Consumer Goods
Ad-Hoc Insights

Presented By-Susmita Ghosh

Overview

- **AtliQ Hardware leading Manufacturer of Computer Hardware struggles to get enough insights to make quick and smart data-informed decisions.**

- **AtliQ Management wants to expand their Data Analytics team for data driven decision making.**

- **Tony Sharma, Director of Data Analytics decides to hire a talent sound in technical and soft skills.**

- **A SQL based Challenge has been organized to assess the applicants for the role.**

"AtliQ Exclusive" Markets In APAC Region.

```sql
SELECT DISTINCT
    market
FROM
    gdb023.dim_customer
WHERE
    region = 'APAC'
AND
    customer = 'Atliq Exclusive';
```

- India
- Indonesia
- Japan
- Philippines
- South Korea
- Australia
- New Zealand
- Bangladesh

"AtliQ Exclusive" Operates its business in over 8 countries in APAC Region

# Product Increase Percentage 2020 vs. 2021

```
SELECT  unique_products_2020,

         unique_products_2021, unique_products_2020,2) AS

         Round((unique_products_2021-

         unique_products_2020)*100/unique_products_2020,2) as

         percentage_change

FROM

     (SELECT

     COUNT(distinct case when f.fiscal_year=2020 then

      p.product_code END) as unique_products_2020,

      COUNT(distinct case when f.fiscal_year=2021 then

      p.product_code END) AS unique_products_2021

FROM  dim_product p

JOIN fact_sales_monthly f USING (product_code)

WHERE   f.fiscal_year IN (2020, 2021))  AS product_counts;
```

increase

Unique Products percentage_chnge

● Unique_products_2020 ● Unique_products_2021

36.33%

300

200

100

0

245

334
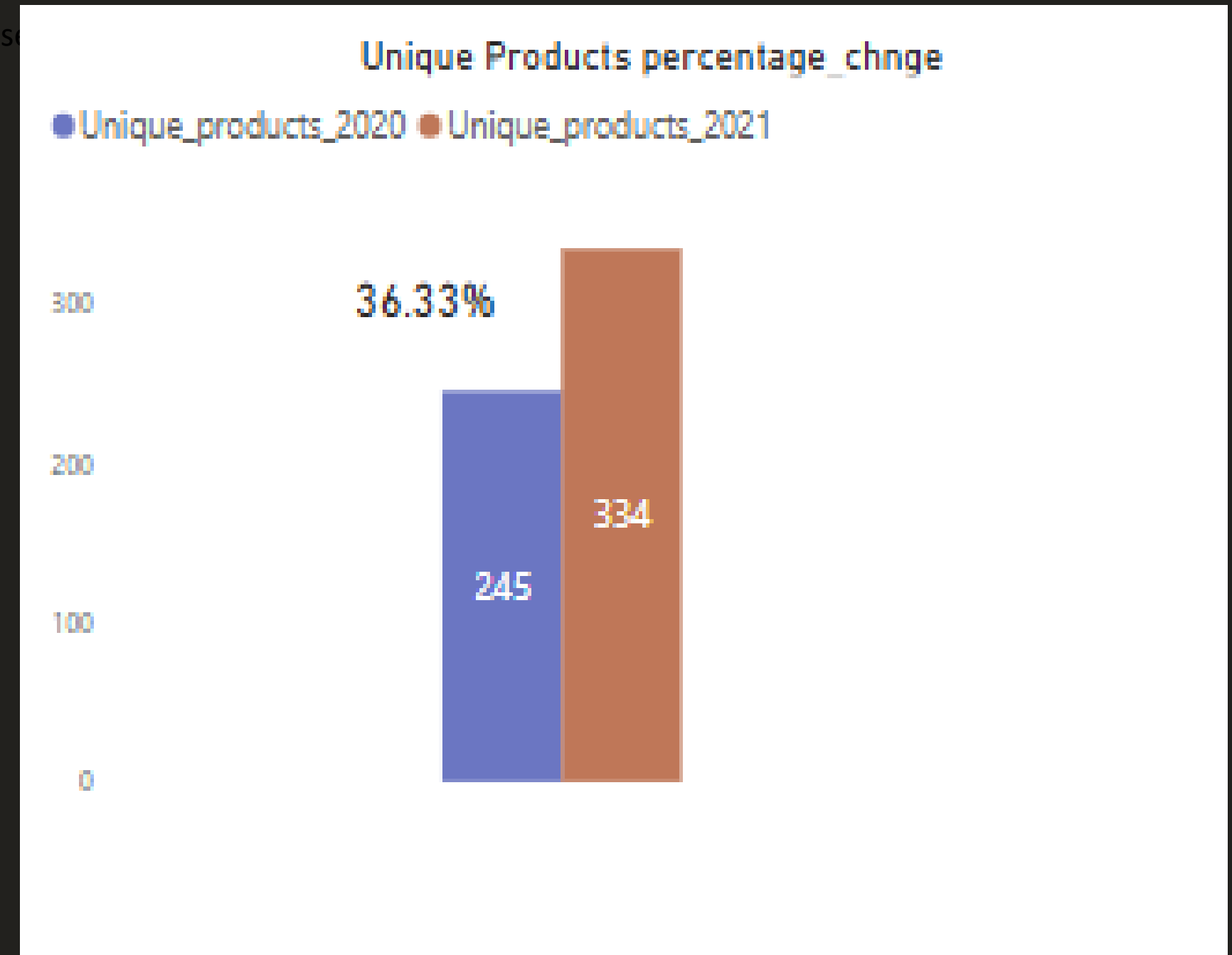
# Unique Products-Segment Level.

```sql
SELECT segment,
       COUNT(DISTINCT product_code) AS
       product_counts
FROM
    dim_product
GROUP BY
    segment
ORDER BY
    product_counts DESC;
```


