A STUDY ON SUPPLY CHAIN MANAGEMENT IN ELECTRONICAL INDUSTRIES

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ABSTRACT

This report conducts a comprehensive analysis of supply chain management in a Aluminum die casting manufacturing company, traversing the intricacies of raw material procurement, manufacturing processes, and distribution logistics. The sourcing phase scrutinizes efficient procurement strategies and robust supplier relationships for critical raw materials, emphasizing quality control. Manufacturing optimization is explored through polymerization, blending, and extrusion processes, incorporating technology for enhanced efficiency. Post- production, the report delves into inventory management, evaluating the company's adeptness in balancing stock levels through JIT principles, demand forecasting, and advanced tracking systems. The distribution phase focuses on transportation strategies, warehousing practices, and meticulous order fulfillment processes. Supplier relationships and risk management are paramount considerations, with an investigation into the company's strategies for mitigating supply chain disruptions and ensuring business continuity. The report aims to identify strengths, opportunities for improvement, and best practices in the company's supply chain. By offering a holistic view, this analysis seeks to contribute insights that facilitate continuous enhancement of supply chain management, enabling the aluminum manufacturing company to thrive in a dynamic market environment. The overarching goal is sustained success through the optimization of procurement, manufacturing, distribution, and risk management processes.

KEY WORDS: Procurement, Supplier Management, Inventory Management, EDI, Freight and Transportation and Logistics Management.

INTRODUCTION:
Supply chain management (SCM) is the process of planning, optimizing, and overseeing the flow of goods, services, information, and finances as they move from the point of origin to the point of consumption. It involves the coordination of various activities, including procurement, production, transportation, distribution, and even customer services to ensure that products or services are delivered to customers efficiently, cost-effectively and with high quality.

OBJECTIVES:

1. To understand Strategic Supplier Collaboration.
2. To Find out the Satisfaction Level of Improvement in Product Offering.
3. To Identify & diagnose Supply chain Visibility.

REVIEW OF LITERATURE:

1. Yiyi Fan, Mark Stevenson (2008)- A Review Of Supply Chain Management:
   Definition, Theory and Research agenda

The purpose of this paper is to review the extant literature on supply chain risk management (SCRM, including risk identification, assessment, treatment, and monitoring), developing a comprehsive definition and conceptual framework; to evaluate prior theory use; and to identify future research directions.

2. SongXu, Xiaotong Zhang, Lipan Feng & Wenting Yang(2020)- Distribution   Riskin Supply chain Management: a Literature review based on bibliometric analysis

This research is all about understanding how disruptions in   supply chains (like unexpected events that mess things up) can harm the performance of companies involved. They've studied this field quite a bit, and this paper takes a close look at all the research done. The researchers examined 1,310 publications to see who the most.

3. Dmirty Ivanov,Alexandro Dolugi, Boris Sokolov and Marina Ivanova (2017)-   Literature review on Distribution recovery in the supply chain

This paper reviews the current research landscape regarding supply chain design and planning, focusing on disruptions and recovery strategies. It categorizes various quantitative methods and application areas related to managing disruption risks and recovery measures. The study identifies research gaps and outlines future directions, offering insights for both operations and supply chain managers in choosing appropriate tools and highlighting the need for further research in supply chain risk management.

RESEARCH METHODOLOGY:

Data Collection:
Primary Data - Primary data is collected through a questionnaire which is face-to-face communication to 30 respondents.
Secondary Data - Secondary data is already collected data that is available on company websites, journals, the internet, annual reports, and certain published papers.

Research Design: Descriptive. A descriptive research design is a sort of research methodology that seeks to describe or document the traits, actions, attitudes, opinions, or perceptions of a group or population being investigated.

Sampling Technique: Convenient Sampling Method.
Sample size: 30
Population size: 100

Period of Study: 3 Months

Tools Used for Analysis:
- Percentage analysis.
- Correlation

HYPOTHESIS:
1. (H0): There Is No Significant Difference In The Durability And Quality Of Rework Aluminum die casting Compared To Newly Manufactured Aluminum die casting. (H1): Reworked Aluminum die cast Exhibits A Significant Improvement In Durability And Quality Compared To Newly Manufactured Aluminum die casting.
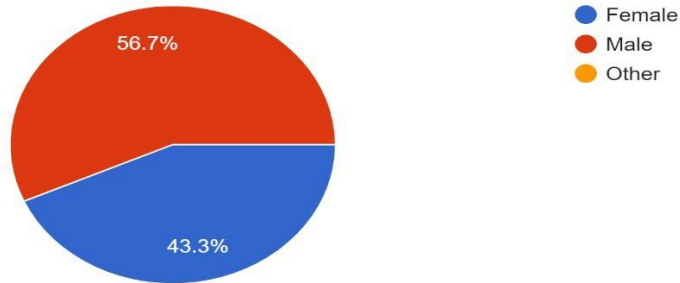(H0): there is no significant difference between the age and our organization helps its suppliers to improve their product quality.
2. (H1): there is a significant difference between the age and our organization helps its suppliers to improve their product quality.

