

# SUPERSTORE SALES & PROFIT ANALYSIS, DASHBOARD (EXCEL)

Prepared by “Junaid Khan”

## Project Overview

This project focuses on analyzing retail sales data to understand overall business performance, profit trends, return impact, and regional contributions. The solution includes data cleaning, transformation, pivot-based analysis, and an interactive management dashboard built in Excel.

## Dataset Information

The dataset was sourced from Kaggle and contains three related tables:

**Orders** – Sales transactions, products, customers, and profit data

**Returns** – Information about returned orders

**People** – Region-wise responsible managers

## Data Preparation & Cleaning

Row	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment	Country	City	State	Postal Code	Region	Product ID	Category	Sub-Category	Product Name	Sales	Quantity	Discount	Profit
1	CA-2016-152156	08/11/2016	11/11/2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Henderson	Kentucky	42420	South	FUR-BO-1000	Furniture	Bookcases	Bush Somers	261.96	2	0	41.9136
2	CA-2016-152156	08/11/2016	11/11/2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Henderson	Kentucky	42420	South	FUR-CH-1000	Furniture	Chairs	Hon Deluxe F	731.94	3	0	219.582
3	CA-2016-138688	12/06/2016	16/06/2016	Second Class	DV-13045	Darrin Van H	Corporate	United States	Los Angeles	California	90036	West	OFF-LA-1000	Office Suppli	Labels	Self-Adhesive	14.62	2	0	6.8714
4	US-2015-108966	11/10/2015	18/10/2015	Standard Class	SO-20335	Sean O'Donn	Consumer	United States	Fort Lauderdale	Florida	33311	South	FUR-TA-1000	Furniture	Tables	Bretford CR4	957.5775	5	0.45	-383.031
5	US-2015-108966	11/10/2015	18/10/2015	Standard Class	SO-20335	Sean O'Donn	Consumer	United States	Fort Lauderdale	Florida	33311	South	OFF-ST-1000	Office Suppli	Storage	Eldon Fold 'N	22.368	2	0.2	2.5164
6	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoff	Consumer	United States	Los Angeles	California	90032	West	FUR-FU-1000	Furniture	Furnishings	Eldon Expres	48.86	7	0	14.1694
7	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoff	Consumer	United States	Los Angeles	California	90032	West	OFF-AR-1000	Office Suppli	Art	Newell 322	7.28	4	0	1.9656
8	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoff	Consumer	United States	Los Angeles	California	90032	West	TEC-PH-1000	Technology	Phones	Mitel 5320 IP	907.152	6	0.2	90.7152
9	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoff	Consumer	United States	Los Angeles	California	90032	West	OFF-BI-1000	Office Suppli	Binders	DXL Angle-Vi	18.504	3	0.2	5.7825
10	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoff	Consumer	United States	Los Angeles	California	90032	West	OFF-AP-1000	Office Suppli	Appliances	Belkin F5C20	114.9	5	0	34.47
11	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoff	Consumer	United States	Los Angeles	California	90032	West	FUR-TA-1000	Furniture	Tables	Chromcraft R	1706.184	9	0.2	85.3092
12	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoff	Consumer	United States	Los Angeles	California	90032	West	TEC-PH-1000	Technology	Phones	Konftel 250 C	911.424	4	0.2	68.3568
13	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoff	Consumer	United States	Los Angeles	California	90032	West	OFF-PA-1000	Office Suppli	Paper	Xerox 1967	15.552	3	0.2	5.4432
14	CA-2017-114412	15/04/2017	20/04/2017	Standard Class	AA-10480	Irene Maddoi	Consumer	United States	Concord	North Carolin	98103	West	OFF-BI-1000	Office Suppli	Binders	Fellowes PB2	407.976	3	0.2	132.5922
