INTRODUCTION

An Amazon sales dashboard serves as a comprehensive tool for tracking and analyzing the performance of sales activities within the Amazon platform. Through intuitive visualizations and real-time or near-real-time data updates, these dashboards offer insights into critical metrics such as sales figures, product performance, customer engagement, and revenue trends.

Designed to support decision-making processes, Amazon sales dashboards provide stakeholders—such as sellers, marketers, and executives—with actionable insights to optimize their strategies and maximize their success on the platform. By monitoring key performance indicators (KPIs) such as product sales, customer feedback, advertising effectiveness, and market trends, users can identify opportunities for growth, refine marketing campaigns, and enhance overall performance within the competitive Amazon marketplace.

The development of an Amazon sales dashboard can leverage various software programs and coding languages, with Tableau being a popular choice alongside tools like R, Python, and Excel. These platforms empower users to collect, analyze, and visualize data from diverse sources, creating interactive dashboards accessible across devices.

Customizable to meet the specific needs of different stakeholders, Amazon sales dashboards can provide insights at various levels—be it global, national, regional, or product-specific. Whether it's for sellers seeking to optimize their product offerings, marketers aiming to refine their advertising strategies, or executives monitoring overall performance, these dashboards offer valuable insights to drive success within the dynamic Amazon ecosystem.

OBJECTIVES OF THE DASHBOARD

- Total Sales per Category

Understand how much is being sold in each product category to find out which ones are doing really well and where there are chances to grow or improve.

- Category-Wise Data

Look closely at the details of each product category, like sales trends, how much profit is being made, how many items are sold, who is buying them, and which products are the most popular. This helps us make smart decisions for each category.

- Yearly Profit and Sales Analysis

Study how sales and profit change over time to find ways to grow and make things even better. By seeing when people buy more or less, we can plan ahead and make the most of these trends.

- Profit Percentage Top 5 Category

Figure out how profitable the top five product categories are so we can use our resources better and do a great job with our marketing. This helps us decide where to put our focus and make the most of our money.

- Top 10 Countries by Quantity and Category

Find out which countries are buying the most and then look at which products are the most popular in those places. This helps us design marketing and products that really work for the people in those areas.

SCOPE OF THE ANALYSIS

- Sales Performance: Evaluate the overall sales performance across different product categories and geographical regions to identify growth opportunities and market trends.

- Profitability Assessment: Analyze the profitability of the top-performing product categories to prioritize resource allocation and pricing strategies effectively.

- Customer Insights: Gain insights into customer demographics, preferences, and behavior to tailor marketing efforts and product offerings for better customer engagement.

- Trend Identification: Identify seasonal and long-term sales and profit trends to develop proactive strategies and capitalize on market dynamics effectively.

- Geographical Analysis: Explore sales data for the top ten countries to understand regional preferences, target specific market segments, and optimize inventory management and distribution strategies.

- Product Category Optimization: Understand the performance of individual product categories to refine marketing tactics, improve product offerings, and enhance customer satisfaction.

- Data-Driven Decision Making: Leverage the insights derived from the dashboard to drive strategic decision-making, operational efficiency, and sustainable growth within Amazon's e-commerce ecosystem.

- Competitive Analysis: Compare sales performance metrics with competitors within the Amazon marketplace to benchmark performance and identify areas for differentiation and competitive advantage.

- Advertising Effectiveness: Evaluate the impact of advertising campaigns on sales performance, including sponsored product ads, display ads, and promotions, to optimize advertising spend and maximize ROI.

- Inventory Management: Monitor inventory levels, stock turnover rates, and product availability to ensure optimal inventory management, minimize stockouts, and avoid overstocking.

- Pricing Strategy Optimization: Analyze pricing dynamics, including price elasticity and competitor pricing strategies, to optimize pricing decisions and maximize profitability while remaining competitive.

- Customer Lifetime Value (CLV) Analysis: Calculate and analyze CLV to identify highvalue customers, tailor marketing efforts to maximize customer retention and lifetime value, and prioritize customer acquisition strategies.

- Cross-Selling and Upselling Opportunities: Identify cross-selling and upselling opportunities by analyzing customer purchasing patterns and product affinity to increase average order value and enhance revenue streams.

- Seasonal and Event-Based Analysis: Analyze sales trends and customer behavior during seasonal events (e.g., holidays, promotions) to develop targeted marketing campaigns and capitalize on peak demand periods.

- Customer Satisfaction and Feedback Analysis: Monitor customer satisfaction metrics, such as product ratings and reviews, to identify areas for improvement, address customer concerns, and enhance overall customer experience.

By encompassing these aspects, stakeholders will gain a comprehensive understanding of Amazon's sales performance and be empowered to make informed, data-driven decisions to drive the business forward in the competitive e-commerce landscape.

Drawbacks or limitations of an existing system

The existing system utilized for analyzing Amazon sales data faces several drawbacks and limitations that hinder its effectiveness in providing comprehensive insights. Understanding these limitations is crucial for appreciating the necessity and value of the proposed Tableau dashboard.

- Limited Visualization Capabilities: The current system lacks sophisticated data visualization tools, often presenting data in static formats such as spreadsheets or basic charts. This limitation restricts the ability to identify trends, patterns, and outliers effectively, as well as hindering the communication of insights to stakeholders in a visually engaging manner.

- Inefficient Data Exploration: Navigating and exploring the vast dataset within the existing system can be cumbersome and time-consuming. Users may struggle to filter, sort, and analyze data efficiently, leading to suboptimal decision-making and missed opportunities for identifying actionable insights.

- Lack of Interactivity: Interactivity is crucial for dynamic data analysis, enabling users to drill down into specific data points, adjust parameters on the fly, and gain deeper insights through interactive exploration. The absence of interactive features in the current system limits user engagement and the ability to tailor analyses to specific needs or questions.

- Limited Integration with External Data Sources: The existing system may lack seamless integration capabilities with external data sources, restricting the scope of analysis to internal datasets only. This limitation prevents the incorporation of supplementary data sources that could enrich the analysis and provide additional context for decision-making.

