

Global Electronics Retailer

A Data Analysis Project.

one of many steps in the Data Analysis Specialist Track.

Main Group of :
Data Analyst Specialist_SHR1_DAT1_G1e

At Digital Egypt Pioneers Initiative -
DEPI



A team work of

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Global Electronics Retailer

- Global Electronic retailer which runs a worldwide company to sell different electronics products for its customer.
- Retailer timeseries data for Global Electronic were provided including details on the customer and location, product, sales, store, and delivery in the period between Jan 2016 and Feb 2021.
- The main goal of this project is to create an interactive dashboard using PowerBI for managers to track the overall performance of the company,in addition to Analyzing:
 - Sales
 - Customer Behavior
 - Product Performance
 - Store and Delivery



Build an interactive dashboard

We've built a full interactive dashboard presenting the main KPI's and most important charts all with a different kinds of slicers.

Global Electronics

Dilevery Category, Subcategory Date

All All 1/1/2016 2/20/2021 Last Update Feb 20th 2021

Total Revenue \$55.76M Total Cost \$23.09M Gross Profit \$32.66M Total Orders 26.33K Total Stores 57 Avg Dilevery Days 4.53

Which Brand Earned More Revenue ?

Customer Age Group ● 19-29 ○ 30-39 □ 40-49 ■ 50-59 ▲ 60-89

Brand	Revenue
Adventure Works	\$11.85M
Contoso	\$10.79M
Wide World Importers	\$9.17M
Fabrikam	\$6.81M
The Phone Company	\$5.39M
Proseware	\$3.21M
Litware	\$2.66M
Southridge Video	\$2.58M
A. Datum	\$1.49M
Northwind Traders	\$1.13M
Tailspin Toys	\$0.68M

Which Location Generated More Revenue Drilled up to Country?

Customer Gender ● Female ○ Male

Country	Revenue
United States	\$29.87M
United Kingdom	\$7.08M
Germany	\$5.41M
Canada	\$4.72M
Australia	\$2.71M
Italy	\$2.48M
Netherlands	\$1.96M
France	\$1.52M

TOP 5 PRODUCTS WE SOLD

Product Name	Total Revenue
WWI Desktop PC2.33 X2330 Black	\$505,450
Adventure Works Desktop PC2.33 XD233 Silver	\$466,089
Adventure Works Desktop PC2.33 XD233 Brown	\$464,151
Adventure Works Desktop PC2.33 XD233 Black	\$447,678
Adventure Works Desktop PC2.33 XD233 White	\$437,019
Total	\$2,320,387

Make different insights

Firstly We've Sales Analysis



Sales Report

Overview

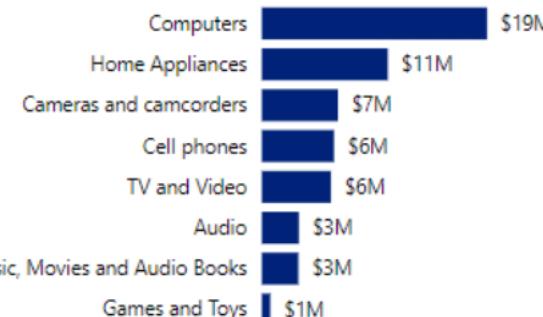
Sales Report

Stores Report

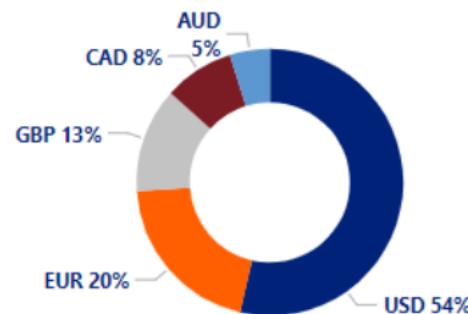
Customers Report

Products Report

Which Product Category Earned More Revenue ?



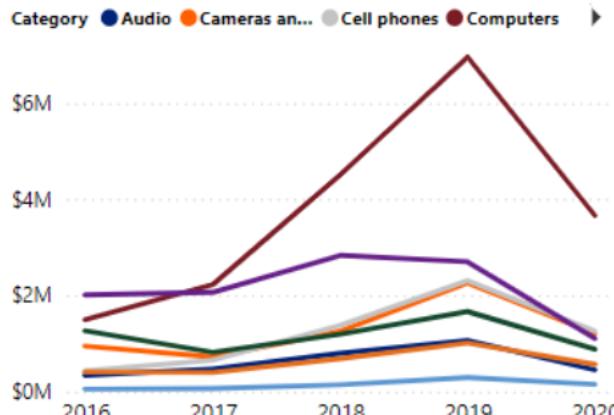
Which Currency Customers Paid More ?