15	US-2015-118983	22/11/2015	26/11/2015	Standard Class	HP-14815	Harold Pawla	Home Office	United States	Fort Worth	Texas	76106	Central	OFF-AP-1000	Office Suppli	Appliances	Holmes Repli	68.81	5	0.8	-123.858
16	US-2015-118983	22/11/2015	26/11/2015	Standard Class	HP-14815	Harold Pawla	Home Office	United States	Fort Worth	Texas	76106	Central	OFF-BI-1000	Office Suppli	Binders	Storex DuraTi	2.544	3	0.8	-3.816
17	CA-2014-105893	11/11/2014	18/11/2014	Standard Class	PK-19075	Pete Kriz	Consumer	United States	Madison	Wisconsin	53711	Central	OFF-ST-1000	Office Suppli	Storage	Stur-D Stor SI	665.88	6	0	13.3176
18	CA-2014-167164	13/05/2014	15/05/2014	Second Class	AG-10270	Alejandro Gri	Consumer	United States	West Jordan	Utah	84084	West	OFF-ST-1000	Office Suppli	Storage	Fellowes Sup	55.5	2	0	9.99
19	CA-2014-143336	27/08/2014	01/09/2014	Second Class	ZD-21925	Zuschuss Doi	Consumer	United States	San Francisco	California	94109	West	OFF-AR-1000	Office Suppli	Art	Newell 341	8.56	2	0	2.4824
20	CA-2014-143336	27/08/2014	01/09/2014	Second Class	ZD-21925	Zuschuss Doi	Consumer	United States	San Francisco	California	94109	West	TEC-PH-1000	Technology	Phones	Cisco SPA 50	213.48	3	0.2	16.011
21	CA-2014-143336	27/08/2014	01/09/2014	Second Class	ZD-21925	Zuschuss Doi	Consumer	United States	San Francisco	California	94109	West	OFF-BI-1000	Office Suppli	Binders	Wilson Jones	22.72	4	0.2	7.384
22	CA-2016-137330	09/12/2016	13/12/2016	Standard Class	KB-16585	Ken Black	Corporate	United States	Fremont	Nebraska	68025	Central	OFF-AR-1000	Office Suppli	Art	Acco Six-Outl	71.372	7	0	5.0596
23	CA-2016-137330	09/12/2016	13/12/2016	Standard Class	KB-16585	Ken Black	Corporate	United States	Fremont	Nebraska	68025	Central	OFF-AR-1000	Office Suppli	Appliances	Global Delux	60.34	7	0	15.6884
24	US-2017-156909	16/07/2017	18/07/2017	Second Class	SF-20065	Sandra Flana	Consumer	United States	Philadelphia	Pennsylvania	19140	East	FUR-CH-1000	Furniture	Chairs	Global Delux	71.372	2	0.3	-1.0196
25	CA-2015-106320	25/09/2015	30/09/2015	Standard Class	EB-13870	Emily Burns	Consumer	United States	Orem	Utah	84057	West	FUR-TA-1000	Furniture	Tables	Bretford CR4	1044.63	3	0	240.2649
26	CA-2016-121755	16/01/2016	20/01/2016	Second Class	EH-13945	Eric Hoffman	Consumer	United States	Los Angeles	California	90049	West	OFF-BI-1000	Office Suppli	Binders	Wilson Jones	11.648	2	0.2	4.2224
27	CA-2016-121755	16/01/2016	20/01/2016	Second Class	EH-13945	Eric Hoffman	Consumer	United States	Los Angeles	California	90049	West	TEC-AC-1000	Technology	Accessories	Imation 8GB	90.57	3	0	11.7741
28	US-2015-150630	17/09/2015	21/09/2015	Standard Class	TB-21520	Tracy Blumst	Consumer	United States	Philadelphia	Pennsylvania	19140	East	FUR-BO-1000	Furniture	Bookcases	Riverside Pal	3083.43	7	0.5	-1665.0522
29	US-2015-150630	17/09/2015	21/09/2015	Standard Class	TB-21520	Tracy Blumst	Consumer	United States	Philadelphia	Pennsylvania	19140	East	OFF-BI-1000	Office Suppli	Binders	Avery Recycl	9.618	2	0.7	-7.0532
30	US-2015-150630	17/09/2015	21/09/2015	Standard Class	TB-21520	Tracy Blumst	Consumer	United States	Philadelphia	Pennsylvania	19140	East	FUR-FU-1000	Furniture	Furnishings	Howard Mille	124.2	3	0.2	15.525
31	US-2015-150630	17/09/2015	21/09/2015	Standard Class	TB-21520	Tracy Blumst	Consumer	United States	Philadelphia	Pennsylvania	19140	East	OFF-FU-1000	Office Suppli	Furnishings	Howard Mille	124.2	3	0.2	15.525

Figure 1 Raw Dataset Before Analysis.