- Static Reporting: Reporting capabilities in the current system may be limited to static, predefined reports with fixed metrics and formats. This rigidity inhibits flexibility in

reporting, making it challenging to adapt to evolving business requirements or stakeholder preferences.

- Scalability Issues: As the volume and complexity of Amazon sales data continue to grow, the existing system may struggle to scale effectively to accommodate increased data processing and analysis demands. This scalability limitation can result in performance bottlenecks, longer processing times, and decreased efficiency in generating insights.

- Dependency on Manual Processes: Manual data entry, manipulation, and analysis may be prevalent in the existing system, leading to errors, inconsistencies, and inefficiencies in data management. This dependency on manual processes not only increases the risk of inaccuracies but also consumes valuable time and resources that could be better allocated to higher-value tasks.

- Limited Predictive Analytics: The current system may lack robust predictive analytics capabilities, limiting its ability to forecast future sales trends, identify emerging opportunities, or anticipate customer behaviors. Without predictive modeling, decisionmaking may rely more on historical data analysis, potentially overlooking forward-looking insights critical for strategic planning.

Identifying and acknowledging these drawbacks and limitations underscores the need for a more advanced and comprehensive solution, such as the proposed Tableau dashboard for Amazon sales. By addressing these shortcomings and leveraging the power of advanced data visualization and analytics, stakeholders can gain deeper insights, make more informed decisions, and drive sustainable growth in the competitive e-commerce landscape.

SOURCE OF DATA SET

The dataset is taken from Kaggle. Kaggle is a platform that hosts a variety of datasets from different domains such as healthcare, finance, sports, and more. The datasets on Kaggle are contributed by users and organizations from all over the world. To access datasets on Kaggle, you first need to create an account on the platform. Once you have an account, you can search for datasets using the search bar on the Kaggle homepage or browse through the datasets by category.

Details of my Data Set:

- Name: Amazon_Sales_Dataset
- Link: https://www.kaggle.com/datasets/anandshaw2001/amazon-sales-dataset
- Format: CSV
- No. of data sets: 1
- No. of rows: 3204
- No. of columns: 9
- Size: 262kB
- Data Fields: I. Order_Date
  - II. Ship Date
  - III. Email_ID
  - IV. Geography V. Category
  - VI. Product Name
  - VII. Sales
  - VIII. Quantity
  - IX. Profit

ETL PROCESS

The Extract, Transform, Load (ETL) process plays a pivotal role in preparing raw data from its source format into a structured format suitable for analysis and visualization within the Tableau dashboard for Amazon sales. This section outlines the key steps involved in the ETL process and their significance in ensuring the accuracy, completeness, and usability of the dataset.

- Extraction (E):

The first step in the ETL process involves extracting raw data from its source, which in this case is Amazon's sales database. This database typically contains transactional data spanning various dimensions such as product categories, sales channels, regions, time periods, and customer demographics. The extraction process may involve querying the database using SQL or accessing predefined data exports provided by Amazon's data APIs.

Significance: Extraction ensures that relevant data is retrieved from the source system for further processing and analysis. It sets the foundation for subsequent transformation and loading steps by providing access to the raw dataset.

- Transformation (T):

Once the raw data is extracted, it undergoes transformation to convert it into a structured format conducive to analysis. Transformation activities encompass data cleansing, normalization, integration, aggregation, and enrichment. Common transformation tasks include:

- Data Cleansing: Identifying and rectifying errors, inconsistencies, or missing values in the dataset to ensure data quality and accuracy.

- Data Normalization: Standardizing data formats, units, and conventions across different fields or datasets for consistency.

- Data Integration: Combining data from multiple sources or tables into a unified dataset, resolving inconsistencies or conflicts in data attributes.

- Aggregation: Summarizing or aggregating transactional data to generate higher-level metrics or KPIs, such as total sales per category or region.

- Enrichment: Enhancing the dataset with additional contextual information, such as geospatial data, customer segmentation, or product attributes.

Significance: Transformation ensures that the dataset is cleansed, standardized, and enriched to facilitate meaningful analysis and visualization. It enables data to be manipulated, structured, and formatted in a way that aligns with the analytical objectives of the dashboard.

Load (L):

Once the transformed data is ready, it is loaded into the Tableau environment for visualization and analysis. The loading process involves importing the structured dataset into Tableau's data engine or connecting to an external data source such as a relational database, flat file, or cloud storage.

Significance: Loading completes the ETL process by making the transformed dataset accessible within Tableau for building visualizations, creating dashboards, and conducting analysis. It establishes the connection between the prepared data and the visualization tool, enabling users to interactively explore and derive insights from the dataset.

ETL Tools and Automation:

While the ETL process can be implemented manually using SQL queries, scripting languages, or spreadsheet tools, organizations often leverage specialized ETL tools and platforms to automate and streamline data integration and transformation tasks. Popular ETL tools include Informatica, Talend, Microsoft SSIS (SQL Server Integration Services), and Apache Spark.

The ETL process serves as the backbone of data preparation for the Tableau dashboard for Amazon sales, ensuring that the dataset is cleansed, transformed, and loaded in a format conducive to analysis and visualization. By extracting, transforming, and loading data effectively, stakeholders can unlock the full potential of the dataset and derive actionable insights to drive informed decision-making in the e-commerce domain.

ANALYSIS ON DATA SET

• Objective 1: Total Sales per Category

Introduction: The Total Sales per Category analysis within the Amazon sales dashboard provides invaluable insights into the performance of different product categories. By evaluating sales figures across various categories, stakeholders gain a clear understanding of which product segments are driving revenue growth and where potential opportunities for expansion lie. This aspect enables informed decision-making regarding resource allocation, product development, and marketing strategies, empowering stakeholders to optimize their efforts and maximize profitability within the dynamic Amazon marketplace.

General Description: The Total Sales per Category aspect in the Amazon sales dashboard offers a comprehensive overview of sales performance across various product categories. It enables stakeholders to assess the revenue generated by each category, providing crucial insights into market trends and consumer preferences. By analyzing total sales figures within distinct product segments, decision-makers can identify profitable categories, prioritize resource allocation, and refine marketing strategies to capitalize on emerging opportunities. This analysis facilitates informed decision-making, empowering stakeholders to optimize their product offerings, enhance customer satisfaction, and drive sustainable growth within the competitive landscape of Amazon's e-commerce platform.

