

# Sales Insights Dashboard – AtliQ Hardware

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## 1. Project Overview

AtliQ Hardware is a Delhi-based computer hardware supplier operating across multiple regions in India. The company faced significant challenges in tracking sales performance due to fragmented Excel reports and verbally communicated regional updates. These reports were often inconsistent, biased, and difficult to consolidate.

The Sales Director required a centralized, reliable, and real-time reporting solution to:

- Monitor regional sales performance
- Identify revenue trends over time
- Track top customers and products
- Enable data-driven strategic decisions

This project transforms raw transactional data into structured insights using SQL and Power BI, culminating in an interactive executive dashboard.

## 2. Dataset Summary

The dataset consists of multiple relational tables:

- **transactions** – Sales amount, sales quantity, currency, order date, market code
- **date** – Year, month, and time attributes
- **customers** – Customer information
- **products** – Product details
- **markets** – Regional market mapping

Data spans across **2019 and 2020**, enabling year-over-year comparison.

Key data preparation steps included:

- Removing invalid transactions ( $\text{sales\_amount} \leq 0$ )
- Cleaning inconsistent currency entries (INR, USD)
- Joining transaction data with date table for time-based analysis

```
1 • SELECT * FROM sales.transactions;
2
3 #joining transaction and date column,checking the data for the year 2019
4
5 • select sales.transactions.*,sales.date.* from
6 sales.transactions inner join sales.date on sales.transactions.order_date=sales.date.date
7 where sales.date.year=2019;
```

Result Grid														
Filter Rows														
Exports														
Wrap Cell Contents														
Fetch rows														
product_code	customer_code	market_code	order_date	sales_qty	sales_amount	currency	profit_margin_percentage	profit_margin	cost_price	date	cy_date	year	month_name	date_yy_mmm
Prod279	Cus020	Mark011	2019-04-16	1	102	INR	0.08	8.16	93.84	2019-04-16	2019-04-01	2019	April	19-Apr
Prod279	Cus020	Mark011	2019-05-08	1	102	INR	-0.05	-5.1	107.1	2019-05-08	2019-05-01	2019	May	19-May
Prod279	Cus020	Mark011	2019-05-13	1	102	INR	0.35	35.7	66.3	2019-05-13	2019-05-01	2019	May	19-May
Prod279	Cus020	Mark011	2019-05-20	1	102	INR	0.24	24.48	77.52	2019-05-20	2019-05-01	2019	May	19-May
Prod279	Cus020	Mark011	2019-06-03	1	102	INR	-0.14	-14.28	116.28	2019-06-03	2019-06-01	2019	June	19-Jun
Prod279	Cus020	Mark011	2019-06-06	1	102	INR	0.01	1.02	100.98	2019-06-06	2019-06-01	2019	June	19-Jun
Prod279	Cus020	Mark011	2019-06-19	1	102	INR	0.15	15.3	86.7	2019-06-19	2019-06-01	2019	June	19-Jun
Prod279	Cus020	Mark011	2019-06-20	1	102	INR	0.1	10.2	91.8	2019-06-20	2019-06-01	2019	June	19-Jun
Prod279	Cus020	Mark011	2019-06-28	1	102	INR	-0.25	-25.5	127.5	2019-06-28	2019-06-01	2019	June	19-Jun
Prod279	Cus020	Mark011	2019-07-01	1	102	INR	-0.25	-25.5	127.5	2019-07-01	2019-07-01	2019	July	19-Jul
Prod279	Cus020	Mark011	2019-07-12	1	102	INR	-0.17	-17.34	119.34	2019-07-12	2019-07-01	2019	July	19-Jul
Prod279	Cus020	Mark011	2019-07-15	1	102	INR	0.1	10.2	91.8	2019-07-15	2019-07-01	2019	July	19-Jul
Prod279	Cus020	Mark011	2019-07-17	1	102	INR	0.33	33.66	68.34	2019-07-17	2019-07-01	2019	July	19-Jul
Prod279	Cus020	Mark011	2019-07-19	1	102	INR	-0.1	-10.2	112.2	2019-07-19	2019-07-01	2019	July	19-Jul
Prod279	Cus020	Mark011	2019-07-24	1	102	INR	-0.19	-19.38	121.38	2019-07-24	2019-07-01	2019	July	19-Jul
Prod279	Cus020	Mark011	2019-07-25	1	102	INR	-0.21	-21.42	123.42	2019-07-25	2019-07-01	2019	July	19-Jul
Prod279	Cus020	Mark011	2019-07-30	1	102	INR	-0.3	-30.6	132.6	2019-07-30	2019-07-01	2019	July	19-Jul
Prod279	Cus020	Mark011	2019-07-31	1	102	INR	0.37	37.74	64.26	2019-07-31	2019-07-01	2019	Julv	19-Jul

