FORECASTING AND INVENTORY MANAGEMENT IMPROVEMENT AT JFE SHOJI STEEL PHILIPPINES INC.

A Management Research Paper Presented to the
Faculty of the Graduate School of Business
De La Salle University-Dasmariñas
Dasmariñas, City

In Partial Fulfillment of the Requirements for the
Degree Master in Business Administration with
Specialization in Supply Chain Management

RHOMEL A. SORIANO

September 2019

TABLE OF CONTENTS

	Page
TITLE PAGE ……..	i
DEED OF DECLARATION ……..	ii
APPROVAL SHEET ……..	iii
BIOGRAPHICAL SKETCH ……..	iv
ACKNOWLEDGEMENT ……..	v
TABLE OF CONTENTS ……	vi
LIST OF TABLES ……..	ix
LIST OF FIGURES ……	x
LIST OF APPENDICES ……	xii
EXECUTIVE SUMMARY ……..	xv
INTRODUCTION ……...	1
Global Company Background ……..……	1
Business Interest in the Philippines …….	4
JFE Group of Companies in the Philippines ……	5
Local Company Background ……	6
Financial Performance of JSSP ……	8
RESEARCH DESIGN AND METHODOLOGY ……	11
Research Design ……	11

Scope and Limitations 11

Sources of Data 12

Organization and Management of JSSP 12

Key Performance Indicators 21

Different Supply Chain Management Function in JSSP 23

ANALYSIS OF DATA AND FINDINGS 27

Mission Statement 27

Vision Statement 27

Management System Policy 28

Analysis of Data 28

Sales Forecasting 33

Material Planning 35

Ordering of Materials 40

Problems encountered in the current system 41

Proposed Improvement on Supply Chain Management 51

Action Plan 61

Implication of the Proposed Improvement 66

CONCLUSIONS AND RECOMMENDATIONS 69

Conclusion 69

Proposed Balanced Scorecard 70

Recommendations ……... 73

REFERENCES …….. 77

APPENDICES ……..... 78

AKLATANG EMILIO AGUINALDO - INFORMATION RESOURCE CENTER
De La Salle University-Dasmariñas • Since 1977 • Dasmariñas, Cavite, Philippines

LIST OF TABLES

Table		Page
1	Different Commodities of JSSP ……..….	7
2	Financial Statistics of JSSP ……	9
3	JSSP Current KPI of Purchasing, Logistics and Inventory Control ……..	22
4	Suppliers Delivery Lead Time and MOQ …….	36
5	5 Why Analysis on High Inventory Level ……	43
6	Actual vs Forecast ……..……	48
7	Summary of Root Causes of High Inventory Level and List of Improvement Proposals …….	53
8	Proposed KPIs for Marketing Section ……	55
9	Proposed KPIs for HR/CS Section ……	58
10	Proposed Additional KPIs for Sales Section …….	61
11	Financial Statistics of JSSP after the Proposed Improvement ……	67

LIST OF FIGURES

Figures		Page
1	JFE holdings structure …….	2
2	Global network of JFE …….……...	4
3	JFE group of companies in the Philippines ……	6
4	JSSP organizational structure …….…….	13
5	Purchasing and sales organizational chart ……	18
6	JSSP supply chain management …….…..…..	24
7	JSSP reverse logistics …….……..…..…..…...…...	26
8	Stock ratio of JSSP …….……..	30
9	Total loss of JSSP due to disposal …….……	31
10	JSSP storage charges at the port …….	32
11	Sources of information of sales forecasting in JSSP …….	33
12	Factors being considered during materials planning in JSSP …….....	35
13	UKEBARAI …….…….…….	39
14	Flow of ordering of materials in JSSP …….……..	41
15	Fish bone diagram showing the probable causes of high inventory level …….	42
16	Pareto diagram of top customers …….…….……..	46

17 Proposed re-structuring of sales and purchasing department 54

18 Proposed training programs for sales, purchasing and marketing department 57

19 Gantt chart for re-structuring sales and purchasing department 63

20 Gantt chart for the implementation of proposal 3 66

21 Proposed balanced scorecard of proposed improvement 71

AKLATANG EMILIO AGUINALDO · INFORMATION RESOURCE CENTER
De La Salle University-Dasmariñas • Since 1977 • Dasmariñas, Cavite, Philippines

LIST OF APPENDIX TABLES

Appendix Tables		Page
1	Raw Data of Storage Charges and Disposal Loss	79
2	Ratio of Average Total Loss per year to Sales and Net Profit	80
3	Financial Performance of JSSP Before and After the Implementation of Proposed Improvement	81
4	Timetable for Top Management	82

LIST OF APPENDIX FIGURES

Appendix Figures		Page
1	JSSP company ……	85
2	JSSP slitting machines ……..	86
3	JSSP shearing machines ……	87
4	JSSP products …….	88
5	AS400 program ……..	89
6	Fishbone diagram ……..	90
7	5 WHY analysis ……..	91
8	Pareto diagram ……...	92
9	Balanced scorecard …….	93
10	Inventory turnover ratio …….	94

LIST OF APPENDICES

Appendix		Page
A	Curriculum Vitae …….	95
B	Certification of English Editor ……	97

AKLATANG EMILIO AGUINALDO - INFORMATION RESOURCE CENTER
De La Salle University-Dasmariñas • Since 1977 • Dasmariñas, Cavite, Philippines

EXECUTIVE SUMMARY

JSSP has problems on forecasting and inventory management that resulted to high inventory level. The research aimed to improve the forecasting and inventory management of JSSP to solve additional costs in terms of storages charges and loss due to disposal of aging inventories. This improvement will standardize the process of ordering of materials, improve inventory level, minimize loss due disposal and storage charges, and maximize the utilization of warehouse space.

The activities of purchasing and sales department which is the focus of this study were evaluated and discussed in detailed considering the flow in supply chain management. The sales and purchasing manager will play a big role for the realization of the proposed improvement as the leader for proper implementation, monitoring, and evaluation.

The best way to address the problem is to make necessary actions once the root causes has been identified. Fishbone (Ishikawa) diagram and 5 why analysis was used to identify and analyze possible causes of the problem. Three major factors that resulted to high inventory level were identified, namely, a) lack of market research, b) lack of training, and c) unreliable forecast. This high inventory level resulted to not enough space in the warehouse resulting to storage charges at the port and huge loss due to high disposal of aging inventory.

Pareto diagram was used to further analyze and confirm that unreliable forecast led to high inventory level. Historical data from 2014 to 2018 was tabulated to identify top customers and check the discrepancy between actual sales and forecasted demand.

The proposed improvement includes restructuring the organization to add a new unit which is the marketing section; formal training the sales, purchasing and marketing department; and establish a standard sales forecast error. It is expected that the target inventory stock level of 2.5 months will be met in order to eliminate or incur only minimal storage charges at the port as well as disposal of aging inventories. A balance scorecard will help to monitor the implementation of the plan and to further evaluate the performance of the sales and purchasing department. This also ensures that corrective actions to problems are made and inventory management contributes to increase the profitability of the company with the support of the management.