

SMART INVENTORY MANAGEMENT SYSTEM

Narva Mounika¹, Ms. G. Swetha²

¹Department of Management Studies Aristotle PG College, Chilkur, Moinabad, Ranga Reddy District, Telangana, India.

²Assistant Professor Aristotle PG College, Chilkur, Moinabad, Ranga Reddy District, Telangana, India.

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ABSTRACT

Smart Inventory Management System is an online software application which fulfils the requirement of a typical Stock Analysis in various godowns. It provides the interface to users in a graphical way to manage the daily transactions as well as historical data. Also provides the management reports like monthly inwards, monthly deliveries and monthly returns.

This application maintains the centralized database so that any changes done at a location reflects immediately. This is an online tool so more than one user can login into system and use the tool simultaneously.

The aim of this application is to reduce the manual effort needed to manage transactions and historical data used in various godowns. Also this application provides an interface to users to view the details like the daily Stock Statements of all godowns.

Keywords: Smart Inventory Management System, godowns.

1. INTRODUCTION

It is a Stock Storage department related to Reliance Industries which sells different items to the public through their retail outlets like Reliance Fresh, Reliance Foot Wear etc. Since the company needs to maintain all their goods and items at a separate storage area which requires separate department also for tracking the details related to in and outs of all godowns. The in and out's will henceforth be referred to as inwards and outwards.

Prior to storage of goods this department has to manage different godowns, product-wise stocks in each godown, inwards and outwards of each godown. It has to hold the details of all godowns like godown id, godown location, capacity in quintals, godown manager and start date. Whenever a product comes into a particular godown then the details like Godown ID, Name of the Supplier, Date of Supply, Item Name, Invoice No, quantity, received by, receipt no and bill checked by need to be stored in the inwards register of the that godown by godown manager.

Whenever stock comes out from the godown then the details like Godown ID, Item Name, Invoice No, Date of Supply, Date of delivery, Delivered to, Quantity, Purpose (Sale/Service), Receipt No, Bill Value, Bill Checked by need to be stored in the outwards register by the godown manager.

Whenever a customer returns a stock to the godown then we need to check the reason for returning that item. If it is a damage then the details like Item Name, Date of delivery, date of return, Return Godown ID, Quantity, invoice no, returned by, receipt no, bill value and checked by needs to be stored in returns register. If the reason is order cancelled then we need to update the stock no in that godown. Checking for particular inwards, outwards or returns entry info takes lot of time here.

Thus the cycle is repeated for every day. Currently all the above activities are done manually. The process is a tedious one. To arrive at the Inwards, outwards or returns for items, data has to be gathered from various sources. Because of this errors are occurring in the process, which is leading to delayed deliveries to the customers. Some times because of the errors wrong products are sent out which have no requirement & thus a lot of money is being wasted in maintaining the stock.

Automating such a process will not only eliminate the errors in the process, but also bring down the delivery times & make the company more competitive. So it was decided that an automated system should be developed to make the whole process simpler & easier. The following is the system developed for the above stated needs. An initial feasibility study was performed & a conclusion was arrived at that automating such a system will not only achieve all the things mentioned above, but will also provide additional Reports which will enable the Management to look at the statistical side of the inwards, inwards & returns related to each godown. This would also create an effective Stock management system, which would reduce the confusion in maintaining the stocks at different godowns, thus effectively reducing the expenditure costs of the company. Another advantage was that the whole Accounts system could be linked to this system in future, which would finally reduce the Overheads of the company.

2. REVIEW OF LITERATURE

ARTICLE: 1

Title: Smart Inventory Management System of Food-Processing-and- Distribution Industry

Author: Chih-Chin Liang.

