



DECODING SALES DATA

Analysing Wholesale Performance of Hardware Company.

Objectives:

- Providing insights for ad-hoc business questions and requests by the client.
- Dashboard for monitoring and tracking sales performance.



PRESENTED BY: ALI BIN KASHIF

Provide the list of markets in which customer "Amazon" operates its business in the APAC region.

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```
1 SELECT DISTINCT(market)
2 FROM dim_customer
3 WHERE region = 'APAC'
4     AND customer = 'Amazon';
```



	market
▶	India
	Indonesia
	Japan
	Pakistan
	Philippines
	South Korea
	Australia
	Newzealand
	Bangladesh



What is the percentage of unique product increase in 2021 vs. 2020?

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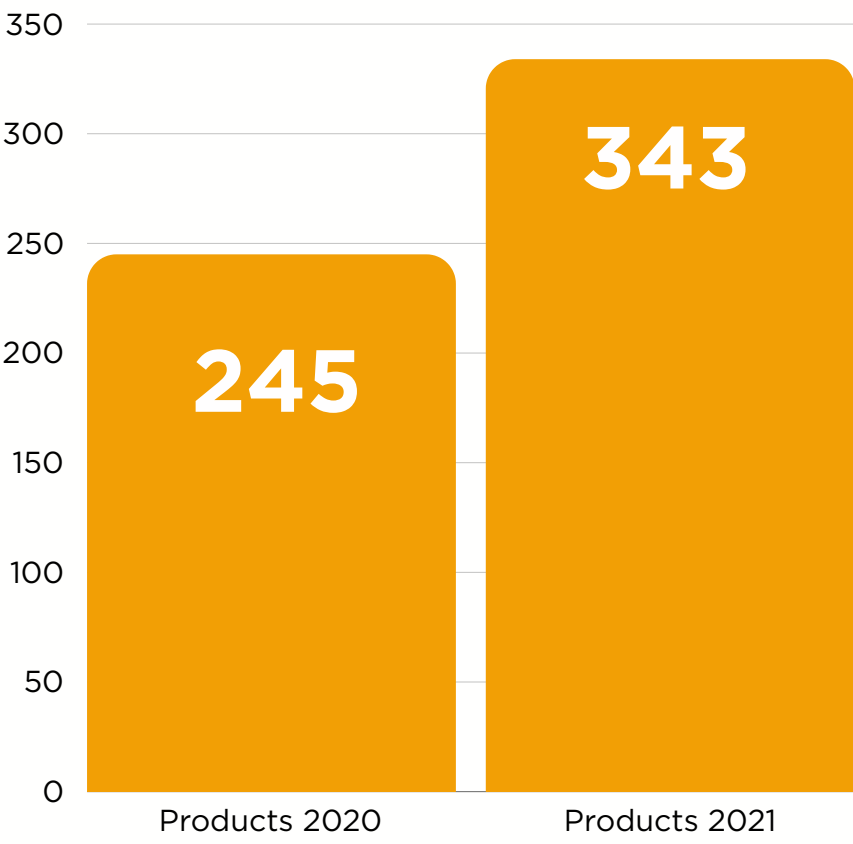
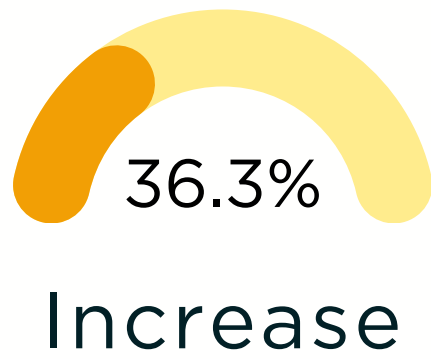
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```
1 SELECT
2   p2020.p_count AS unique_products_2020,
3   p2021.p_count AS unique_products_2021,
4   ROUND((p2021.p_count - p2020.p_count)/p2020.p_count * 100
5   ,2) AS percentage_chg
6 FROM
7   (SELECT COUNT(product_code) AS p_count
8   FROM fact_gross_price WHERE fiscal_year=2020) AS p2020,
9   (SELECT COUNT(product_code) AS p_count
10  FROM fact_gross_price WHERE fiscal_year=2021) AS p2021;
```