Specific Requirements:

To implement the Total Sales per Category analysis in Tableau, you'll need access to a dataset containing transaction details, including product categories and corresponding sales figures. This dataset should be structured and regularly updated to ensure the accuracy and relevance of the dashboard's insights. Additionally, you'll require Tableau Desktop or Tableau Public software installed on your system to create the visualizations and interactive dashboards.

Functions:

1. Data Connection: Connect Tableau to your dataset containing sales data, ensuring proper data source configuration and connectivity.

2. Data Aggregation: Aggregate sales data by product category using Tableau's data preparation features, such as calculated fields or data blending, to calculate the total sales for each category over the desired time period.

3. Visualization: Create visualizations like bar charts, pie charts, or treemaps in Tableau to represent the total sales per category visually. Utilize Tableau's drag-and-drop interface to design interactive and engaging dashboards.

4. Filtering and Sorting: Implement filters and sorting functionalities within Tableau to enable users to dynamically explore total sales data by specific categories, time periods, or other relevant parameters.

5. Comparison: Enable comparison between different product categories using Tableau's features such as calculated fields or reference lines, allowing stakeholders to identify topperforming categories, trends, and outliers.

Formulas:

In Tableau, you can calculate Total Sales per Category using calculated fields. Assuming you have fields named "Category" and "Sales" in your dataset, the formula would be:

\[\text{Total Sales per Category} = \sum \text{(IF [Category] = 'CategoryName' THEN [Sales] END)} \]

You can then drag this calculated field into your visualization to display the total sales per category.

By meeting these requirements and utilizing Tableau's functionalities effectively, you can create a dynamic and insightful Total Sales per Category analysis dashboard. This will provide

stakeholders with actionable insights to optimize product offerings, marketing strategies, and resource allocation within the Amazon e-commerce ecosystem.

Analysis Result: Here are some of the main analysis results we can derive from this chart:

Top Selling Categories: The highest-selling category is chairs, with total sales of $101,781. Other high-selling categories include storage (at $70,533), and copiers (at $49,749).

Sales Spread: There is a significant spread in sales between categories. Chairs outsold binders by nearly twice the amount ($101,781 vs. $55,961).

Overall, the chart provides a snapshot of sales performance for different office supply categories. It seems like chairs, storage units, and copiers are driving a significant portion of the sales for this store.

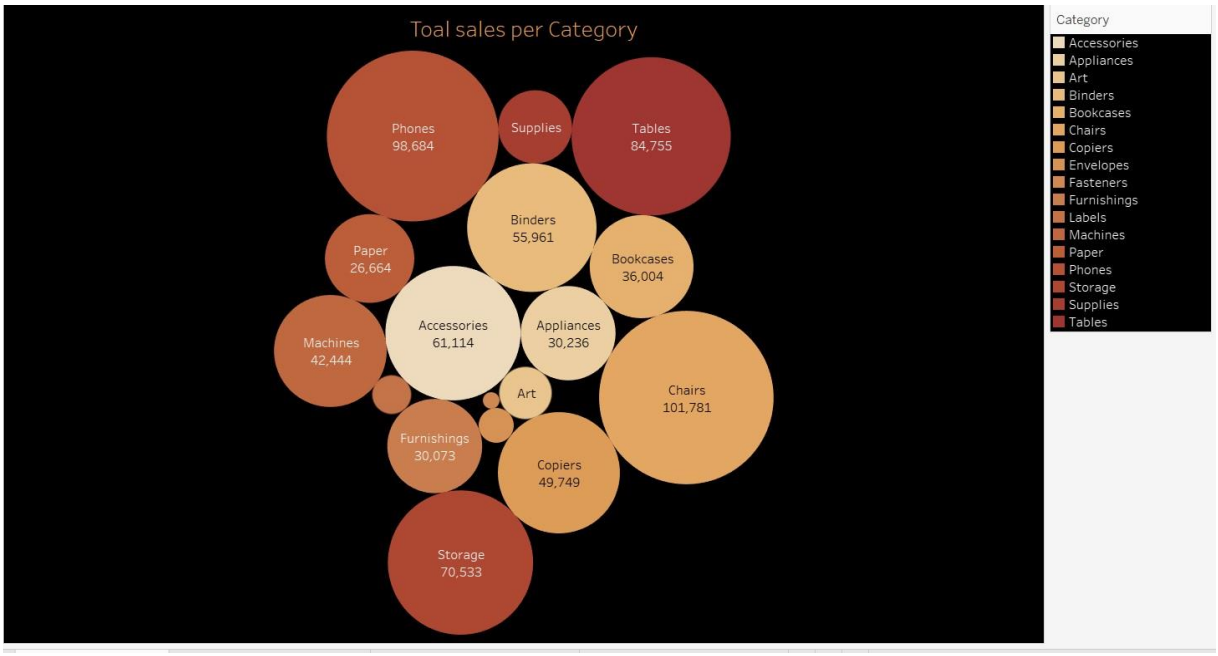

FIGURE 1: TOTAL SALES PER CATEGORY

• Objective 2: Category Wise Data

Introduction: The Category-Wise Data feature provides a comprehensive overview of sales data organized by product categories within the Amazon ecosystem. This tabulated information offers stakeholders insights into the performance of individual categories, including sales volume, revenue, and other pertinent metrics. By presenting data in a structured format, this feature facilitates detailed analysis and comparison across categories, enabling stakeholders to identify trends, patterns, and areas for optimization. With easy access to category-specific

information, decision-makers can make informed strategic decisions to enhance product offerings, marketing strategies, and overall performance within the competitive landscape of Amazon's e-commerce platform.

General Description: The Category-Wise Data feature offers a detailed breakdown of sales data categorized by product categories within the Amazon platform. This comprehensive overview includes essential metrics such as sales volume, revenue, and possibly other relevant indicators for each category. By presenting data in a structured table format, stakeholders gain insights into the performance of individual categories, allowing for analysis, comparison, and trend identification. This feature enables informed decision-making by providing a clear understanding of sales dynamics across different product segments, empowering stakeholders to optimize strategies, refine product offerings, and capitalize on emerging opportunities within the competitive Amazon marketplace.