- Standardized date and numerical formats
- Identified logical duplicates using **Order ID + Product ID**
- Aggregated duplicate records to ensure accurate totals
- Linked Returns and People tables with Orders
- Created calculated columns:
  - Profit Margin
  - Order Year
  - Return Flag
- Final cleaned dataset structured as **Master 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	Product Name
3	CA-2016-152156	08/11/2016	11/11/2016	Second Class	CG-12520	Claire Gute	Consumer	United States	Henderson	Kentucky	42420	South	FUR-CH-10000454	Furniture	Chairs	Hon
4	CA-2016-138688	12/06/2016	16/06/2016	Second Class	DV-13045	Darrin Van Huff	Corporate	United States	Los Angeles	California	90036	West	OFF-LA-10000240	Office Supplies	Labels	Self
5	US-2015-108966	11/10/2015	18/10/2015	Standard Class	SO-20335	Sean O'Donnell	Consumer	United States	Fort Lauderdale	Florida	33311	South	FUR-TA-10000577	Furniture	Tables	Brett
6	US-2015-108966	11/10/2015	18/10/2015	Standard Class	SO-20335	Sean O'Donnell	Consumer	United States	Fort Lauderdale	Florida	33311	South	OFF-ST-10000760	Office Supplies	Storage	Eldo
7	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	FUR-FU-10001487	Furniture	Furnishings	Eldo
8	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	OFF-AR-10002833	Office Supplies	Art	New
9	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	TEC-PH-10002275	Technology	Phones	Mite
10	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	OFF-BI-10003910	Office Supplies	Binders	DXL
11	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	OFF-AP-10002892	Office Supplies	Appliances	Belk
12	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	FUR-TA-10001539	Furniture	Tables	Chro
13	CA-2014-115812	09/06/2014	14/06/2014	Standard Class	BH-11710	Brosina Hoffman	Consumer	United States	Los Angeles	California	90032	West	TEC-PH-10002033	Technology	Phones	Konf
14	CA-2017-114412	15/04/2017	20/04/2017	Standard Class	AA-10480	Andrew Allen	Consumer	United States	Concord	North Carolina	28027	South	OFF-PA-10002365	Office Supplies	Paper	Xero
15	CA-2016-161389	05/12/2016	10/12/2016	Standard Class	IM-15070	Irene Maddox	Consumer	United States	Seattle	Washington	98103	West	OFF-BI-10003656	Office Supplies	Binders	Xero
16	US-2015-118983	22/11/2015	26/11/2015	Standard Class	HP-14815	Harold Pawlan	Home Office	United States	Fort Worth	Texas	76106	Central	OFF-AP-10002311	Office Supplies	Appliances	Holm
17	US-2015-118983	22/11/2015	26/11/2015	Standard Class	HP-14815	Harold Pawlan	Home Office	United States	Fort Worth	Texas	76106	Central	OFF-AP-10002311	Office Supplies	Binders	Stor