Source: 1 |www.hssr.in

Abstract

Small businesses are vital for employment and job creation in South Africa. The implementation of A food-processing-and-distribution company typically stores products in a warehouse before shipping them to customers. Inventory management is therefore important to the food-processing-and-distribution industry because of the large amount of products typically stored. Large amounts of stored products increase inventory cost and management cost and can reduce warehouse efficiency. Restated, inventory management should be the primary focus of the food-processing-and-distribution industry, especially for perishable foods. This study is therefore important to build up a system to predict possible forthcoming inventory. This study surveyed experts to identify key issues associated with inventory management in the food-processing-and- distribution industry, and analyzed sequential patterns to find rules based on analytical results from the survey. This study also proposed a model for inventory prediction. Through this proposed prediction model, the best accuracy of inventory prediction could reach up to 66.3%. Through the sequential patterns based on expert opinions, the food-processing-and-distribution industry can manage inventory efficiently and accurately.

ARTICLE: 2

Title: Smart Inventory System using IoT and Cloud Technology

Source: International Journal of Engineering Research and Technology

Author: Vijaya N. Aher

Abstract:

A smart inventory system is a computational time efficient system that helps businesses to manage and track their inventory levels, orders, and deliveries. It facilitate companies to have real-time visibility into their inventory and helps them make more informed and quick decisions about restock and how much to order. One key feature of a smart inventory system is its ability to automatically reorder items when they reach a certain threshold, eliminating the need for manual intervention. This helps to ensure that businesses always have the right amount of inventory on hand, reducing the risk of running out of stock or having excess inventory that takes up valuable storage space. This paper include deployment of this system in real world which benefits to handle smart inventory system with improved accuracy 30% and efficiency in inventory tracking around 10%, reduced lead times for ordering and restocking, and the ability to track inventory across multiple locations. This paper briefly elaborates the implementation of smart inventory system that greatly improves a business's inventory management process, leading to increased profitability by more than 50%, average foot fall increased to 25% and reducing the waiting time of customer by nearly 75% making customer more satisfied.

RESEARCH GAP:

This study identifies the various methods of recruitment and selection process through a systematic review of literature, which would be the right fit for attracting and selecting employees in an organization.

OBJECTIVES:

- To understand the process of recruitment
- To know the sources of recruitment at various levels and various jobs
- To critically analyze the functioning of recruitment procedures
- To identify the probable area of improvement to make recruitment procedure more effective.
- To know the managerial satisfaction level as well as to know the yield ratio

3. RESEARCH METHODOLOGY

Need For The Study

The need for recruitment may be due to the following reasons / situations

- Vacancies: due to promotions, transfers, retirement, termination, permanent disability, death and labour turnover.
- Creation of new vacancies: due to growth, expansion and diversification of business activities of an

enterprise.

- In addition, new vacancies are possible due to job respecification.

Scope Of The Study:

The benefit of the study for the researcher is that it helped to gain knowledge and experience and also provided the opportunity to study and understand the prevalent recruitment procedures.

The key points of my research study are:

- To Understand and analyze various HR factors including recruitment procedure at consultant.
- To suggest any measures/recommendations for the improvement of the recruitment procedures

Methodology

Primary Data:

Primary data was collected through survey method by distributing questionnaires to employees. The questionnaires were carefully designed by taking into account the parameters of my study.

Secondary Data:

Data was collected from web sites, going through the records of the organisation, etc. It is the data which has been collected by individual or someone else for the purpose of other than those of our particular research study. Or in other words we can say that secondary data is the data used previously for the analysis and the results are undertaken for the next process.

Sample Design:

A complete interaction and enumeration of all the employees was not possible so a sample was chosen that consisted of 25 employees. The research was taken by necessary steps to avoid any biased while collecting the data.

Tools of Analysis:

The data collected from both the sources is analyzed and interpreted in the systematic manner with the help of statistical tool like percentages.

HYPOTHESIS OF THE STUDY:

H0- There is no significant relationship between selected variables under study (Age Group, Gender, and Marital Status) and procedure to be carried out during recruitment.