Result 1\_X

Read On

Result 1 x

Read Only

### 3. Data Analysis Using SQL (Business Transactions)

#### 3.1 Revenue Comparison (2019 vs 2020)

SQL was used to calculate total sales for both years.

Business Purpose:

To evaluate company growth performance and identify whether revenue improved or declined year-over-year.

Insight:

The comparison reveals overall performance direction and supports strategic planning for the upcoming financial year.

```
8
9  #sum of total sales did in 2019
10
11 • select sum(sales.transactions.sales_amount) from
12 sales.transactions inner join sales.date on sales.transactions.order_date=sales.date.date
13 where sales.date.year=2019;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	sum(sales.transactions.sales_amount)			
▶	336019102			

```
15  #sum of total sales did in 2020 and compare with the total sale of year 2019
16
17 • select sum(sales.transactions.sales_amount) from
18 sales.transactions inner join sales.date on sales.transactions.order_date=sales.date.date
19 where sales.date.year=2020;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	sum(sales.transactions.sales_amount)			
▶	142224545			

#### 3.2 Regional Revenue Analysis – Chennai (Mark001)

Revenue for 2020 was filtered for a specific market (Mark001 – Chennai).

Business Purpose:

To evaluate regional contribution and identify high/low-performing markets.

Insight:

Regional breakdown helps leadership allocate marketing budgets and sales resources effectively.

```
21  #sum of total sales did in 2020 in chennai
22
23 • select sum(sales.transactions.sales_amount) from
24 sales.transactions inner join sales.date on sales.transactions.order_date=sales.date.date
25 where sales.date.year=2020 and sales.transactions.market_code="Mark001";
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	sum(sales.transactions.sales_amount)			
▶	2463024			

### 3.3 Data Cleaning – Invalid Sales Detection

Transactions with zero or negative sales were identified.

Business Purpose:

Ensure accurate reporting and prevent distortion of revenue metrics.

Insight:

Removing invalid entries improves reliability of KPI calculations and dashboard credibility.

```
26
27     #removing sales amount which are 0 or less than 0
28
29 •   select * from sales.transactions where sales_amount <= 0;
30
```

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### 3.4 Currency Standardization

Distinct currency values were analyzed to detect inconsistencies such as trailing characters (e.g., INR\r).




Business Purpose:

Ensure clean financial aggregation and prevent miscalculated totals.

Insight:

Currency cleaning ensures financial accuracy and consistency in reporting.

