Brooks	Consumer	United States	Seattle	Washington	98115	West	FUR-CH-100040
11	8310	CA-2014-168312	03-01-2014	03-07-2014	Standard Class	GW-14605	Giulietta Weimer	Consumer	United States	Houston	Texas	77036	Central	OFF-ST-100036
12	8311	CA-2014-168312	03-01-2014	03-07-2014	Standard Class	GW-14605	Giulietta Weimer	Consumer	United States	Houston	Texas	77036	Central	FUR-TA-100018
13	1373	US-2014-157021	04-01-2014	04-06-2014	Second Class	KM-16720	Kunst Miller	Consumer	United States	Vallejo	California	94591	West	OFF-LA-100023
14	1374	US-2014-157021	04-01-2014	04-06-2014	Second Class	KM-16720	Kunst Miller	Consumer	United States	Vallejo	California	94591	West	OFF-BI-100004
15	7954	CA-2014-138359	04-01-2014	04-06-2014	Standard Class	KH-16330	Katharine Harms	Corporate	United States	Revere	Massachusetts	2151	East	OFF-ST-100006
16	7955	CA-2014-138359	04-01-2014	04-06-2014	Standard Class	KH-16330	Katharine Harms	Corporate	United States	Revere	Massachusetts	2151	East	OFF-BI-100001
17	245	CA-2014-131926	06-01-2014	06-06-2014	Second Class	DW-13480	Dianna Wilson	Home Office	United States	Lakeville	Minnesota	55044	Central	FUR-CH-100040
18	246	CA-2014-131926	06-01-2014	06-06-2014	Second Class	DW-13480	Dianna Wilson	Home Office	United States	Lakeville	Minnesota	55044	Central	OFF-ST-100022
19	247	CA-2014-131926	06-01-2014	06-06-2014	Second Class	DW-13480	Dianna Wilson	Home Office	United States	Lakeville	Minnesota	55044	Central	OFF-PA-100040
20	248	CA-2014-131926	06-01-2014	06-06-2014	Second Class	DW-13480	Dianna Wilson	Home Office	United States	Lakeville	Minnesota	55044	Central	OFF-AP-100029
21	249	CA-2014-131926	06-01-2014	06-06-2014	Second Class	DW-13480	Dianna Wilson	Home Office	United States	Lakeville	Minnesota	55044	Central	OFF-PA-100000
22	307	CA-2014-111003	06-01-2014	06-06-2014	Standard Class	CR-12625	Corey Roper	Home Office	United States	Lakewood	New Jersey	8701	East	OFF-BI-100004
23	308	CA-2014-111003	06-01-2014	06-06-2014	Standard Class	CR-12625	Corey Roper	Home Office	United States	Lakewood	New Jersey	8701	East	OFF-AR-100021
24	2201	US-2014-165659	06-01-2014	06-06-2014	Standard Class	LT-17110	Liz Thompson	Consumer	United States	Little Rock	Arkansas	72209	South	FUR-FU-100019
25	2202	US-2014-165659	06-01-2014	06-06-2014	Standard Class	LT-17110	Liz Thompson	Consumer	United States	Little Rock	Arkansas	72209	South	TEC-PH-100025

Key Metrics Calculation and Data Analysis

Formulas:

Gross Sales	=SUM (Sales Amount)
Net Sales	=Sales-(Discount*sales)
Average Sales	=Average(sales)
Discounted Sale	= (Sales rate*Discount rate)
Month ()	=MONTH (orderdate column)
Year ()	=Year (orderdate column)

Visuals:

Total Adjusted sales	₹ 19,74,421.77
Average order	198
Total Revenue	₹ 22,96,919.49
Total Discount	₹ 3,22,497.72

Time Based Analysis

The table summarizes the monthly sales performance for a superstore, showing the adjusted sales figures for each month and the grand total. Here's an analysis of the performance:

1. **Monthly Performance**:

   o **Strongest Months**: November (232,927.4267) and September (216,148.9719) are the top-performing months, followed by December (216,371.6841) and March (184,273.5674). These months show significantly higher sales compared to others.

   o **Moderate Months**: January (142,632.6259), May (146,446.3224), and August (176,595.9273) show moderate sales performance.

   o **Lower Performance Months**: February (117,748.8708), April (122,846.7527), June (125,646.6321), July (135,782.8367), and October (157,000.1477) have relatively lower sales figures.

2. **Trends**:

   o The second half of the year (July to December) generally performs better than the first half, with November and December being particularly strong.

   o The first half of the year (January to June) shows more variability, with March being a standout month.