	unique_products_2020	unique_products_2021	percentage_chg
▶	245	334	36.33



Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

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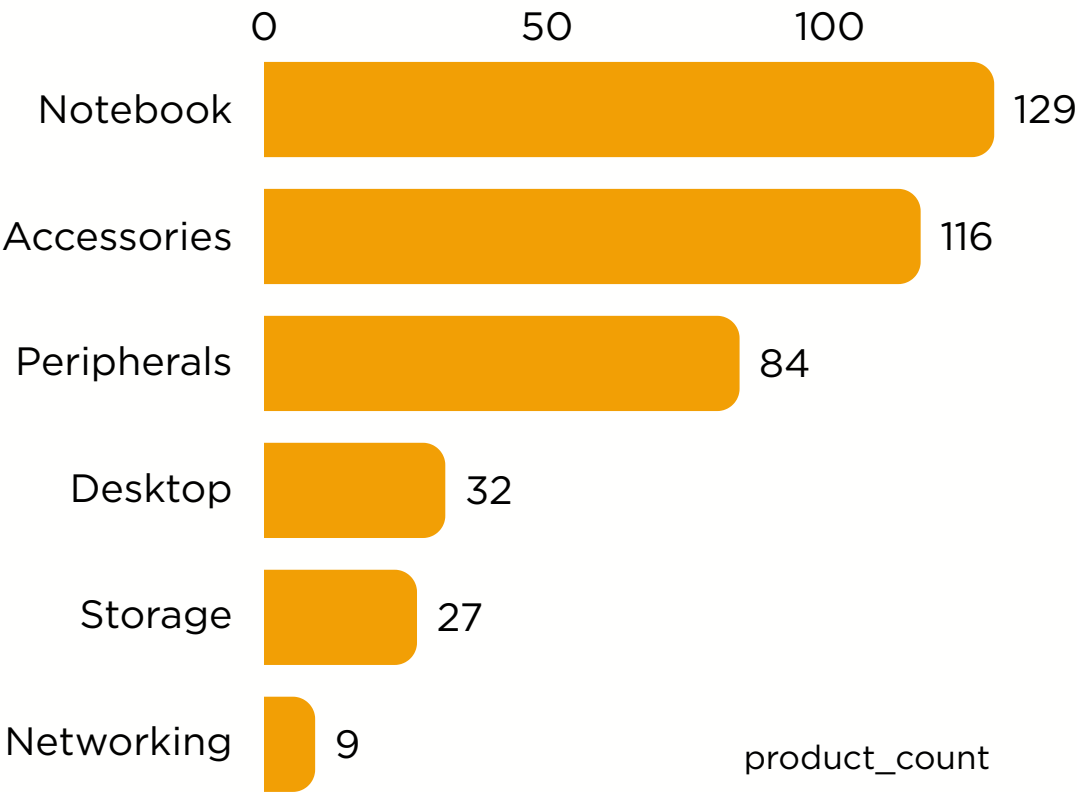
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```
1 SELECT
2     segment,
3     COUNT(DISTINCT product_code) AS product_count
4 FROM dim_product
5 GROUP BY segment
6 ORDER BY product_count DESC;
```



segment	product_count
Notebook	129
Accessories	116
Peripherals	84
Desktop	32
Storage	27
Networking	9



Follow-up: Which segment had the most increase in unique products in 2021 vs 2020?

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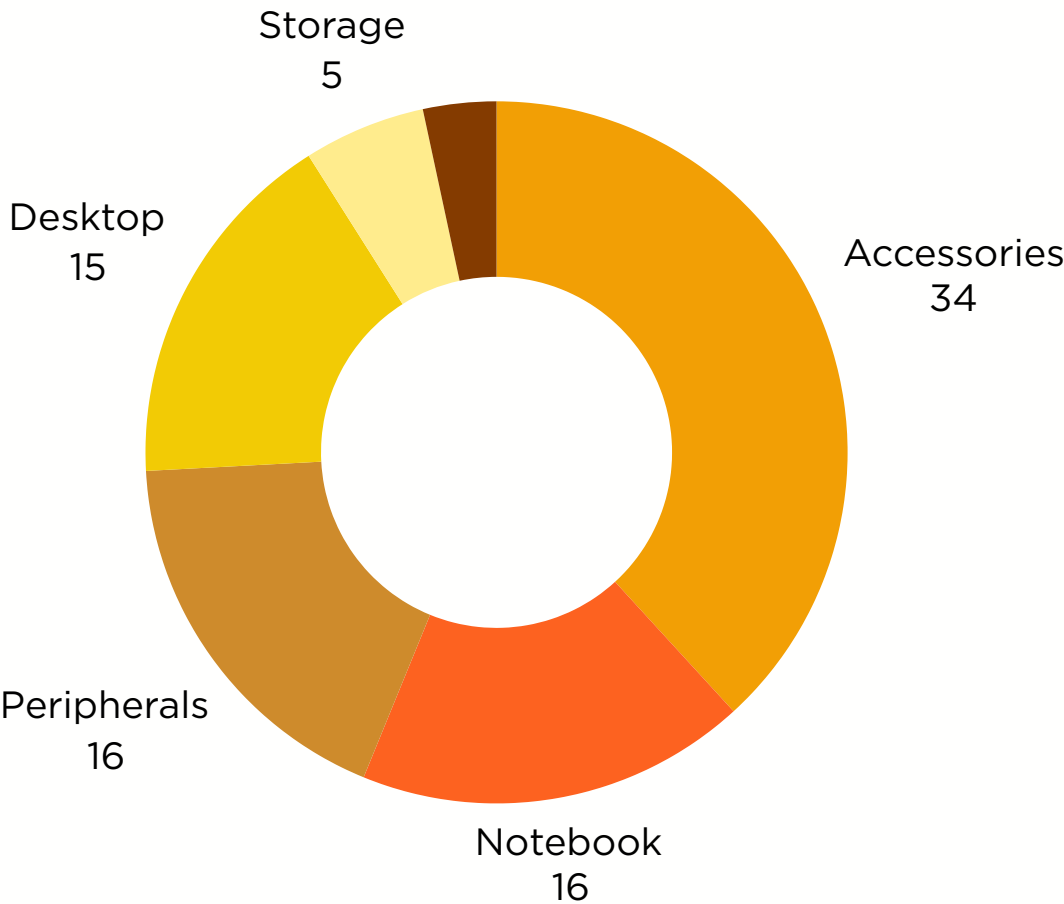
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```
1  WITH segment_2020 AS (  
2  SELECT  
3      segment,  
4      COUNT(DISTINCT product_code) AS product_count  
5  FROM dim_product  
6  LEFT JOIN fact_gross_price  
7  USING(product_code)  
8  WHERE fiscal_year = 2020  
9  GROUP BY segment  
10 ORDER BY product_count DESC ),  
11  
12 segment_2021 AS (  
13 SELECT  
14     segment,  
15     COUNT(DISTINCT product_code) AS product_count  
16 FROM dim_product  
17 LEFT JOIN fact_gross_price  
18 USING(product_code)  
19 WHERE fiscal_year = 2021  
20 GROUP BY segment  
21 ORDER BY product_count DESC )  
22  
23 SELECT  
24     segment,  
25     s1.product_count AS product_count_2020,  
26     s2.product_count AS product_count_2021,  
27     (s2.product_count - s1.product_count) AS difference  
28 FROM segment_2020 AS s1  
29 INNER JOIN segment_2021 AS s2  
30 USING(segment)  
31 ORDER BY difference DESC;
```



segment	product_count_2020	product_count_2021	difference
Accessories	69	103	34
Notebook	92	108	16
Peripherals	59	75	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3



Get the products that have the highest and lowest manufacturing costs.