```
31     #removing the duplicates for usd and rupees
32
33 •   select distinct(transactions.currency) from transactions;
34
35 •   select count(currency) from transactions where currency = 'INR';
36 •   select count(currency) from transactions where currency = 'INR\r';
37 •   select count(currency) from transactions where currency = 'USD';
38 •   select count(currency) from transactions where currency = 'USD\r';
--
```

Result Grid |  Filter Rows:  | Export:  | Wrap Cell Content: 

	count(currency)
▶	2

### 3.5 Monthly Revenue Validation (January 2020)

SQL was used to verify monthly revenue figures to cross-check Power BI dashboard values.

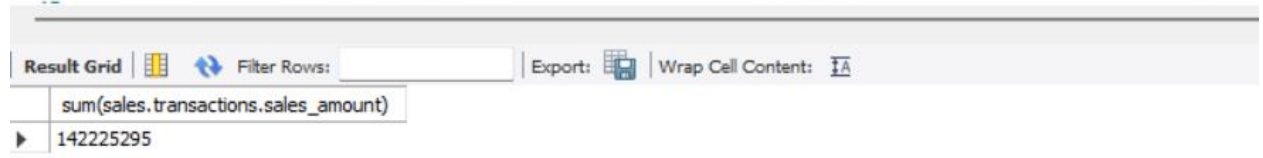
Business Purpose:

Validate BI outputs against raw database calculations.

Insight:

Cross-verification strengthens dashboard trustworthiness for stakeholders.

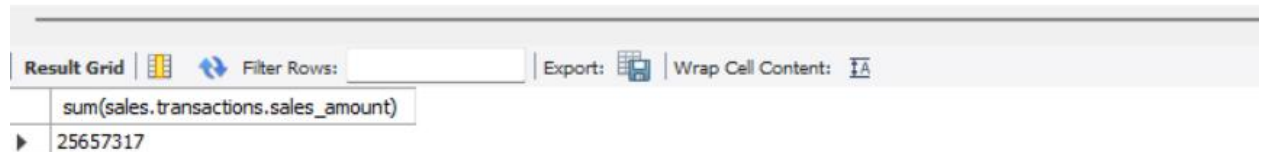
```
39
40  #verify sum of amount in 2020 with powerbi
41
42  •  select sum(sales.transactions.sales_amount) from
43      sales.transactions inner join sales.date on sales.transactions.order_date=sales.date.date
44      where sales.date.year=2020 and transactions.currency='INR' or transactions.currency='USD';
--
```



The screenshot shows a SQL query result grid. The query calculates the sum of sales\_amount for all transactions in 2020, filtered by currency 'INR' or 'USD'. The result is 142225295.

sum(sales.transactions.sales_amount)
142225295

