

# Project 2

By Anna Howitt

# Frame

- Problem Statement: The Regional Sales Director would like to know which product segment and which customer segment are performing the best and why.
- Goals: Identifying high performing Segments and understanding the fundamental drivers of success.

# Analysing

```
14 SELECT category,  
15 COUNT (DISTINCT product_id) AS number_of_products  
16 FROM products  
17 GROUP BY category
```

Data output Messages Notifications

	category text	number_of_products bigint
1	Furniture	2228
2	Office Supplies	5689
3	Technology	2375

```
4 SELECT segment,  
5 COUNT (DISTINCT customer_id) AS number_of_unique_customers  
6 FROM customers  
7 GROUP BY segment  
8
```

Data output Messages Notifications

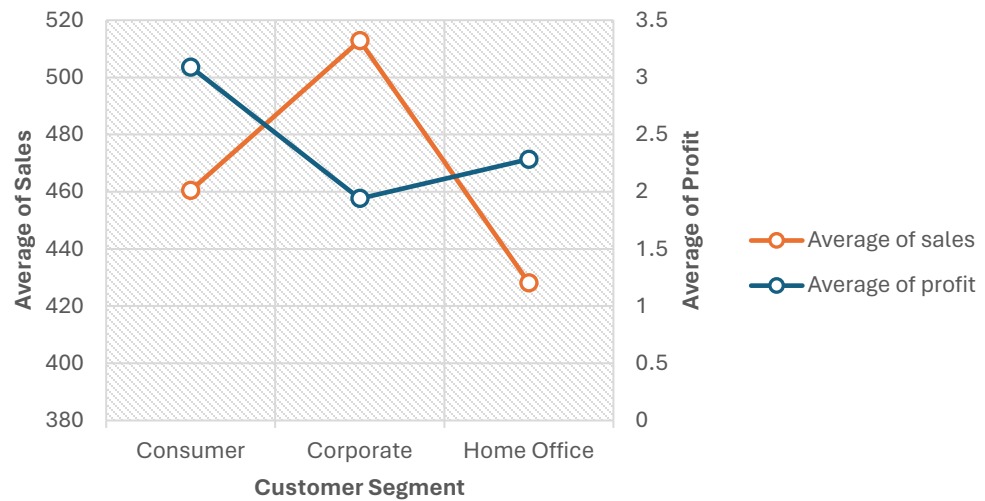
	segment text	number_of_unique_customers bigint
1	Consumer	818
2	Corporate	476
3	Home Offi...	296

The quantity of orders by Product Categories and Number of Customer Segments

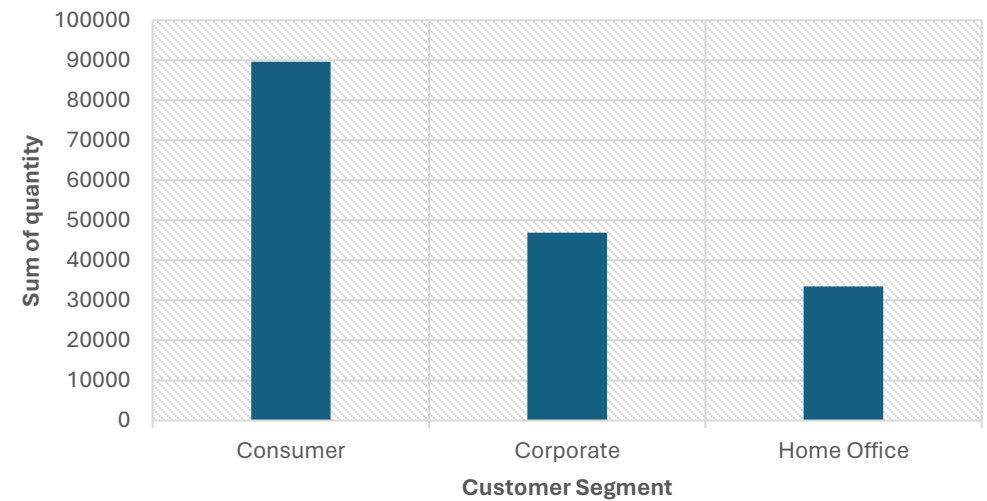
# Customer Segment

```
SELECT o.*,  
       r.*,  
       cu.*  
FROM orders o  
JOIN returns r  
ON o.order_id = r.order_id  
JOIN customers cu  
ON o.customer_id = cu.customer_id
```