18	CA-2014-105893	11/11/2014	18/11/2014	Standard Class	PK-19075	Pete Kriz	Consumer	United States	Madison	Wisconsin	53711	Central	OFF-ST-10004186	Office Supplies	Storage	Stur
19	CA-2014-167164	13/05/2014	15/05/2014	Second Class	AG-10270	Alejandro Grove	Consumer	United States	West Jordan	Utah	84084	West	OFF-ST-10000107	Office Supplies	Storage	Felc
20	CA-2014-143336	27/08/2014	01/09/2014	Second Class	ZD-21925	Zuschuss Donatelli	Consumer	United States	San Francisco	California	94109	West	OFF-AR-10003056	Office Supplies	Art	New
21	CA-2014-143336	27/08/2014	01/09/2014	Second Class	ZD-21925	Zuschuss Donatelli	Consumer	United States	San Francisco	California	94109	West	TEC-PH-10001949	Technology	Phones	Chis
22	CA-2016-137330	09/12/2016	13/12/2016	Standard Class	KB-16585	Ken Black	Corporate	United States	Fremont	Nebraska	68025	Central	OFF-AR-10000246	Office Supplies	Art	Wils
23	CA-2016-137330	09/12/2016	13/12/2016	Standard Class	KB-16585	Ken Black	Corporate	United States	Fremont	Nebraska	68025	Central	OFF-AP-10001492	Office Supplies	Appliances	Acco
24	US-2017-156909	16/07/2017	18/07/2017	Second Class	SF-20065	Sandra Flanagan	Consumer	United States	Philadelphia	Pennsylvania	19140	East	FUR-CH-10002774	Furniture	Chairs	Glob
25	CA-2015-106320	25/09/2015	30/09/2015	Standard Class	EB-13870	Emily Burns	Consumer	United States	Orem	Utah	84057	West	FUR-TA-10000577	Furniture	Tables	Bret
26	CA-2016-121755	16/01/2016	20/01/2016	Second Class	EH-13945	Eric Hoffmann	Consumer	United States	Los Angeles	California	90049	West	OFF-BI-10001634	Office Supplies	Binders	Wils
27	CA-2016-121755	16/01/2016	20/01/2016	Second Class	EH-13945	Eric Hoffmann	Consumer	United States	Los Angeles	California	90049	West	TEC-AC-10003027	Technology	Accessories	Imat
28	US-2015-150630	17/09/2015	21/09/2015	Standard Class	TB-21520	Tracy Blumstein	Consumer	United States	Philadelphia	Pennsylvania	19140	East	FUR-BO-10004834	Furniture	Bookcases	Rive
29	US-2015-150630	17/09/2015	21/09/2015	Standard Class	TB-21520	Tracy Blumstein	Consumer	United States	Philadelphia	Pennsylvania	19140	East	OFF-AP-10000474	Office Supplies	Binders	Aver
30	US-2015-150630	17/09/2015	21/09/2015	Standard Class	TB-21520	Tracy Blumstein	Consumer	United States	Philadelphia	Pennsylvania	19140	East	FUR-FU-10004848	Furniture	Furnishings	How
31	US-2015-150630	17/09/2015	21/09/2015	Standard Class	TB-21520	Tracy Blumstein	Consumer	United States	Philadelphia	Pennsylvania	19140	East	OFF-FU-10001509	Office Supplies	Envelopes	Poly