Segment Level Product_Counts
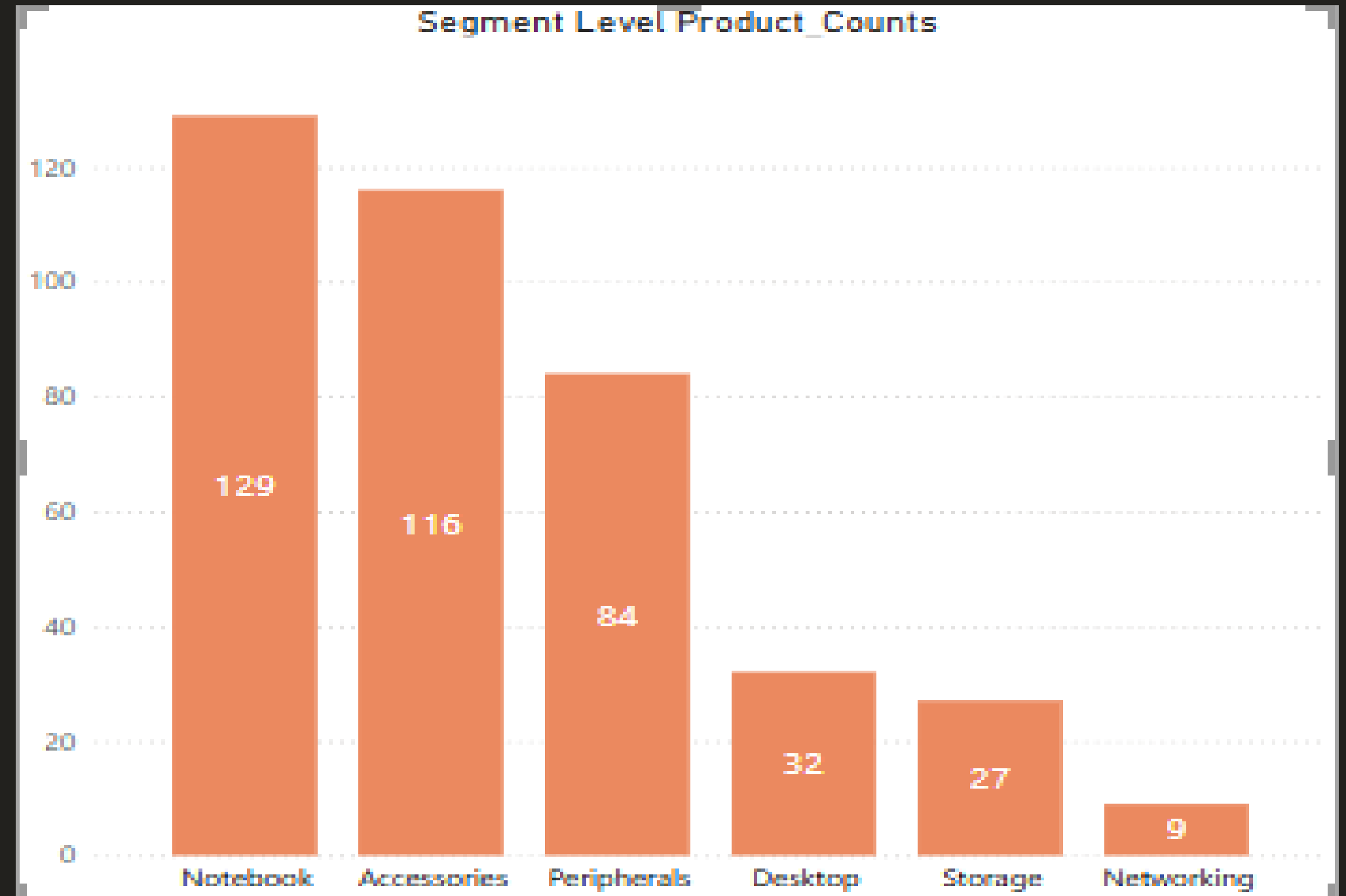
Segment Level Unique Products-2020 vs 2021

```sql
WITH   Product_counts AS
          (SELECT segment,
           COUNT(DISTINCT CASE WHEN f.fiscal_year=2020
           THEN p.product_code END) AS product_count_2020,
           COUNT(DISTINCT CASE WHEN f.fiscal_year=2021
           THEN p.product_code END) AS product_count_2021
FROM
       dim_product p
JOIN
       fact_sales_monthly f USING (product_code)
WHERE
       f.fiscal_year IN (2020, 2021)
GROUP BY segment)

Select   Segment,
         Product_count_2020,
         Product_count_2021,
         Product_count_2021-product_count_2020 as Difference
FROM
       product_counts
ORDER BY
       Difference desc;
```