H1- - Alternative Hypothesis: There is significant relationship between selected variables under study and procedure to be carried out during recruitment

4. DATA ANALYSIS & INTERPRETATION:

Sources of Recruitment

Sr. No.	Sources	Percentages (%)
1	Direct applicants	40
2	Placement Consultants	0
3	Job portals	20
4	Employee referral	20
5	Through temporary staffing	10
6	Head hunting	10

Sources of Recruitment Systems

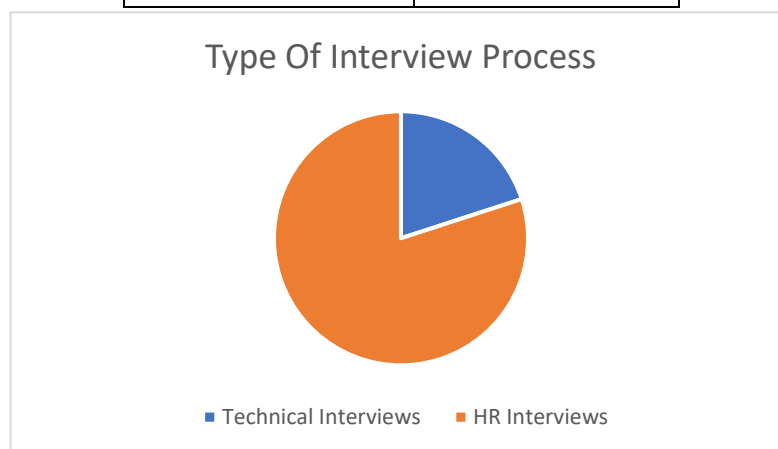


INTERPRETATION:

- From, the above data it is clear that 40% of respondents feel Direct Applicants is the main source for Recruitment Systems.
- Job Portals is of 20 % from the respondents.
- Employee Referral is of 20 % from the respondents.
- Temporary Staffing is of 10 % from the respondents.

Type of Interview Process

Options	Percentage (%)
Technical Interviews	20
HR Interviews	80

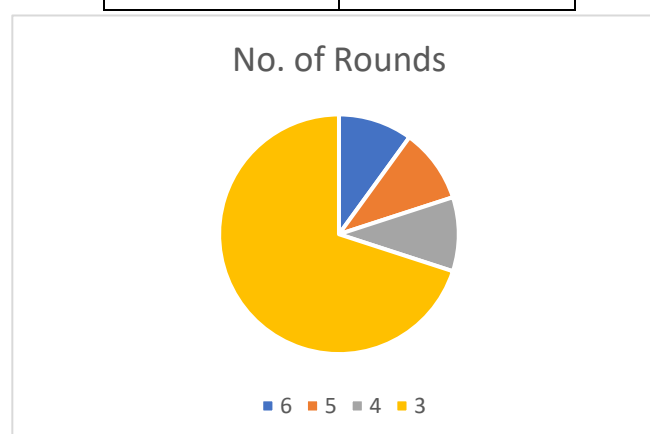


INTERPRETATION:

- From, the above data it is clear that 80% of respondents feel HR Interviews are mostly used in interview Process.
- Technical Interviews are of 20 % from the respondents.

Number of rounds in Recruitment Process

No. of Rounds	Percentage (%)
6	10
5	10
4	10
3	70

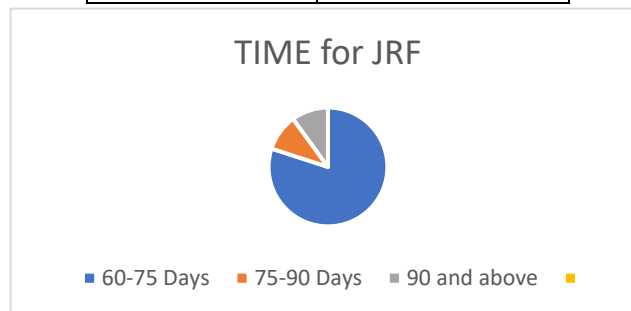


INTERPRETATION:

- From, the above data it is clear that 70% of respondents feel 3 rounds are conducted during recruitment process.
- 4 rounds are of 10 % from the respondents.
- 5 rounds are of 10 % from the respondents.
- 6 rounds are of 10 % from the respondents.

