

A Study on the Impact of Automated Human Resource Planning on Organization Performance in the E-Commerce Industry

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Abstract. The growth in the e-commerce industry is significantly visible and it is mainly due to the covid-19 pandemic, which has led to the emerging trend toward e-commerce and increased competition. E-commerce companies are facing tough competition. The paper is a systematic presentation consisting of collected facts of data and proposed conclusions to inform recommendations. The primary source is used for collecting data. The majority of respondents believe that HR planning leads to the fair distribution of work among the employees and it prevents overstaffing and understaffing. Also, it helps in the effective utilization of human resources as 82% of the respondents agree with this statement.

Keywords: e-commerce, recommendations, organization performance, human resource planning.

1 Introduction

Human resource planning is an important part of Human resources and it is also called Manpower planning. It ensures that an organization has an adequate number of people, is placed correctly, and is capable of completing tasks in meeting the organizational objective. It is about identifying the human potential and ability in the human resource available in the organization working for growth. Linking individuals to the right job is an essential part of planning because if the employees are satisfied with their jobs, it will ultimately lead to the achievement of the desired organizational performance. Human resource planning major activities are related to the recruitment, selection, placement, appraisal, and other activities for the existing human resources to improve their efficiency and effectiveness. E-commerce is a technology-driven industry so an organization needs to ensure effective human resource planning for a dynamic workforce, that is ready for challenges. HRP ensures that an

organization's employees are motivated by giving bonuses and other fringe benefits that encourage employees to perform efficiently and effectively. As it is unlikely that an e-commerce organization staffed by unenthusiastic workers will win any awards anytime soon. An organization with half as many employees who are genuinely enthusiastic about their work, on the other hand, will find it much easier to keep everyone productive and motivated daily. HR managers need to succeed in fast-moving e-commerce surroundings. Becoming a recruiter in the high-voltage e-commerce industry in India can be difficult. Most of these companies are start-ups, so it's difficult to attract the right people and manage diversity. Keeping employees happy and motivated is a big task for HR professionals. Therefore, it is important to create a home-like environment. Apart from that, reward and recognition are essential. HR in e-commerce is challenging because of the diversity in the organization. Organizations in every industry especially e-commerce should strive to maximize mobility throughout so an organization can rely on every member when the going gets tough. Human resources are maybe not as important to the organization as sales, marketing, or customer service, but they are vital for maintaining stability during times of change. There has been significant growth in e-commerce mainly due to the covid-19 pandemic, which has led to the emerging trend toward e-commerce and increased competition. E-commerce companies are facing tough competition. So, there has been a realization that the true strength of an organization lies with its human resource, for which proper human resource planning is vital for an organization in the e-commerce industry to survive the competition or to gain a competitive advantage. When compared to other sectors in India, where HR and systems are becoming increasingly important, the e-commerce industry has a lot of potentials. We see a lot of young people gravitating toward e-commerce companies because it provides them with the decent salary and lifestyle they desire. However, even in the e-commerce industry, finding the appropriate personnel remains a difficulty. To deal tactically with this, automated HR solutions can be used. E HRM could be a way of implementing HR strategies, policies, and practices in organizations. But still many industries which are technology-driven like e-commerce believe that human resources are not important to the organization. They focus more on sales, finance, production, marketing, customer service, or other departments avoiding the human resource part of the organization which leads to many issues like understaffing, overstaffing, lack of motivation in employees, etc., against this backdrop, the present study aims to study the impact of human resource planning on organization performance in the e-commerce industry.

1.1. Human Resource challenges in the E-commerce industry

- a. As a direct result of the above, employees are constantly forced to stand up, leading to stress and demoralization in the workplace and common causes of layoffs.
- b. E-commerce is characterized by a clear fragmentation of the workforce, with a small percentage of qualified managers managing semi-skilled employees. Organic growth, including identifying lower-level talent and preparing for higher-level positions, is a challenge that creates a large supply-demand gap.
- c. As more venture capital firms see e-commerce as a jackpot, too many are keeping up with the times, failing to keep up with the fierce competition, and failing prematurely.

This makes it difficult for promoters to streamline operations and invest in employee training.

- d. Organizations face the challenge of balancing management attention between the immediate need to complete a paper and the long-term capabilities that result from effective talent management.
- e. To guide or coach young employees. Positional power management is less effective because they place more emphasis on autonomy and do not respect authority.