Revenue Trend Drilled Down To Months



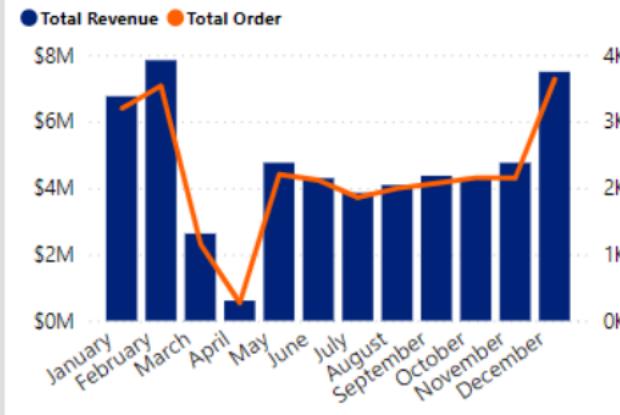
Which Category Has the Highest Sales Growth ?



Subcategory Profit Margin

Subcategory	Average Profit Margin
Digital SLR Cameras	60.34%
Projectors & Screens	57.54%
Digital Cameras	57.18%
Movie DVD	57.14%
Monitors	56.54%
Printers, Scanners & Fax	56.49%
Camcorders	56.32%
Smart phones & PDAs	55.87%
Bluetooth Headphones	55.60%
Touch Screen Phones	55.22%
Televisions	55.16%
Total	54.90%

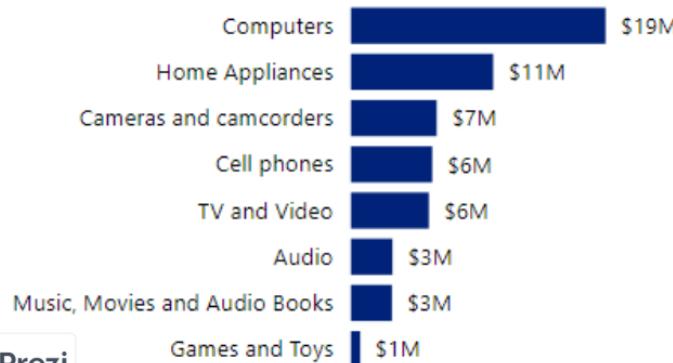
Revenue vs. Order Comparison



Brands We Sell:

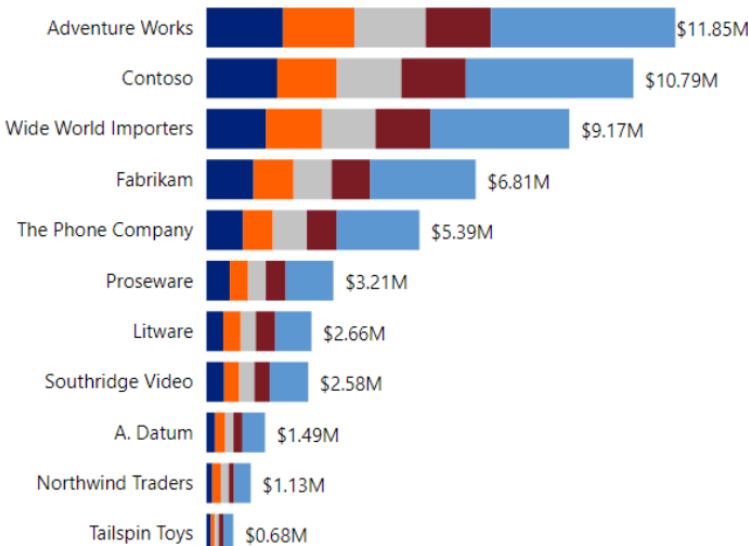
- Adventure Works has the highest revenue with \$11.85M .
- Talispen Toys has the lowest with \$0.68M
- Age group 60-89 has the major part of revenue of all brands.

Which Product Category Earned More Revenue ?



Which Brand Earned More Revenue ?

Customer Age Group ● 19-29 ● 30-39 ● 40-49 ● 50-59 ● 60-89



Product categories Revenue :

- Computers comes 1st with \$19M .
- Games and toys comes last with \$1M .

Which Location Generated More Revenue Drilled up to Country?

Customer Gender ● Female ● Male



Sales in Continents and countries:

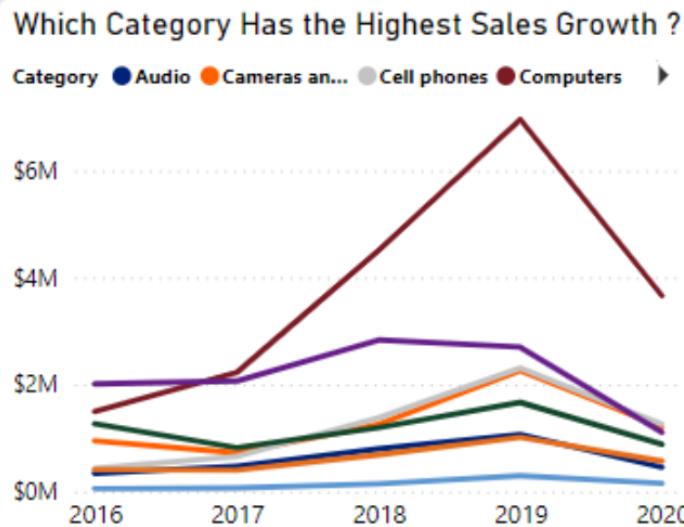
- North America has the highest with \$34.6M .
- Australia is the least continent makes about \$2.71M .