3. **Grand Total**:

   o The total adjusted sales for the year amount to 1,974,421.7661.

Overall, the data indicates a strong performance in the latter part of the year, with November being the peak month. This trend suggests potential seasonality or specific factors driving higher sales during these periods.

Row Labels	Sum of Adjusted_sales
Jan	142632.6259
Feb	117748.8708
Mar	184273.5674
Apr	122846.7527
May	146446.3224
Jun	125646.632
Jul	135782.8367
Aug	176595.9273
Sep	216148.9719
Oct	157000.1477
Nov	232927.4267
Dec	216371.684
Grand Total	1974421.766
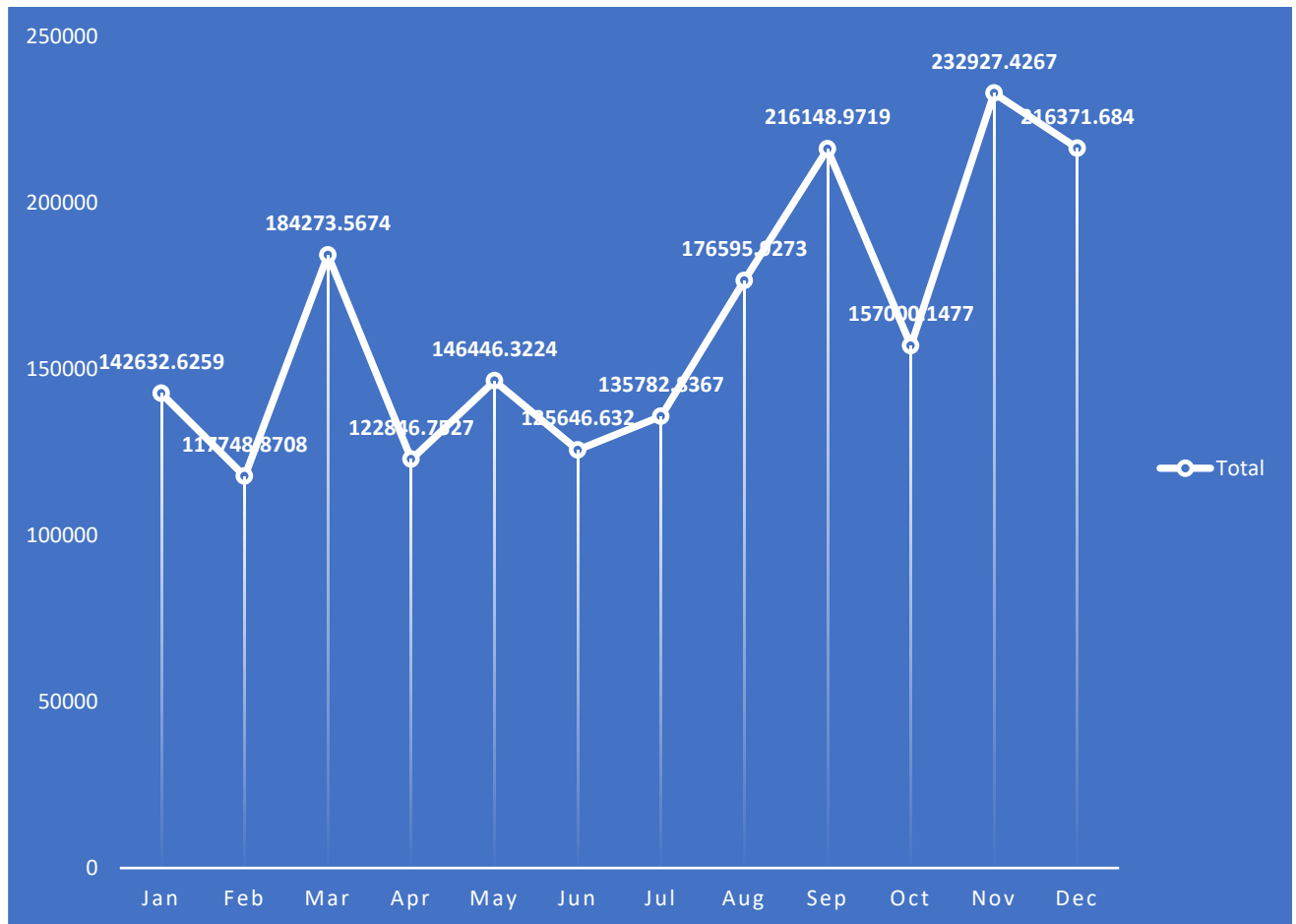
Product Wise Sales

The table provides a breakdown of sales performance by product category, showing the adjusted sales figures for each category and the grand total. Here's an analysis of the performance:

1. **Top-Performing Categories**:

   o **Phones**: This category has the highest sales at 281,914.1148, making it the best-performing product category.

   o **Chairs**: The second-highest sales come from Chairs at 278,437.3425.

   o **Tables**: Tables also perform well with sales of 162,773.3349.

   o **Binders**: This category shows strong performance with sales of 159,667.6537.

   o **Storage**: Storage products contribute significantly with sales of 210,645.6384.