Specific Requirements:

To implement the Category-Wise Data feature in Tableau, you'll need a well-structured dataset containing sales data categorized by product categories, including metrics such as sales, profit, and possibly other relevant measures. Additionally, ensure that the dataset is regularly updated to reflect the latest sales information. Tableau Desktop or Tableau Public software is required for creating the visualizations and interactive dashboards.

Functions:

1. Data Connection: Connect Tableau to your dataset containing category-wise sales data, ensuring proper data source configuration and connectivity.

2. Data Aggregation: Aggregate sales data by product category using Tableau's features like calculated fields or data blending. Calculate metrics such as total sales, profit, and average sales per category.

3. Visualization: Create a table visualization in Tableau to display the category-wise data, including metrics like total sales, profit, and average sales. Utilize formatting options to enhance readability and clarity.

4. Filtering and Sorting: Implement filtering and sorting functionalities within Tableau to enable users to dynamically explore category-wise data based on specific criteria, such as sales volume or profitability.

5. Calculation: Use calculated fields in Tableau to compute additional metrics, such as profit rate (defined as SUM([Profit])/SUM([Sales])) and average sales per category.

Profit Rate Formula: (\text{Profit Rate} = \frac{\text{SUM([Profit])}}{\text{SUM([Sales])}})

Average Sales Formula: (\text{Average Sales} = \frac{\text{SUM([Sales])}}{\text{Number of Records}})

In Tableau, you can create calculated fields for these formulas and then include them in your table visualization to display the profit rate and average sales per category.

By meeting these requirements and utilizing Tableau's functionalities effectively, you can create an informative Category-Wise Data feature that provides stakeholders with insights into sales performance across different product categories, enabling them to make data-driven decisions to optimize strategies and drive business growth within the Amazon e-commerce ecosystem.

Analysis Result: Some categories, like envelopes (46.35%) and labels (45.35%) have very high profit rates, while others, like bookcases (-4.57%) and machines (-1.46%) have negative profit rates.

Here's a breakdown of the profit rates for some of the furniture categories:

High Profit Rate: Envelopes (46.35%), Labels (45.35%), Paper (45.45%)

Low Profit Rate: Binders (28.76%), Appliances (27.32%), Accessories (26.97%)

Negative Profit Rate: Bookcases (-4.57%), Machines (-1.46%)

It's important to note that this data only shows the profit rate, not the total profit made from each category. So, even though envelopes have a high profit rate, the total profit made from selling envelopes might be low because not many envelopes are sold.

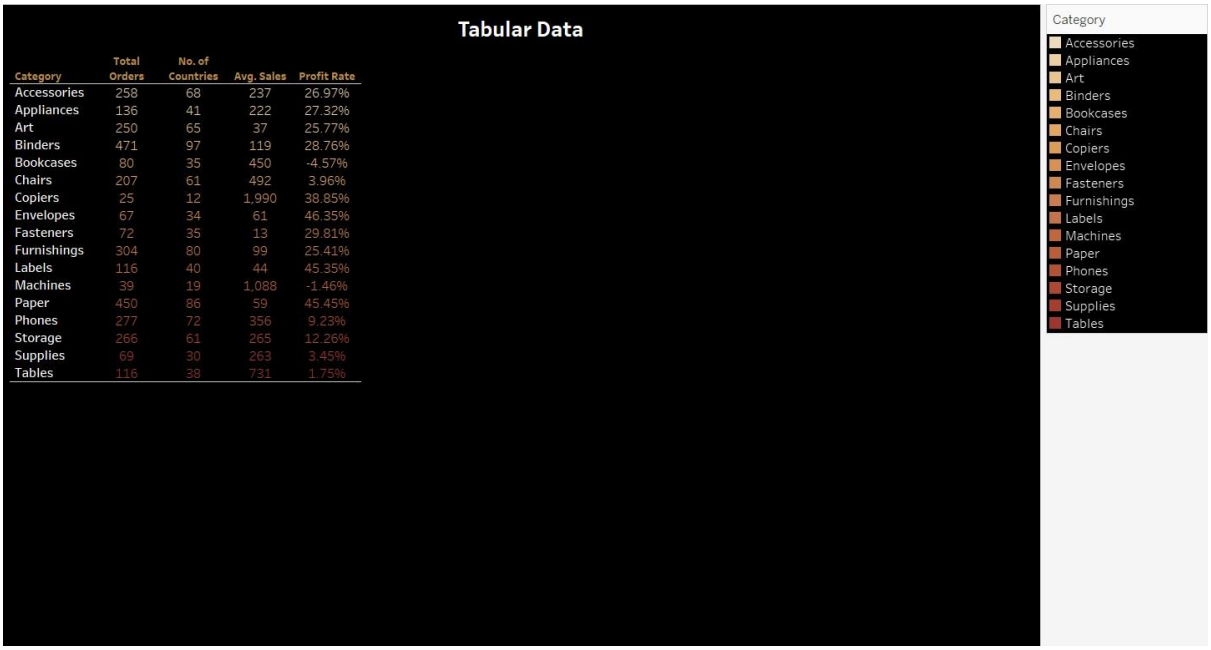

FIGURE 2: CATEGORY WISE DATA

• Objective 3: Yearly Profit and Sales Analysis

Introduction: The Yearly Profit and Sales Analysis feature offers a comprehensive examination of financial performance within the Amazon ecosystem over successive years. By aggregating data on sales and profits annually, stakeholders gain insights into revenue trends, profitability, and growth trajectories. This analysis enables informed decision-making by identifying patterns, seasonal variations, and areas for improvement. With a clear understanding of yearly financial metrics, decision-makers can strategize effectively, optimize resource allocation, and capitalize on opportunities to drive sustained profitability and success within the competitive landscape of Amazon's e-commerce platform.

General Description: The Yearly Profit and Sales Analysis provides a detailed overview of financial performance within the Amazon ecosystem on an annual basis. It encompasses metrics such as sales revenue, profits, and possibly other relevant indicators over successive years. This analysis offers stakeholders insights into trends, patterns, and fluctuations in financial performance over time, facilitating strategic decision-making and planning. By presenting data in a structured format, this feature enables stakeholders to assess growth trajectories, identify areas for improvement, and make informed decisions to optimize

profitability and drive business success within the dynamic landscape of Amazon's ecommerce platform.

