

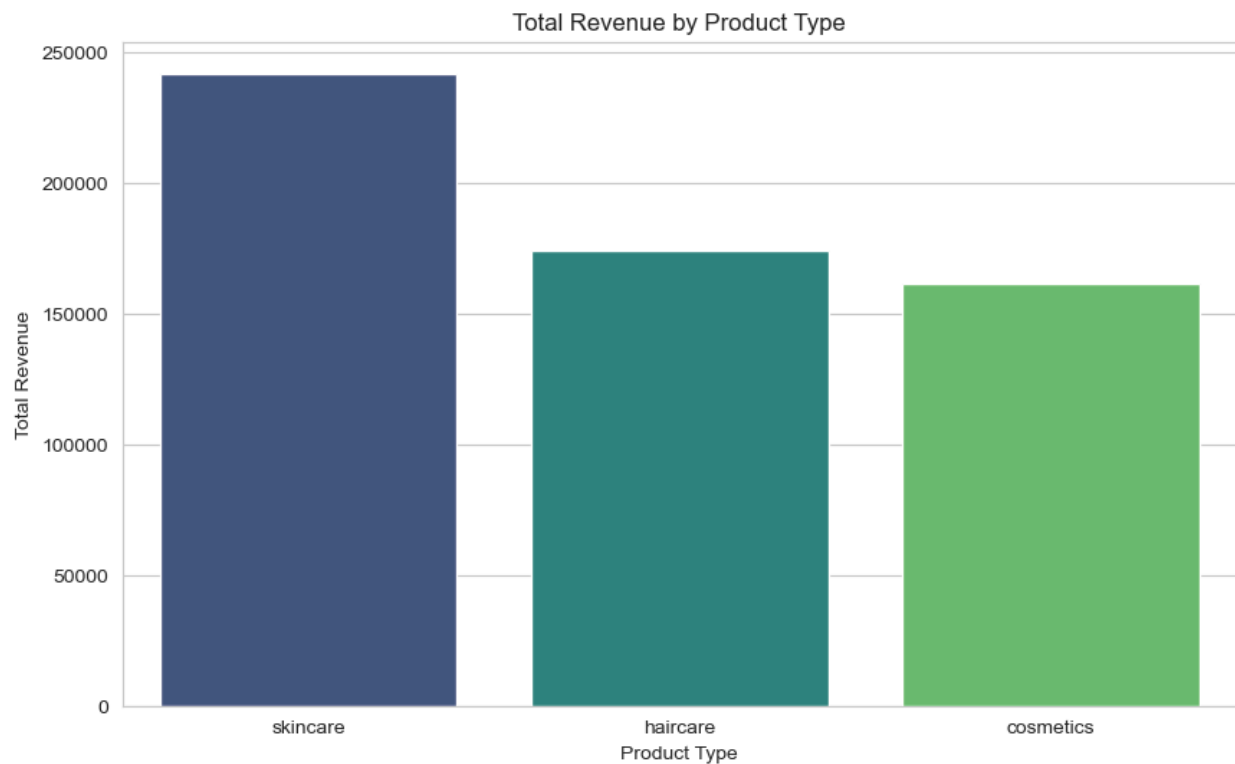
SUPPLY CHAIN PERFORMANCE REPORT

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Introduction

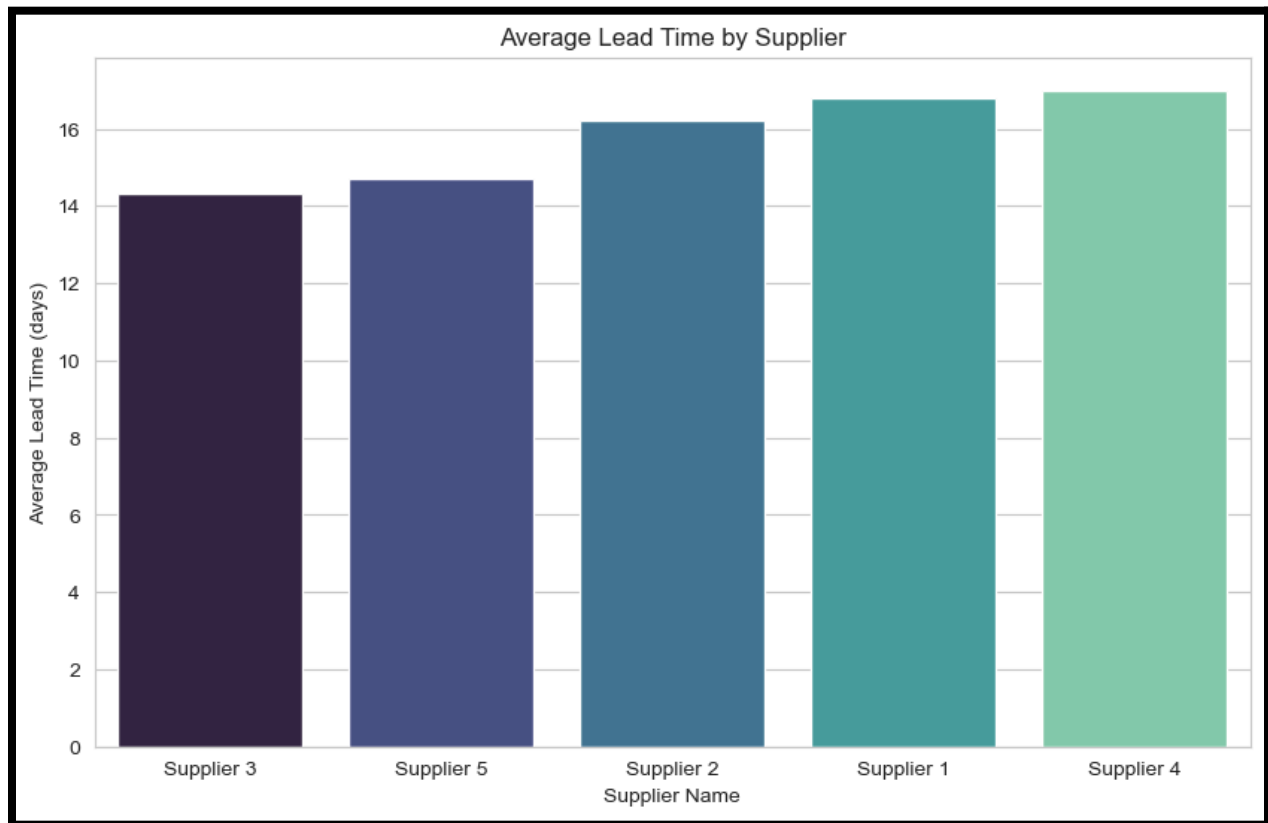
This report provides a comprehensive analysis of the supply chain data for a leading e-commerce company. The analysis aims to uncover insights into the company's financial performance, operational efficiency, and quality control measures. The findings from this report will help the company make informed decisions to optimise its supply chain operations and drive business growth.