Segment Level Unique Products 20/21
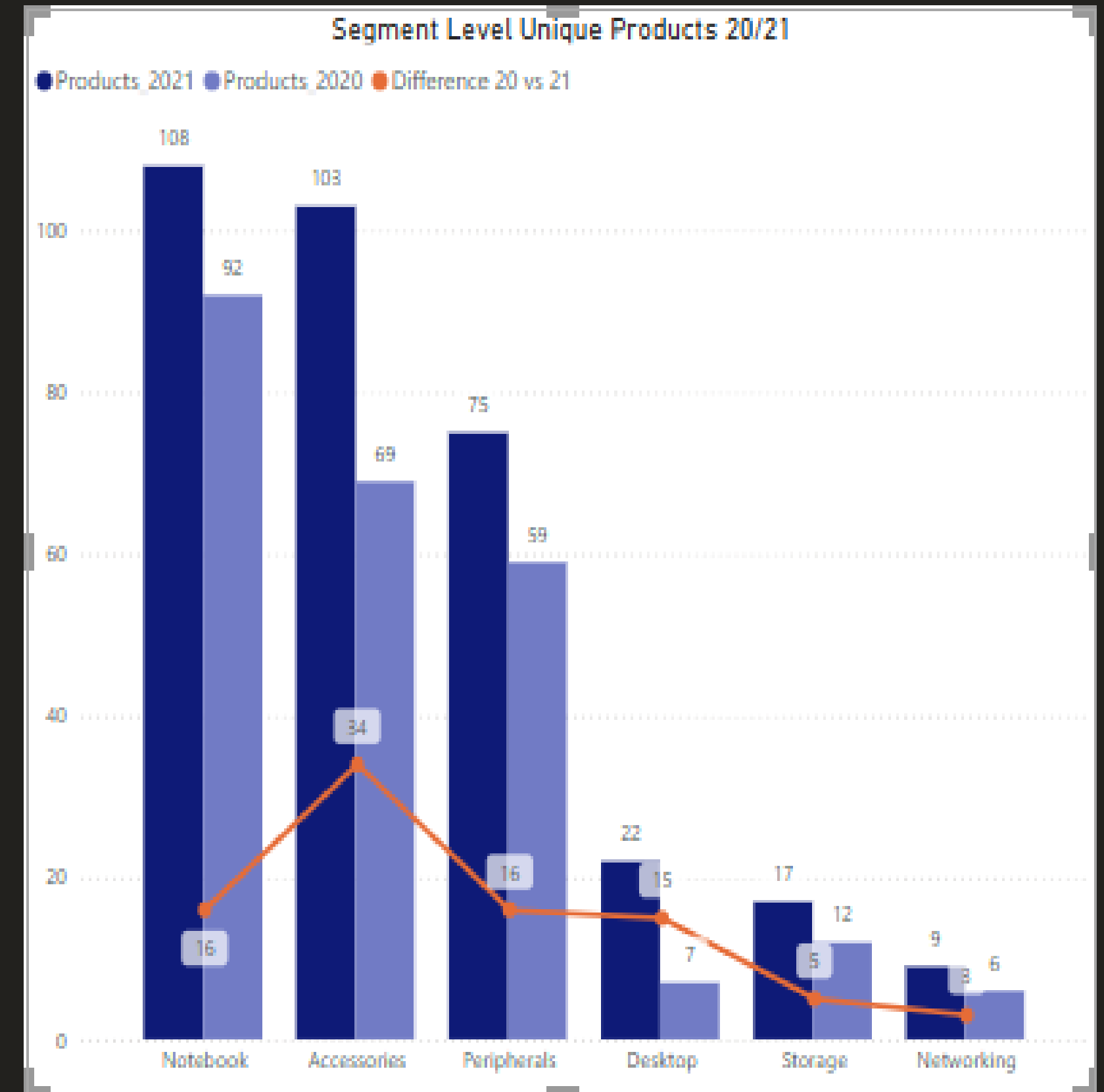
Highest & Lowest Manufacturing Cost-Product Level

```sql
SELECT
        p.product_code,
        p.product,
        m.manufacturing_cost
FROM
        dim_product p
JOIN
    fact_manufacturing_cost m
    USING (product_code)
WHERE
    m.manufacturing_cost=(SELECT
    MAX(manufacturing_cost)

FROM
    fact_manufacturing_cost)
OR
    m.manufacturing_cost=(SELECT
    MIN(manufacturing_cost)
FROM
    fact_manufacturing_cost)

ORDER BY manufacturing_cost DESC;
```

