

Project Title: Multi-Platform E-Commerce Analytics: Sales, Pricing, and Customer Behavior

1. Industry Description :

The e-commerce industry has experienced rapid growth over the past decade, driven by digital transformation, increased internet penetration, and changing consumer purchasing behaviors. As competition intensifies, e-commerce platforms must rely on data-driven decision-making to optimize pricing strategies, understand customer preferences, improve product offerings, and maintain competitive advantage. Business Intelligence (BI) plays a crucial role in the e-commerce sector by transforming large volumes of transactional data into actionable insights.

2. Organization Description :

This project focuses on a **multi-platform e-commerce environment** that includes real and well-known online marketplaces: **Amazon, Jumia, and Souq**. These platforms operate across multiple regions and cities, offering a wide range of products from various brands and categories. The dataset used in this project represents transactional sales data collected from these platforms, including information about products, prices, quantities, customer ratings, reviews, locations, and order dates.

3. Business Problem :

Despite having access to large volumes of transactional data, e-commerce platforms often struggle to extract meaningful insights that support strategic and operational decision-making. Sales performance may vary significantly across platforms, categories, brands, and cities, but without proper analytical tools, it is difficult to identify the underlying drivers of these differences. The business problem addressed in this project is the **lack of integrated analytical visibility across multiple e-commerce platforms**, which limits the ability to evaluate sales performance, optimize pricing strategies, and understand customer behavior. This BI solution aims to provide clear insights through structured data modeling, KPIs, and interactive dashboards.

4. Analytical Questions :

The Business Intelligence solution aims to answer the following analytical questions:

1. What is the total revenue generated across all e-commerce platforms?
2. How does sales performance differ between Amazon, Jumia, and Souq?
3. Which product categories generate the highest revenue?
4. Which brands contribute the most to total sales and quantity sold?
5. Which cities generate the highest e-commerce revenue?
6. What is the average order value, and how does it differ by platform?
7. Is there a relationship between customer ratings and total sales?
8. Do products with a higher number of reviews generate more revenue?
9. Which categories show high sales but relatively low customer ratings?
10. Which platform demonstrates the highest customer satisfaction based on ratings?
11. How does the quantity purchased per order vary by category and platform?
12. Which brands perform consistently well across multiple platforms?

5. Key Performance Indicators (KPIs)

To effectively evaluate business performance, the following KPIs are defined:

1. Total Revenue
2. Total Quantity Sold
3. Average Product Price
4. Revenue by Platform
5. Revenue by Category
6. Top Brand Contribution (%)
7. Average Customer Rating
8. Review Volume per Product

6. Expected Value of the BI Solution

The proposed Business Intelligence solution will enable stakeholders to gain a comprehensive view of sales performance across multiple platforms. By monitoring KPIs and analyzing trends, management can identify high-performing products and platforms, optimize pricing strategies, improve customer satisfaction, and support data-driven decision-making.

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