2. **Moderate-Performing Categories**:

   o **Accessories**: Sales of 157,578.3164 indicate a solid performance.

   o **Machines**: This category has sales of 142,472.6495.

   o **Copiers**: Copiers show moderate sales at 131,528.2996.

   o **Appliances**: Sales of 100,041.8613 are decent but not as high as the top categories.

   o **Bookcases**: This category has sales of 94,079.40526.

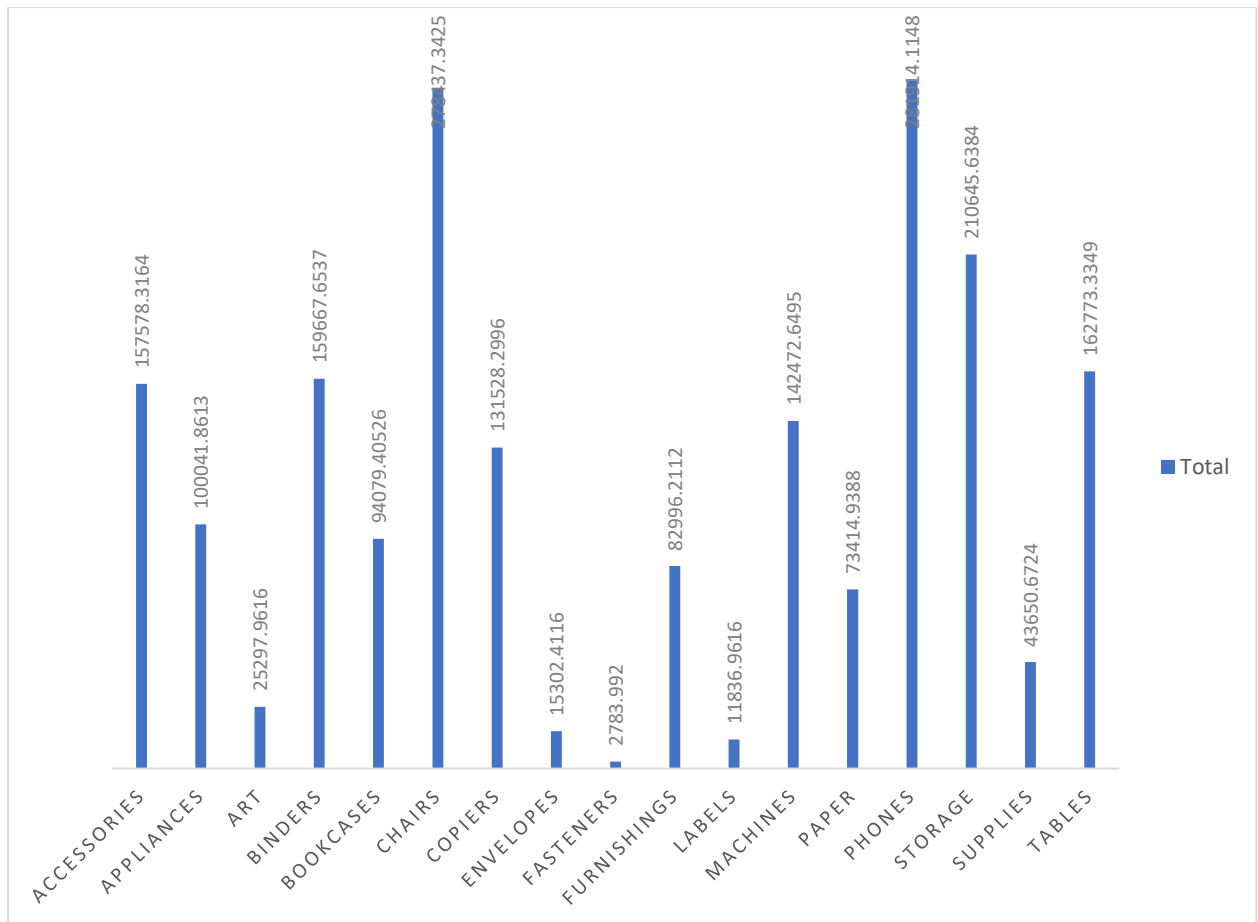   o **Furnishings**: Sales of 82,996.2112 are moderate.

