



A STUDY ON DISPATCH AND STOCK TRANSPORT ORDER

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Abstract

This study focuses on the Dispatch and Stock Transport Order (STO) processes within Naga Limited's Foods Division, which play a vital role in the internal logistics and supply chain efficiency of the organization. Dispatch operations involve the movement of finished goods from manufacturing plants to various distribution centres, while STO facilitates stock transfers between company-owned locations using a structured and system-based approach. The implementation of SAP-based solutions has significantly enhanced tracking accuracy, reduced manual errors, and provided real-time visibility into stock levels and movement.

The streamlined process ensures that goods are delivered on time, inventory is maintained at optimal levels, and operational disruptions are minimized. The integration of technology has led to better planning, efficient resource utilization, and reduced turnaround time for order fulfilment. Key metrics such as lead time, order accuracy, and inventory variance have shown noticeable improvement since adopting enhanced STO and dispatch practices. The Foods Division has also benefited from improved coordination between logistics, warehouse, and production teams, resulting in greater customer satisfaction and cost savings.

This abstract highlights the importance of efficient dispatch and STO systems in modern supply chain management and showcases how Naga Limited has optimized its internal processes for operational excellence.

Keywords: *Dispatch, Stock Transport Order, SAP Automation, Inventory Management, Logistics Optimization.*

Introduction

The **Dispatch and Stock Transport Order (STO)** project is designed to optimize and digitize the internal transfer of goods across various plants and warehouses within **NAGA Limited – Foods Division**. Given the scale of operations and the criticality of timely product movement, this project introduces a standardized system to manage stock transfers with enhanced accuracy, transparency, and control. It forms a key part of the company's push toward integrated supply chain management.

By implementing a structured **Stock Transport Order (STO)** mechanism—integrated with dispatch operations—the project ensures that goods are moved between company locations with clear documentation, delivery scheduling, and stock reconciliation. This reduces manual errors, improves turnaround times, and supports better planning in procurement, production, and sales. The Dispatch and STO project is aligned with NAGA Limited's broader goals of digital transformation, supply chain optimization, and operational excellence.

The study of dispatch and stock transport orders (STOs) focuses on understanding how companies efficiently move goods between internal locations, primarily between different plants or warehouses



within the same organization. This involves managing the entire process from ordering materials to their final destination, ensuring smooth operations and cost optimization.

Key Aspects

1. **Defining STOs:** Understanding the purpose and functionality of STOs as internal purchase orders, facilitating the transfer of goods between plants.
2. **STO Processes:** Examining the different stages involved in an STO, including goods issue, stock in transit, and goods receipt, as well as the potential for two-step processes.
3. **Intra-company and Inter-company STOs:** Differentiating between STOs within the same company code (intra-company) and those involving different company codes (inter-company).
4. **Delivery and Billing:** Understanding how delivery and billing are handled in different types of STOs, particularly in inter-company scenarios.
5. **Benefits of STOs:** Recognizing the advantages of using STOs, such as efficient resource utilization, reduced lead times, and cost savings.
6. **Implementation and Configuration:** Learning about the necessary configurations within a system like SAP to enable and manage STOs effectively.
7. **Integration with other systems:** Understanding how STOs integrate with inventory management, logistics execution, and other business processes.

Need and Objectives

The need for conducting a study on dispatch and stock transport orders (STOs) in Naga Limited – Foods Division arises from the growing importance of efficient supply chain and logistics operations in a competitive food manufacturing environment. Understanding and improving these functions are crucial to ensuring smooth product movement, minimizing costs, and meeting customer demands effectively.

1. Ensuring Timely Delivery of Products.
2. Managing Inventory Effectively.
3. Reducing Operational Inefficiencies.
4. Cost Optimization.
5. Enhancing System and Process Integration.
6. Strengthening Internal Control and Compliance.
7. Supporting Business Expansion.
8. Improving Customer Satisfaction.