SECTION 1: FINANCIAL PERFORMANCE



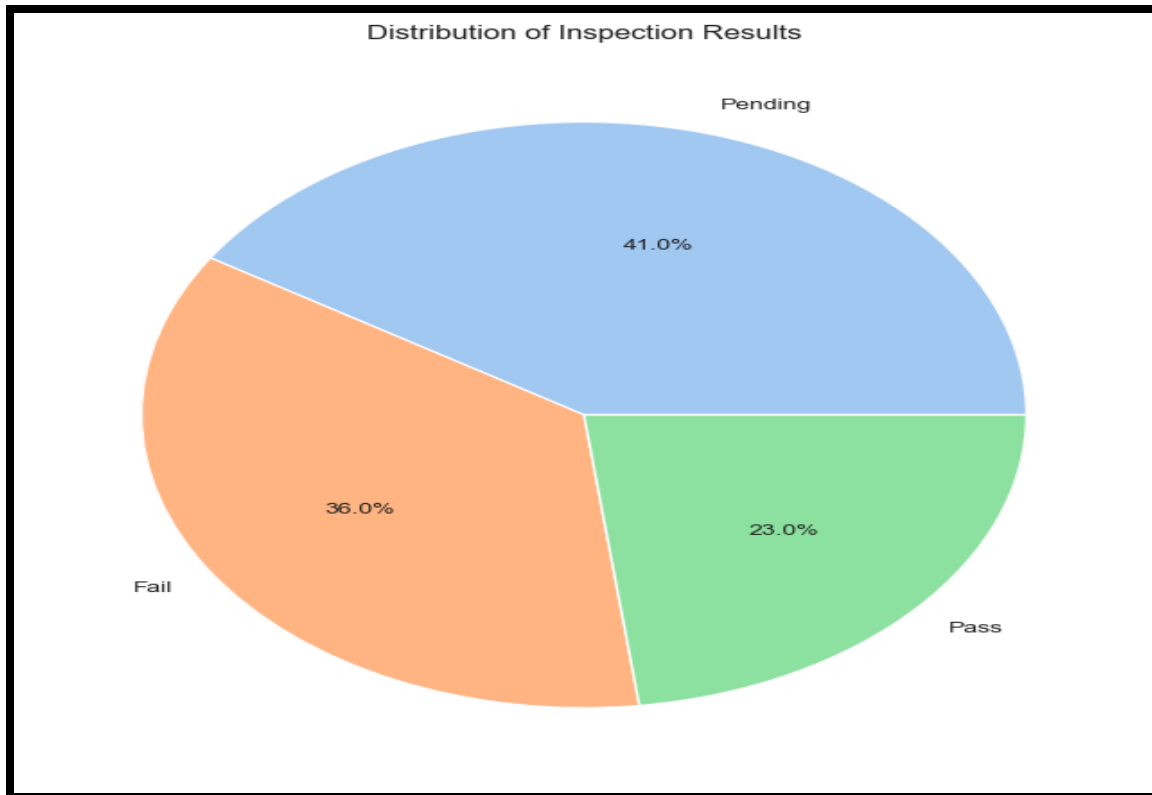
- Skincare is the top-performing product category, generating the highest total revenue (\$241,628.16) and profit (\$219,398.84).
- Haircare and cosmetics also contribute significantly to the company's financial performance, with revenues of \$174,455.39 and \$161,521.27, respectively.
- The profit margins for the three product categories are relatively high, with skincare at 97.8%, haircare at 93.3%, and cosmetics at 92.0%.