Sub-Category	Product Name	Sales	Quantity	Discount	Profit	Returned	Regional Manager	Profit Margin	Year
Bookcases	Bush Somerset Collection Bookcase	261.96	2.00	0%	41.91	No	Cassandra Brandow	16%	2016
Chairs	Hon Deluxe Fabric Upholstered Stacking Chairs, Rounded Back	731.94	3.00	0%	219.58	No	Cassandra Brandow	30%	2016
Labels	Self-Adhesive Address Labels for Typewriters by Universal	14.62	2.00	0%	6.87	No	Anna Andreadi	47%	2016
Tables	Bretford CR4500 Series Slim Rectangular Table	957.58	5.00	45%	-383.03	No	Cassandra Brandow	-40%	2015
Storage	Eldon Fold 'N Roll Cart System	22.37	2.00	20%	2.52	No	Cassandra Brandow	11%	2015
Furnishings	Eldon Expressions Wood and Plastic Desk Accessories, Cherry Wood	48.86	7.00	0%	14.17	No	Anna Andreadi	29%	2014
Art	Newell 322	7.28	4.00	0%	1.97	No	Anna Andreadi	27%	2014
Phones	Mitel 5320 IP Phone VoIP phone	907.15	6.00	20%	90.72	No	Anna Andreadi	10%	2014
Binders	DXL Angle-View Binders with Locking Rings by Samsill	18.50	3.00	20%	5.78	No	Anna Andreadi	31%	2014
Appliances	Belkin F5C206V1EL 6 Outlet Surge	114.90	5.00	0%	34.47	No	Anna Andreadi	30%	2014
Tables	Chromcraft Rectangular Conference Tables	1706.18	9.00	20%	85.31	No	Anna Andreadi	5%	2014
Phones	Konftel 250 Conference phone - Charcoal black	911.42	4.00	20%	68.36	No	Anna Andreadi	8%	2014
Paper	Xerox 1967	15.55	3.00	20%	5.44	No	Cassandra Brandow	35%	2017
Binders	Fellowes PB200 Plastic Comb Binding Machine	407.98	3.00	20%	132.59	No	Anna Andreadi	33%	2016
Appliances	Holmes Replacement Filter for HEPA Air Cleaner, Very Large Room, HEPA Filter	68.81	5.00	80%	-123.86	No	Kelly Williams	-180%	2015
Binders	Storers DuraTech Recycled Plastic Frosted Binders	2.54	3.00	80%	-3.82	No	Kelly Williams	-150%	2015
Storage	Stur-D-Stor Shelving, Vertical 5-Shelf: 72"H x 36"W x 18 1/2"D	665.88	6.00	0%	13.32	No	Kelly Williams	2%	2014
Storage	Fellowes Super Stor/Drawer	55.50	2.00	0%	9.99	No	Anna Andreadi	18%	2014
Art	Newell 341	8.56	2.00	0%	2.48	Yes	Anna Andreadi	29%	2014
Phones	Cisco SPA 501G IP Phone	213.48	3.00	20%	16.01	Yes	Anna Andreadi	7%	2014
Binders	Wilson Jones Hanging View Binder, White, 1"	22.72	4.00	20%	7.38	Yes	Anna Andreadi	33%	2014
Art	Newell 318	19.46	7.00	0%	5.06	No	Kelly Williams	26%	2016
Appliances	Acco Six-Outlet Power Strip, 4' Cord Length	60.34	7.00	0%	15.69	No	Kelly Williams	26%	2016
Chairs	Global Deluxe Stacking Chair, Gray	71.37	2.00	30%	-1.02	No	Chuck Magee	-1%	2017
Tables	Bretford CR4500 Series Slim Rectangular Table	1044.63	3.00	0%	240.26	No	Anna Andreadi	23%	2015
Binders	Wilson Jones Active Use Binders	11.65	2.00	20%	4.22	No	Anna Andreadi	36%	2016
Accessories	Imation 8GB Mini TravelDrive USB 2.0 Flash Drive	90.57	3.00	0%	11.77	No	Anna Andreadi	13%	2016
Bookcases	Riverside Palais Royal Lawyers Bookcase, Royale Cherry Finish	3083.43	7.00	50%	-1665.05	No	Chuck Magee	-54%	2015
Binders	Avery Recycled Flexi-View Covers for Binding Systems	9.62	2.00	70%	-7.05	No	Chuck Magee	-73%	2015