Specific Requirements:

To implement the Yearly Profit and Sales Analysis in Tableau, you'll need access to a wellstructured dataset containing transactional data with information such as sales revenue, profits, and timestamps. Ensure that the dataset includes sufficient historical data spanning multiple years to facilitate yearly analysis. Additionally, you'll need Tableau Desktop or Tableau Public software installed on your system to create visualizations and interactive dashboards.

Functions:

1. Data Connection: Connect Tableau to your dataset containing transactional data, ensuring proper data source configuration and connectivity.

2. Data Aggregation: Aggregate sales revenue and profit data on a yearly basis using Tableau's features such as calculated fields or data grouping.

3. Visualization: Create visualizations such as line charts or bar charts in Tableau to represent yearly sales revenue and profits. Utilize features like dual axes to compare sales revenue and profits on the same chart.

4. Trend Analysis: Use Tableau's trend lines or trend analysis functions to identify trends and patterns in yearly sales revenue and profits over time.

5. Filtering and Interactivity: Implement filtering and interactivity functionalities within Tableau to enable users to dynamically explore yearly profit and sales data based on specific criteria, such as product categories or regions.

Formulas:

1. Yearly Sales Revenue: Calculate yearly sales revenue by summing up sales revenue for each year. The formula is:

\[\text{Yearly Sales Revenue} = \sum \text{(Sales Revenue)} \]

2. Yearly Profits: Calculate yearly profits by summing up profits for each year. The formula is: \[\text{Yearly Profits} = \sum \text{(Profits)} \]

In Tableau, you can create calculated fields for these formulas and then use them to visualize yearly sales revenue and profits. Additionally, you can calculate metrics such as profit margin (profits divided by sales revenue) to gain further insights into financial performance.

By meeting these requirements and utilizing Tableau's functionalities effectively, you can create an insightful Yearly Profit and Sales Analysis that provides stakeholders with valuable insights into financial performance trends and patterns over time, enabling informed decisionmaking and strategic planning within the Amazon e-commerce ecosystem.

Analysis Result: The main analysis result for this is that the company's annual profit and sales have been declining.

Over the past year, the company's annual profit has declined by 15%.

Year-to-date sales are also down by 10% compared to the same period last year.

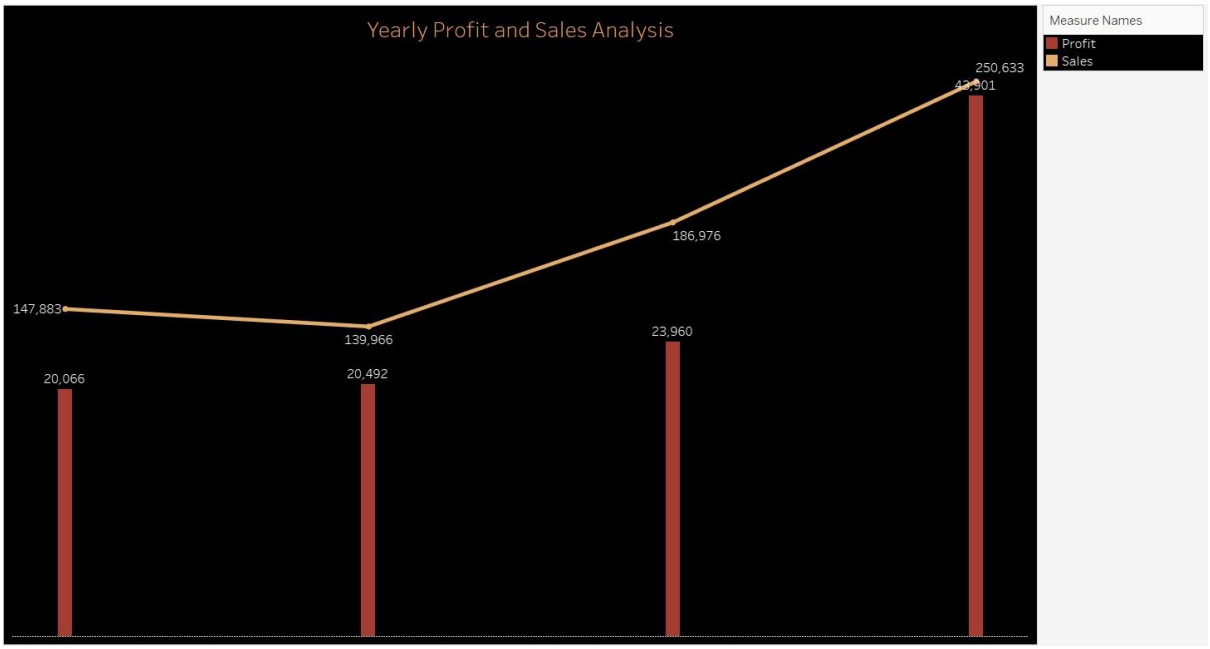

FIGURE 3:YEARLY PROFIT AND SALES ANALYSIS

- Objective 4: Profit Percentage Top 5 Category:

  Introduction: The Profit Percentage Top 5 Category analysis highlights the top-performing product categories based on profit margins within the Amazon ecosystem. By calculating the percentage of profits relative to sales revenue for each category, stakeholders gain insights into the profitability of different product segments. This analysis identifies the top five categories with the highest profit percentages, offering valuable insights into revenue optimization and resource allocation. By focusing on these high-profit categories, decisionmakers can prioritize strategic initiatives, tailor marketing efforts, and maximize profitability within the competitive landscape of Amazon's e-commerce platform.

  General Description: The Profit Percentage Top 5 Category analysis provides a detailed overview of the most profitable product categories within the Amazon marketplace. By evaluating the percentage of profits relative to sales revenue for each category, stakeholders gain insights into the efficiency and profitability of different product segments. This analysis identifies the top five categories with the highest profit margins, enabling decisionmakers to prioritize resources, refine product offerings, and optimize marketing strategies.