SECTION 2: OPERATIONAL EFFICIENCY



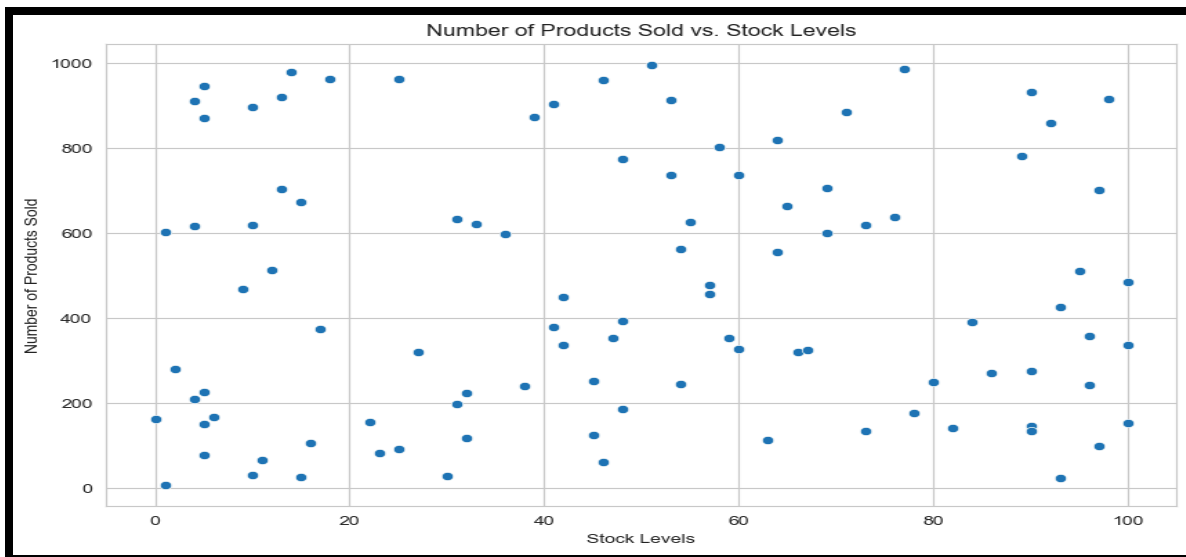
- *Supplier 3 is the most efficient and cost-effective partner, with the fastest average lead times (14.33 days) and the lowest average shipping costs (\$4.79).*
- *In contrast, Supplier 4 has the longest average lead times (17.00 days), while Supplier 1 has the highest total costs (\$15,520.98).*
- *The data suggests that the company should consider relying more heavily on Supplier 3 and investigate the performance of Supplier 4 and Supplier 1.*

