



AtliQ
Hardware

Consumer Goods Ad-Hoc Analysis

AtliQ Hardware

AtliQ Hardware is one of the leading computer hardware producers in India and well expanded in other countries too.

AtliQ sells products in different segments like

- Peripherals and Accessories
- PC
- Network and Storage and in Platforms like
- Brick & Mortar (Chroma , Best buy)
- E-Commerce (Amazon, Flipkart)

However, the management noticed that they do not get enough insights to make quick and smart data-informed decisions. So, I have done Ad-Hoc analysis to provide insights to management in consumer goods domain.

Ad Hoc Requests

1. **Provide** the list of markets in which customer "AtliQ Exclusive" operates its business in the NA region.

```
select distinct market
from dim_customer
where customer="Atliq Exclusive" and region="APAC";
```

	market
	India
	Indonesia
▶	Japan
	Philippines
	South Korea
	Australia
	Newzealand
	Bangladesh

India Indonesia Japan
Philippines South Korea Australia
New Zealand Bangladesh

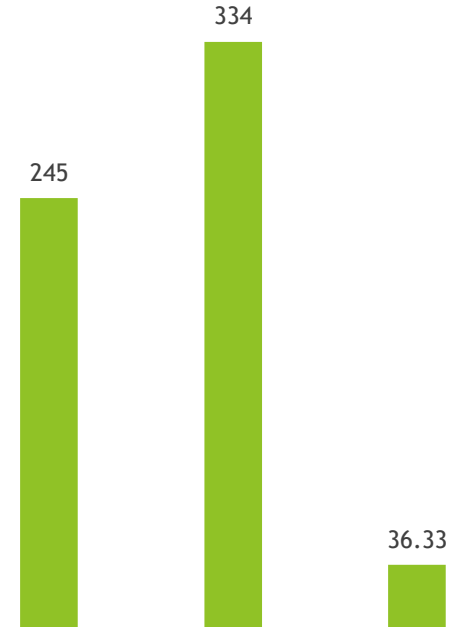


AtliQ Exclusive operates in 8 different markets in Asia Pacific region.

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

```
with cte1 As
(select count(distinct product_code) Unique_product_2020
from fact_sales_monthly
where fiscal_year=2020),
cte2 as
(select count(distinct product_code) Unique_product_2021
from fact_sales_monthly
where fiscal_year=2021)
select cte1.unique_product_2020,cte2.unique_product_2021 ,
round((((cte2.unique_product_2021-
cte1.unique_product_2020)/cte1.unique_product_2020)*100,2)
as percentage_change
from cte1,cte2;
```