2 Literature Review

Farooq, & Hussain, (2010) examined the reason for having a manpower arrangement. The results reveal that it is to have an exact assessment of the number of workers required, with coordinating expertise necessities to achieve organizational objectives. A study by Khera et al., (2012) studied the impact on human resources information systems and their workforce planning: Cognitive analysis of information technology companies. The study highlights that HRP makes a difference for the organization to overcome challenges by plotting the number of representatives, as well as their work depiction. Not as it were this, execution examination being the best spurring variables within the organizations got to be overseen appropriately and HRP makes a difference in this also by analyzing the employee's dedication to his work and his/her normality within the organization. According to the study done by Sharma et al., (2012), the strategic partner role requires HR professionals to identify the main areas requiring attention with regard to people and technology.

A study by Rhoda et al., (2013) examined that the strategic partner role of HR professionals comprises dimensions such as consultant, business expert, knowledge manager, change agent, and strategic human resources planner who supports the HR system to achieve the goals of the organization. Further, a study done by Al Mamun et al., (2014) examined that Strategic HR activities help boost the productivity of employees, and future productivity results should indicate how employees use technological innovations. HR feature helps increase employee productivity. Future results need to show how employees are embracing innovation. A study by Byremo (2015) highlights HR practices affecting the employee's Capacities, Inspiration, and Opportunities to take part are the practices that will affect organizational performance. Typically, exceptionally comparative to what a few analysts call the KSA hypothesis. It is supported that the utilization of HR practices that increment the employees' information, aptitudes, and capacities (KSAs), spur workers to use their KSAs, and, enable the representatives to do so, will reliably make development and success for its organizations.

A study by Samolejová et al., (2015) centered their consideration on recognizing those variables that have the foremost significant effect on the planning, and subsequently on the company performance, of these zones, and their changes amid the execution of the arrangement can cause the greatest deterrents to accomplishing the objectives. The inspiration of employees has been assessed as a region of management and human resource planning, which has the biggest effect on the performance of the observed metallurgical undertakings, was taken after by preparing and enrollment. Further, Pournader (2015) studied a three-step design science approach to develop a new framework for paper human resource planning. The

findings indicated that staffing management could be addressed more accurately according to the size and complexity of the paper; i.e., it could be developed as a separate plan of staffing management or as a part of Human resource planning. A well-organized staffing management plan including selection, recruitment, and safety issues could significantly improve the paper's performance. Further Karikari et al., (2015) studied the role of human resource information systems in the process of manpower activities. The study highlights the importance of forecasting staff requirements that are well established in Human Resource Management vocabulary as manpower planning influences companies' performance because whatever businesses do, they cannot ignore the human aspect. Manpower planning contributes to organizations' earnings/returns by reducing costs and employees training.

According to Haider et al., (2015), employees feel that effective HR practices have a coordinated and positive relationship with worker maintenance. The companies that effectively draw in and hold key employees offer high compensation and an energetic environment. Representatives are faithful to the boss on the off chance that the manager is committed and supportive of their long-term career advancement. Workers come to the organization with certain needs, wants, and aptitudes and anticipate that they would be given an environment where they can utilize and improve their capacities and fulfills numerous of their needs. Jalagat (2016) examined the relationship between strategic human resource management and organizational performance. The results reveal that the human resource strategies like planning of human resources have a relation with organizational performance whether financially or employee performance which in turn encourages productivity. HR Strategy also contributes to the development of business strategy and has become vital in meeting and keeping quality customer satisfaction and superior quality performance, and maintaining the dedication and commitment of the employees to the organization for successful and sustainable competitive advantage. Thus, it enhances employee development, motivation, and commitment to stay longer in the company. Further, Pamela et al., (2017) analyzed Human resource planning and organizational performance in a firm in Port Harcourt. The result indicated that human resource planning has a strong influence on organizational performance in forecasting future demand of business and environmental factors which help to manage human resource demand as required. Having the required number and qualified personnel in an organization helps to achieve the firm's success.

The study done by Chakraborty & Biswas, (2020), sheds light on the reality that in this complex and energetic commerce framework where the creators discover a multigenerational workforce and how HRP exercises vitalize the execution of the firm. The survey confirms the overall model and HRP activities, namely retention planning, professional training and development, workplace analysis and design, successor development plans, and reintegration plans, and invigorates the company's performance. It reflects that. Recruitment plans have a negative and insignificant impact on the functional performance of your organization. The successor development plan has a great impact on the company's competitive advantage, followed by the retention plan. The results also confirm that the effective performance of the company provides strategic sustainability. A recent study done by Hani, (2021) studied the impact of human resource planning in achieving the strategic goal of the Firm with the moderating role of organizational innovation. The study highlighted the role of human resource planning which includes factors like staffing plans and career development have been identified as crucial in achieving organizational goals and productivity.

3 Research Objective & Methodology

3.1 Research Objective

- To examine the influence of HRP on employee efficiency
- To evaluate the HRP concerning technology on the organization's growth
- To analyze employee sentiment about the effect of HRP on organizational performance.