3. **Lower-Performing Categories**:

   o **Paper**: Sales of 73,414.9388 are relatively lower.

   o **Supplies**: This category has sales of 43,650.6724.

   o **Art**: Sales of 25,297.9616 are quite low.

   o **Envelopes**: This category shows minimal sales at 15,302.4116.

   o **Labels**: Sales of 11,836.9616 are very low.

   o **Fasteners**: This category has the lowest sales at 2,783.992.

4. **Grand Total**:

   o The total adjusted sales across all categories amount to 1,974,421.766.

Row Labels	Sum of Adjusted sales
Accessories	157578.3164
Appliances	100041.8613
Art	25297.9616
Binders	159667.6537
Bookcases	94079.40526
Chairs	278437.3425
Copiers	131528.2996
Envelopes	15302.4116
Fasteners	2783.992
Furnishings	82996.2112
Labels	11836.9616
Machines	142472.6495
Paper	73414.9388
Phones	281914.1148
Storage	210645.6384
Supplies	43650.6724
Tables	162773.3349
Grand Total	**1974421.766**

Chart data labels (by category):

- ACCESSORIES: 157578.3164
- APPLIANCES: 100041.8613
- ART: 25297.9616
- BINDERS: 159667.6537
- BOOKCASES: 94079.40526
- CHAIRS: 2?5?37.3425
- COPIERS: 131528.2996
- ENVELOPES: 15302.4116
- FASTENERS: 2783.992
- FURNISHINGS: 82996.2112
- LABELS: 11836.9616
- MACHINES: 142472.6495
- PAPER: 73414.9388
- PHONES: 2?5?14.1148
- STORAGE: 210645.6384
- SUPPLIES: 43650.6724
- TABLES: 162773.3349

Legend: ■ Total

Regional Sales

1. **Regional Performance**:

   o **West**: This region has the highest sales at 632,051.149, making it the top-performing region.

   o **East**: The East region follows with sales of 583,975.645, indicating strong performance.

   o **Central**: The Central region shows solid sales at 423,452.227.

   o **South**: The South region has the lowest sales among the regions at 334,942.743.

2. **Grand Total**:

   o The total adjusted sales across all regions amount to 1,974,421.76.

3. **Trends**:

   o The West and East regions are the primary drivers of sales, contributing significantly to the overall total.

- The Central region performs moderately, while the South region lags behind in comparison.

Row Labels	Sum of Adjusted sales
Central	423452.2276
East	583975.6454
South	334942.7434
West	632051.1492
Grand Total	**1974421.766**
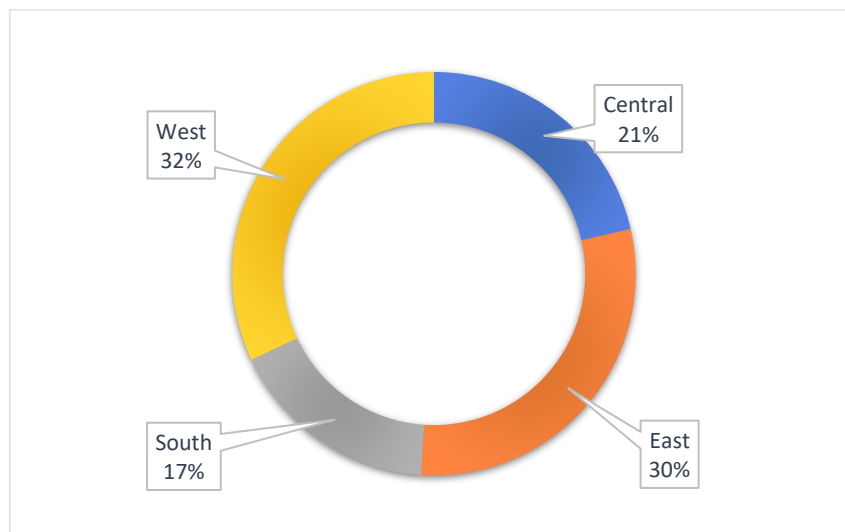
Conclusion & Next Steps

The data highlights the importance of the Technology category and the West region in driving overall sales. By focusing on high-performing areas and addressing underperforming segments, there is significant potential to optimize revenue and market share.

Next steps:

1. Seasonal Sales Analysis

2. Customer Segmentation

3. Customer Feedback and Satisfaction

4. Cross-Selling and Upselling Opportunities