



A Study on Supply Chain Efficiency at Zomato with Business Analytics Techniques

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Abstract:

Supply chain efficiency plays a critical role in the success of online food delivery platforms like Zomato, where timely delivery, optimal resource utilization, and customer satisfaction are key performance indicators. This study focuses on analyzing and improving Zomato's supply chain operations using business analytics techniques.

The research leverages data-driven approaches such as descriptive analytics, predictive modeling, and optimization algorithms to evaluate order processing time, delivery partner allocation, demand forecasting, and route optimization. By examining historical order data, customer preferences, and real-time traffic conditions, the study identifies inefficiencies such as delivery delays, uneven distribution of delivery agents, and demand-supply mismatches.

Advanced techniques like machine learning models are applied to predict peak demand periods and optimize delivery routes, while data visualization tools are used to monitor key performance metrics. The findings suggest that implementing analytics-driven decision-making can significantly reduce delivery time, improve fleet utilization, and enhance overall customer experience.

The study concludes that integrating business analytics into supply chain management enables Zomato to achieve higher operational efficiency, cost reduction, and competitive advantage in the dynamic food delivery market.

Keywords: User Satisfaction, Descriptive Analytics, Optimal Resource Utilization.

Introduction:

In the modern digital era, the food delivery industry has experienced rapid growth due to changing consumer lifestyles, increased internet usage, and the convenience offered by online platforms. Among the major players in this sector, Zomato has established itself as a leading food delivery and restaurant aggregator platform. Its operations involve connecting customers, restaurants, and delivery partners through a technology-based ecosystem. In such a business model, the efficiency of the supply chain

becomes a crucial factor in ensuring timely service, cost control, and customer satisfaction.

Supply chain efficiency refers to the ability of an organization to manage the flow of goods, services, information, and resources in the most effective and economical manner. In the case of Zomato, the supply chain does not involve traditional manufacturing or warehousing alone, but rather a dynamic service-based chain that includes order placement, restaurant coordination, food preparation, delivery partner assignment, route management, and final delivery to customers. Since food delivery is highly time-

sensitive, even minor inefficiencies in these processes can lead to delayed deliveries, customer dissatisfaction, increased operational costs, and reduced business performance.

To overcome these challenges, companies are increasingly relying on business analytics techniques to improve decision-making and operational performance. Business analytics involves the use of data analysis, statistical tools, predictive models, and optimization methods to understand current operations and forecast future outcomes. For a data-driven company like Zomato, large volumes of real-time and historical data are generated daily through customer orders, restaurant preparation times, delivery durations, traffic conditions, cancellation rates, and customer feedback. This data provides valuable insights into the strengths and weaknesses of the supply chain system.

Problem Statement:

Supply chain efficiency is a major factor in the success of online food delivery companies like Zomato. Since Zomato operates in a highly dynamic and time-sensitive environment, several operational challenges affect the smooth functioning of its supply chain. Although business analytics techniques can help improve performance, there are still many problems that reduce overall efficiency.

Literature Review:

Chopra, S. & Meindl, P. – Supply Chain Management: Strategy, Planning, and Operation

Christopher, M. – Logistics and Supply Chain Management

Heizer, J., Render, B. & Munson, C. – Operations Management

Articles on:

Food delivery logistics

Last-mile delivery optimization Business analytics in supply chain Digital platform

operations Company reports and case studies on Zomato Davenport (1998) explained that ERP systems help organizations integrate various functional areas and improve organizational efficiency through centralized data management.

Objectives of The Study:

1. To identify the factors affecting supply chain efficiency at Zomato.
2. To analyze the role of business analytics techniques in supply chain operations.
3. To examine the challenges in Zomato's delivery and logistics system.
4. To suggest measures for improving supply chain efficiency at Zomato.

Research Questions:

1. What are the key factors influencing supply chain efficiency at Zomato?
2. How is the supply chain of Zomato structured and managed?
3. In what ways can business analytics techniques improve supply chain performance at Zomato?
4. How does supply chain efficiency influence customer satisfaction and service quality at Zomato?

Research Methodology:

1. Research Design:

The study follows the research design is prepared to examine the supply chain efficiency of Zomato and to understand how business analytics techniques can improve its operational performance.

2. Sample Size:

A sample size of **100** is considered suitable for this academic study because it is manageable, practical, and sufficient to draw meaningful conclusions.

3. Sample Area:

The sample area of the study is **Hyderabad**. The respondents are selected from Zomato users in this area to collect data regarding delivery service, customer satisfaction, and supply chain efficiency.

