

A Study on Recruitment and Selection Process at Arcus Automation

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Abstract: This study analyzes the recruitment and selection process at Arcus Automation Pvt. Ltd., Chennai. It highlights the importance of effective hiring practices in improving organizational performance. The research aims to evaluate existing methods and identify areas for improvement. A descriptive research design was used with both primary and secondary data. Data were collected from 132 respondents through a structured questionnaire. The study examines recruitment sources and selection techniques used by the company. Findings emphasize the need for efficient and structured hiring processes. The study suggests improvements to enhance employee retention and productivity.

Keywords Recruitment, Selection, HRM, Talent Acquisition, Hiring Process, Employee Retention, E-Recruitment, Organizational Performance.

I. INTRODUCTION

Recruitment and selection are essential functions of Human Resource Management that play a crucial role in organizational success, productivity, and growth. Recruitment involves attracting potential candidates, while selection focuses on choosing the most suitable individual based on skills, qualifications, and organizational fit. Arcus Automation Pvt. Ltd., established in 2010, is a leading company in industrial and automation solutions, requiring skilled employees to meet technological demands. The company follows a structured hiring process that includes sourcing, screening, interviews, and assessments using methods such as job portals, employee referrals, and campus recruitment. Effective recruitment and selection help reduce turnover, improve employee performance, and enhance organizational efficiency. However, challenges such as skill gaps, high competition, and employee retention exist in the automation industry. The use of modern technology like online platforms and AI-based tools has improved recruitment efficiency and decision-making. A strong selection process also increases employee satisfaction and long-term retention. As the industry evolves, future recruitment will focus on advanced technologies, skill-based hiring, and employer branding to attract and retain talented professionals.

II REVIEW OF LITERATURE

1. Recruitment and Selection Practices in Manufacturing Industries (2020)

Sharma and Gupta (2020) conducted a study to examine recruitment and selection practices in manufacturing industries in India. The research focused on methods such as campus recruitment, employee referrals, online job portals, and internal promotions. Data were collected from 150 HR managers to evaluate the effectiveness of different recruitment sources

2. Impact of Digital Recruitment on Organizational Performance (2021)

Smith and Kumar (2021) conducted a study on the impact of digital recruitment systems on organizational hiring effectiveness. The research focused on the use of Applicant Tracking Systems (ATS), online job portals, and AI-based resume screening tools in manufacturing and technology companies. Data were collected from 500 HR professionals to analyze improvements in recruitment efficiency and quality of hiring.

3. Role of Employer Branding in Talent Acquisition (2022)

Nguyen and Patel (2022) analyzed how employer branding influences recruitment outcomes. The study examined 200 organizations and assessed how company reputation, social media presence, and employee reviews affect applicant attraction.

4. Fairness and Transparency in Selection Process (2023)

Reddy and Mehta (2023) conducted research on fairness in recruitment and selection practices across 250 companies. The study focused on structured interviews, unbiased evaluation criteria, and communication with candidates

5. Artificial Intelligence in Recruitment and Selection (2024)

Lopez and Chen (2024) explored the use of Artificial Intelligence (AI) in recruitment processes. The study examined AI-based resume screening, chatbots for candidate communication, and predictive analytics in selection decisions.

III . OBJECTIVES OF THE STUDY

- A Study on recruitment and selection process at Arcus Automation Pvt.Ltd, Chennai • To Identify challenges and limitations in the current recruitment and selection process.
- To assess the selection methods employed, including technical evaluations, interviews, And psychometric assessments.
- To analyze the existing recruitment and selection process at Arcus Automation,
- Identifying each stage from job posting to final selection.
- To evaluate the effective of recruitment strategies used by y the organization in attracting skilled professionals.
- To suggest improvement and best practices for optimizing recruitment efficiency reducing costs and enhancing employee satisfaction and retention.

IV. RESEARCH METHODOLOGY :

A systematic and scientific process of collecting, analyzing, and interpreting data. It helps in solving problems and drawing meaningful conclusions.

Research Design:

A blueprint or framework that guides the entire research process. It defines methods for collecting, measuring, and analyzing data.

• Descriptive Research Design:

A method used to describe characteristics of a group or situation. It focuses on observing and presenting existing conditions accurately.

• Data Collection Methods:

Techniques used to gather relevant information for the study. They ensure accuracy and reliability of research findings.

• Primary Data:

Original data collected directly from respondents by the researcher. It is specific, first-hand, and collected for the current study.