3.2 Research Methodology

The paper is a systematic presentation consisting of collected facts of data and proposed conclusions to inform recommendations. The primary source is used for collecting data.

4 Data Analysis

4.1. Introduction

This chapter includes charts, tables, graphs, and diagrams based on qualitative/quantitative data analysis. The results are presented according to the objectives i.e., to examine the influence of HRP on employee efficiency, to evaluate the HRP concerning technology on the organization's growth, and to analyze employee sentiment about the effect of HRP on organizational performance; these objectives add up to determine the main objective of this study i.e. to find out overall impact of human resource planning on the organizational performance of the organizations in the e-commerce sector.

4.2. Response Rate

Out of 150 employees who were given the questionnaire, 110 responded to the questionnaires which were distributed. Table 6.1 indicates the response rate which is 73.3%

Table 1. Response Rate.

Questionnaires	Example	Percentage
Number of employees who responded	110	73.3%
Number of employees who were asked to respond	150	100%

4.3. Demographic information of the respondents

This section consists of demographic data of the respondents i.e., age, gender, and level of education. Demographic information helps to understand better about the characteristics of a respondent.

4.3.1. Age of the respondents

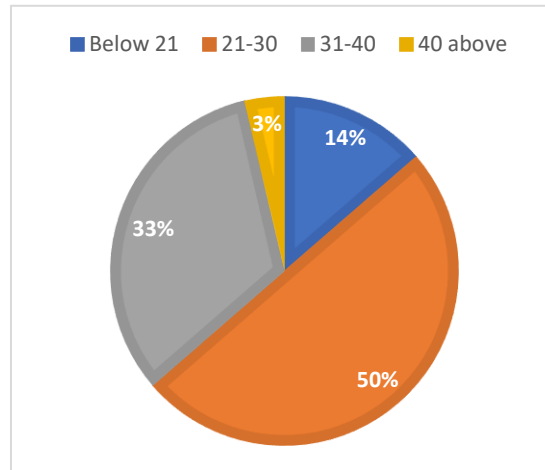


Fig. 1. Age of respondents.

Table 2. Statistics of Age and respondents.

Age	respondents
Below 21	15
21-30	55
31-40	36
40 above	4
Total	110

According to the pie chart, 50% of the respondents are of the age group 21-30. 33% are in the age group of 31-40, 14% are in the age group below 21 and 3% are in the age group above 40.

4.3.2. Gender of the respondent

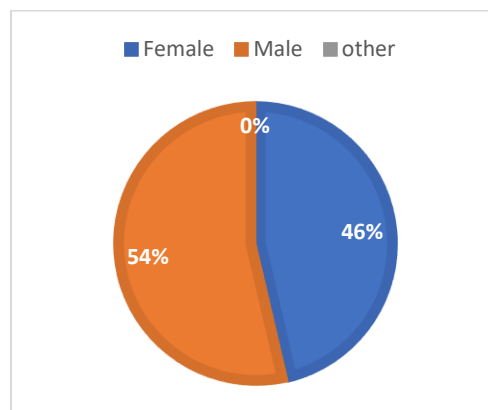


Fig. 2. Gender of respondents

Table 3. Gender and respondents

Gender	respondents
Female	51
Male	59
other	0
Total	110

According to the pie chart, 54% of respondents are male and 46% of respondents are female.

4.3.3. Level of education of the respondents

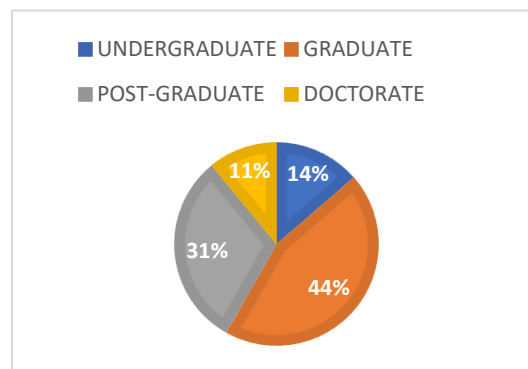


Fig. 3. Level of education of respondents

Table 4: Level of education

Level of education	respondents
Undergraduate	15
Graduate	49
Post-graduate	34
Doctorate	12
Total	110

According to the pie chart, 31% of the respondents had attained a master's degree level in education, 44% were bachelor's degree holders while 11% had a Ph.D., the high percentage of university-level education is an indicator that the respondents were well educated to understand the questions.