4. Data Collection:

Primary Data:

- Understand customer perception of Zomato's supply chain performance

Secondary Data:

- Research journals
- Company websites
- Industry reports
- Books and online sources

5. Sampling Technique:

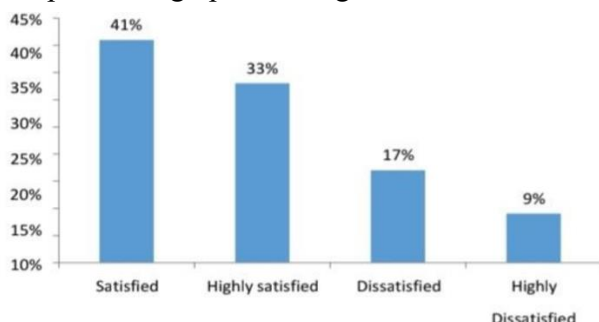
For the study on “Supply Chain Efficiency at Zomato with Business Analytics Techniques”, the sampling technique used is **Convenience Sampling**.

Data Analysis:

Table 1: User Satisfaction Level

Satisfaction level	Respondents	Percentage
Highly Satisfied	40	36%
Satisfied	38	40%
Neutral	15	14%
Dissatisfied	7	10%

Graph 1 : Bar graph showing satisfaction levels



Interpretation:

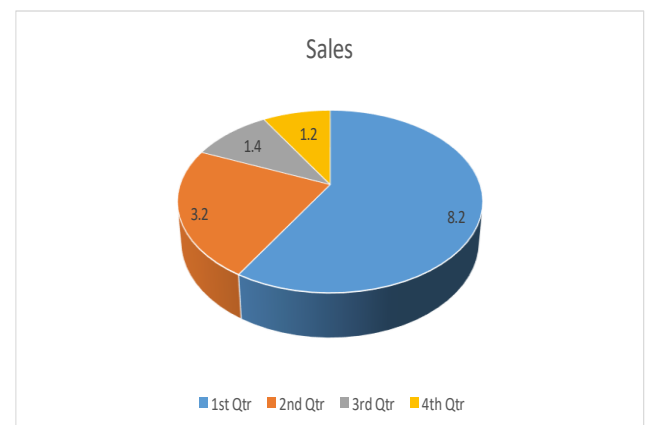
The analysis shows that **76% of respondents are satisfied or highly satisfied**

with Zomato. This indicates that the system effectively supports organizational operations. However, 10% of respondents expressed dissatisfaction, suggesting the need for improvements in certain features and support services.

Table 2: Perceived Benefits of ERP & CRM

Benefit	Respondents	Percentage
Improved Efficiency	30	30%
Better Data Management	24	24%
Improved Customer Relationship	20	20%
Better Decision Making	16	16%
Other Benefits	10	10%

Graph 2 : Pie chart showing benefits of Zomato customer reviews



Interpretation:

The interpretation of the data also suggests that timely decision-making based on real-time information improves coordination between restaurants, delivery partners, and customers. This results in better resource utilization and lower operational costs.

Findings:

1. Business analytics improves operational efficiency by helping Zomato manage orders, delivery schedules, and partner coordination effectively.
2. Real-time data analysis helps reduce delivery delays and improves the speed of order fulfillment.
3. Route optimization techniques improve delivery efficiency by reducing travel time and fuel usage.
4. Delivery partner allocation becomes more effective with analytics-based decision-making.
5. Restaurant performance monitoring helps identify delays in food preparation and order processing.
6. Customer feedback and ratings provide valuable insights for improving service quality and customer satisfaction.

Suggestions:

1. Improve real-time tracking systems to enhance delivery transparency and reduce customer uncertainty.
2. Strengthen predictive analytics models to better forecast demand during peak hours, weekends, and festive seasons.
3. Enhance route optimization systems to reduce delivery time, fuel costs, and operational inefficiencies.
4. Use customer feedback analytics more effectively to identify service gaps and improve customer satisfaction.
5. Reduce order cancellations by improving communication between restaurants, delivery partners, and customers.

6. Invest in AI and machine learning tools for smarter forecasting, route planning, and customer behavior analysis

Conclusion:

The study on supply chain efficiency at Zomato with business analytics techniques concludes that business analytics plays a significant role in improving the overall performance of the company's supply chain operations. Zomato's supply chain mainly depends on effective coordination between restaurants, delivery partners, and customers. The use of business analytics helps the company in demand forecasting, route optimization, order tracking, delivery partner allocation, and customer feedback analysis. These factors contribute to faster deliveries, reduced operational delays, better resource utilization, and improved customer satisfaction.

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