

Amazon Sales Performance Dashboard

Tool: Microsoft Power BI

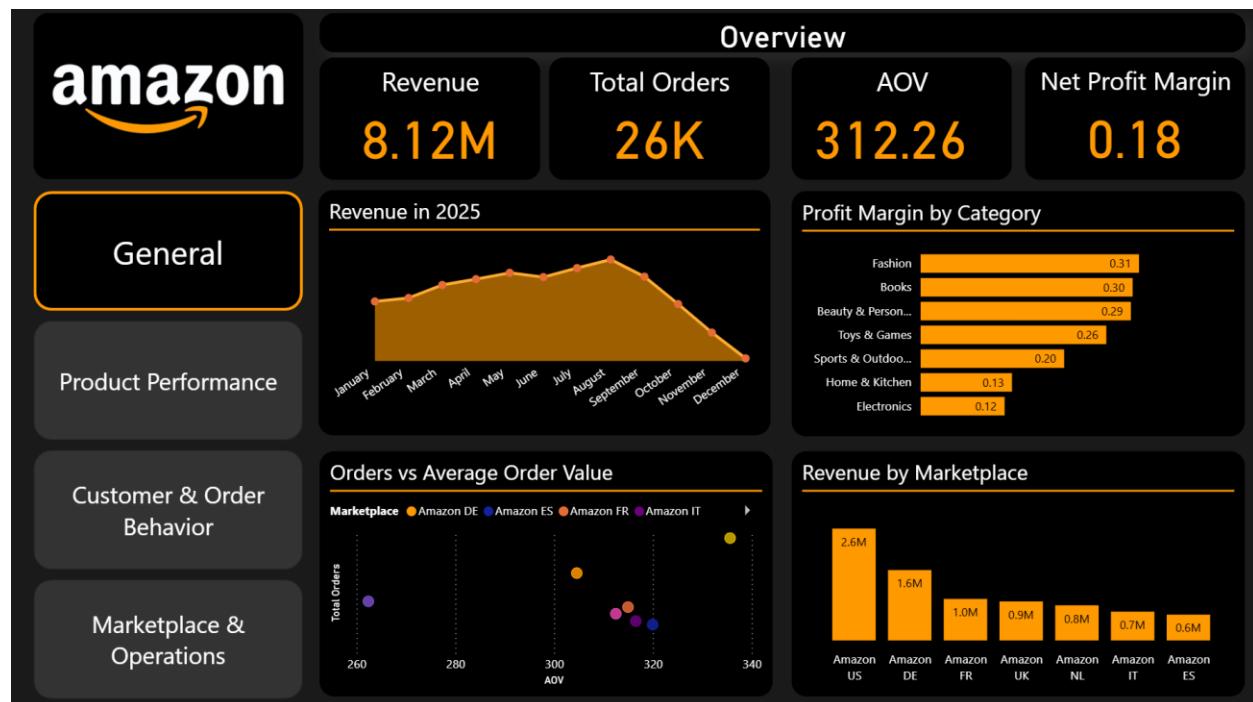
Focus: Sales, Profitability & Product Performance Analytics

1. Project Overview

This project presents a comprehensive **Amazon-style sales analytics dashboard** designed to support business decision-making in an e-commerce environment. The dashboard provides a structured overview of revenue, profitability, marketplace performance, and individual product behavior.

The objective was not only to visualize sales data, but to **transform incomplete and imperfect raw data into actionable insights** through proper data modeling, DAX measures, and clean dashboard design.

The final result is a **multi-page, interactive Power BI dashboard** suitable for management-level reporting, performance monitoring, and portfolio demonstration.



2. Business Questions Answered

The dashboard was built to answer key commercial and operational questions typically faced by e-commerce and marketplace-driven businesses:

- Which marketplaces generate the highest revenue and profit?
- Which products contribute most to profitability versus volume?
- How do discounts and costs affect profit margins?
- Which categories underperform despite strong sales?
- How does performance evolve over time across marketplaces?

These questions were translated into KPIs, comparative visuals, and trend analyses across multiple dashboard pages.



3. Data & Modeling Challenges

The dataset used in this project intentionally reflected **realistic challenges often encountered in business environments**, including:

- No pre-defined **Profit** or **COGS** columns
- Discount and tax values initially missing or set to zero
- Identical quantities across categories due to raw data structure
- Lack of product-level attributes required for deeper analysis

To resolve these issues, the data had to be **enriched, simulated, and logically corrected** to avoid misleading insights. This step was critical to ensure that all visuals reflected realistic Amazon-like sales behavior rather than mechanically aggregated values.