SECTION 3: QUALITY AND RISK



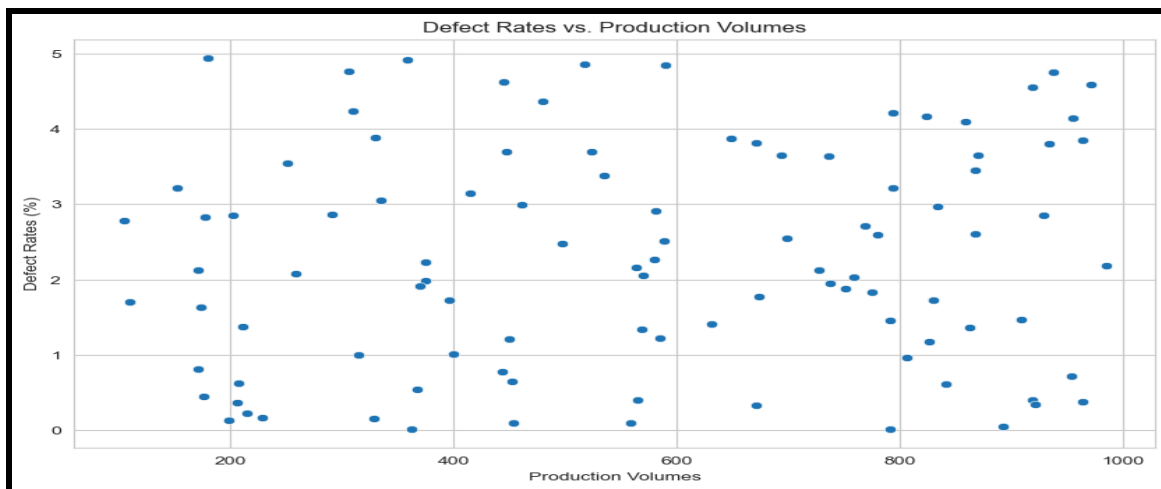
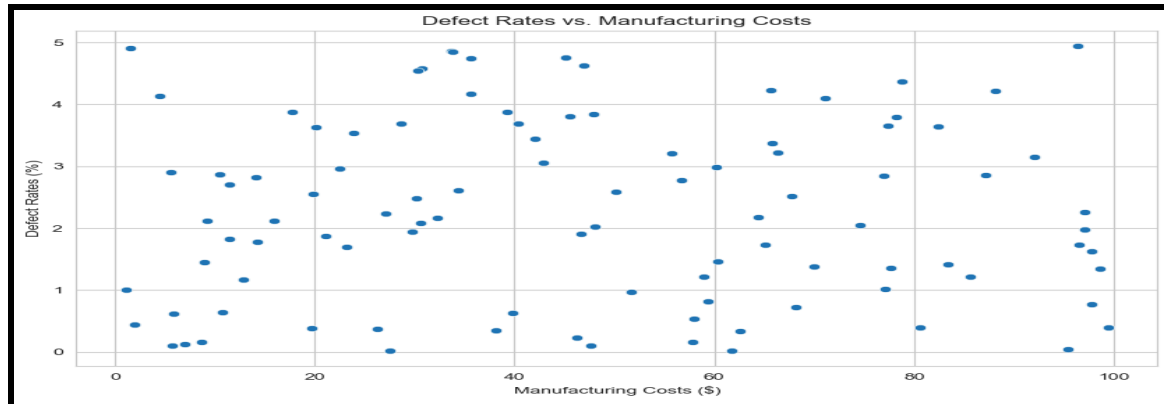
- The quality control process appears to have significant issues, with a high number of **failed (36)** and **pending (41)** inspections.
- Supplier 5 has the highest average defect rate at 2.67%, indicating a higher risk of receiving faulty products from this supplier.
- The company should immediately address the quality control process and closely monitor Supplier 5 to prevent future quality issues.