- The US has the large number by \$29.87M .
- France has the lowest with \$1.52M .

Which Location Generated More Revenue Drilled up to Country?

Customer Gender ● Female ● Male





Product Category Sales Growth:

- Computers makes the highest growth from \$1.5M in 2016 to \$3.7M in 2020 with a peek in 2019 with \$7M .
- Games and Toys Makes the lowest Growth from \$52.5K to \$154K .
- Home Appliances makes a negative Growth from \$2M to \$1.1M .

2016

Audio	\$339,347.76
Cameras and camcorders	\$946,180.01
Cell phones	\$429,497.27
Computers	\$1,496,820.33
Games and Toys	\$52,529.59
Home Appliances	\$2,010,476.12
Music, Movies and Audio Books	\$405,566.38
TV and Video	\$1,266,376.1

2019

Audio	\$1,064,197.77
Cameras and camcorders	\$2,260,124.97
Cell phones	\$2,311,957.73
Computers	\$6,958,430.89
Games and Toys	\$295,643.31
Home Appliances	\$2,700,287.88
Music, Movies and Audio Books	\$1,008,971.45
TV and Video	\$1,664,768.48

2020

Audio	\$452,725.55
Cameras and camcorders	\$1,209,222.04
Cell phones	\$1,256,725.73
Computers	\$3,665,122.72
Games and Toys	\$154,189.13
Home Appliances	\$1,107,301.56
Music, Movies and Audio Books	\$566,479.4
TV and Video	\$882,866.01

Revenue Trend Drilled Down To Months



Revenue and Order Trends:

- Trends Shows a sales peek in December, January and February monthes .
- A sharp decline in April .

- There is a positive Correlation between Revenue and Orders .

Revenue vs. Order Comparison



Secondly Comes Stores Performance

Stores Report

Location: All | Dilevery: All | Brand: All | Date: 1/1/2016 - 2/20/2021 | Last Update: Feb 20th 2021

Dilevery Performance Trend

Total Stores: 57 | **Avg Dilevery Days**: 4.53 | **Total Orders**: 26.33K

In-Store vs. Online Orders

Top Store

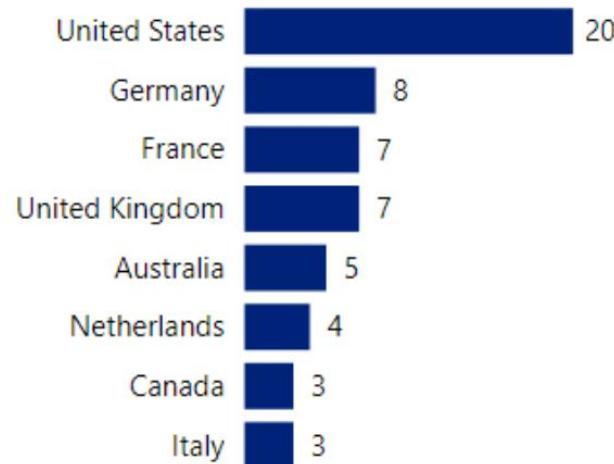
StoreKey	Country	Total Order
0	Online	5580
9	Canada	658
54	United States	629
61	United States	624
55	United States	622
59	United States	619
45	United States	617
44	United States	606
50	United States	605
57	United States	605
65	United States	596
8	Canada	583
47	United States	582
51	United States	581
64	United States	566
43	United States	558
66	United States	545
48	United States	539
52	United States	524
Total		26326

Store Size vs. Quantity Sold Comparison

which Country Has More Stores ?

Country	Number of Stores
United States	20
Germany	8
France	7
United Kingdom	7
Australia	5
Netherlands	4
Canada	3
Italy	3

which Country Has More Stores ?



Global warehouse allocation:

The United States has the highest number of stores by 20 .

Canada and Italy has the lowest number by 3 .

.

In-Store & Online Order Rates:

In-Store orders has the highest rate with 79% .

Online Performance is the lowest with 21% .

In-Store vs. Online Orders



Dilevery Performance Trend



Delivery performance:

There's a general downward trend in delivery days from 2016 to 2021 from 8 to 4 days .

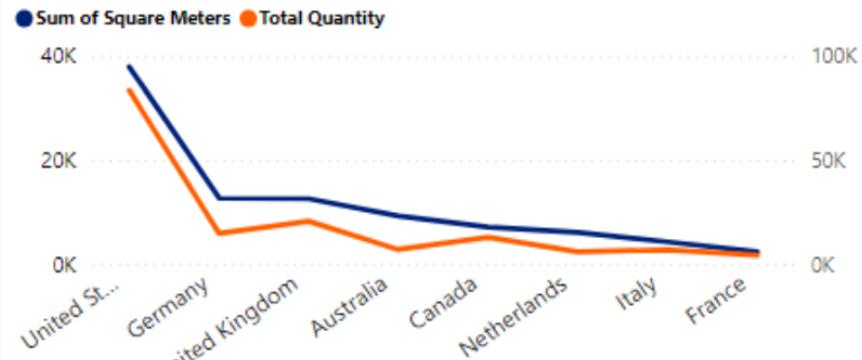
Stores Capacity and Quantity Sold levels:

There's a positive correlation between store size and capacity with product quantity sold .