• Secondary Data:

Data already collected and available from other sources. It includes journals, reports, and websites for reference.

• Sampling Method:

The process of selecting a representative portion of the population. It helps in making generalizations about the entire group.

• Pilot Study:

A preliminary test conducted to check the reliability and clarity of the questionnaire .It helps in making necessary improvements before the final study.

• Sample Size Determination

• The sample size was calculated using the formula:

$$n = \frac{N \times Z^2 \times p \times q}{e^2(N - 1) + Z^2 \times p \times q}$$

N = 200, Z = 1.96, p = 0.5, q = 0.5, e = 0.05, The required sample size was 132.

Normality Test

Non-parametric statistical tests were used for analysis because the Shapiro-Wilk and Kolmogorov-Smirnov tests returned p-values of 0.000, indicating that the data did not follow a normal distribution.

Statistical Tools Used

The gathered information was examined using:

- Analysis of Percentages
- Spearman Rank Correlation
- The Mann-Whitney U Test
- Chi Square Test
- Friedman Test

Data Analysis

Percentage analysis was used to interpret employee responses:

Percentage = No. of respondents / Total respondents x 100 IV.

RESULTS & DISCUSSION

1. Spearman Rank Correlation

Null Hypothesis (H0): There is no significant relationship between recruitment process and selection process.

Alternative Hypothesis (H1): There is a significant relationship between recruitment process and selection process. •

Correlation between Recruitment Process and Selection Process

Variables Compared	Correlation Coefficient (ρ)	Significance (p-value)	Result
Recruitment Process & Selection Process	0.717	0.000	Significant Positive Relationship

The Spearman correlation coefficient value ($\rho = 0.717$) indicates a **strong positive relationship** between recruitment and selection process. Since the p-value (0.000) is less than 0.05, the result is statistically significant. **2. Mann-Whitney U Test**

Null Hypothesis (H0): There is no significant difference between male and female employees in the recruitment process. **Alternative Hypothesis (H1):** There is a significant difference between male and female employees in the recruitment process.

Difference between Gender and Recruitment Process

Gender	N	Mean Rank	Sum of Ranks
Male	65	96.05	6243.25
Female	67	101.50	6800.50
Total	132		

Test	Value
Mann-Whitney U	1328.000
Wilcoxon W	16904.000
Z Value	-2.138
Significance (2-tailed)	0.033

Variables Compared	Chi-Square Value
Gender & Recruitment Sources	0.895

df	Significance	Result
1	0.639	Not Significant

The p-value (0.639) is greater than 0.05, indicating that there is **no significant association between gender and recruitment sources**.

3. Friedman Test

Ranking of Recruitment and Selection Factors

Factors	Mean Rank	Rank
Selection Process	3.16	I
Recruitment Process	3.09	II

Friedman Test Statistics

Test Statistics	Value
N	132
Chi-Square	13.797
df	1
Significance	0.008

The p-value (0.008) is less than 0.05, indicating a **significant difference between the factors**. The selection process has a higher mean rank than the recruitment process.

4. Chi-Square Results

Test	Value	df	Significance (p-value)
Pearson Chi-Square	0.895	1	0.639

The p-value (0.639) is greater than 0.05, indicating no significant association. Gender does not influence recruitment source preference

V. SUGGESTIONS

Based on the findings of the study, several suggestions can be made to improve the effectiveness of the recruitment and selection process. The organization should focus on enhancing transparency by clearly communicating recruitment procedures, selection criteria, and decision-making processes to candidates. This will help in building trust and reducing uncertainty among applicants. Efforts should also be taken to minimize delays in the recruitment process, as faster hiring can prevent the loss of potential candidates and improve organizational efficiency. Communication with candidates should be strengthened at every stage of the hiring process to ensure a positive experience and maintain engagement.

VI. CONCLUSION

The study on recruitment and selection process highlights the importance of effective hiring practices in organizational success. The findings indicate that while the organization has a structured recruitment system in place, there are several areas that require improvement, such as transparency, communication, and candidate experience. The statistical analysis confirms that recruitment and selection processes are closely related, and improvements in one area positively impact the other. While certain demographic factors like educational qualification influence perceptions, most factors do not significantly affect the recruitment process. The study also reveals that the selection process plays a more critical role compared to recruitment, emphasizing the importance of choosing the right candidate through effective evaluation methods.

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