UGC Approved Indexed Peer Reviewed Journal

ISSN: 2320-6586 (Online)

IILM UNIVERSITY

Technologies for Sustainable Development Goals 2025 (TECH4SDG-2025)

School of Computer Science & Engineering

IILM University Greater Noida

Presents

1st National Conference

on

Technologies for Sustainable Development Goals 2025 (TECH4SDG-2025)

3rd March 2025

Technically Co-Sponsored by IEEE UP SECTION (INDIA)

Venue:

IILM University, Greater Noida

Plot No.18,16, Knowledge Park II, Greater Noida, Uttar Pradesh 201306

Procedings Published at

International Journal of Research in Modern Engineering and Emerging Technology

Vol. 13, Sp. Issue 1, April 2025

Doi: https://doi.org/10.63345/ijrmeet.org.v13.si1.1301

Editor-in-Chief

Dr. Mylavarapu Seetharama Prasad

www.ijrmeet.org

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Sales and Order Analysis Using Excel-Based Dashboard: A Case Study on Vrinda Store

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ABSTRACT

This study presents a data-driven analysis of Vrinda Store's sales and order performance using a dynamic dashboard created in Microsoft Excel. By leveraging visualization tools like pivot charts, slicers, and interactive filters, the dashboard delivers insights into customer demographics, top-performing states, product categories, and order fulfillment status. The findings highlight the effectiveness of Excel for small and medium businesses in deriving strategic insights without investing in expensive BI tools. The study also offers actionable recommendations for improving sales and customer engagement.

Introduction

With the exponential rise in online commerce, businesses must continuously track and optimize their sales performance. Dashboards are powerful visualization tools that aid in real-time monitoring and strategic planning. This paper analyzes an Excel-based E-commerce dashboard to derive actionable insights. The rapid growth of data generation in business operations has created opportunities for organizations to harness data for strategic decision-making. Sales forecasting, a critical component of business planning, relies heavily on accurate predictions to optimize resources and meet market demands. Traditional forecasting methods often fall short in capturing complex patterns in sales data, such as seasonality, trends, and external factors. This paper proposes the use of time series analysis as a robust solution to address these challenges, enabling businesses to make data-driven decisions and achieve long-term success. In the modern retail environment, businesses must constantly monitor their performance to remain competitive. Vrinda Store, an apparel-based retailer, has adopted a data-centric approach by utilizing Excel to build a dynamic dashboard for tracking key performance indicators. This research paper aims to explore how such a dashboard helps in making data-driven decisions regarding sales trends, order status, customer segmentation, and regional performance.

Literature Review

Numerous studies emphasize the importance of business intelligence (BI) tools in e-commerce for enhancing strategic decision-making. Dashboards are widely adopted for visualizing large datasets, improving user comprehension, and delivering real-time updates. Literature suggests that Excel, when used with advanced charting and pivot functionalities, can serve as an effective BI tool for small to medium-sized enterprises (SMEs).

2. Objective:
The main objective of this study is to demonstrate the effectiveness of Excel-based dashboards for business intelligence. Specific goals include:

-
- Evaluating sales performance across states, age groups, and genders
- Analyzing order status distribution (delivered, cancelled, returned)
- Identifying top sales channels (Amazon, Flipkart, etc.)
- Enabling user-friendly, filter-based interaction with data (by month, channel, category)

TOOLS AND TECHNIQUES

Design Tools:
This section explains the software, features, and methods you used to create and analyze the dashboard. Here's what to include:

- Microsoft Excel: Mention that Excel was the primary tool used due to its accessibility and versatility for data analysis and visualization.
- Pivot Tables: For summarizing sales, profit, and quantity across different dimensions (e.g., Category, Region, Year).
- Pivot Charts: Used to create dynamic visualizations like bar charts, pie charts, and line graphs.
- Slicers & Filters: Enabled interactive filtering by Year, Region, and Segment.
- Conditional Formatting: Highlighted KPIs like profit margin drops and YoY growth indicators.
- Map Chart: For state-wise sales analysis.
- Data Cleaning & Structuring: Any preprocessing steps like removing duplicates, formatting columns, etc.

Discussion and Results:
The findings underscore the importance of time series analysis in enhancing business success.
4.1 Overall Sales Performance
Analysis revealed that February showed the highest sales. However, the number of orders was comparatively lower, indicating either high-value purchases or bundled products. This points to seasonal demand peaks or successful promotional campaigns during that month.

