

CHAPTER 5 – CONCLUSIONS AND RECCOMENDATIONS

5.1 Conclusions

From the results of research conducted at PT. UT Sumbawa, the conclusions that can be obtained are as follows:

- The problems at PT. UT Sumbawa are the highest Days of Inventory (DOI) and service level of UT Sumbawa to customer have not reached the target, this can be solved by implementing this research, so that the DOI can be reduced, with the level of service increasing and reaching the target.
- Based on research conducted, it is known that the root of the problem is in the order process for stock and order process for full fill PO customer. To get improvements in DOI performance and Service Level at PT. UT Sumbawa requires order process improvement activities using Forecasting Methods, Inventory Control, Order Process Error Prevention and VHS Systems to improve service levels and spare parts supply lead times.
- The most appropriate Forecasting method used at PT. UT Sumbawa namely:
 - Fast Moving parts: Utilize a 12-month moving average.
 - Slow Moving parts: Utilize a 3-month moving average.
- The most suitable inventory control method is the EOQ approach.
- With this improvement, there was an improvement in SL by 12% and DOI by 127 days since April 2023.
- The analysis of order process error prevention using the Swiss Cheese Model method yielded seven recommendations encompassing human skills and knowledge, human attitudes and responsibilities, supervision, and the influence of company procedure or management.

- The VHS system stands out as the optimal inventory management system for enhancing service level measurement outcomes and expediting lead times for spare parts supply.
- Standard Operational Procedures must be created and their implementation ensured with a periodic audit system by management so that the forecasting and inventory control processes are carried out according to the right method.

5.2 Recommendations for Further Research

For the future advancement of research outcomes at PT. UT Sumbawa, to achieve performance surpassing targets and ensure sustainability, it is recommended:

1. Conduct in-depth research to apply the forecasting methods recommended in this research within the scope of PT. UT nationwide and created a real-time digital forecasting system to make it the standard, thereby mitigating employee-induced errors or inconsistencies.
2. Conduct thorough research on enhancing employee competency and attitude to foster a greater sense of responsibility and accountability, aiming to prevent order process errors consistently.
3. Conduct comprehensive research on the most suitable approaches for handling new and unscheduled demand to elevate the standards of service for customers.

GLOSSARY

No	Term	Definition
1	<i>Availability</i>	: Availability of inventory when demand occurs
2	<i>Customer</i>	: Customers from PT. UT
3	<i>Days of inventory</i>	: the length of days during which stock is able to meet demand.
4	<i>Distributor</i>	: Main distributor of heavy equipment brands
5	<i>Economic Order Quantity</i>	: One of the inventory control techniques
6	<i>Fast moving</i>	: Spare parts that frequently occur in transactions
7	<i>Forecasting</i>	: Predict future demand
8	<i>Historical</i>	: Past data
9	<i>Inventory</i>	: Stock available at the Company
11	<i>Lead time supply</i>	: Time required for delivery
12	<i>Maintenance</i>	: Heavy equipment repair
13	<i>Non-Moving</i>	: Spare parts that have never been transacted
14	<i>Performance</i>	: Performance level
15	<i>Product support</i>	: Spare parts and heavy equipment repair services
16	<i>Purchased</i>	: Purchase of spare parts
17	<i>Raw material</i>	: Raw materials for spare parts
18	<i>Safety stock</i>	: Additional or spare supplies
19	<i>Sampling</i>	: Taking several examples from many incidents
20	<i>Service level</i>	: Availability level
21	<i>Slow Moving</i>	: Spare parts that rarely occur in transactions
22	<i>Spare parts</i>	: Heavy equipment spare parts
24	<i>stock level</i>	: Inventory quantity levels
25	<i>Supply spare parts</i>	: Delivery of spare parts to customers
26	<i>Turnover ratio</i>	: Inventory turnover ratio
27	<i>Vendor</i>	: Service or product provider
28	<i>Vendor Held Stock</i>	: Inventory management by vendor
29	<i>Warehouse</i>	: Spare parts storage area

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