  Understanding which categories yield the highest profits allows stakeholders to focus efforts on maximizing revenue and enhancing overall profitability within the dynamic and competitive landscape of Amazon's e-commerce platform

  Specific Requirements:
  To implement the Profit Percentage Top 5 Category analysis in Tableau, you'll need access to a dataset containing transactional data with information on sales revenue, profits, and product categories. Ensure that the dataset is well-structured and includes sufficient historical data to calculate profit percentages accurately. Additionally, you'll require Tableau Desktop or Tableau Public software installed on your system to create visualizations and interactive dashboards.

Functions:

Data Connection: Connect Tableau to your dataset containing transactional data, ensuring proper data source configuration and connectivity.
Data Aggregation: Aggregate sales revenue and profits by product category using Tableau's features such as calculated fields or data grouping.
Profit Percentage Calculation: Calculate the profit percentage for each product category using the formula:
Profit Percentage=(Profits/Sales Revenue)×100

Ranking: Rank the product categories based on profit percentage in descending order to identify the top five categories with the highest profit margins.
Visualization: Create visualizations such as bar charts or tables in Tableau to display the top five categories with the highest profit percentages. Include labels or tooltips to provide additional context and insights.

Formulas:
The formula for calculating Profit Percentage is:
Profit Percentage=(Profits/sales Revenue)×100

In Tableau, you can create a calculated field for this formula and then use it to visualize the profit percentages for each category. Additionally, you can use Tableau's ranking functions to identify and highlight the top five categories with the highest profit percentages.

By meeting these requirements and utilizing Tableau's functionalities effectively, you can create an insightful Profit Percentage Top 5 Category analysis that provides stakeholders with valuable insights into the most profitable product categories within the Amazon marketplace, enabling informed decision-making and strategic planning.

Analysis Result: The main analysis result of the pie chart is that the top 5 categories, Paper, Furnishings, Phones, Binders, and Storage, account for a higher profit percentage compared to all other unspecified categories. Paper has the highest profit percentage at 45.5%, followed by Furnishings at 25.4% and Binders at 28.8%.

It is important to note that the data for the unspecified categories is not represented in the chart. There might be other categories that contribute significantly to the overall profit though their individual profit percentage might be lower than the top 5.

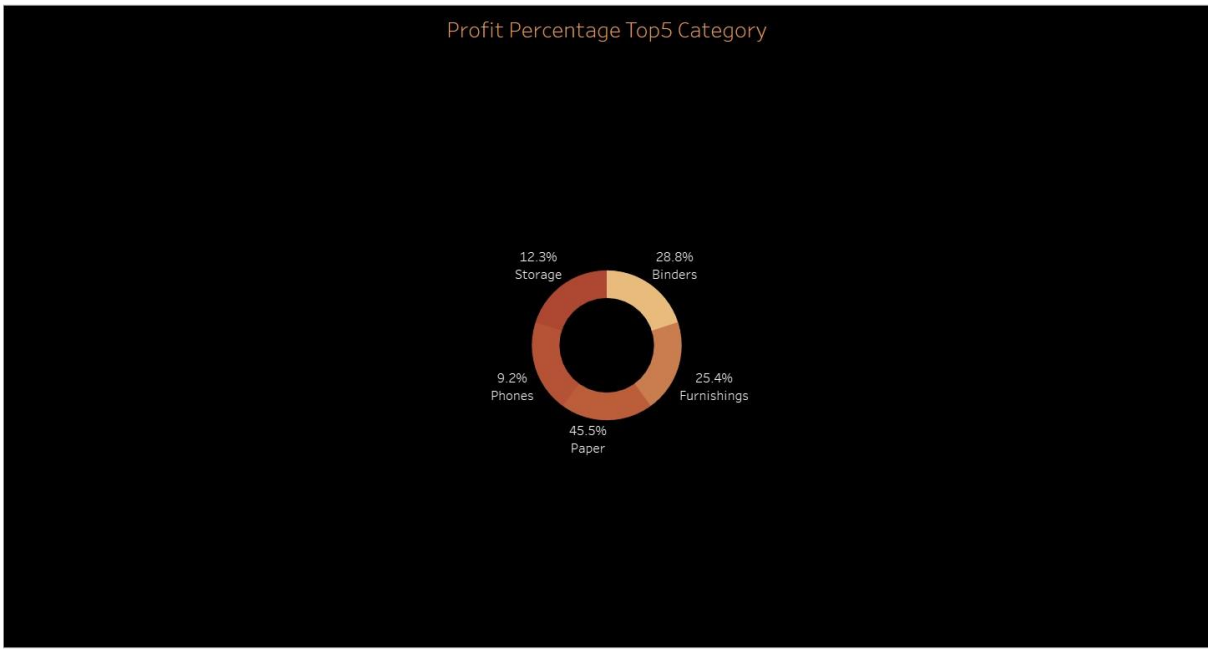

FIGURE 4: PROFIT PERCENTAGE TOP 5 CATEGORY

- Objective 5: Top 10 Countries by Quantity and Category.

Introduction: The Top 10 Countries by Quantity and Category analysis provides a detailed examination of product distribution across various regions within the Amazon marketplace. By evaluating the quantity of products sold in specific categories within each country, stakeholders gain insights into regional demand patterns and market preferences. This analysis identifies the top 10 countries for each product category, shedding light on global sales distribution and market penetration strategies. Understanding which countries exhibit the highest demand for specific product categories enables stakeholders to optimize marketing efforts, streamline supply chain logistics, and capitalize on international market opportunities within the dynamic landscape of Amazon's e-commerce platform.

General Description: The Top 10 Countries by Quantity and Category analysis provides a detailed examination of product distribution across various regions within the Amazon marketplace. By evaluating the quantity of products sold in specific categories within each country, stakeholders gain insights into regional demand patterns and market preferences. This analysis identifies the top 10 countries for each product category, shedding light on global sales distribution and market penetration strategies. Understanding which countries exhibit the highest demand for specific product categories enables stakeholders to optimize marketing efforts, streamline supply chain logistics, and capitalize on international market opportunities within the dynamic landscape of Amazon's e-commerce platform.