Figure 2&3: Cleaned Dataset After Calculate Important Matrixes and Conditional Formatting.

## Analysis Performed

The following analyses were conducted using Pivot Tables:

- Overall Sales & Profit Summary
- Category and Sub-Category Performance
- Regional Sales & Profit Comparison
- Customer Segment Analysis
- Returned vs Non-returned Orders Comparison
- Return Rate Calculation
- Regional Performance by Manager
- Year-wise Sales Trend

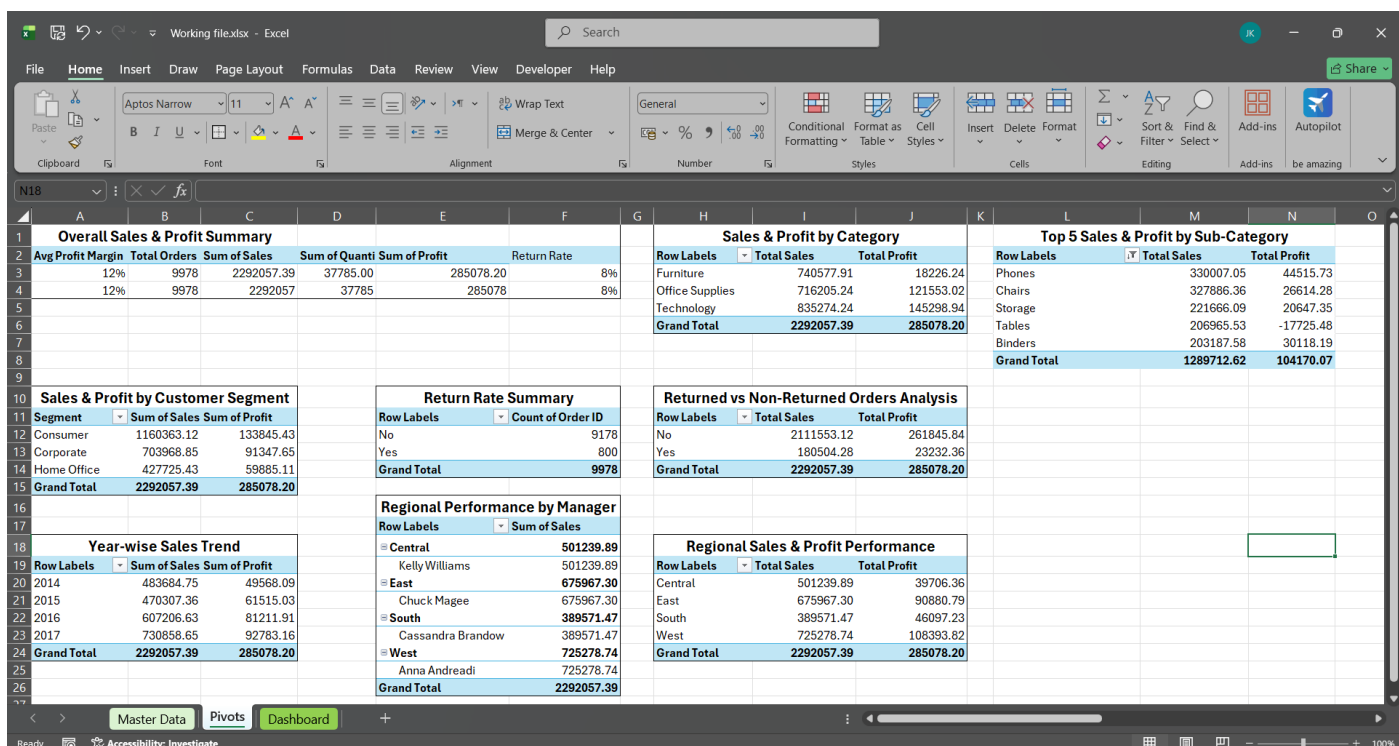


Figure 3 Pivot-based Business Analysis

## Key Performance Indicators (KPIs) Performed:

- **Total Sales:** \$2.29M
- **Total Profit:** \$285K
- **Total Quantity Sold:** 37,785
- **Total Orders:** 9,978
- **Average Profit Margin:** 12%
- **Return Rate:** 8%

## Dashboard Features

The Excel dashboard includes:

- Category-wise performance charts
- Top products analysis
- Regional sales and profit comparison
- Segment performance breakdown
- Returns impact visualization
- Manager accountability by region
- Yearly sales trend
- Interactive slicers: Category, Segment, Region, Year