SECTION 4: STOCK VS SALES & REVENUE



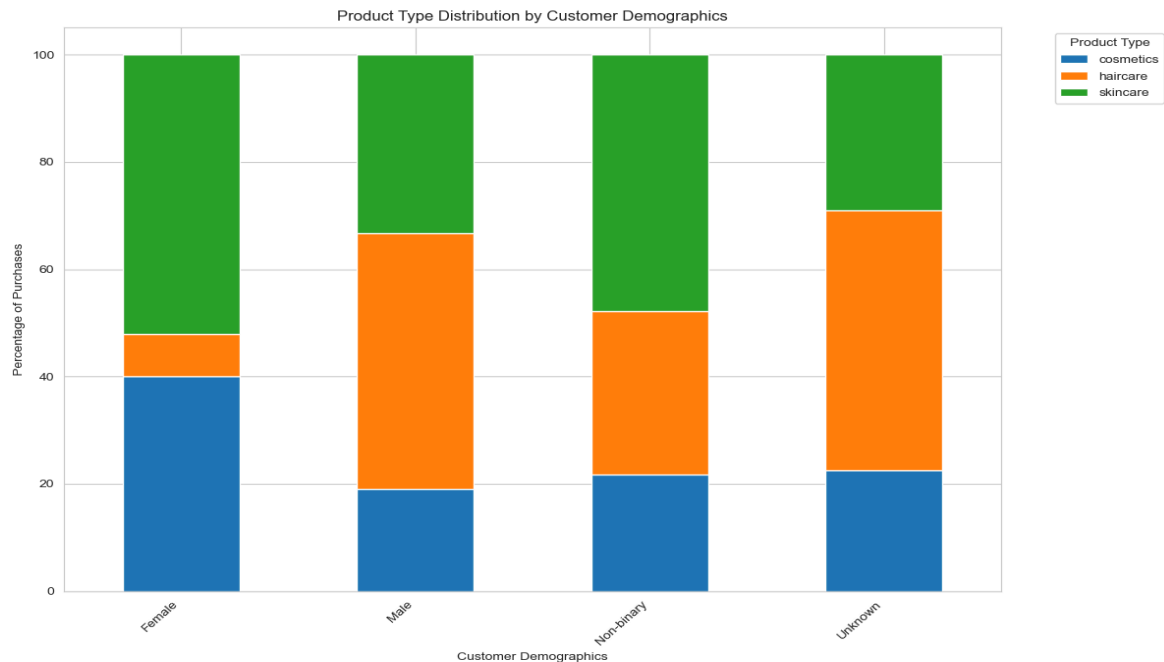
- *There is no clear correlation between stock levels and product sales, suggesting that factors beyond inventory management influence sales performance.*
- *Similarly, product availability does not directly drive revenue, as high stock levels do not necessarily translate to high sales.*
- *The company should focus on other factors, such as pricing, demand, marketing, and seasonality, to boost sales and revenue.*

SECTION 5: MANUFACTURING COSTS, PRODUCTION, & DEFECT RATES



- There is an inverse relationship between manufacturing costs and defect rates, with higher costs generally corresponding to lower defect rates.
- However, significant variability in the data points suggests that other factors, such as production processes and quality control measures, also play a role in determining defect rates.
- The company should analyse its manufacturing processes and quality control measures to identify opportunities for improvement and cost optimisation.

SECTION 6: CUSTOMER AND MARKET INSIGHTS



Key insights from the chart:

- Skincare is the dominant product type across all customer demographics, accounting for the highest percentage of purchases.
- For female customers, skincare makes up 52% of purchases, followed by cosmetics at 40% and haircare at 8%.
- Male customers have a more even distribution, with haircare at 47.6%, skincare at 33.3%, and cosmetics at 19%.
- Non-binary customers show a more balanced mix, with skincare at 47.8%, haircare at 30.4%, and cosmetics at 21.7%.
- Customers with unknown demographics have the highest proportion of haircare purchases at 48.4%, followed by skincare at 29% and cosmetics at 22.6%.

SECTION 7: CONCLUSION & RECOMMENDATIONS

The comprehensive analysis of the supply chain data has provided valuable insights that can significantly enhance the company's operations and foster business growth. The company should prioritise the following strategic areas:

- 1. **Maximise Revenue and Profitability:** Capitalise on the strengths of top-performing product categories and efficient suppliers to optimise financial outcomes.*
- 2. **Enhance Quality Control:** Address existing quality control challenges to boost customer satisfaction and minimise costs related to defective products.*
- 3. **Broaden Sales Strategies:** Investigate factors beyond inventory management, such as pricing strategies, demand forecasting, marketing initiatives, and seasonal trends, to effectively increase sales and revenue.*
- 4. **Leverage Customer Demographics:** Utilise insights from customer demographics to tailor marketing strategies and product offerings. For instance, emphasising skincare products for female customers and promoting haircare for male customers can help align with purchasing behaviours.*
- 5. **Refine Manufacturing Processes:** Conduct a thorough analysis of manufacturing practices and quality control measures to uncover opportunities for improvement and cost savings.*

By executing these strategies, including a focused approach on demographic insights, the company can improve supply chain efficiency, elevate product quality, and achieve sustainable growth and profitability in a competitive market.