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A Study on Impacts of Purchase and Material Management on Production Department With Reference to Seyyon Hi-Tech Poly Fabs Pvt Ltd Erode

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ABSTRACT: However, from "humble" origins to the strategic relevance it now enjoys in some organizations and as a significant area of academic research, this recognition has evolved. To better comprehend and value the significant function that purchasing today plays, it is worthwhile to analyse the historical development of the practice. To help explain numerous phenomena in the subject of purchasing, a lot of literature and theoretical frameworks have been generated. Economics of transactions is one of these theories that has been put to use.

I.INTRODUCTION OF THE STUDY

A function called materials management seeks to handle materials in an industrial activity in an integrated manner. Its primary goals are to save costs and manage materials effectively throughout the entire effort. Its role encompasses a number of crucial material-related activities, including acquiring, storing, controlling inventories, handling materials, standardizing,

II.STATEMENT OF THE PROBLEM

The word "purchasing" refers to the act of buying. It involves understanding the requirements, choosing a supplier, and negotiating a price. Ordering, expediting, receiving, and paying are just a few of the many tasks that are included in the purchasing function, which is a part of the larger procurement function. Purchasing is in charge of acquiring the components, tools, supplies, and labour required to create a good or render a service. Large purchases and minor purchases can be classified into two major categories, Additionally, for retail and wholesale businesses, the percentages for purchased stocks are significantly greater, occasionally topping 90.

III.OBJECTIVES OF THE STUDY

- To determine the company's need for purchasing and material management.
- To ascertain the effects of material management and purchasing on output.
- To evaluate how purchasing and material management affect the company's profitability.
- To find ways to make the company's purchasing and material management better.
- To make honest ideas for Seyyon hi tech poly Fabs pvtltd's future development.

IV.SCOPE OF THE STUDY

- It is possible to improve the production system by analysing inventory control strategies.
- The flaws in the production system can be identified by looking at how outsourcing affects the production process.
- The implementation strategies can be determined by looking into the advantages of just-in-time (JIT) production systems.
- It is possible to enhance the production system by investigating how sustainability affects purchasing and material management practises.



V.LIMITATIONS OF THE STUDY

- Many Respondents neglected to respond to the Survey in their Busy Schedule.
- Many Respondents found it difficult to Rank the Problems faced by them, because They are equally facing all the problems.

VI.RESEARCH METHODOLOGY

The exact steps or methods used to find, pick, process, and analyse information on a subject are known as research methodology. It is a means of outlining a researcher's intended method of investigation.

INTRODUCTION TO RESEARCH:

Research is described as a "careful investigation or enquiry through search for new facts in any branch of knowledge" in the Advanced Learners Dictionary of Current English.

DESIGN OF RESEARCH

The overall approach we select to integrate the many study components in a logical and cohesive manner, so assuring that we will successfully answer the research problem, is referred to as the research design. It serves as the manual for the Gathering, Measuring, and Analysis of Data.

SAMPLING:

The selection of a portion of an aggregate or totality is referred to as sampling 100.

TYPES OF RESEARCH:

The descriptive research type was employed in this study to characterize a populations or phenomenon's characteristics.

MODEL DESIGN:

- 1) Choosing a sufficient number of components from the population is the process of sampling.
- 2) An established strategy for acquiring a sample from the sampling frame is known as a sample design. 3. It alludes to the method or process the researcher would use to choose some sampling units from which generalizations about the population are made.

NON-PROBABILITY SAMPLING IS A METHOD OF SAMPLING:

Non-Probability Sampling (NPS) is a sampling method where the samples are acquired in a manner that does not ensure that every member of the population has an equal chance of being chosen.

COMFORTABLE SAMPLING:

- 1) Convenience sampling was the method of sampling used in this study.
- 2) Convenience sampling is a particular kind of non-probability sampling technique that focuses on data collection from population members who are easily available to participate in the study. It is sometimes referred to as availability sampling.