Manufacturing_cost by product

AQ HOME Allin1 Gen 2	
AQ Master wired x1 Ms	

0   100   200
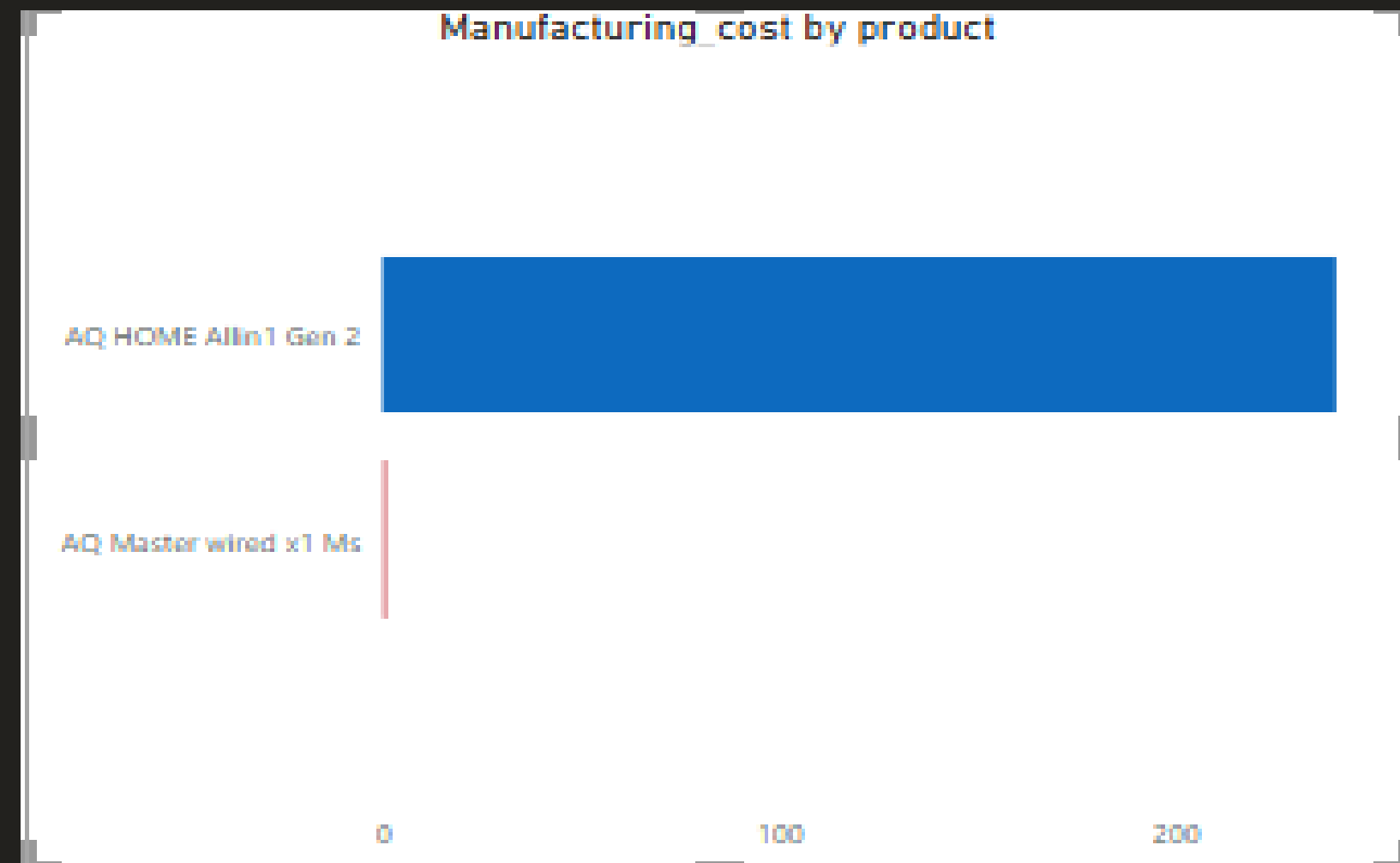
Top 5 Customers In India-Average High Pre_Invoice_Discount_Pct FY-2021

```sql
SELECT
      d.customer_code,
      d.customer,
      pre_invoice_discount_pct AS
      average_discount_percentage

FROM
      dim_customer d

JOIN
      fact_pre_invoice_deductions f
      USING (customer_code)

WHERE market="India" and fiscal_year=2021

ORDER BY average_discount_percentage DESC

LIMIT 5;
```

customer_code	customer	average_discount_percentage
90002009	Flipkart	30.83 %
90002006	Viveks	30.38 %
90002003	Ezone	30.28 %
90002002	Croma	30.25 %
90002016	Amazon	29.33 %