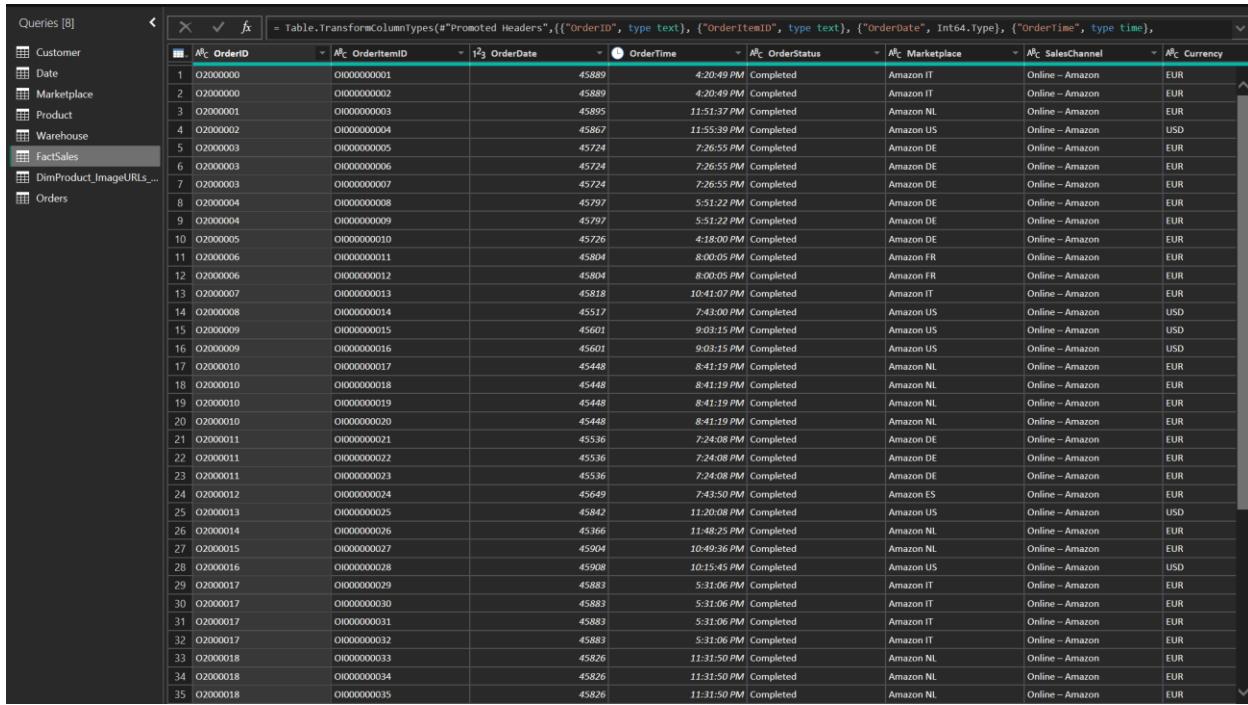
4. Data Preparation (Power Query)

All structural transformations were handled in **Power Query** to prepare a reliable data model before analysis.

Key preparation steps included:

- Cleaning and standardizing raw sales data
- Creating additional attributes such as product categories and weights
- Normalizing marketplace and date fields
- Preparing product identifiers to support future image integration

By handling these transformations upstream, the data model remained clean, efficient, and scalable.



The screenshot shows the Power Query Editor interface with a table titled "Promoted Headers". The table has 8 columns: OrderID, OrderItemID, OrderDate, OrderTime, OrderStatus, Marketplace, SalesChannel, and Currency. The data consists of 35 rows of sales information, primarily from Amazon DE and Amazon US, with various order dates and times, and completed status. The editor's ribbon at the top includes tabs for Home, Transform, and Power Query. The left sidebar lists other queries in the project, including Customer, Date, Marketplace, Product, Warehouse, FactSales, DimProduct, and DimProduct_Images. The formula bar at the top shows the current step: "Table.TransformColumnTypes(#"Promoted Headers", {{"OrderID", type text}, {"OrderItemID", type text}, {"OrderDate", Int64.type}, {"OrderTime", type Time}, {"OrderStatus", type text}, {"Marketplace", type text}, {"SalesChannel", type text}, {"Currency", type text}})".