DATA GATHERING:

Data collection is the process of obtaining and analyzing information on relevant variables in a systematic and defined manner in order to answer a given research question, test an idea, and assess the results.

PRIMARY DATA SOURCE:

- 1) A Primary data source offers direct or first-hand evidence on a thing, a person, or a piece of art. It comprises records from experiments, eyewitness accounts, historical and legal documents, statistical information, audio and video recordings, and more.
- 2) We collected the data using a questionnaire, which is a set of printed or written questions with multiple-choice answers designed for a survey or statistical study.

ADDITIONAL DATA SOURCE:

- 1) Secondary data sources are those that were used to supplement primary data sources.



2) The articles, journals, and magazines listed in the bibliography were consulted.

HOW BIG THE SAMPLE IS:

Selecting the number of observations or replicates to include in a statistical sample is known as sample size determination. The instance empirical study with the aim of drawing conclusions about a population from a sample must take into account the sample size as a crucial component. 100 people comprise the sample.

TOOLS USED: The data collected was analyzed using tools like,

- Simple Percentage
- Chi – Square
- Henry Garrett Ranking

a) SIMPLE PERCENTAGE ANALYSIS: Simple Percentage Analysis is the method to represent raw streams of data as a percentage (a part in 100-percent) for better understanding of collected data.

FORMULA:
$$\frac{\text{Number of respondents}}{\text{Total number of respondents}} \times 100$$

b) CHI-SQUARE ANALYSIS:

A Chi-Squared Test is a statistical hypothesis test where the sampling distribution of the test statistic is a chi-squared distribution when the Null Hypothesis is true. It is used to determine whether is a significant difference between the expected frequencies and the observed frequencies in one or more categories. The purpose of the test is to evaluate how likely it is that the Null Hypothesis is true, given the observations.

c) HENRY GARRETT RANKING METHOD:

Ranking is a method of numbering of attributes from highest total score to lowest total score.

VII. REVIEW OF LITERATURE

KRISHNA SATYANARAYANA RAO et al. (2017);

They account for 60 to 70 percent of the overall cost of production. Materials management will make an effort to address the problems, including material shortages, supply delays, price changes, damage, and wastage.

ANTONY ROGER NAVODAYA ET AL. (2017):

Even while the materials and components used in construction account for more than 60% of the project’s overall cost, techniques for managing them entirely depend on human abilities, according to research by. They claimed that using this technology, Near Field Communication (NFC) and the Global Positioning System.

ASHOKKUMAR ET AL. (2014):

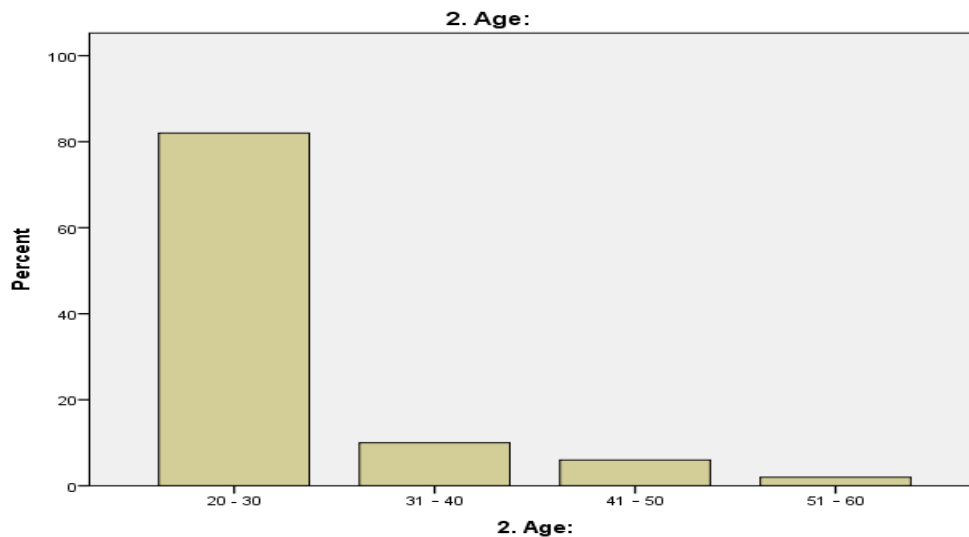
The caliber of construction projects determines how the construction industry develops. One of the key elements in the success of construction projects is quality. The primary focus of this project is on the significance of and factors influencing quality management during the execution (construction) phase.