Gross sales "AtliQ Exclusive" –Monthly Analysis

```
With CTE AS
    ( SELECT    s.*,
              c.customer,
              g.gross_price
FROM
      fact_sales_monthly s
JOIN
      dim_customer c USING (customer_code)
 JOIN
      fact_gross_price g
    USING (product_code)
)

SELECT
    MONTH(date) AS month_no,
    YEAR(Date) AS yr,
    ROUND(SUM(gross_price * sold_quantity), 2) AS
    Gross_sales_amount
FROM
      CTE
WHERE   customer = 'AtliQ Exclusive'
GROUP BY month_no , Yr;
```


Gross_sales_amount by month_no and fy
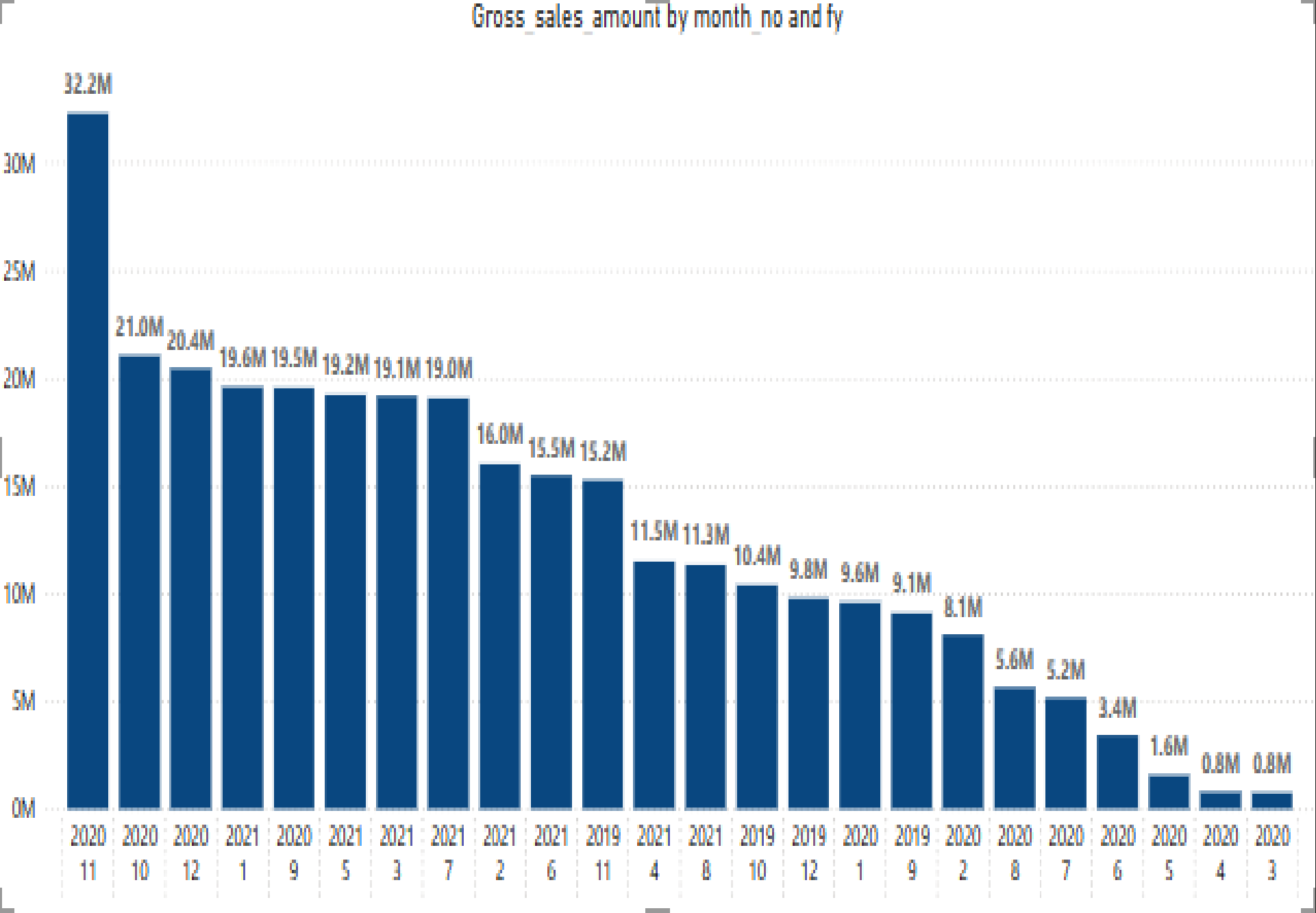
Total Sold Quantity-Quarter Level Analysis

```sql
WITH CTE AS
        (SELECT  *,
CONCAT('Q',
CEILING(MONTH(DATE_ADD(DATE,INTERVAL 4
Month))/3)) AS Quarters
FROM Fact_Sales_monthly)


 SELECT   Quarters,
         SUM(sold_quantity) AS total_sold_qty

FROM   CTE
WHERE   fiscal_year = 2020
GROUP BY Quarters
ORDER BY total_sold_qty DESC;
```