Germany, Australia, Netherlands have a decline in quantity volume compared to store size .



Store Size vs. Quantity Sold Comparison



Thirdly We've Customers Analysis

GLOBAL ELECTRONICS

Customers Report

Last Update Feb 20th 2021

Location: All | Delivery: All | Brand: All | Date: 1/1/2016 - 2/20/2021

Overview

Sales Report

Stores Report

Customers Report

Products Report

Age Group Revenue vs Orders Comparison

Total Order (Blue Bar) Total Revenue (Orange Line)

Age Group	Total Order (K)	Total Revenue (M\$)
19-29	~4.5	~3.5
30-39	~4.2	~3.2
40-49	~4.0	~3.0
50-59	~4.2	~3.2
60-89	~10.5	~18.0

Total Customers: 11887

Average Customer Age: 52

Top Customer

Name	Country	Total Revenue	Total Order	Age
Matthew Flemming	United States	\$61,871.7	9	84
Karen Jones	United States	\$43,517.8	3	50
Zrina Topic	United States	\$42,788.04	7	59
Stefanie Hartmann	Germany	\$41,521.53	3	38
Stephan Rothstein	Germany	\$40,556.54	4	67
Gaspare Trevisan	Italy	\$40,225.01	14	29
Roy Le	Canada	\$38,813.88	3	39
Dennis Weissmuller	United States	\$38,191.06	4	63
Virgie Takacs	United States	\$37,319.88	3	58
Ollie Davis	United States	\$36,817.28	5	41
Michael Robertson	United Kingdom	\$36,664.3	8	61
Mie Huus	United States	\$36,067.47	3	60
Tyrone Lewis	United States	\$35,806.19	6	66
Paul Warren	United States	\$35,780.33	10	41
Esin Holman	Netherlands	\$35,710.61	4	37
Bibiana Ferri	Italy	\$34,963.76	6	53
Charles Collins	United States	\$34,858.48	7	83
Kyle Valentine	United States	\$34,490.76	5	79
Wayne Banks	United States	\$34,484.28	6	41
Felix Bauer	Germany	\$24,242.20	2	62
Total		\$55,755,479.59	26326	

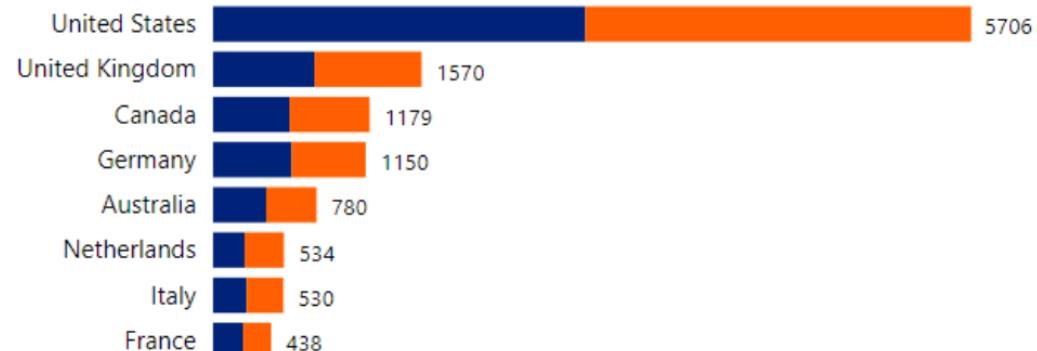
Which Country Has More Customers ?

Gender: Female (Blue) Male (Orange)

Country	Female (K)	Male (K)	Total (K)
United States	~4.8	~5.0	5706
United Kingdom	~1.2	~1.4	1570
Canada	~1.0	~1.1	1179
Germany	~1.0	~1.1	1150
Australia	~0.8	~0.9	780
Netherlands	~0.6	~0.7	534
Italy	~0.6	~0.7	530
France	~0.5	~0.6	438

Which Country Has More Customers ?

Gender ● Female ● Male



Customer Distribution by Country and Gender Size:

The US has the highest number of customers overall.

France have the lowest number of customers.

All with a balanced gender distribution.