4.2 Top Performing States
Maharashtra emerged as the top contributor with ₹0.12M in sales, followed by Tamil Nadu and Uttar Pradesh. These insights help identify markets with the highest customer engagement and purchasing power.
4.3 Customer Demographics
Women were found to contribute 56% of the total sales, indicating a strong female customer base. Furthermore, adults (both male and female) were the dominant age group, suggesting product appeal among working professionals or homemakers in the 30–39 age bracket.
4.4 Order Fulfillment Status
The fulfillment rate was exceptionally high, with 97% of orders successfully delivered. Only 2% were cancelled and 1% returned, reflecting an efficient supply chain and strong customer satisfaction.
4.5 Sales by Channel
Amazon led all platforms with a 36% share of total orders, followed by Flipkart and Myntra. This suggests that marketing and sales strategies should prioritize these platforms for maximum visibility and conversion.
4.6 Interactive Dashboard Filters
Filters were implemented for:

- Time (Month-wise analysis from Jan to Aug)
- Sales Channel (Amazon, Flipkart, etc.)
- Product Category (Saree, Blouse, etc.)

These filters allowed the user to view data dynamically, tailoring the dashboard view to answer specific business questions.

Conclusion:
The Excel-based E-commerce dashboard provides a holistic view of business performance. While overall sales and profit are growing, the negative margin trend and underperformance in certain categories highlight the need for targeted action. Dashboards like these empower stakeholders to make timely, data-driven decisions.

Recommendations:
Based on the analysis, the following strategies are recommended:

1.Focus marketing campaigns on women aged 30–39, especially in states like Maharashtra, Karnataka, and Uttar Pradesh.
2.Leverage platforms like Amazon and Flipkart, where customer engagement is highest.

3.Enhance promotional efforts during peak months (e.g., February).

4.Continue maintaining a robust delivery mechanism, ensuring minimal cancellations and returns.



Figure 1: Excel-Based Dashboard of Vrinda Store

This figure displays the interactive dashboard built using Microsoft Excel, featuring sales trends, order status, customer demographics, and state-wise performance through pivot charts, slicers, and filters

Discussion on Advantages and Applications
The Excel-based dashboard developed in this study offers several practical advantages. It provides a cost-effective solution for small and medium businesses to analyze and visualize data without requiring specialized BI software.

Advantages include:
- Ease of Use: Excel is widely known and accessible.
- Cost Efficiency: No need for expensive BI tools.
-Interactivity: Real-time filtering with slicers.
- Customizability: Adaptable to business-specific needs.

Applications include:
- Retail Management
- Inventory Control
- Customer Targeting
- E-commerce Optimization

Basic Details and Parameters Used:
This study focused on analyzing the sales and order data of Vrinda Store using Excel. Key tools used: Pivot Tables, Charts, Slicers, Conditional Formatting.

Parameters analyzed:
-Total Sales, Order Status, Region-wise Sales
- Customer Demographics (Age, Gender)
- Sales Channels (Amazon, Flipkart, Myntra)
- Time frame: January–August
February had the highest sales; Maharashtra led in regional performance;
Female customers aged 30–39 were the most active segment

REFERENCES

[1] *Microsoft Corporation. (2023). Create a dashboard in Excel. Retrieved from https://support.microsoft.com/en-us/office/create-a-dashboard-in-excel-e6e99b8d-2f9e-4b21-8013-6a9b8d5e3da0*
[2] *Peltier, J. (2018). Excel Dashboards and Reports. Hoboken, NJ: Wiley.*

[3] *Alexander, M., & Walkenbach, J. (2016). Excel Dashboards and Reports for Dummies (3rd ed.). Hoboken, NJ: John Wiley & Sons.*

[4] *Harvey, C. (2021). Mastering Excel Dashboards: Techniques for Creating Dynamic Dashboards. Packt Publishing.*

[5] *ExcelJet. (2024). How to build a dynamic dashboard in Excel. Retrieved from https://exceljet.net/articles/how-to-build-a-dynamic-dashboard-in-excel*

[6] *Jelen, B. (2022). Pivot Table Data Crunching: Microsoft Excel 365. Que Publishing.*

[7] *Mynda Treacy (Excel MVP). (2023). Excel Dashboards Course. Retrieved from https://www.myonlinetraininghub.com/excel-dashboards*