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```
1 SELECT
2     product_code,
3     product,
4     manufacturing_cost
5 FROM fact_manufacturing_cost
6 LEFT JOIN dim_product
7 USING(product_code)
8 WHERE
9     manufacturing_cost =
10    (SELECT MAX(manufacturing_cost)
11      FROM fact_manufacturing_cost)
12 OR
13     manufacturing_cost =
14    (SELECT MIN(manufacturing_cost)
15      FROM fact_manufacturing_cost);
```



product_code	product	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	240.5364
A2118150101	AQ Master wired x1 Ms	0.8920

Generate a report which contains the top 5 customers who received an average high pre-invoice discount % for the fiscal year 2021 and in the Australian market.

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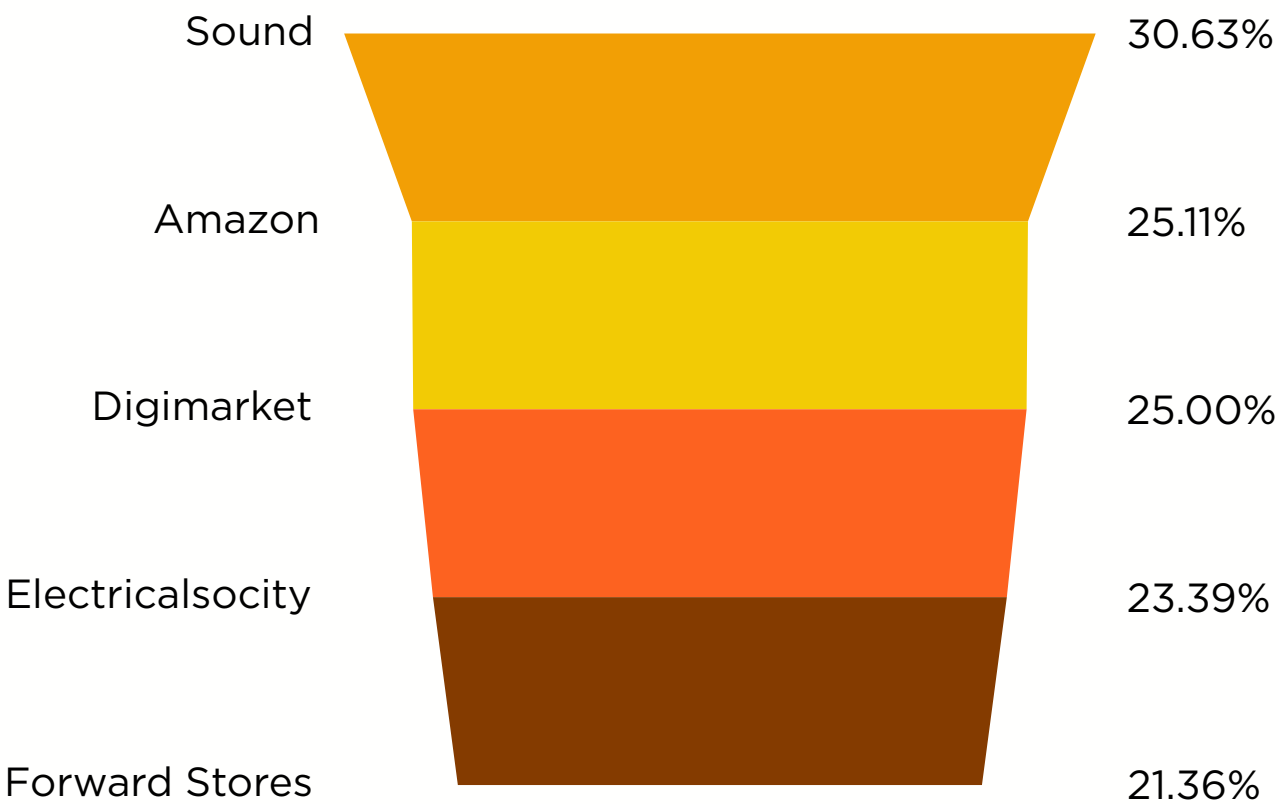
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```
1 SELECT
2     customer_code,
3     customer,
4     pre_invoice_discount_pct
5 FROM fact_pre_invoice_deductions
6 INNER JOIN dim_customer
7 USING(customer_code)
8 WHERE fiscal_year = 2021
9     AND market = 'Australia'
10 ORDER BY pre_invoice_discount_pct DESC
11 LIMIT 5;
```




customer_code	customer	pre_invoice_discount_pct
90008166	Sound	0.3063
90008168	Amazon	0.2511
90008164	Digimarket	0.2499
90008167	Electricalsociety	0.2339
90008165	Forward Stores	0.2136




Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month. This analysis helps to get an idea of low and high-performing months and take strategic decisions.

```
1 SELECT
2     date,
3     MONTHNAME(date) as month,
4     EXTRACT(YEAR from date) as year,
5     ROUND(SUM((sold_quantity * gross_price))/1000000
6         ,2) AS gross_sales_mln
7 FROM fact_sales_monthly AS fsm
8 INNER JOIN dim_customer
9 USING(customer_code)
10
11 INNER JOIN fact_gross_price AS fpg
12 ON fsm.product_code = fpg.product_code
13     AND fsm.fiscal_year = fpg.fiscal_year
14
15 WHERE customer = 'Atliq Exclusive'
16 GROUP BY date;
```



date	month	year	gross_sales_mln
2019-09-01	September	2019	4.50
2019-10-01	October	2019	5.14
2019-11-01	November	2019	7.52
2019-12-01	December	2019	4.83
2020-01-01	January	2020	4.74
2020-02-01	February	2020	4.00
2020-03-01	March	2020	0.38
2020-04-01	April	2020	0.40
2020-05-01	May	2020	0.78
2020-06-01	June	2020	1.70
2020-07-01	July	2020	2.55
2020-08-01	August	2020	2.79
2020-09-01	September	2020	12.35



Visual is included in the dashboard.

Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

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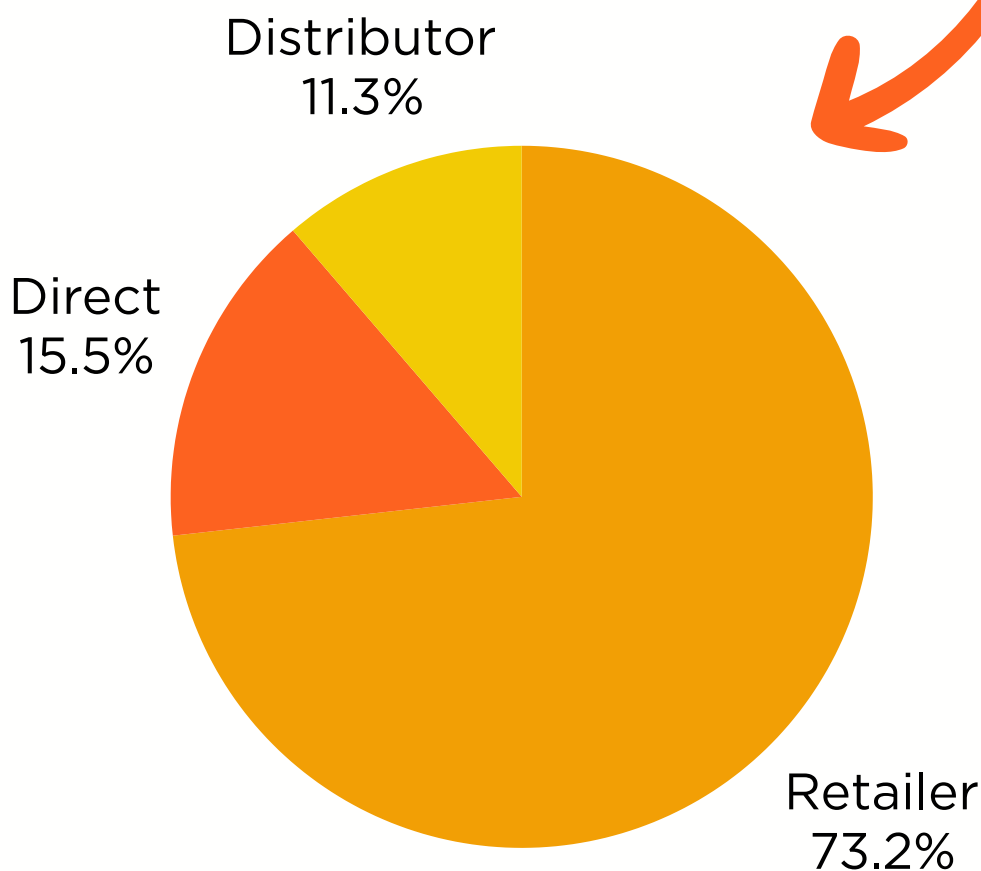
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```
1 WITH gross_sales_by_channel AS (  
2   SELECT  
3     channel,  
4     SUM(gross_price * sold_quantity) AS gross_sales  
5   FROM fact_sales_monthly  
6   INNER JOIN dim_customer  
7     USING(customer_code)  
8   INNER JOIN ( SELECT product_code, gross_price  
9                 FROM fact_gross_price  
10                WHERE fiscal_year = 2021) AS gross_price_2021  
11  ON fact_sales_monthly.product_code = gross_price_2021.product_code  
12  WHERE fiscal_year = 2021  
13  GROUP BY channel )  
14  
15  SELECT  
16    channel,  
17    ROUND(gross_sales/1000000,2) AS gross_sales_mln,  
18    ROUND(gross_sales / (SELECT SUM(gross_sales)  
19      FROM gross_sales_by_channel) * 100,2)  
20    AS percentage  
21  FROM gross_sales_by_channel  
22  ORDER BY percentage DESC;
```

channel	gross_sales_mln	percentage
Retailer	1219.08	73.23
Direct	257.53	15.47
Distributor	188.03	11.30



In which quarter of 2020, got the maximum total sold quantity?

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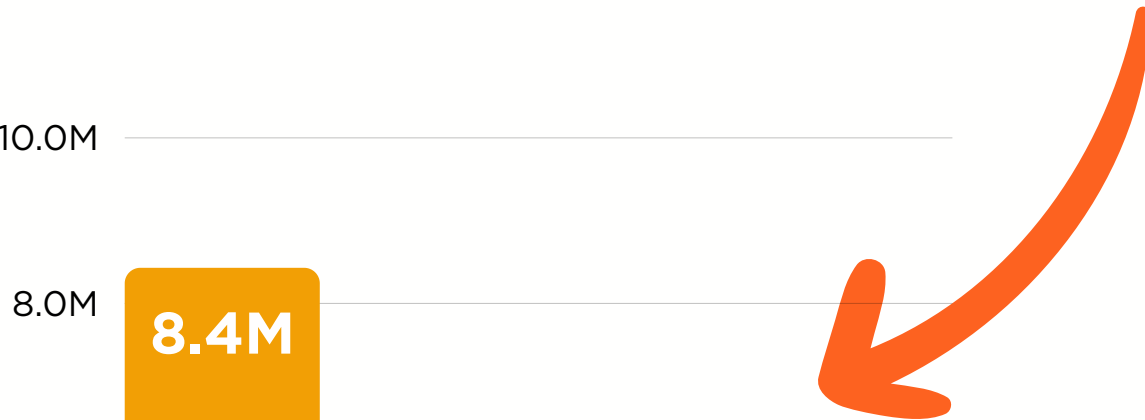
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```
1 SELECT
2     CONCAT('Q', EXTRACT(QUARTER FROM date)) AS quarter,
3     ROUND(SUM(sold_quantity)/1000000
4     ,2) AS total_sold_quantity_mln
5 FROM fact_sales_monthly
6 WHERE fiscal_year = 2020
7 GROUP BY CONCAT('Q', EXTRACT(QUARTER FROM date))
8 ORDER BY total_sold_quantity_mln DESC;
```

quarter	total_sold_quantity_mln
Q4	8.43
Q3	5.25
Q1	3.70
Q2	3.40



DASHBOARD





Sales Insights Dashboard

Overview

Segments/Categories

All

Market (Country)