The objective of studying Dispatch and Stock Transport Orders (STO) in Naga Limited – Foods Division is to analyse and optimize the internal logistics and supply chain operations, specifically focusing on the movement of goods between manufacturing units, warehouses, and distribution points. This involves a detailed understanding of how finished goods are dispatched and how stock is transferred within the organization.

Key Objectives of the Study

1. Assessing Efficiency of Dispatch Operations.
2. Analysing Stock Transport Orders (STOs).
3. Inventory Management Optimization.



4. Cost and Resource Optimization.
5. Compliance and Documentation Accuracy.
6. Enhancing Supply Chain Coordination.
7. Use of Technology and Automation.

Outcome Expectation: A streamlined dispatch and STO process that improves delivery performance, reduces operational costs, and supports better inventory management—ultimately contributing to higher customer satisfaction and operational excellence within Naga Limited – Foods Division.

Limitations

1. The study does not cover raw material procurement or production processes, unless directly impacting dispatch or STO activities.
2. External logistics partners are considered only in terms of their role in the dispatch process (e.g., delivery performance), not their internal operations.

Review of Literature

A review of literature provides a theoretical foundation and sapience into former studies applicable to dispatch and stock transport order (STO) systems. The logistics and force chain sphere has considerably explored the significance of effective force movement, dispatch scheduling, and ERP-grounded stock transfers, particularly in the fast-moving consumer goods (FMCG) sector. Naga Limited's Foods Division stands as a prominent reality in South India's wheat milling assiduity famed for its expansive product range and advanced processing capabilities. Operating a completely automated flour shop supplied by Bühler, Switzerland, the division boasts a substantial product capacity of 250,000 tons per annum. This installation, strategically located along a public trace, ensures effective logistics and transportation. Naga Mills The division's product portfolio includes colourful wheat-grounded products similar as Maida, Atta, Sooji, Rava, Flakes, and Bran. These products are retailed under multiple brands like Naga, Amman, Perumal, Mercury, Diamond, Kovil, Jupiter, Red Hills, and Bubbly Bubbly Maida, feeding to different consumer preferences across Tamil Nadu. The company emphasizes quality by sourcing high-grade wheat from India's high wheat-growing countries and, when necessary, importing from estimable transnational sources. Naga Mills Naga Limited's commitment to quality is apparent in its relinquishment of advanced structure and aseptic processing styles. The shop operates continuously, icing harmonious product vacuity. Likewise, the company's focus on nutritive value and contamination-free products has solidified its character among consumers. The addition of bran and flakes also addresses the requirements of the feed assiduity, showcasing the division's versatility. Naga Mills in summary, Naga Limited's Foods Division exemplifies a mix of technological advancement, strategic operations, and product diversification, buttressing its position as a leader in the indigenous food processing sector.

Dispatch Management in Supply Chain: According to Chopra and Meindl (2016), dispatch is a critical element of logisticsthat directly impacts delivery performance, client satisfaction,and force chain responsiveness. Effective dispatching requires collaboration between warehousing, transportation, and demand planning. In FMCG companies, detainments or in accuracies in dispatch can beget service dislocations and affect brand fidelity. In a study by Rushton et al.(2014), it's emphasized that transportation and dispatch functions must align with overall force chain strategy to reduce lead time and enhance inflexibility. This is particularly true for food diligence where product newness and timely delivery are pivotal.



Stock Transport Orders (STOs) and ERP Integration: Stock Transport Orders (STOs) are a crucial point in ERP systems like SAP, used to manage inter-plant oriented-warehouse transfers. As per Monk and Wagner (2012), STOs enable real-time visibility and control over internal stock movements, icing accurate force situations across colorful locales. A case study by Nah and Lau (2001) on SAP perpetration set up that companies that effectively use STOs in their ERP systems see bettered delicacy in force shadowing, reduced homemade crimes, and better planning opinions. These findings are applicable to Naga Limited, where SAP or analogous ERP platforms are likely used to manage logistics.