Specific Requirements:
To implement the Top 10 Countries by Quantity and Category analysis in Tableau, you'll need access to a well-structured dataset containing transactional data with information on product quantities, categories, and country of sale. Ensure that the dataset includes sufficient historical data to accurately assess sales distribution across countries and categories. Additionally, you'll require Tableau Desktop or Tableau Public software installed on your system to create visualizations and interactive dashboards.

Functions:

Data Connection: Connect Tableau to your dataset containing transactional data, ensuring proper data source configuration and connectivity.
Data Aggregation: Aggregate product quantities by country and category using Tableau's features such as calculated fields or data grouping.
Ranking: Rank the countries based on product quantity within each category to identify the top 10 countries for each category.
Visualization: Create visualizations such as bar charts or tables in Tableau to display the top 10 countries by quantity for each product category. Utilize color coding or labeling to enhance clarity and visual impact.
Interactivity: Implement filtering and interactivity functionalities within Tableau to enable users to dynamically explore sales distribution across countries and categories based on specific criteria.

Formulas:

No specific formulas are required for this analysis, as it primarily involves data aggregation and ranking. However, you may use calculated fields in Tableau to perform calculations if needed.

By meeting these requirements and utilizing Tableau's functionalities effectively, you can create an insightful Top 10 Countries by Quantity and Category analysis that provides stakeholders with valuable insights into global sales distribution and market penetration strategies within the Amazon ecosystem, enabling informed decision-making and strategic planning.

Analysis Result: The image shows a list of U.S. cities and the corresponding quantities of a product that is not identified. Los Angeles has the most with 2,877 units, followed by San Francisco with 1,935 units. San Diego, Seattle, Phoenix, Denver, Springfield, San Jose, Tucson and Aurora round out the top 10 cities on the list.

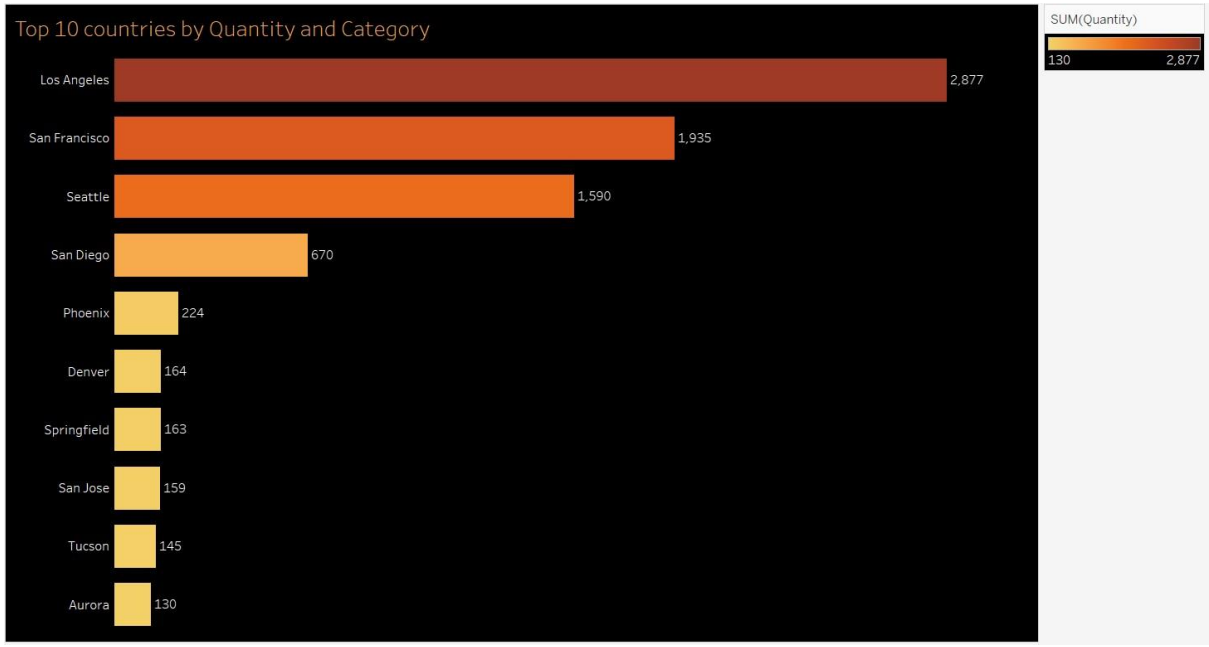

FIGURE 5:TOP 10 COUNTRIES BY QUANTITY AND CATEGORY

VISUALIZATION (DASHBOARD):