Age Group Revenue vs Orders Comparison:

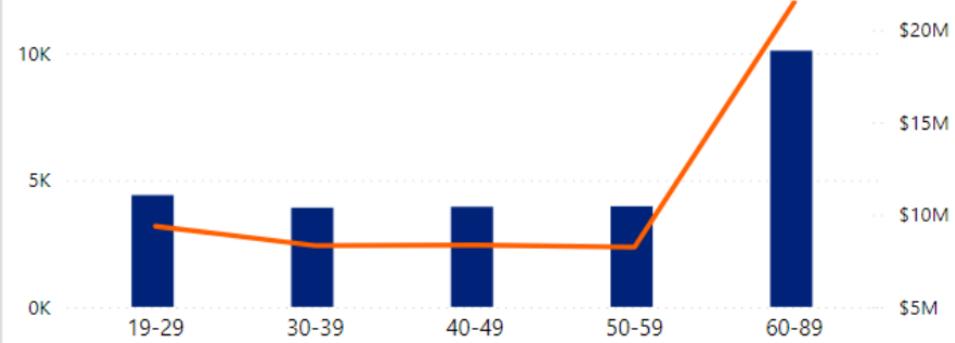
The 60-89 age group has the highest number of total orders with high relative total revenue.

The other groups have relatively similar numbers of total orders but lower total revenue compared to 60-89 group revenue



Age Group Revenue vs Orders Comparison

● Total Order ● Total Revenue



Fourthly We've Products Analysis

Products Report

Location: All | Delivery: All | Brand: All | Date: 1/1/2016 - 2/20/2021 | Last Update: Feb 20th 2021

Which Product Sold More Quantity?

WWI Desktop PC2.33 X2330 Black	550
WWI Desktop PC1.80 E1800 White	538
Adventure Works Desktop PC1.60 ED160 Black	521
Adventure Works Desktop PC2.30 MD230 White	521
Adventure Works Desktop PC1.80 ED180 Black	520
Adventure Works Desktop PC2.30 MD230 Black	514
WWI Desktop PC1.60 E1600 Black	509
WWI Desktop PC1.60 E1600 Silver	507

Total Products: 2492 | Average Order Quantity: 10

Which Subcategory Sold More Quantity ?

Movie DVD	29K
Desktops	21K
Bluetooth Headphones	14K
Download Games	12K
Boxed Games	11K
Touch Screen Phones	11K
Smart phones & PDAs	10K
Recording Pen	7K
Televisions	6K
Home & Office Phones	5K
Cell phones Accessories	5K
Laptops	5K
Projectors & Screens	5K
Microwaves	5K
Computers Accessories	5K
Printers, Scanners & Fax	5K
Monitors	5K
Water Heaters	5K
Cameras & Camcorders Acces...	5K
Camcorders	4K

Top Product

Product Name	Total Revenue	Total Quantity	Unit Profit Margin
WWI Desktop PC2.33 X2330 Black	\$505,450	550	33.13%
Adventure Works Desktop PC2.33 XD233 Silver	\$466,089	481	33.13%
Adventure Works Desktop PC2.33 XD233 Brown	\$464,151	479	33.13%
Adventure Works Desktop PC2.33 XD233 Black	\$447,678	462	33.13%
Adventure Works Desktop PC2.33 XD233 White	\$437,019	451	33.13%
WWI Desktop PC2.33 X2330 White	\$424,578	462	33.13%
WWI Desktop PC2.33 X2330 Brown	\$422,740	460	33.13%
Adventure Works 52" LCD HDTV X590 White	\$394,398.64	136	33.13%
Adventure Works 52" LCD HDTV X590 Black	\$374,098.71	129	33.13%
WWI Desktop PC2.33 X2330 Silver	\$360,248	392	33.13%
Adventure Works 52" LCD HDTV X590 Silver	\$353,798.78	122	33.13%
Adventure Works Desktop PC2.30 MD230 White	\$312,070	521	45.00%
Total	\$55,755,479.59	197757	

Overview

Sales Report

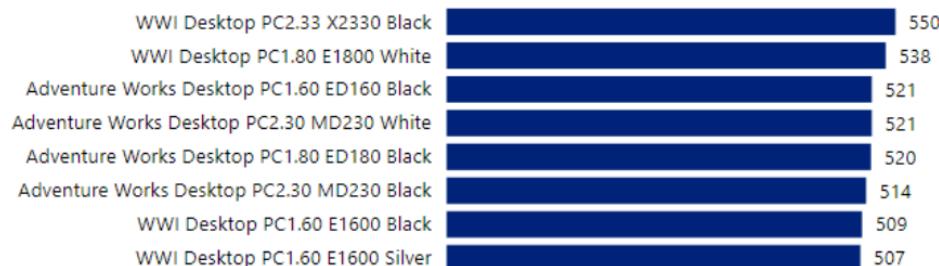
Stores Report

Customers Report

Products Report

Prezi

Which Product Sold More Quantity?