Force and storehouse Optimization: Ballou(2007) highlights that the collaboration between dispatch and internal stock transfers plays a vital part in force optimization. Redundant stock at one position and dearths at another indicate poor STO operation, leading to increased carrying costs or lost deals. The Just- In- Time(JIT) force conception by Toyota Production System(Ohno, 1988) also supports the need for timely and accurate stock transfers to reduce holding costs and ameliorate functional effectiveness — a principle applicable for Naga’s Foods Division in managing perishable goods.

Dispatch and Distribution Challenges in FMCG Sector: A report by McKinsey & Company(2020) on digital force chains noted that FMCG companies face unique dispatch challenges including route optimization, demand variability, and the need for fast loss cycles. Technology- driven dispatch processes, combined with real-time shadowing, can significantly enhance performance. In addition, a study by Accenture(2019) emphasized the significance of integrating logistics data across platforms to reduce conveyance time and boost storehouse outturn.

Indian Context and Food Industry Dynamics: In the Indian FMCG geography, companies like ITC, Nestlé, and Britannia have espoused integrated logistics systems to streamline their dispatch and STO processes. According to the Confederation of Indian Industry(CII, 2018), effective stock movement and dispatch planning are critical for cost savings and competitiveness in the Indian food sector. A study on logistics in the Indian food assiduity by Singh and Sharma(2017) set up that system-grounded stock transfers reduce disagreement and insure vacuity of goods across civic and pastoral requests.

Research Methodology: The research methodology outlines the structured approach adopted to carry out the study on Dispatch and Stock Transport Orders (STO) within Naga Limited – Foods Division. It provides the framework for data collection, analysis, and interpretation, enabling a systematic investigation of the operational efficiency, system usage, and logistical challenges associated with the movement of goods. This study aims to evaluate the effectiveness of dispatch and STO processes in ensuring timely delivery, inventory accuracy, and cost control. A well-defined research methodology is essential to derive valid and actionable insights that can support decision-making and process improvement. The methodology involves both primary and secondary data collection, using qualitative and quantitative techniques. It includes field observations, interviews with logistics and warehouse personnel, review of ERP records, and analysis of existing company documentation. The focus is to understand current practices, identify bottlenecks, and suggest practical solutions.

Software Tools used (if applicable)

Microsoft Excel: For data entry, analysis, and visualization.

ERP Reports (e.g., SAP): For generating STO and dispatch data.

SPSS or Google Sheets: For statistical computation and organizing survey results.



Statistical Tools used for Analysis

Tools or instruments used to analyze the collected data in order to reach meaningful conclusions are called analysis tools in research. Anova, chi-squ are and Correlation in SPSS are used in this study for analyzing the data.

Anova Analysis

ANOVA test can be defined as a type of test used in hypothesis testing to compare whether the means of two or more groups are equal or not. This test is used to check if the null hypothesis can be rejected or not depending upon the statistical significance exhibited by the parameters. The decision is made by comparing the ANOVA test statistic with the critical value.

One way ANOVA

The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of two or more independent (unrelated) groups.

Null Hypothesis, H₀: $\mu_1 = \mu_2 = \mu_3 = \dots = \mu_k$ Alternative Hypothesis, H₁:The means are not equal

Decision Rule: If test statistic > critical value then rejects the null hypothesis and conclude that the means of at least two groups are statistically significant.

Conclusions

In conclusion, the analysis of Dispatch and Stock Transport Order processes highlights critical inefficiencies that impact operational performance and customer satisfaction. The primary issues stem from limited visibility, manual handling, system integration gaps, and inconsistent procedures. Addressing these challenges through automation, system integration, and process standardization can lead to significant improvements in accuracy, efficiency, and coordination. By adopting a proactive and data-driven approach, organizations can streamline their logistics operations, reduce costs, and enhance service levels, ultimately contributing to a more resilient and responsive supply chain.