All

2020

2021



Overview



Product & Customer



Finance



Channel and Growth

\$2.20bn

Total Revenue



\$183.4M

Avg Monthly Sales



71M

Quantity Sold

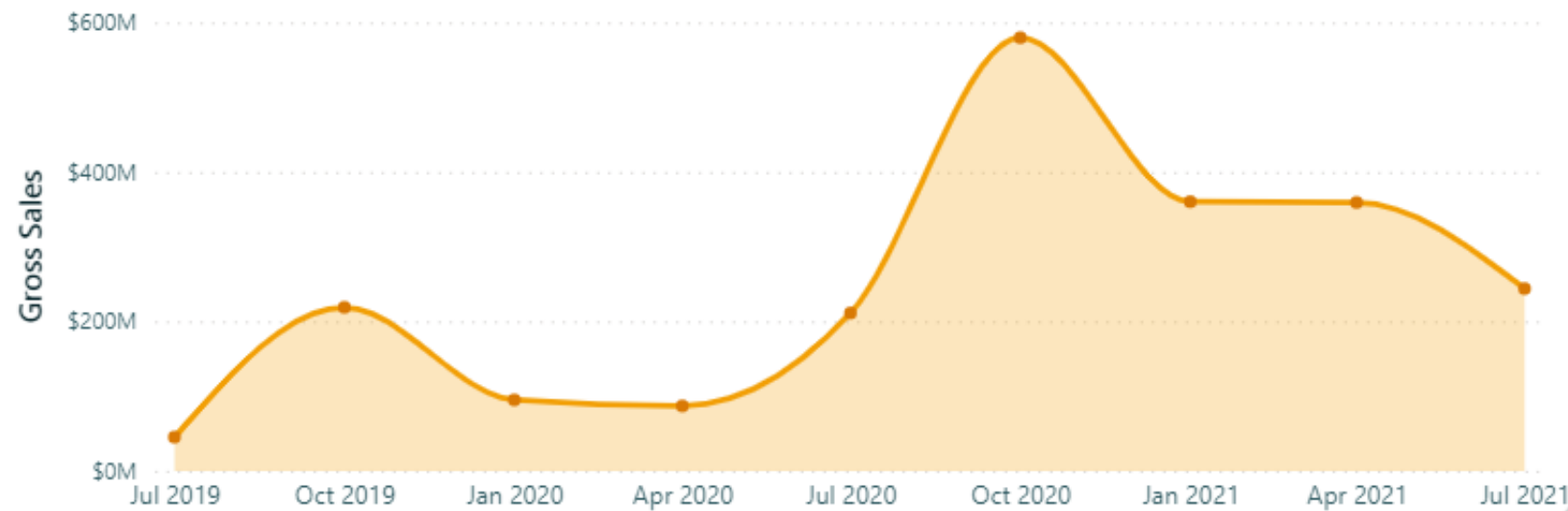


210.6%

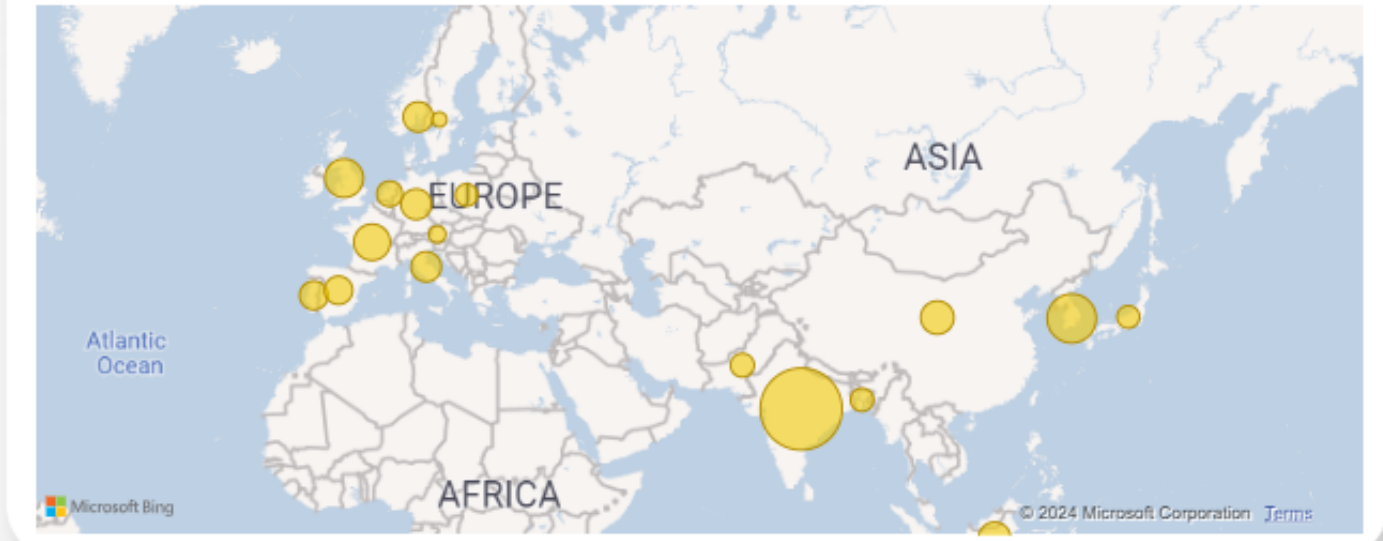
Sales Growth (FY)