Subcategory Quantity Sold :

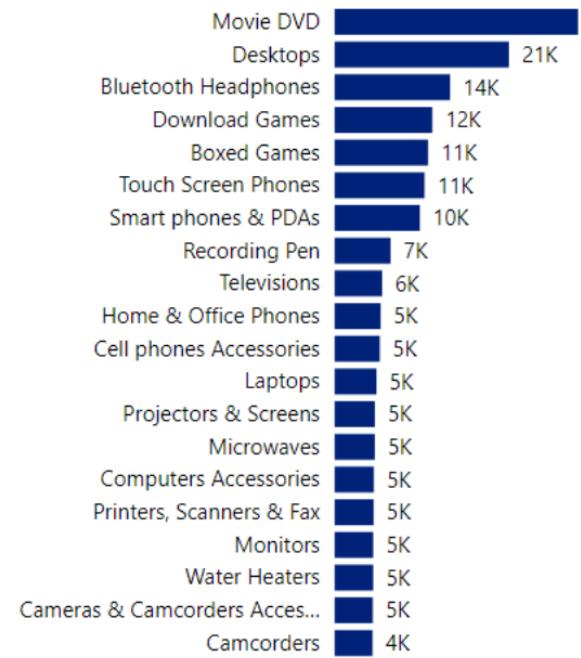
Movie DVD comes first with 29K.

Desktops comes second with 21K.

Products Quantity Sold :

World Wide Importers and Adventure Works desktops have the highest quantity sold.

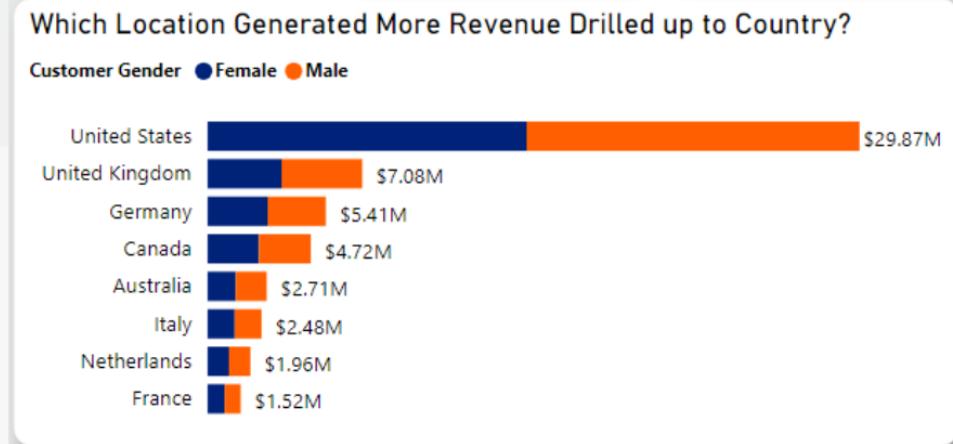
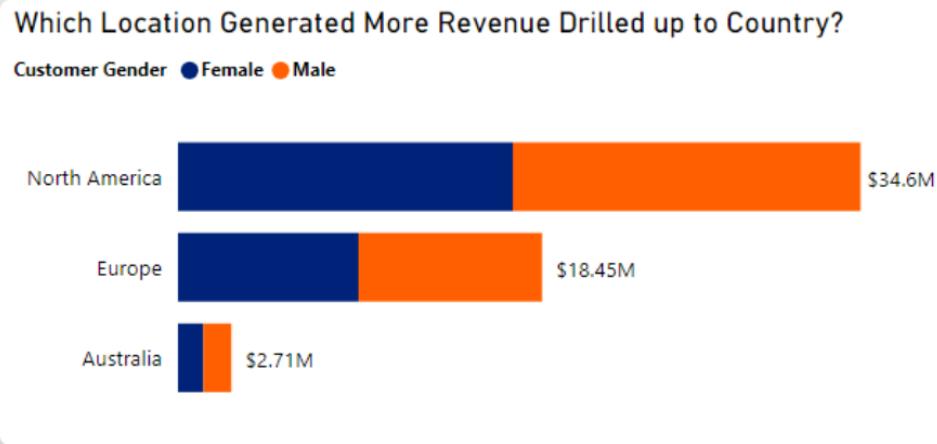
Which Subcategory Sold More Quantity ?



Propose solutions and recommendations

1. Optimize Store Capacity and Distribution

- Expand High-Demand Stores: Increase the capacity of stores in high-demand areas, particularly in regions like North America, which shows the highest revenue across all categories.

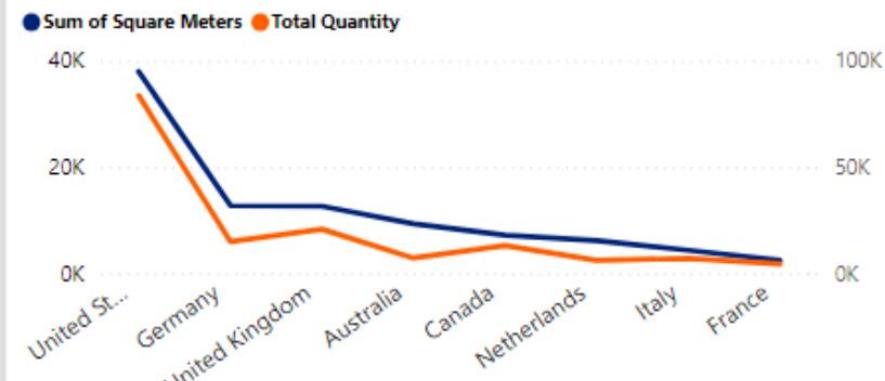


Address Declining Regions: Focus on regions like Germany, Australia, and the Netherlands, where there is a decline in quantity sold compared to store volume. Investigate and address the reasons for this decline.

which Country Has More Stores ?