Average of Sales and Profit for each Customer Segment

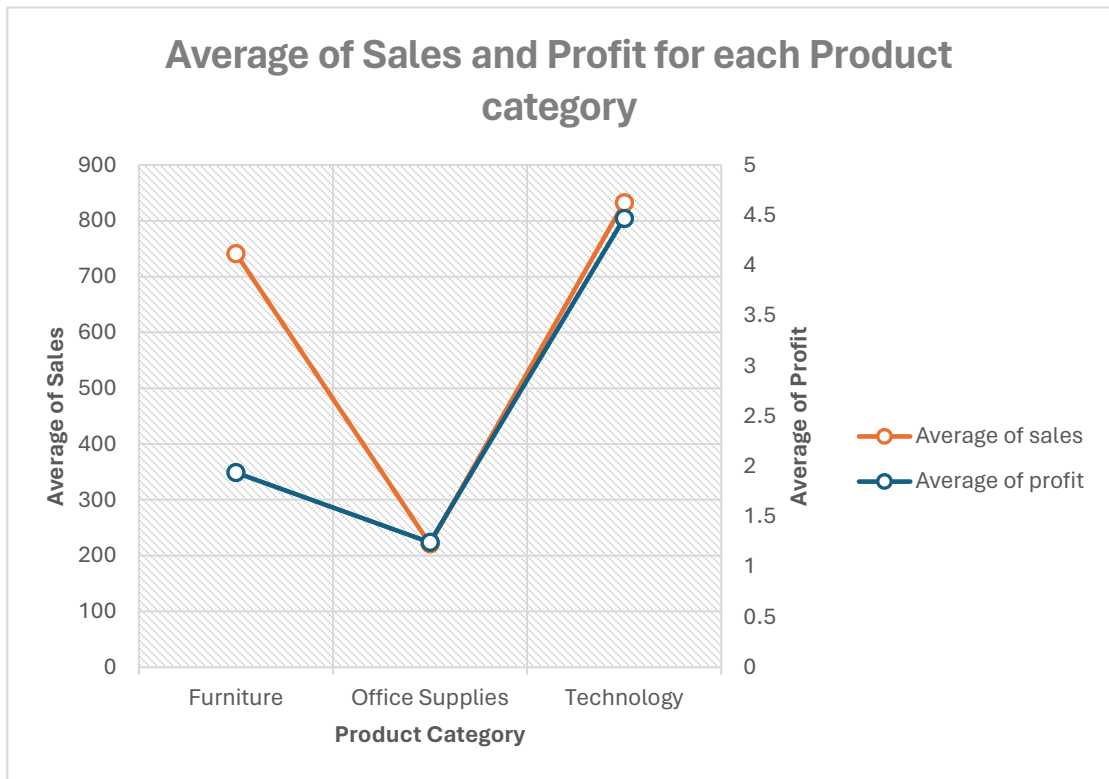


Sum of Quantity of Orders for Each Customer Segment

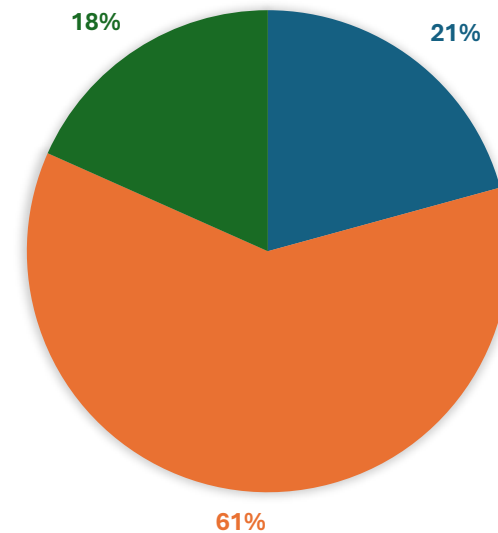


# Product Category

```
SELECT o.*,
       r.*,
       pr.*
FROM orders o
JOIN returns r
ON o.order_id = r.order_id
JOIN products pr
ON o.product_id = pr.product_id
```



### SUM OF QUANTITY OF ORDERS FOR EACH PRODUCT CATEGORY



# Pricing

```
SELECT *
FROM products
ORDER BY product_cost_to_consumer DESC
LIMIT 10

SELECT *
FROM products
ORDER BY product_cost_to_consumer ASC
LIMIT 10
```