Job Requisition Form

Option	Percentage (%)
60 – 75 Days	80
75 - 90 Days	10
90 and above	10

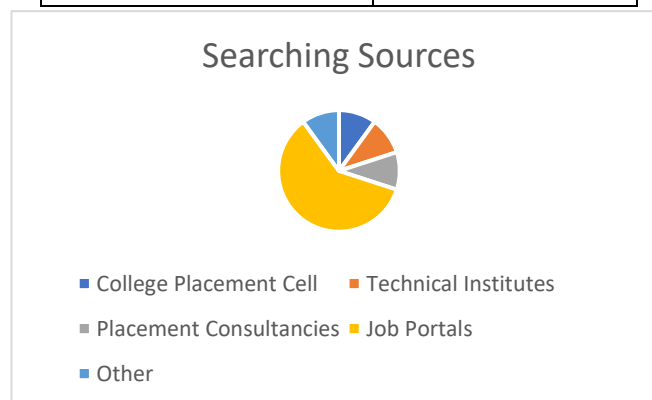


INTERPRETATION:

- From, the above data it is clear that 80% of respondents feel 65 – 75 days are taken for job requisition form.
- 75 - 90 days is of 10 % from the respondents.
- 90 and above is of 10 % from the respondents.

Searching Best Talent

Options	Percentage (%)
College Placement Cell	10
Technical Institutes	10
Placement Consultancies	10
Job Portals	60
Other	10

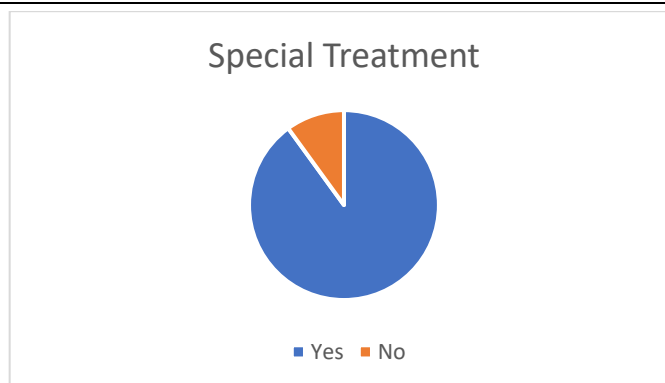


INTERPRETATIONS:

- From, the above data it is clear that 60% of respondents feel job portals are used for searching candidates.
- College Placement Cell is of 10 % from the respondents.
- Technical Institutes is of 10 % from the respondents.
- Placement Consultancies is of 10 % from the respondents.
- Technical Institutes is of 10 % from the respondents.
- Other is of 10 % from the respondents.

Special Treatment to Employees

Options	Percentage (%)
Yes	90
No	10



INTERPRETATION:

- From, the above data it is clear that 90% of respondents feel special treatment for employees is given.
- Special treatment for employees is not given is of 10 % from the respondents.
- Technical Institutes is of 10 % from the respondents.
- Placement Consultancies is of 10 % from the respondents.
- Technical Institutes is of 10 % from the respondents.

5. CONCLUSIONS

- All the employees are aware of the recruitment process of the organisation.
- Both the internal and external sources of information is used in recruitment process in the organisation. Depending of the vacancies the appropriate sources of recruitment is followed.
- The organisation mostly conducts written test and group discussions are conducted for the selection of employee according to the requirement.
- The organisation is also implementing the policies laid down by the government and employee referral are also taken into consideration.
- Most of the employees say that the policy followed for recruiting employees meets the overall objectives of the company.

6. REFERENCES

- [1] <http://recruitment.naukrihub.com/meaning-of-recruitment.html>
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- [5] <http://www.emc.com/>