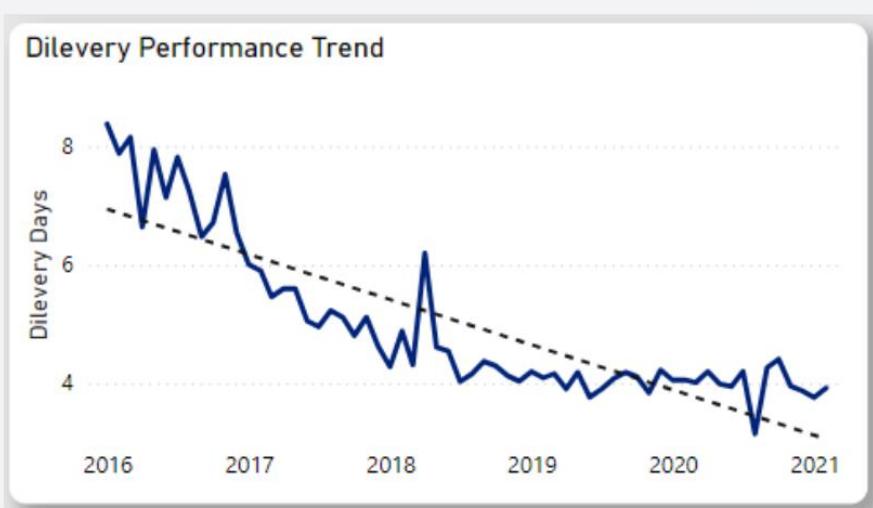


Store Size vs. Quantity Sold Comparison



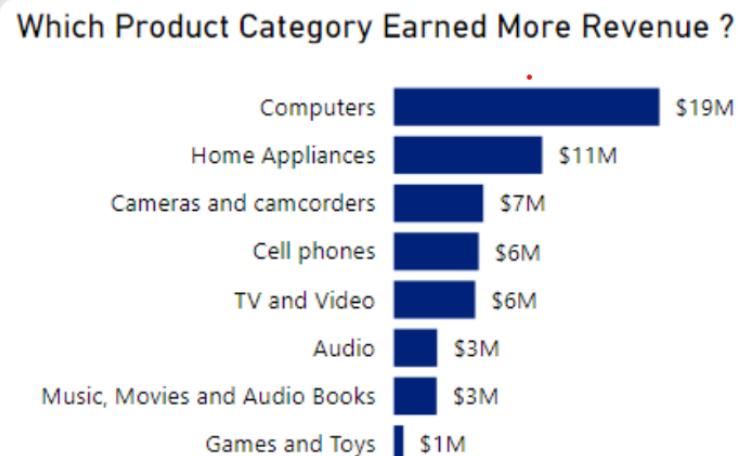
2. Improve Delivery Performance

- Efficiency Improvements: The downward trend in delivery time from 2016 to 2021 indicates a need for optimizing delivery routes and improving logistics. Implement strategies to reduce delivery times and enhance efficiency.
- Regular Maintenance: Ensure regular maintenance of delivery vehicles to prevent delays and improve reliability.



3. Leverage Product and Brand Performance

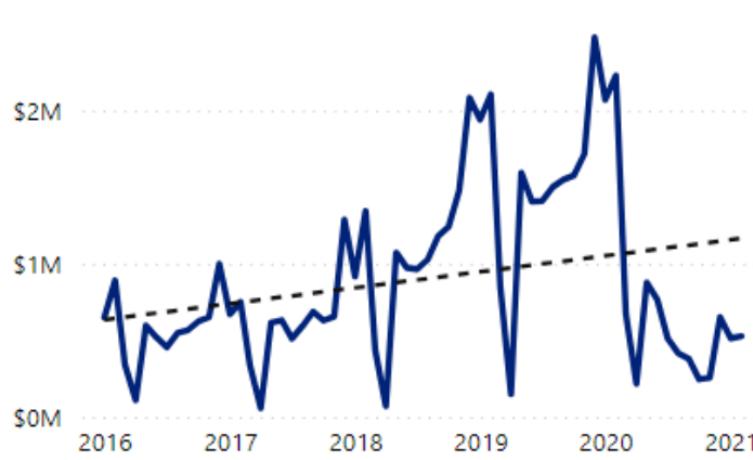
- Promote Top Performers: Focus on promoting and expanding the best-selling products and brands, such as "Adventure Works," which has the highest revenue.
- Rebrand or Discontinue Underperformers: Investigate products and brands with lower sales, such as "Tailspin Toys," and consider rebranding or discontinuing them.