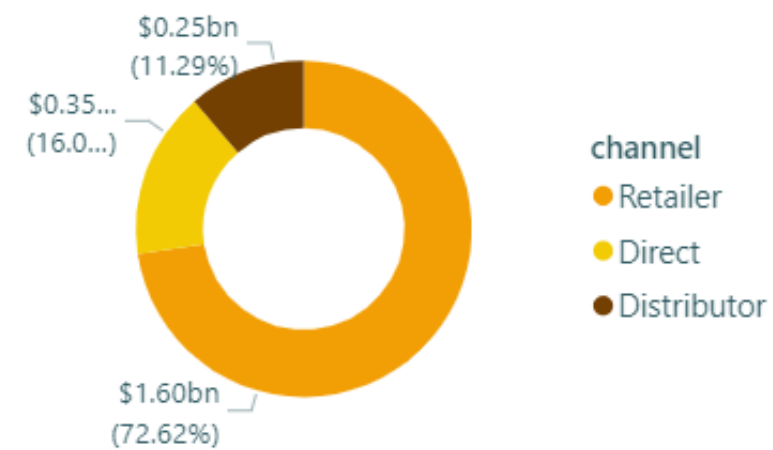
Sales Trend



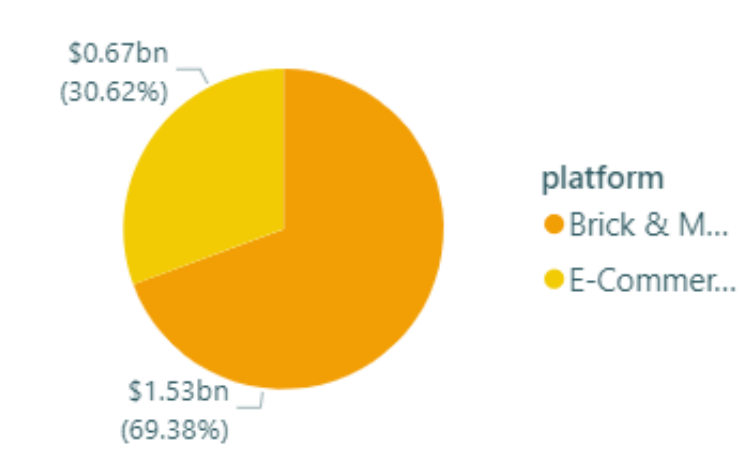
Total Sales by Market



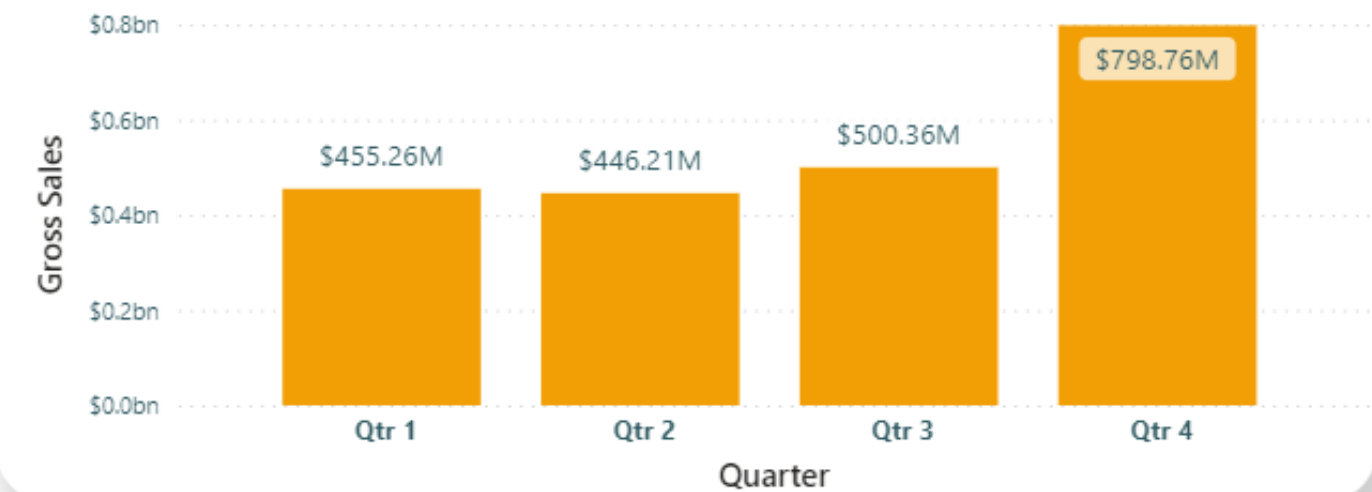
Total Sales by Channel



Total Sales by Platform



Quarterly Sales





Overview

Product &
Customer

Finance

Channel and
Growth

209

Total Customers

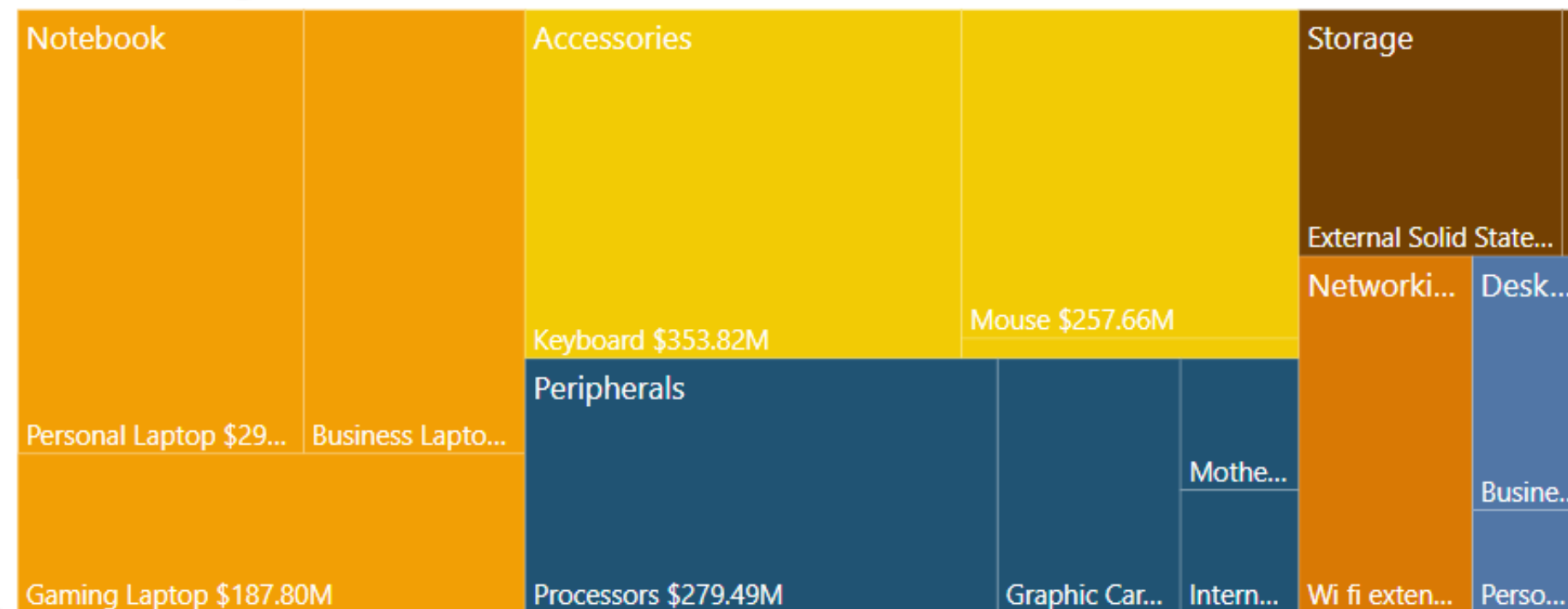


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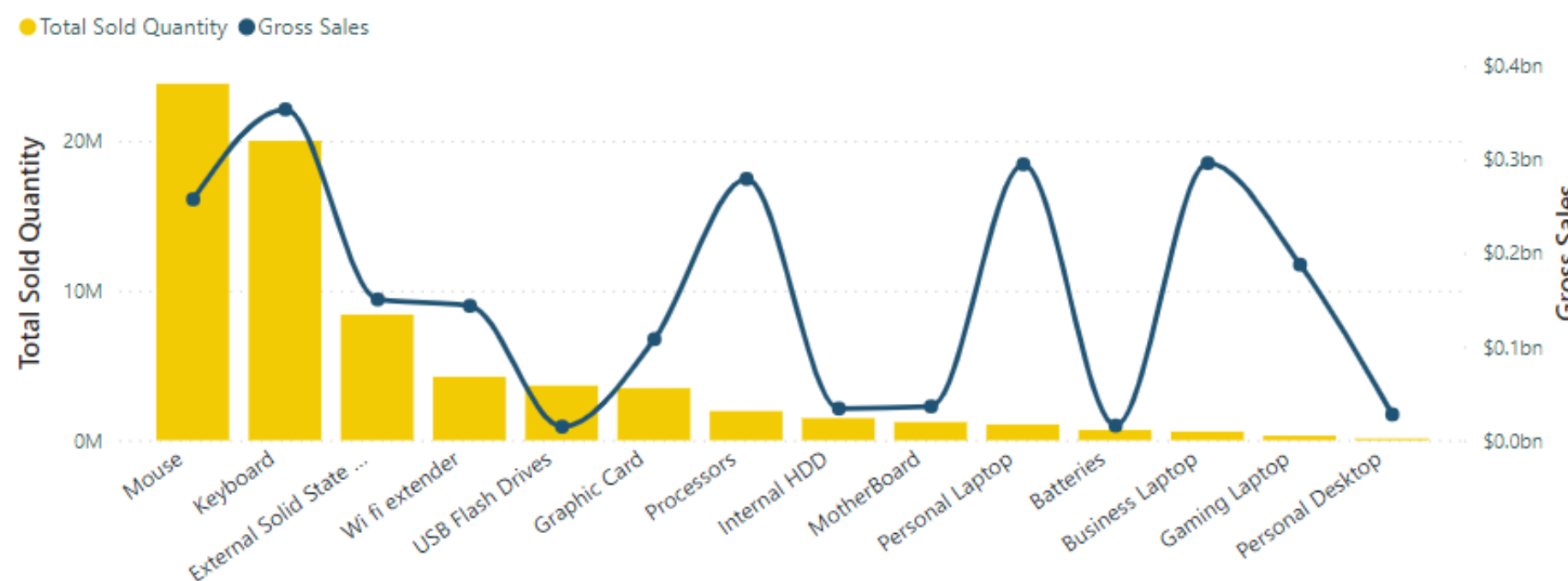
Products in Market