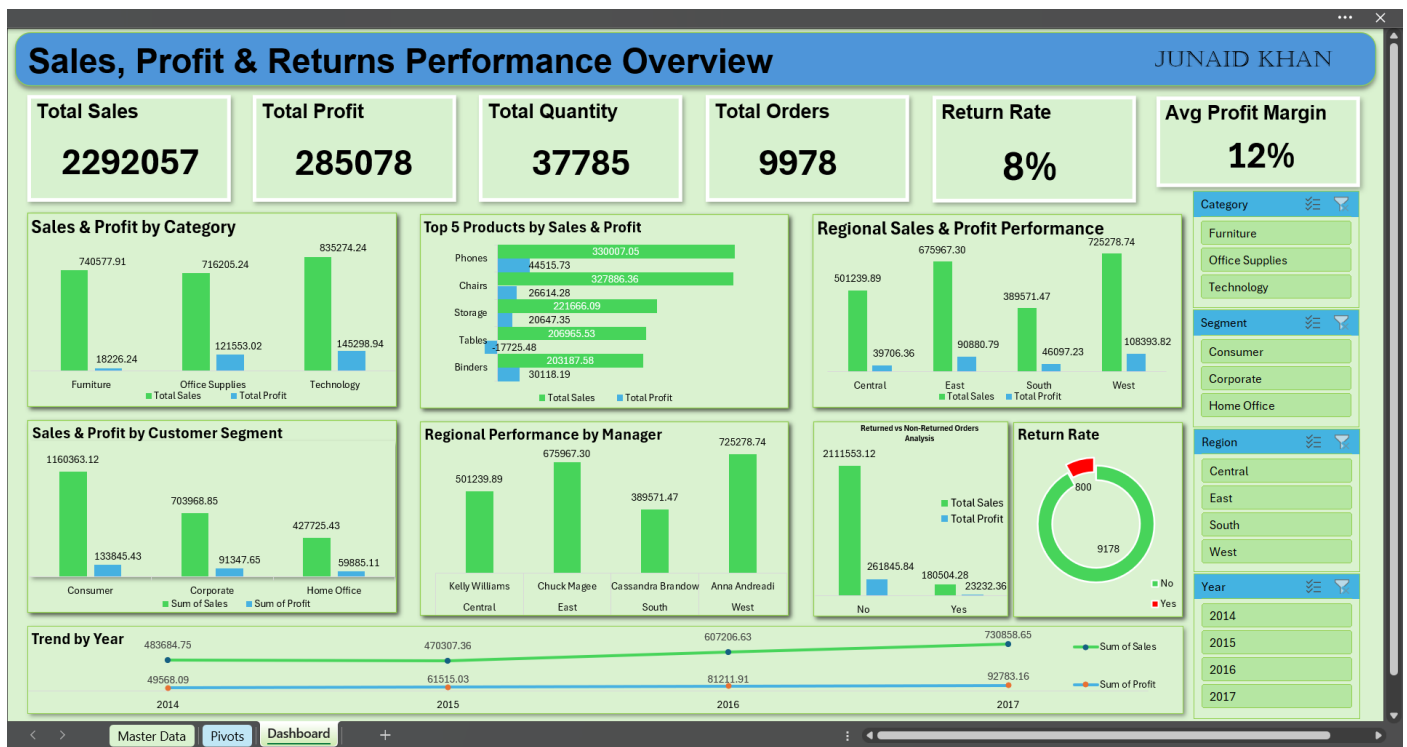


Figure 4 Overall Dashboard layout

## Business Insights

- The business generated **\$2.29M in total sales** and **\$285K in total profit**, with an average **profit margin of 12%**, indicating moderate overall profitability.
- Among categories, **Technology** is the most profitable (**\$145K profit**), while **Furniture** generated only **\$18K profit** despite strong sales volume, suggesting margin inefficiencies.
- At the sub-category level, **Tables** recorded a **negative profit of -\$17.7K** on **\$206K sales**, highlighting a pricing or cost-control issue. In contrast, **Phones** delivered strong performance with **\$44.5K profit**.
- Regionally, the **West region** is the top performer (**\$108K profit**), followed by the **East (\$90K)**. The **Central region (\$39K)** shows comparatively weaker profitability, indicating potential operational gaps.
- From a customer segment perspective, the **Consumer segment contributes the highest sales (\$1.16M)** and profit (**\$133K**), making it the primary revenue driver.
- The company processed **9,978 orders**, of which **800 were returned**, resulting in an **8% return rate**. Non-returned orders generated **\$261K profit**, whereas returned orders significantly reduced profitability, confirming the financial impact of returns.
- Region-wise accountability analysis shows that **Anna Andreadi (West)** manages the most profitable region, while other regions may require performance optimization strategies.
- Sales show consistent year-on-year growth, increasing from **\$483K (2014)** to **\$730K (2017)**, reflecting steady business expansion.

## Business Recommendations

- The **Tables sub-category** should undergo a pricing and discount strategy review. Despite generating over **\$206K in sales**, it resulted in a **negative profit (-\$17.7K)**, indicating margin leakage that needs immediate corrective action.
- Given that **Technology contributes \$145K in profit**, the company should consider expanding product offerings, increasing targeted promotions, and prioritizing inventory in this high-margin category.
- The **Central region**, with only **\$39K profit**, underperforms compared to West and East. A review of regional sales strategies, cost structure, and operational efficiency is recommended to improve profitability.
- With an **8% return rate (800 orders)**, analyzing return reasons by product category and region could help reduce losses and protect overall margins.
- As sales have grown steadily from **\$483K (2014)** to **\$730K (2017)**, reinvesting in high-performing regions (West, East) and profitable segments (Consumer, Technology) can further accelerate growth.

## Tools Used

- Microsoft Excel, Pivot Tables, Slicers, (Shapes)Dashboard Design
- AI (Chat GPT)

## Conclusion

- This project demonstrates how raw retail data can be transformed into meaningful business insights using Excel. Through data cleaning, structured analysis, and dashboard design, the report provides clear visibility into sales performance, profitability, regional contribution, and return impact. The dashboard enables decision-makers to quickly understand trends and identify improvement areas.