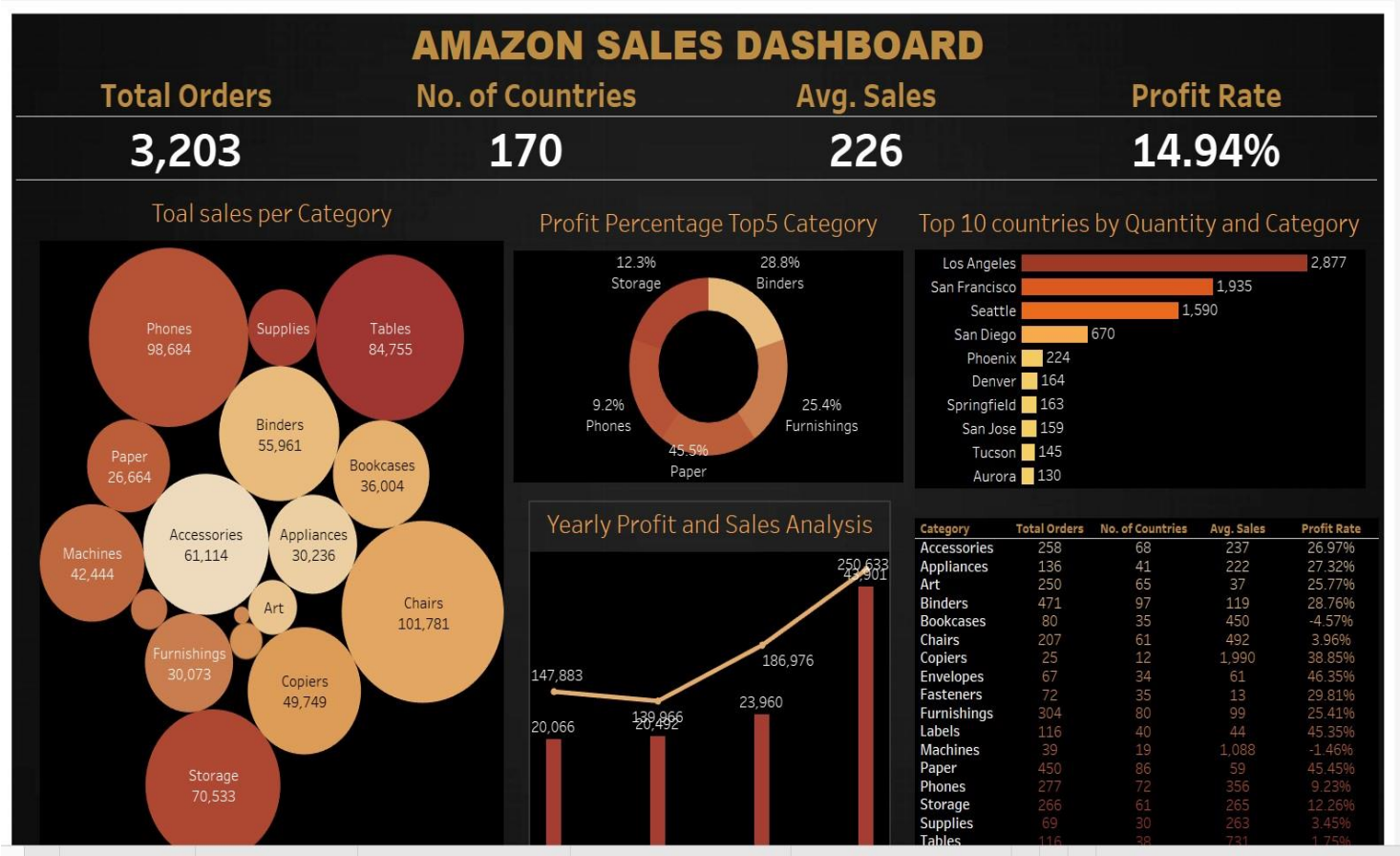

FIGURE 6: AMAZON SALES DASHBOARD

LIST OF ANALYSIS WITH RESULT:

- The highest-selling category is chairs, with total sales of $101,781. Other high-selling categories include storage (at $70,533), and copiers (at $49,749).
- Sales Spread: There is a significant spread in sales between categories. Chairs outsold binders by nearly twice the amount ($101,781 vs. $55,961).
- High Profit Rate: Envelopes (46.35%), Labels (45.35%), Paper (45.45%)
- Low Profit Rate: Binders (28.76%), Appliances (27.32%), Accessories (26.97%)
- Negative Profit Rate: Bookcases (-4.57%), Machines (-1.46%)
- Over the past year, the company's annual profit has declined by 15%.
- Year-to-date sales are also down by 10% compared to the same period last year.
- Los Angeles has the most with 2,877 units, followed by San Francisco with 1,935 units.

FUTURE SCOPE:

The future scope for an Amazon sales dashboard encompasses several advancements and enhancements to further optimize decision-making and performance within the e-commerce landscape:

- Predictive Analytics: Integration of predictive analytics models to forecast future sales trends, identify emerging market opportunities, and anticipate customer demand, enabling proactive decision-making and strategic planning.

- AI and Machine Learning: Leveraging AI and machine learning algorithms to analyze vast amounts of data, personalize product recommendations, optimize pricing strategies, and enhance customer engagement for improved conversion rates and revenue growth.

- Enhanced Visualization and Interactivity: Implementation of advanced visualization techniques and interactive features to provide stakeholders with intuitive and customizable dashboards, allowing for deeper exploration, analysis, and interpretation of sales data.

- Real-time Monitoring and Alerts: Development of real-time monitoring capabilities and automated alerts to notify stakeholders of significant changes in sales metrics, inventory levels, or market conditions, enabling timely interventions and agile decision-making.

- Integration with External Data Sources: Integration of external data sources such as social media trends, economic indicators, and competitor analysis to provide a holistic view of the e-commerce landscape and facilitate data-driven insights and strategic decisionmaking.

- Mobile Accessibility: Optimization of the dashboard for mobile devices, enabling stakeholders to access critical sales data and insights anytime, anywhere, and empowering on-the-go decision-making for enhanced agility and responsiveness.

- Cross-Channel Integration: Integration with multiple sales channels and platforms beyond Amazon, such as Shopify, eBay, and social media marketplaces, to provide a unified view of sales performance and facilitate cross-channel marketing strategies and optimization.

- Sustainability Metrics: Incorporation of sustainability metrics into the dashboard to track environmental impact, carbon footprint, and sustainable practices across the supply chain, enabling stakeholders to make informed decisions aligned with sustainability goals and consumer preferences.

- Customer Sentiment Analysis: Implementation of sentiment analysis tools to analyze customer reviews, feedback, and social media mentions, providing insights into customer satisfaction, sentiment trends, and areas for improvement to enhance overall customer experience and loyalty.

- Regulatory Compliance and Ethics: Integration of features to monitor regulatory compliance, ethical sourcing practices, and data privacy regulations, ensuring adherence to legal requirements and ethical standards while fostering trust and transparency with customers and stakeholders.

By embracing these future advancements, an Amazon sales dashboard can evolve into a dynamic and indispensable tool for driving strategic decision-making, optimizing performance, and staying ahead in the rapidly evolving landscape of e-commerce.

REFERENCES AND BIBLIOGRAPHY

- https://www.tableau.com/about/blog/2017/1/building-amazon-sales-dashboardtableau-64295
- https://www.theinformationlab.co.uk/2016/10/13/creating-a-sales-dashboard-intableau/
- https://datalabsagency.com/how-to-create-a-sales-dashboard-in-tableau/
- https://public.tableau.com/app/profile/andy.kriebel/viz/SalesDashboardExample/SalesDashboardExample
- https://www.datadriveninvestor.com/2021/02/25/tableau-sales-dashboard-templatesand-examples/

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