	unique_product_2020	unique_product_2021	percentage_change
▶	245	334	36.33

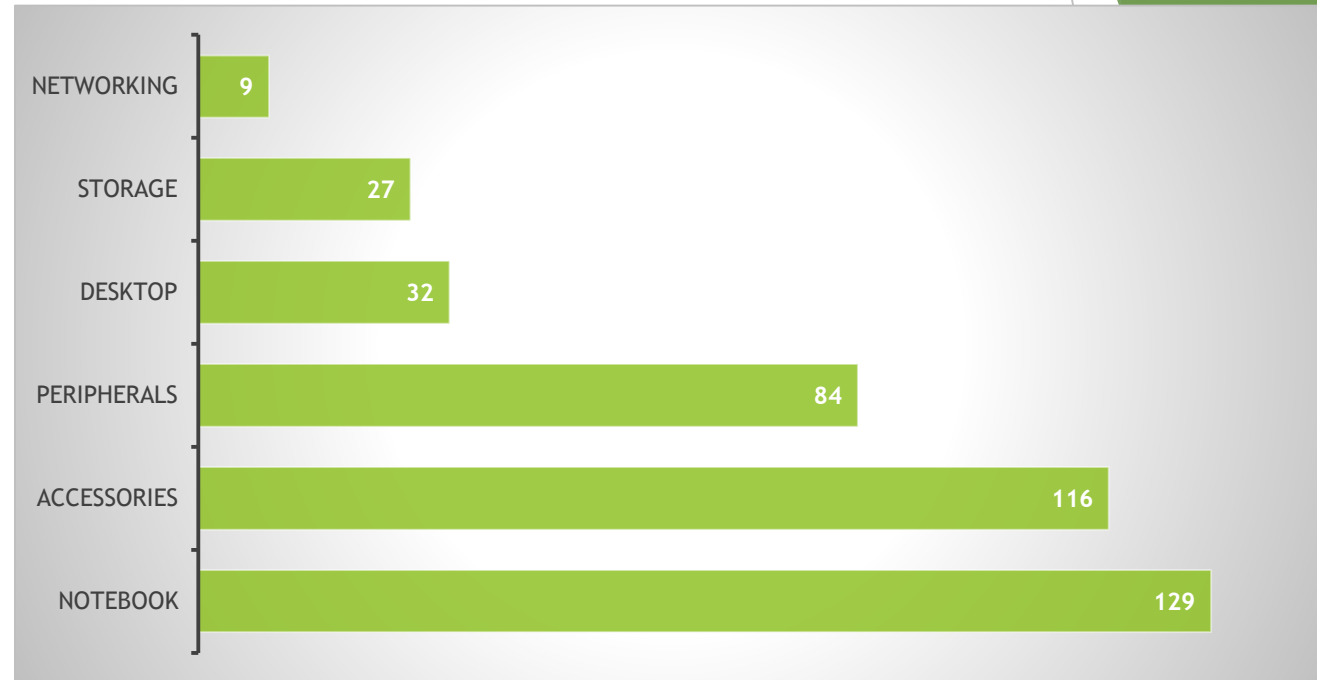


There is a 36.33% increase in unique products from 2020 to 2021. This growth could be a positive indicator for business performance, signaling innovation or market adaptation.

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

```
select segment, count(distinct  
product_code) as product_count from  
dim_product  
group by segment  
order by product_count desc;
```

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



Notebook is the leading segment with 129 unique products, indicating a demand in this category.

Networking and Storage have the lowest counts, which may indicate limited offerings or specialization in these areas.

4. Which segment had the most increase in unique products in 2021 vs 2020?

```
with cte1 as(
select p.segment,count(distinct s.product_code)as product_count_2020 from dim_product p
join fact_sales_monthly s using (product_code)
where s.fiscal_year=2020
group by p.segment
order by product_count_2020),

cte2 as (
select p.segment,count(distinct s.product_code) as product_count_2021 from dim_product p
join fact_sales_monthly s using(product_code)
where s.fiscal_year=2021
group by p.segment
order by product_count_2021)
select cte2.segment,cte1.product_count_2020,cte2.product_count_2021,
(product_count_2021-product_count_2020) as difference from cte1
join cte2 using(segment) order by difference desc;
```

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

Accessories segment had the most significant increase in unique products.
Networking segment showed the lowest increase in unique products.

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

```
select p.product_code,  
       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;
```

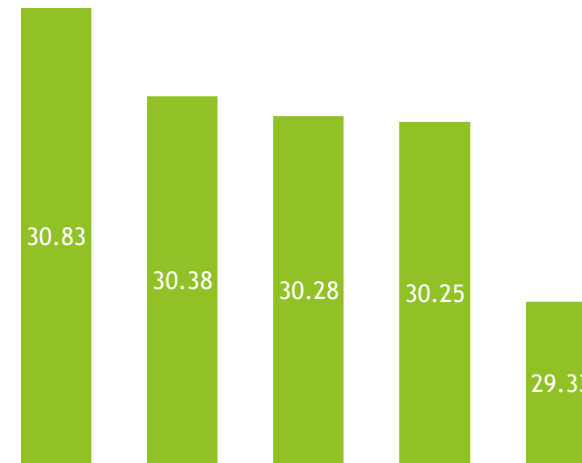
	product_code	product	manufacturing_cost	
▶	A2118150101	AQ Master wired x1 Ms	0.8654	Lowest
	A6121110208	AQ HOME Allin1 Gen 2	263.4207	Highest

- AtliQ Hardware has Highest manufacturing cost of 263,4207 on AQ Home Allin1 Gen2.
- It also has Lowest manufacturing cost of 0.8654 on AQ Master wired x1 Ms.
- The growth in product variety may enhance market competitiveness and offer customer more choice.

6. Generate a report which contains the top 5 customers who received an average high pre_invoice_discount_pct for fiscal year 2021 and in the Indian market.

```
SELECT
    c.customer_code,
    c.customer,
    round (avg(pre_invoice_discount_pct)*100,2) as average_discount_pct
FROM fact_pre_invoice_deductions p
join dim_customer c using(customer_code)
where fiscal_year =2021 and market="India"
group by c.customer_code
order by average_discount_pct desc
limit 5;
```

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



Flipkart customer was given highest average pre-invoice discount in India in FY2021

7. Get the complete report of the Gross sales amount for the customer "AtliQ Exclusive" for each month.

```
select s.fiscal_year as fiscal_year,  
       date_format(date, '%M -%Y') as month,  
       concat(round(sum(s.sold_quantity*g.gross_price)/1000000,2)," M") as gross_sales  
from fact_sales_monthly s  
join fact_gross_price g using(product_code)  
join dim_customer c using (customer_code)  
where customer="AtliQ Exclusive" and s.fiscal_year in(2020,2021)  
group by month,fiscal_year;
```

	fiscal_year	month	gross_sales
▶	2021	September -2020	37.75 M
	2020	September -2019	17.04 M
	2021	October -2020	40.44 M
	2020	October -2019	19.48 M
	2021	November -2020	62.30 M
	2020	November -2019	28.51 M
	2021	May -2021	37.04 M
	2020	May -2020	2.97 M
	2021	March -2021	36.97 M
	2020	March -2020	1.42 M