PERCENTAGE ANALYSIS:
Table 1: Gender of Candidate

Gender
30 responses

Option	No of Respondents	Percentage
Male	17	56.7%
Female	13	43.3%
Total	30	100%

Interpretation: From the above table, it is interpreted that 56.7% of respondents are of Male category and 43.3% of them belong to Female category. It is also to be noted that none of them have opted for the option others.
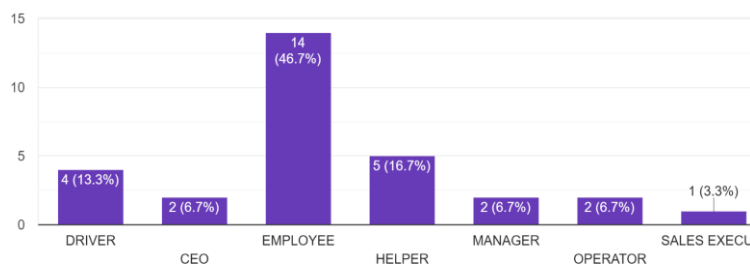
Inference: Therefore, 56.7% of the Respondents Male candidate of Gender

Table 2:

Table showing the Occupation from the respondents

Option	Number of Respondents	Percentage
CEO	2	6.7%
Employee	14	46.7%
Driver	4	13.3%
Operator	2	6.7%
Helper	5	16.7%
Manager	2	6.7%
Total	30	100%

Occupation
30 responses

Interpretation:
From the above table, it can be interpreted that out of the option given 6.7% of respondents are CEO, 46.7% of respondents are employees , 13.3% of respondents are drivers, 6.7% of respondents are operators, 16.7% of respondents are helpers, 3.3% of the respondents are sales executives, 6.7% of the respondents Are Manager.

Inference: Therefore, 46.7% of the respondents are Employees.

HYPOTHESIS:
KARL PEARSON'S CORRELATION COEFFICIENT :
(H0): there is no significant difference between the age and our organization helps its suppliers to improve their product quality.
(H1): there is a significant difference between the age and our organization helps its suppliers to improve their product quality.

		Our Organization Rely on Few high Quality Suppliers	Our Organization Consider Quality as Number One criterion in Selecting Suppliers
Rely on Few High quality Suppliers	Pearson Correlation	1	.045
	Sig (2- tailed)		.818
	N	29	29
Quality as Number One Criterion in Selecting Suppliers	Pearson Correlation	.045	1
	Sig (2-tailed)	.818	
	N	29	29

Inference:
The reis significant difference between the quality and selection of suppliers

FINDINGS:
 ➢ Majority (56.7%) of the respondents of my questionnaire belong to male.
 ➢ Majority (30%) of the respondents of my questionnaire belong to age between 25-35 & 35-45.
 ➢ Majority (46.7%) of the respondents of my questionnaire belong to monthly income of 25,000-30,000.
 ➢ Majority (46.7%) of the respondents of my questionnaire belong to employee as occupation.
 ➢ Majority (53.3%) of the respondents of my questionnaire belong to agree.
 ➢ Majority (40%) of the respondents of my questionnaire belong to strongly agree.
 ➢ Majority (40%) of the respondents of my questionnaire belong to agree.
 ➢ Majority (46.7%) of the respondents of my questionnaire belong to neutral.
 ➢ Majority (43.3%) of the respondents of my questionnaire belong to agree.
 ➢ Majority (56.7%) of the respondents of my questionaire belong to agree.
 ➢ Majority (43.3%) of the respondents of my questionnaire belong to agree.
 ➢ Majority (43.3%) of the respondents of my questionnaire belong to neutral.
 ➢ Majority (36.7%) of the respondents of my questionnaire belong to agree& strongly agree.
 ➢ Majority (50%) of the respondents of my questionnaire belong to agree.
 ➢ Majority (50%) of the respondents of my questionnaire belong to agree.
 ➢ Majority (33.3%) of the respondents of my questionnaire belong to agree& strongly agree.

KARL PEARSON'S CORRELATION COEFFICIENT:

Since is positive, there is a significant difference between the age and our organization helps its suppliers to improve their product quality.

CONCLUSION:

conclusion, this thorough analysis underscores the critical role of supply chain management in the success of the Aluminum die casting manufacturing company. The report has systematically examined each phase of the supply chain, from raw material procurement to distribution logistics, shedding light on key aspects that impact efficiency and competitiveness.

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