Customer	Gross Sales	Quantity Sold	COGS
Amazon	\$322.33M	11M	\$96.39M
Atliq e Store	\$203.06M	7M	\$60.73M
Atliq Exclusive	\$181.53M	6M	\$54.28M
Flipkart	\$79.24M	3M	\$23.70M
Sage	\$74.77M	2M	\$22.35M
Leader	\$70.42M	2M	\$21.06M
Ebay	\$57.26M	2M	\$17.12M
Neptune	\$47.35M	1M	\$14.16M
Electricalsociety	\$43.23M	1M	\$12.93M
Synthetic	\$41.02M	1M	\$12.27M
Electricalslytic	\$38.77M	1M	\$11.59M
Total	\$2,200.59M	71M	\$658.08M

Products Segmentation



Products Categories by Gross Sales and Quantity Sold





Sales Insights Dashboard

Financial Analysis

Segments/Categories

All

Market (Country)

All

2020

2021



Overview



Product &
Customer



Finance



Channel and
Growth

46.73%

Average Profit Margin

23.34%

Average Pre-Invoice Discount

\$1.03bn

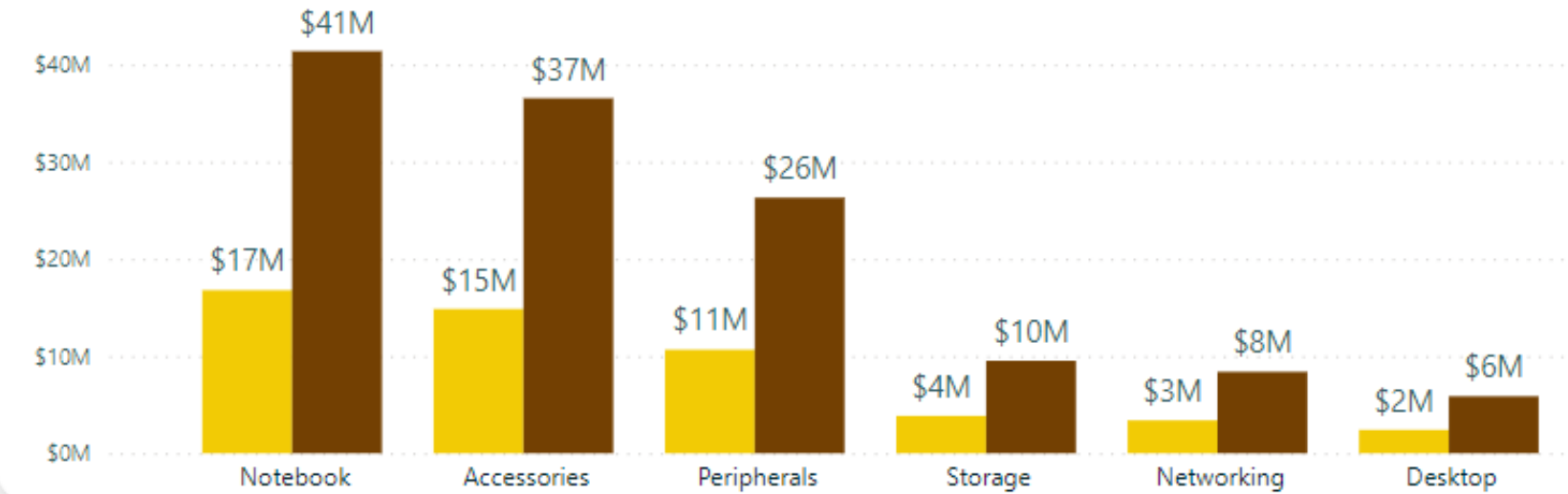
Gross Profit

\$517.20M

Discounts Given

Net Sales and Discount by Product Segment

Discount Amount Net Sales



Top Customers receiving high average discount

Avg Pre-Invoice Discount Gross Sales



product	Gross Profit	Avg Profit Margin
AQ 5000 Series Electron 8 5900X Desktop Processor	\$22.34M	46.29%
AQ 5000 Series Electron 9 5900X Desktop Processor	\$20.66M	46.83%
AQ 5000 Series Ultron 8 5900X Desktop Processor	\$24.59M	47.24%
AQ Aspiron	\$9.21M	46.82%
AQ BZ 101	\$15.03M	46.97%
AQ BZ Allin1	\$31.46M	46.39%
AO BZ Compact	\$31.55M	46.76%
Total	\$1,025.31M	46.73%