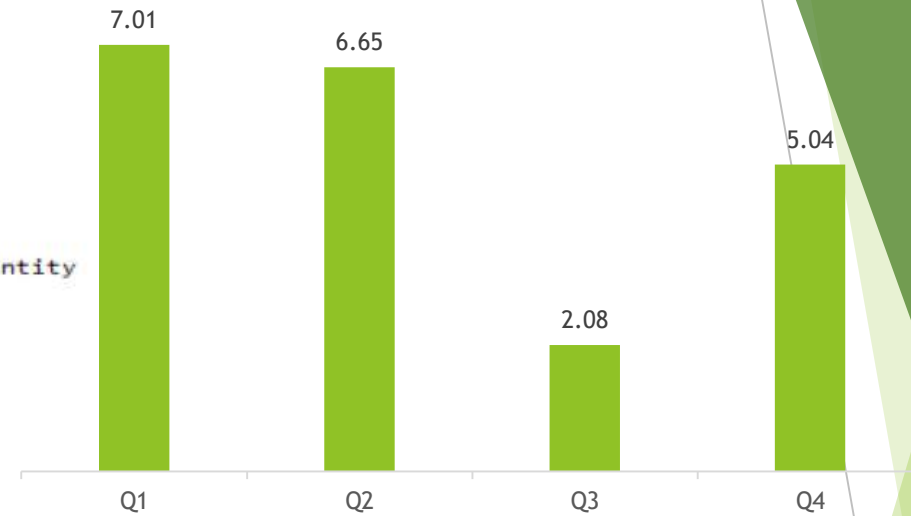
fiscal_year	month	gross_sales
2020	March -2020	1.42 M
2021	June -2021	29.89 M
2020	June -2020	6.45 M
2021	July -2021	36.68 M
2020	July -2020	9.69 M
2021	January -2021	37.70 M
2020	January -2020	18.01 M
2021	February -2021	30.85 M
2020	February -2020	15.17 M
2021	December -2020	39.31 M

Gross sales increased significantly from FY 2020 to 2021, with November having peak sales of \$62.3 Millions in FY 2021

8. In which quarter of 2020, got the maximum total_sold_quantity?

```
select
  case
    when month(date) in (9,10,11) then "Q1"
    when month(date) in (12,1,2) then "Q2"
    when month(date) in (3,4,5) then "Q3"
    when month(date) in (6,7,8) then "Q4"
  end as Quarter,
  concat(round(sum(sold_quantity)/1000000,2)," M") as total_sold_quantity
from fact_sales_monthly
where fiscal_year=2020
group by Quarter;
```

	Quarter	total_sold_quantity
►	Q1	7.01 M
	Q2	6.65 M
	Q3	2.08 M
	Q4	5.04 M

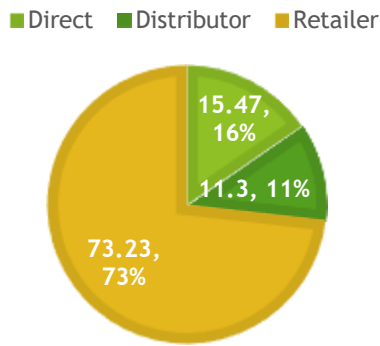


This suggests a strong start in total products sold in Quarter1, followed by a gradual decline over subsequent quarters. While Quarter3 sold least number of products.

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

```
with cte1 as(
select channel,
       concat(round(sum(sold_quantity*gross_price)/1000000,2), "M") as gross_sales
from fact_sales_monthly s
join fact_gross_price g
on s.product_code=g.product_code and s.fiscal_year=g.fiscal_year
join dim_customer c using(customer_code)
where s.fiscal_year=2021
group by channel
order by gross_sales desc)
select *,
       round((gross_sales/sum(gross_sales) over()*100),2) percentage
from cte1
```

	channel	gross_sales	percentage
►	Direct	257.53M	15.47
	Distributor	188.03M	11.3
	Retailer	1219.08M	73.23



The Retailer channel generated the highest gross sales with 73.23% of total sales in FY2021.

10. Get Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021.

```
with cte1 as
(select division,
       s.product_code,
       product,
       sum(sold_quantity) as total_quantity_sold
from fact_sales_monthly s
join dim_product using(product_code)
where fiscal_year=2021
group by division,s.product_code,product),
cte2 as (select *,
              dense_rank() over(partition by division order by total_quantity_sold desc) as rank_order
from cte1
order by total_quantity_sold desc)

select * from cte2 where rank_order<=3
order by division;
```

	division	product_code	product	total_quantity_sold	rank_order
▶	N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
	N & S	A6818160202	AQ Pen Drive DRC	688003	2
	N & S	A6819160203	AQ Pen Drive DRC	676245	3
	P & A	A2319150302	AQ Gamers Ms	428498	1
	P & A	A2520150501	AQ Maxima Ms	419865	2
	P & A	A2520150504	AQ Maxima Ms	419471	3
	PC	A4218110202	AQ Digit	17434	1
	PC	A4319110306	AQ Velocity	17280	2
	PC	A4218110208	AQ Digit	17275	3

- Efficient inventory management is essential to meet customer need and crucial for sustained success.

Thank You