Quarterly Total_sold_qty

Quarter	Total
Q1	7.0M
Q2	6.6M
Q4	5.0M
Q3	2.1M
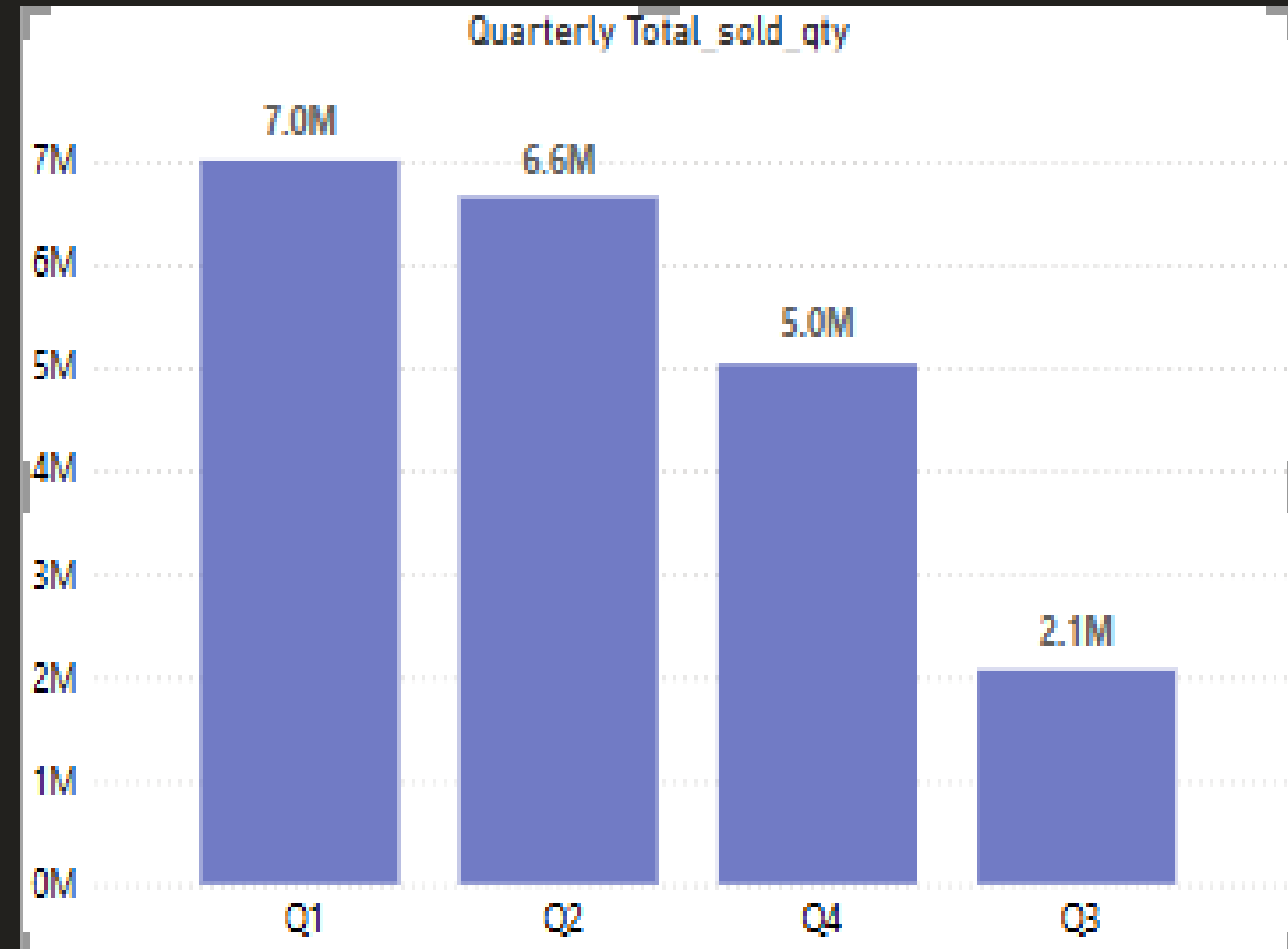
Top Gross Sales and Percentage Contribution-Channel Level FY 2021

```sql
With  yrly_sales  AS
            ( SELECT c.channel,
                    ROUND(SUM(g.gross_price *
             f.sold_quantity)/1000000,2) AS
            gross_sales_mln
FROM
            fact_sales_monthly f

JOIN   dim_customer c USING (customer_code)