**TABLE NO: 1 DEMOGRAPHIC PROFILE OF RESPONDENTS:SIMPLEPERCENTAGEANALYSIS
AGE**

S.NO	FACTORS	NO.OF.PERSON	PERCENTAGE
1	20-30	82	82%
2	31-40	10	10%
3	41-50	6	6%
4	51-60	2	2%
TOTAL	4	100	100%

INTERPRETATION:

82% of respondents under the age category of 20-30



COMPARING THE TWO VARIABLES WITH CHI-SQUARE TEST

Chi-square test 1:

Comparing the Age and Current level of the purchasing in Seyyon Employees.

- Independent variable: Age
- Dependent variable: Current level of the purchasing

NULL HYPOTHESIS (H0):

There is no significant relationship between the Age and Current level of the purchasing

ALTERNATIVE HYPOTHESIS (H1):

There is a significant relationship between the Age and Current level of the purchasing

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.905 ^a	12	.537
Likelihood Ratio	13.320	12	.346
N of Valid Cases	100		

2) Age of the respondent 8) Are you satisfied with the current level of the purchasing and material management system?

A) 16 cells (80.0%) have expected count less than 5. The minimum expected count is .02.

INTERPRETATION

From the above table, there is a significant relationship between the Age and of the Current level of the purchasing employees. So, Alternative hypothesis is accepted.

PROBLEMS FACED BY THE RESPONDENT:

HENTRY GARETT RANKING METHOD

S.NO	PROBLEMS	MEANS CORE	TOTAL SCORE	RANK
1	Automate purchase system	164	820	5
2	Strong supplier partnership	220	1100	4
3	Just in time	246	1230	2



	inventory system			
4	Material tracking software	250	1250	1
5	Material resource planning system	234	1170	3

INTERPRETATION:

From this study, it is found from the table that.

- 1). Material tracking software is ranked as no.1 and the total score is 1250.
- 2). Just in time inventory system is ranked as no.2 and the total score is 1230.
- 3). Material resource planning system is ranked as no.3 and the total score is 1170.
- 4). Strong supplier partnership is ranked as no.4 and the total score is 1100.
- 5). Automate purchase system is ranked as no.5 and the total score is 820.

VIIIFINDINGS

- 1)82% of respondents under the age category of 20-30
- 2)77% of respondents under the male category.67% of respondents have responded they got married.
- 3)From the above table, there is a significant relationship between the Age and of the Current level of the purchasing employees. So, Alternative hypothesis is accepted.
- 1)Material tracking software is ranked as no.1 and the total score is 1250.
- 2). Just in time inventory system is ranked as no.2 and the total score is 1230.
- 3). Material resource planning system is ranked as no.3 and the total score is 1170.
- 4). Strong supplier partnership is ranked as no.4 and the total score is 1100.
- 5). Automate purchase system is ranked as no.5 and the total score is 820.

IX.SUGGESTIONS

- 1)Build Procurement Management Frameworks
- 2)Automate Procurement Processes
- 3)Create Procurement Management Frameworks
- 4)Improve the quality for the products
- 5)Engage with your supplier
- 6)Marketing knowledge persons shared to company.

X.CONCLUSION

A Purchase management has an effect on cash flow, inventory stock costs, contractual issues, and product availability. The purchase management process involves people, procedures, and technology, as was previously said, exactly like in the majority of business organizations. A purchasing department may find it challenging to manage the enormous quantity of items, suppliers, and purchase orders. It is possible to address important company needs with the least number of resources needed thanks to effective purchase order administration.

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