	OrderID	OrderItemID	OrderDate	OrderTime	OrderStatus	Marketplace	SalesChannel	Currency
1	O2000000	O1000000001	45889	4:20:49 PM	Completed	Amazon IT	Online - Amazon	EUR
2	O2000000	O1000000002	45889	4:20:49 PM	Completed	Amazon IT	Online - Amazon	EUR
3	O2000001	O1000000003	45895	11:51:37 PM	Completed	Amazon NL	Online - Amazon	EUR
4	O2000002	O1000000004	45867	11:55:39 PM	Completed	Amazon US	Online - Amazon	USD
5	O2000003	O1000000005	45724	7:26:55 PM	Completed	Amazon DE	Online - Amazon	EUR
6	O2000003	O1000000006	45724	7:26:55 PM	Completed	Amazon DE	Online - Amazon	EUR
7	O2000003	O1000000007	45724	7:26:55 PM	Completed	Amazon DE	Online - Amazon	EUR
8	O2000004	O1000000008	45797	5:51:22 PM	Completed	Amazon DE	Online - Amazon	EUR
9	O2000004	O1000000009	45797	5:51:22 PM	Completed	Amazon DE	Online - Amazon	EUR
10	O2000005	O1000000010	45726	4:18:00 PM	Completed	Amazon DE	Online - Amazon	EUR
11	O2000006	O1000000011	45804	8:00:05 PM	Completed	Amazon FR	Online - Amazon	EUR
12	O2000006	O1000000012	45804	8:00:05 PM	Completed	Amazon FR	Online - Amazon	EUR
13	O2000007	O1000000013	45818	10:41:07 PM	Completed	Amazon IT	Online - Amazon	EUR
14	O2000008	O1000000014	45517	7:43:00 PM	Completed	Amazon US	Online - Amazon	USD
15	O2000009	O1000000015	45601	9:03:15 PM	Completed	Amazon US	Online - Amazon	USD
16	O2000009	O1000000016	45601	9:03:15 PM	Completed	Amazon US	Online - Amazon	USD
17	O2000010	O1000000017	45448	8:41:19 PM	Completed	Amazon NL	Online - Amazon	EUR
18	O2000010	O1000000018	45448	8:41:19 PM	Completed	Amazon NL	Online - Amazon	EUR
19	O2000010	O1000000019	45448	8:41:19 PM	Completed	Amazon NL	Online - Amazon	EUR
20	O2000010	O1000000020	45448	8:41:19 PM	Completed	Amazon NL	Online - Amazon	EUR
21	O2000011	O1000000021	45536	7:24:08 PM	Completed	Amazon DE	Online - Amazon	EUR
22	O2000011	O1000000022	45536	7:24:08 PM	Completed	Amazon DE	Online - Amazon	EUR
23	O2000011	O1000000023	45536	7:24:08 PM	Completed	Amazon DE	Online - Amazon	EUR
24	O2000012	O1000000024	45649	7:43:50 PM	Completed	Amazon ES	Online - Amazon	EUR
25	O2000013	O1000000025	45842	11:20:08 PM	Completed	Amazon US	Online - Amazon	USD
26	O2000014	O1000000026	45366	11:48:25 PM	Completed	Amazon NL	Online - Amazon	EUR
27	O2000015	O1000000027	45904	10:49:36 PM	Completed	Amazon NL	Online - Amazon	EUR
28	O2000016	O1000000028	45908	10:15:45 PM	Completed	Amazon US	Online - Amazon	USD
29	O2000017	O1000000029	45883	5:31:06 PM	Completed	Amazon IT	Online - Amazon	EUR
30	O2000017	O1000000030	45883	5:31:06 PM	Completed	Amazon IT	Online - Amazon	EUR
31	O2000017	O1000000031	45883	5:31:06 PM	Completed	Amazon IT	Online - Amazon	EUR
32	O2000017	O1000000032	45883	5:31:06 PM	Completed	Amazon IT	Online - Amazon	EUR
33	O2000018	O1000000033	45826	11:31:50 PM	Completed	Amazon NL	Online - Amazon	EUR
34	O2000018	O1000000034	45826	11:31:50 PM	Completed	Amazon NL	Online - Amazon	EUR
35	O2000018	O1000000035	45826	11:31:50 PM	Completed	Amazon NL	Online - Amazon	EUR

5. Data Modeling & DAX Measures

Core KPIs were implemented using **DAX measures** rather than calculated columns to ensure correct aggregation and dynamic behavior across filters.

Key measures included:

- Total Revenue
- Profit (derived from revenue and cost logic)
- Profit Margin
- Average Order Value (AOV)
- Quantity Sold

Special attention was paid to **filter context**, ensuring that all measures responded correctly to slicers, marketplace selections, and product-level views. This distinction between **Power Query transformations** and **DAX calculations** was essential for accuracy and performance.

```
1 Net Profit Margin = Divide (SUM ( FactSales[NetProfit] ), [Gross Revenue])
```

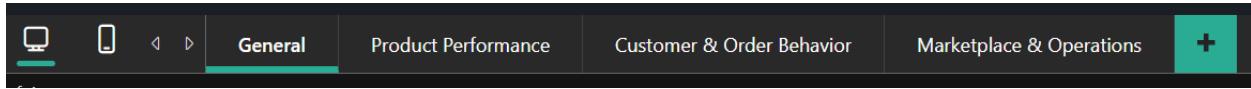
6. Dashboard Design & UX Decisions

The dashboard was designed following **clear layout and UX principles** to ensure readability and professional presentation:

- A 4-page structure:
 - Overview
 - Marketplace & Operations
 - Product Performance
 - Product Deep-Dive
- Pixel-perfect alignment with consistent spacing
- Amazon-inspired color palette for brand familiarity

- Navigation buttons for intuitive page flow
- Avoidance of redundant visuals across pages

Design decisions prioritized clarity, consistency, and decision-making efficiency rather than visual clutter.



7. Outcome & Use Cases

The final dashboard enables stakeholders to:

- Identify high- and low-performing marketplaces
- Detect products with high revenue but low profitability
- Evaluate the impact of pricing and discount strategies
- Support decisions related to inventory, promotions, and product focus

This project demonstrates an **end-to-end analytics workflow**, from raw data challenges to executive-ready insights, making it suitable for both real-world business use and professional portfolio presentation.