JOIN   fact_gross_price g USING (product_code)

WHERE f.fiscal_year = 2021
GROUP BY channel
),
total_Sales AS
            (SELECT SUM(gross_sales_mln) as total_gross_Sales

FROM       yrly_Sales
 )

SELECT        y.channel,   y.gross_sales_mln,
            ROUND(y.gross_sales_mln / t.total_gross_sales * 100, 2)
AS gross_sales_pct
FROM yrly_sales y
CROSS JOIN total_sales t
ORDER BY gross_sales_pct DESC;
```
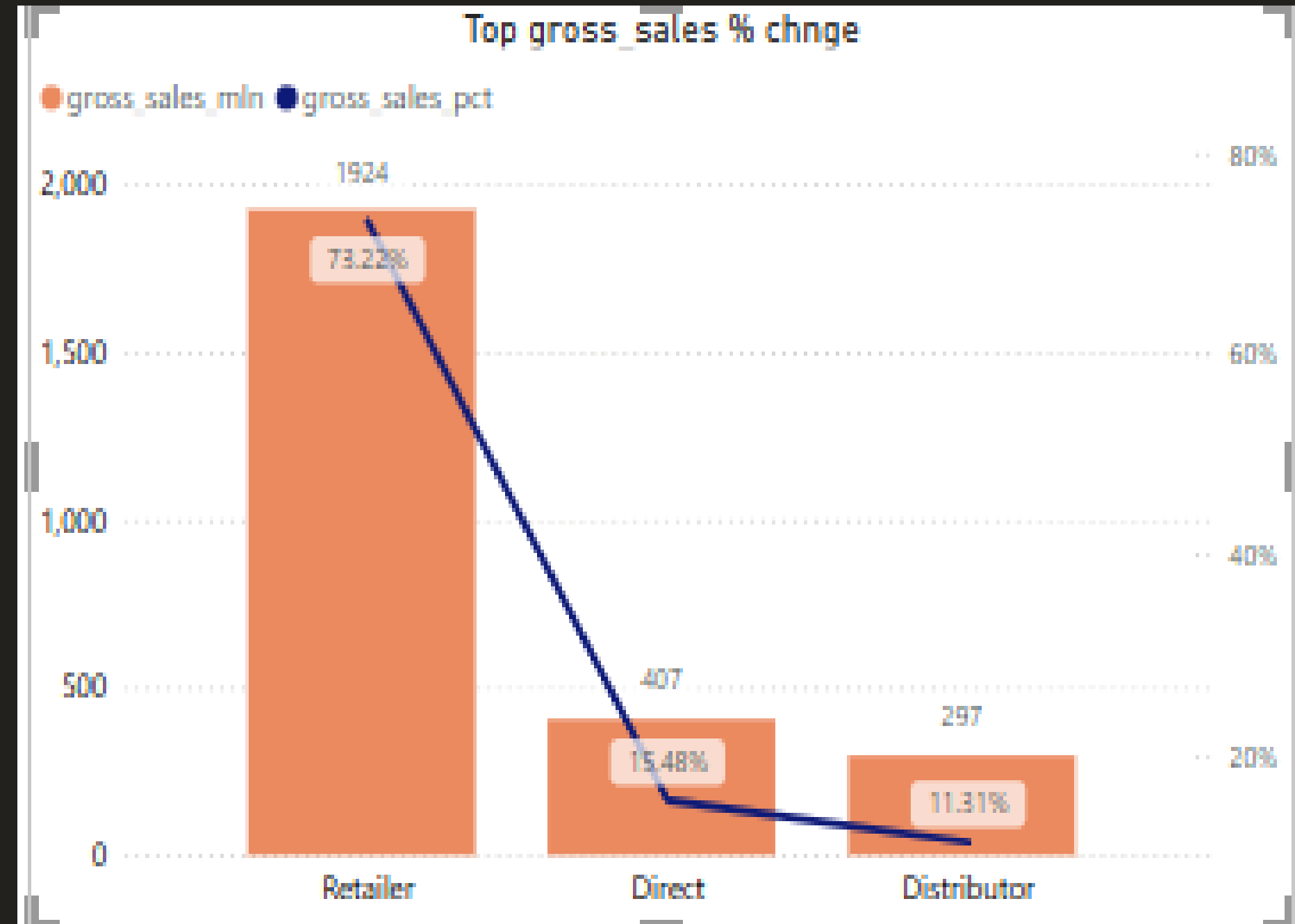