Overview



Product &
Customer

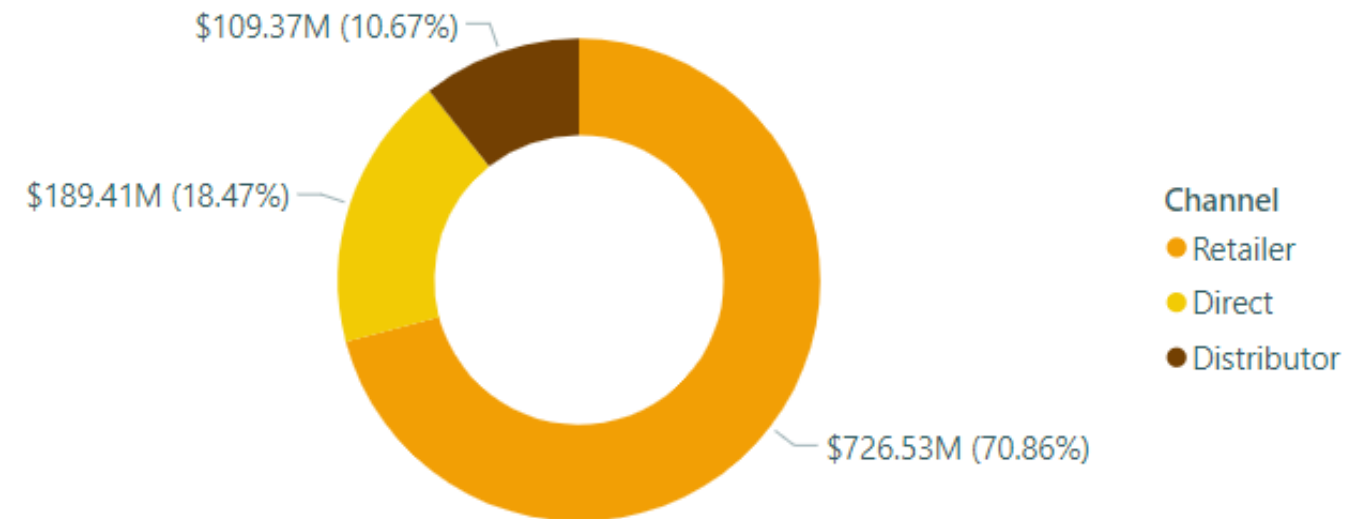


Finance

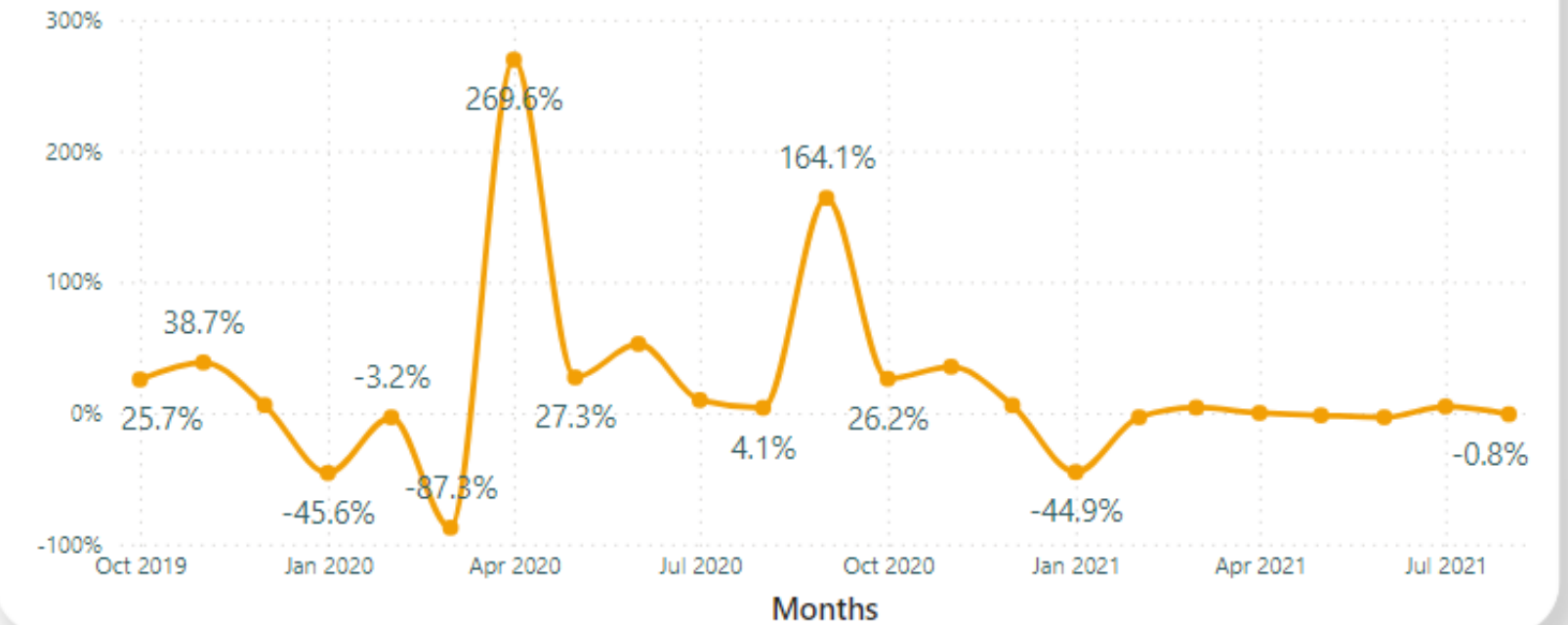


Channel and
Growth

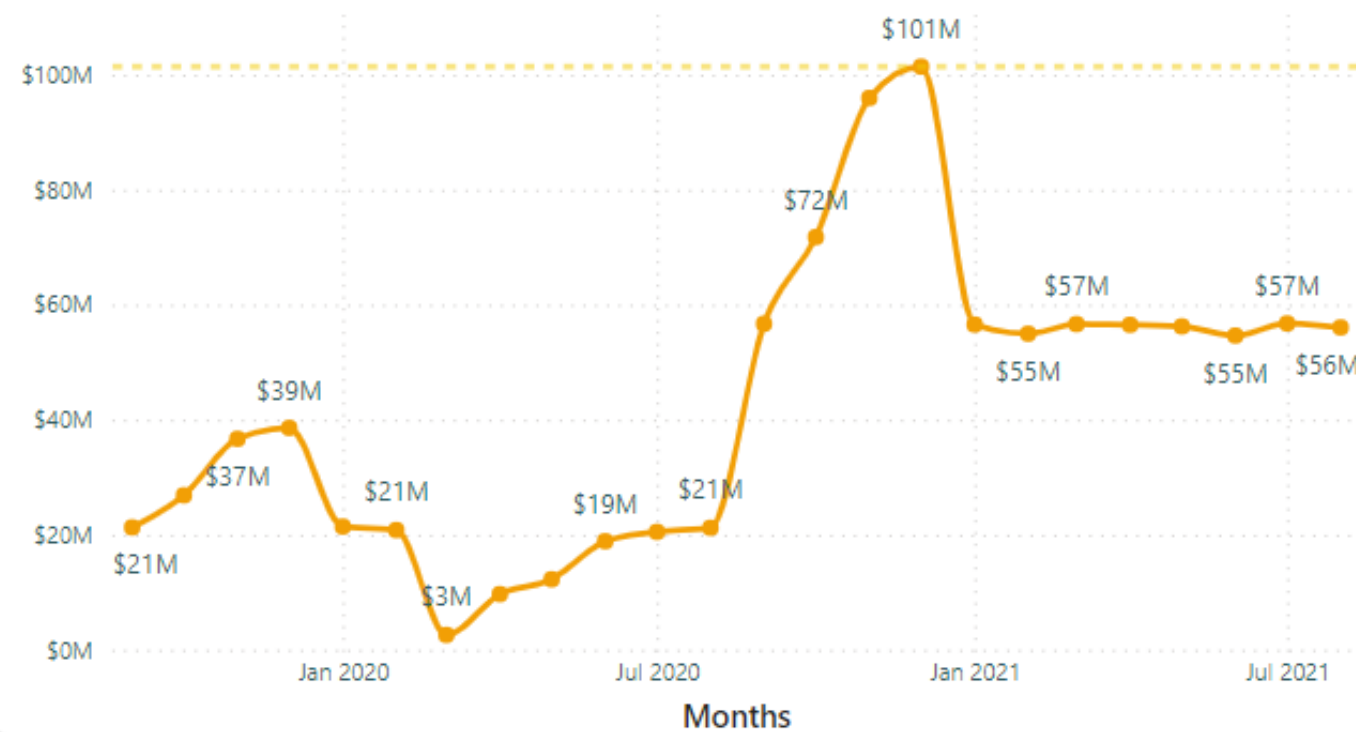
Gross Profit by Channels



Sales Month-over-Month Change %



Gross Profit over Months



Sales Volume and Quarterly Change %