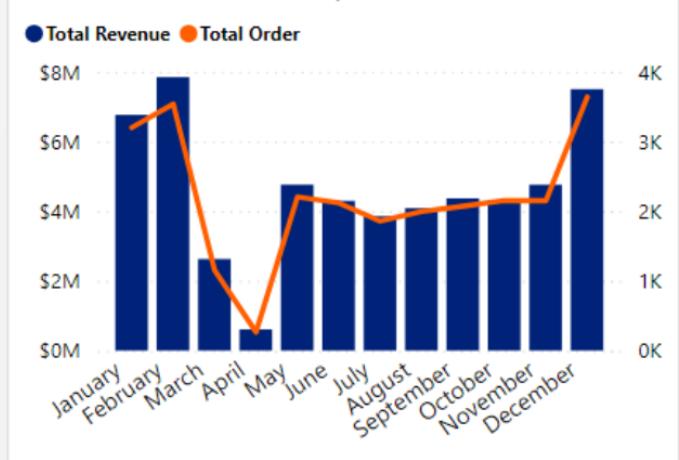
4. Seasonal and Trend Analysis

- Maximize Peak Months: Focus on maximizing sales during peak months like December, January, and February.
- Mitigate Declines: Investigate the reasons for sharp declines in specific months, such as April, and develop strategies to mitigate them.
- Optimize Marketing Strategies: Leverage the positive correlation between revenue and orders to optimize marketing and sales strategies. Ensure that marketing efforts are aligned with periods of high order volumes.

Revenue Trend Drilled Down To Months

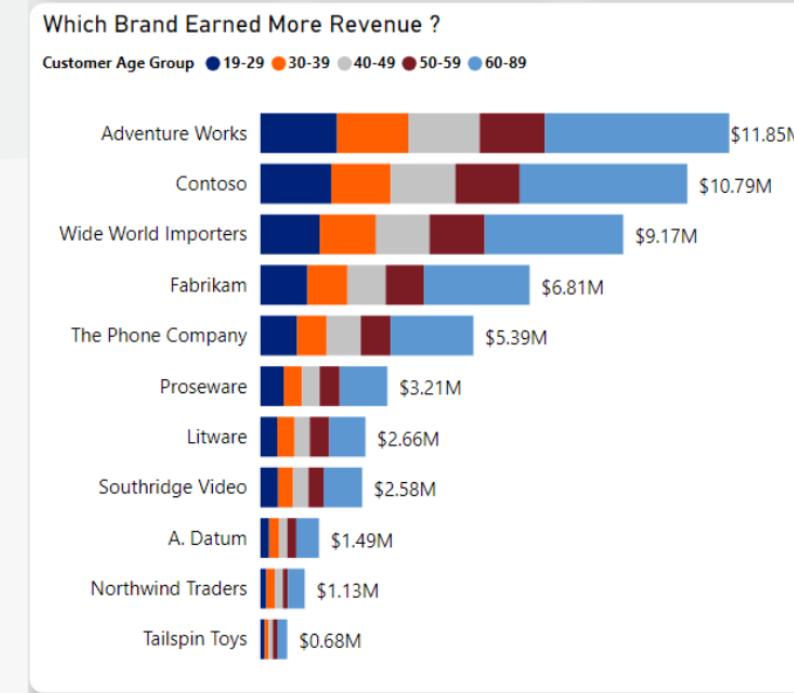
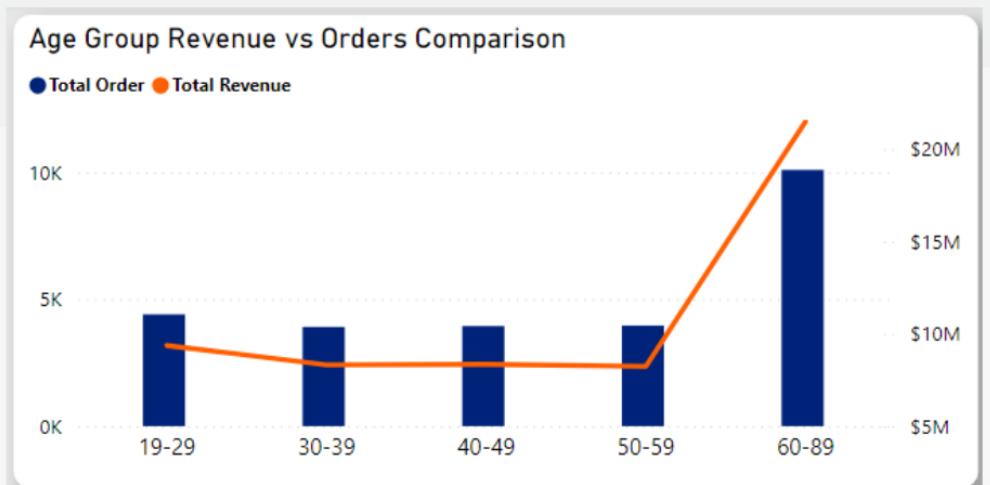


Revenue vs. Order Comparison



5. Customer Demographics

- Target Key Age Groups: Focus on the age group 60-89, which has the major part of revenue across all brands. Tailor your marketing strategies to cater to this demographic.



End of Presentation

Thank you