Top gross_sales % chnge

● gross_sales_mln ● gross_sales_pct

Top 3 Products & Highest Sold Quantity- Division Level Analysis FY 2021

```
WITH top_products AS
      (SELECT  p.division,
               f.product_code,
               p.product,
               ROUND(SUM(f.sold_quantity), 2)
               AS total_sold_quantity,
               RANK() OVER (PARTITION BY p.division
               ORDER BY SUM(f.sold_quantity) DESC
 ) AS rank_order

FROM  fact_sales_monthly f

JOIN   dim_product p
        USING (Product_code)
WHERE f.fiscal_year = 2021

GROUP BY p.division,f.product_code, p.product
)
SELECT  *
        FROM top_products

WHERE rank_order <4;
```
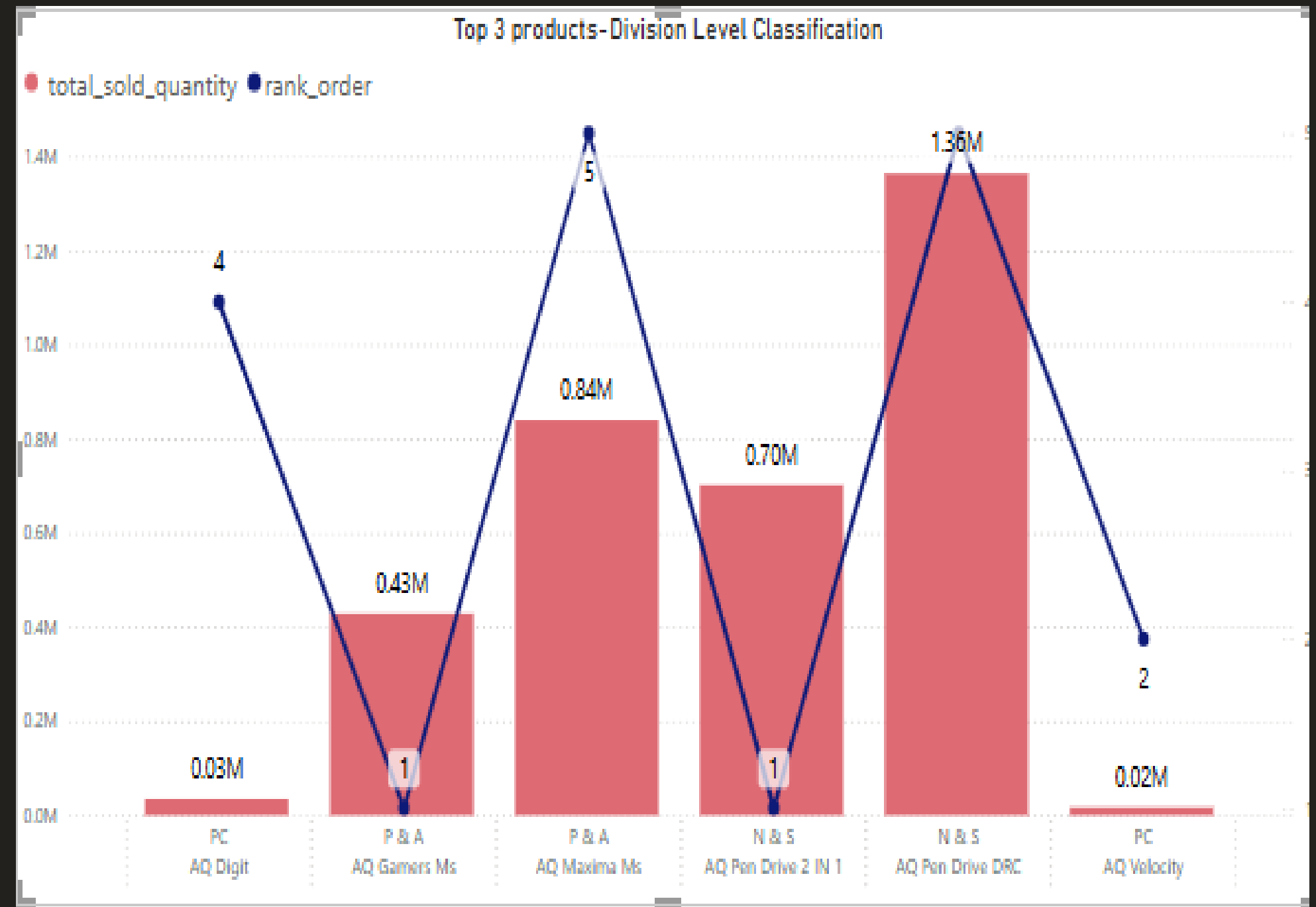
Thank You