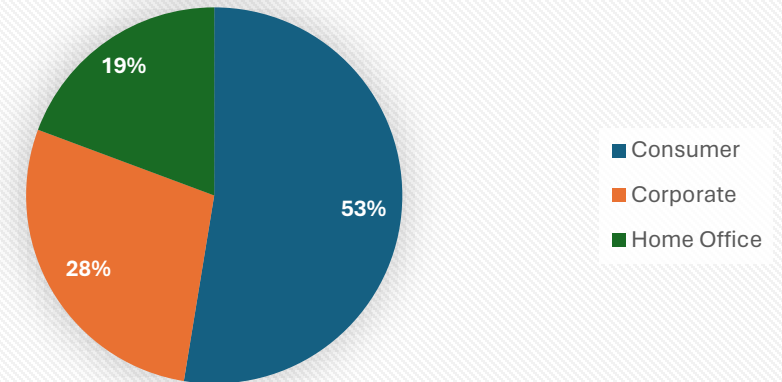
product_id	category	sub_category	product_name	product_cost_to_consumer
TEC-MA-1000	Technology	Machines	Cisco TelePresence System EX90 Videoconferencing Unit	3773.08
TEC-CO-1000	Technology	Copiers	Canon imageCLASS 2200 Advanced Copier	2799.99
TEC-MA-1000	Technology	Machines	Cubify CubeX 3D Printer Double Head Print	2399.99
TEC-MA-1000	Technology	Machines	Cubify CubeX 3D Printer Triple Head Print	1999.99
TEC-MA-1000	Technology	Machines	Canon imageCLASS MF7460 Monochrome Digital Laser Multifunction Copier	1995.99
OFF-SU-1000	Office Supplies	Supplies	High Speed Automatic Electric Letter Opener	1637.53
TEC-MA-1000	Technology	Machines	3D Systems Cube Printer, 2nd Generation, Magenta	1299.99
TEC-MA-1000	Technology	Machines	Zebra ZM400 Thermal Label Printer	1160.95
TEC-MA-1000	Technology	Machines	Okidata MB760 Printer	1119.2
OFF-BI-10004	Office Supplies	Binders	GBC DocuBind P400 Electric Binding System	1088.79
product_id	category	sub_category	product_name	product_cost_to_consumer
OFF-BI-10004	Office Supplies	Binders	Economy Binders	0.42
OFF-BI-10002	Office Supplies	Binders	Avery Reinforcements for Hole-Punch Pages	0.59
OFF-BI-10002	Office Supplies	Binders	Avery Hidden Tab Dividers for Binding Systems	0.6
OFF-BI-10003	Office Supplies	Binders	Self-Adhesive Ring Binder Labels	0.7
OFF-BI-10001	Office Supplies	Binders	Avery Poly Binder Pockets	0.72
OFF-BI-10000	Office Supplies	Binders	Avery Triangle Shaped Sheet Lifters, Black, 2/Pack	0.74
OFF-BI-10000	Office Supplies	Binders	Storex Flexible Poly Binders with Double Pockets	0.79
TEC-AC-1000	Technology	Accessories	Maxell 4.7GB DVD+R 5/Pack	0.79
TEC-AC-1000	Technology	Accessories	Maxell 4.7GB DVD-R 5/Pack	0.79
OFF-AP-1000	Office Supplies	Appliances	Eureka Disposable Bags for Sanitaire Vibra Groomer I Upright Vac	0.81

# Returns

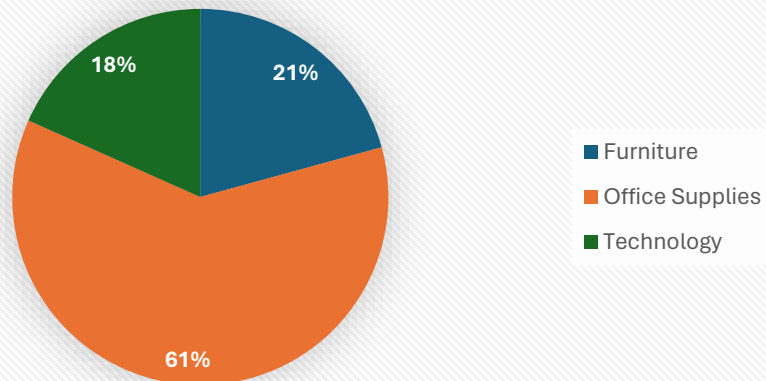
Sum of return_quantity					
	Not Given	Not Needed	Wrong Color	Wrong Item	Grand Total
Consumer	5086	2194	2090	4576	13946
Corporate	2818	912	1336	2386	7452
Home Office	2042	908	694	1480	5124
<b>Grand Total</b>	<b>9946</b>	<b>4014</b>	<b>4120</b>	<b>8442</b>	<b>26522</b>



Sum of Return Quantity for Each Customer Segment



Sum of Return Quantity for Each Product Category



Sum of return_quantity					
	Not Given	Not Needed	Wrong Color	Wrong Item	Grand Total
Furniture	3816	1476	1782	3919	10993
Office Supplies	12754	4595	4954	9978	32281
Technology	3866	1188	1599	3062	9715
<b>Grand Total</b>	<b>20436</b>	<b>7259</b>	<b>8335</b>	<b>16959</b>	<b>52989</b>

# Conclusion



FINDINGS: CONSUMER BEHAVIOUR DRIVES THE HIGHEST VOLUME OF ORDERS, WITH OFFICE SUPPLIES LEADING IN ORDER QUANTITY. HOWEVER, TECHNOLOGY PRODUCTS APPEAR AS THE TOP PERFORMERS IN TERMS OF PROFITABILITY AND SALES.



LOOK IN DEPTH INTO DISCOUNT IMPACT, SUBCATEGORY OF PRODUCTS, REGIONS AND SHIPPING TIMES.



RECOMMENDATIONS:  
- OPTIMISE SALES AND PROFITABILITY ACROSS DIFFERENT PRODUCT CATEGORIES  
- IMPROVING ORDER ACCURACY

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