```
46  #verify sum of amount in 2020/January with powerbi
47
48  •  select sum(sales.transactions.sales_amount) from
49      sales.transactions inner join sales.date on sales.transactions.order_date=sales.date.date
50      where sales.date.year=2020 and month_name= "January"
51      and transactions.currency='INR' or transactions.currency='USD';
```



The screenshot shows a SQL query result grid. The query calculates the sum of sales\_amount for all transactions in January 2020, filtered by currency 'INR' or 'USD'. The result is 25657317.

sum(sales.transactions.sales_amount)
25657317

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## 4. Dashboard in Power BI

The SQL-cleaned dataset was imported into Power BI to create an interactive executive dashboard.

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### 4.1 KPI Cards – Executive Summary

- Total Revenue: 984.88M
- Total Sales Quantity: 2M

Business Value:

Provides leadership with instant performance visibility without navigating detailed tables.

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### 4.2 Revenue by Market (Bar Chart)

This chart compares revenue contribution across different regions.

Key Insight:

Delhi NCR appears to be the highest revenue contributor, indicating strong regional dominance.

Business Impact:

Supports targeted investment and expansion decisions.

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4.3 Revenue Trend (Time Series)

Displays revenue progression across months and years.

Key Insight:

Reveals seasonality patterns and growth/decline phases.

Business Impact:

Helps forecast demand and plan inventory and marketing campaigns.

4.4 Top 5 Customers by Revenue

Identifies highest revenue-generating customers.

Key Insight:

A small number of customers contribute disproportionately to total revenue.

Business Risk:

High dependency risk if top customers churn.

Strategic Action:

Develop retention programs and loyalty incentives.

4.5 Top 5 Products by Revenue

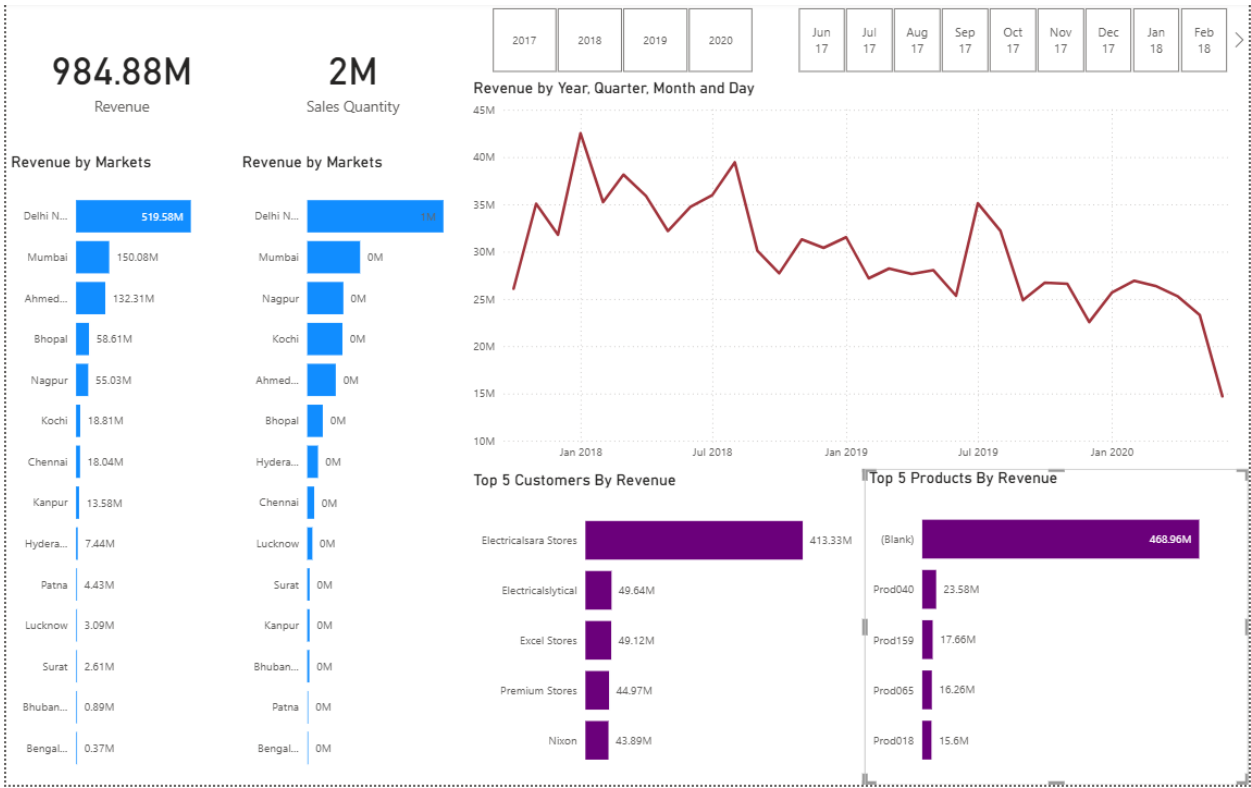
Shows best-performing products.

Key Insight:

Certain products dominate sales performance.

Business Impact:

Guides product promotion strategy and inventory planning.



## 5. Key Insights

- Revenue concentration exists in specific markets.
  - A limited number of customers drive significant revenue.
  - Data cleaning was essential to ensure reporting accuracy.
  - Year-over-year comparison supports strategic planning.
  - Dashboard enables centralized performance monitoring.
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## 6. Business Recommendations

1. Strengthen top-performing markets with focused marketing investments.
2. Develop retention strategies for high-value customers.
3. Diversify revenue sources to reduce dependency risk.
4. Implement automated monthly reporting for leadership.
5. Use trend analysis for forecasting and inventory optimization.