4.4 "Human resource planning" related questions with respect to organizations in the "E-Commerce industry"

4.4.1. Graph

This graph includes questions that are directly about the impact of human resource planning. On the Likert scale, 64 respondents chose strongly agree, 25 respondents chose to agree, 13

respondents chose neutral, 7 respondents chose to disagree and 1 respondent chose strongly disagree for the first question which was if HR Planning prevents understaffing or overstaffing.

On the Likert scale, 52 respondents chose strongly agree, 32 respondents chose to agree, 17 respondents chose neutral, 7 respondents chose to disagree and 2 respondents chose strongly disagree for the second question which was if HR Planning ensures the fair distribution of work among the employees.

On the Likert scale, 47 respondents chose strongly agree, 43 respondents chose to agree, 11 respondents chose neutral, 8 respondents chose to disagree and 1 respondent chose strongly disagree for the third question which was if HR Planning helps in the effective utilization of human resources in the organizations.

On the Likert scale, 58 respondents chose strongly agree, 36 respondents chose to agree, 9 respondents chose neutral, 6 respondents chose to disagree and 1 respondent chose strongly disagree for the fourth question which was if HR Planning affects the overall performance of the organization.

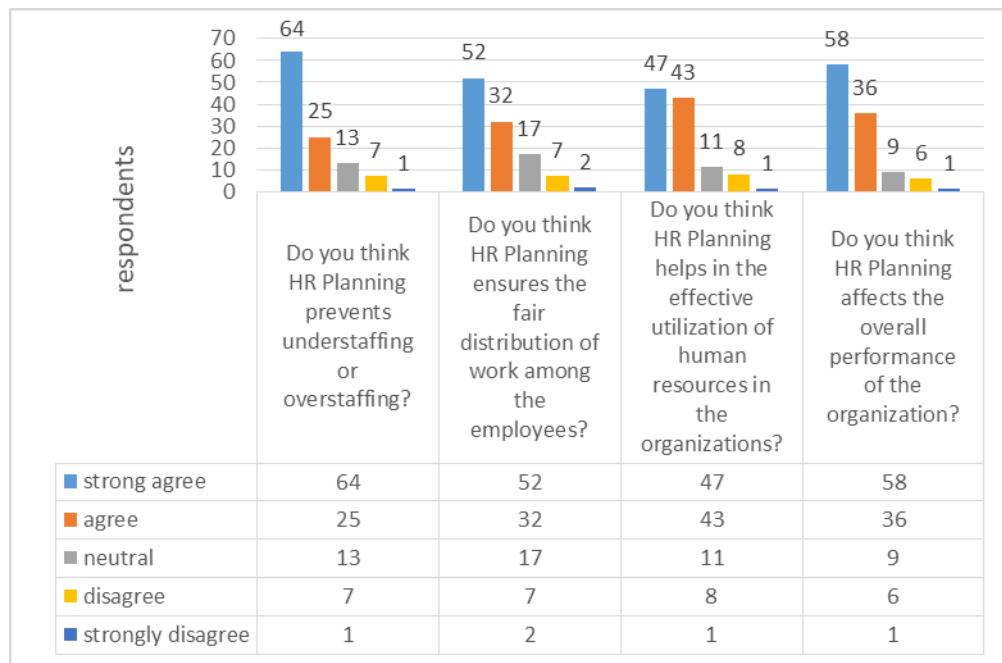


Fig. 4. Human Resource planning in the E-commerce industry

4.4.2. Graph

This graph includes questions related to the presence of human resource planning on the organizational level in the e-commerce industry. On the Likert scale, 71 respondents chose strongly agree, 23 respondents chose to agree, 6 respondents chose neutral, 8 respondents chose to disagree and 2 respondents chose strongly disagree for the first question which was if

the top-level management admits the importance of human resource in the accomplishment of organizational objectives.

On the Likert scale, 57 respondents chose strongly agree, 23 respondents chose to agree, 19 respondents chose neutral, 10 respondents chose to disagree and 1 respondent chose strongly disagree for the second question which was if the organizations in this industry ensure that they possess the right mix of skills.

On the Likert scale, 49 respondents chose strongly agree, 34 respondents chose to agree, 12 respondents chose neutral, 14 respondents chose to disagree and 1 respondent chose strongly disagree for the third question which was if the organizations have right people at right place.

On the Likert scale, 69 respondents chose strongly agree, 29 respondents chose to agree, 9 respondents chose neutral, 3 respondents chose to disagree and no respondent chose strongly disagree for the fourth question which was if the organizations consider their strategic needs while undertaking the recruitment and selection process.

On the Likert scale, 92 respondents chose strongly agree, 8 respondents chose to agree, 4 respondents chose neutral, 6 respondents chose to disagree and no respondent chose strongly disagree for the fifth question which was if the e-commerce organizations undertake comprehensive HR Planning at regular intervals.

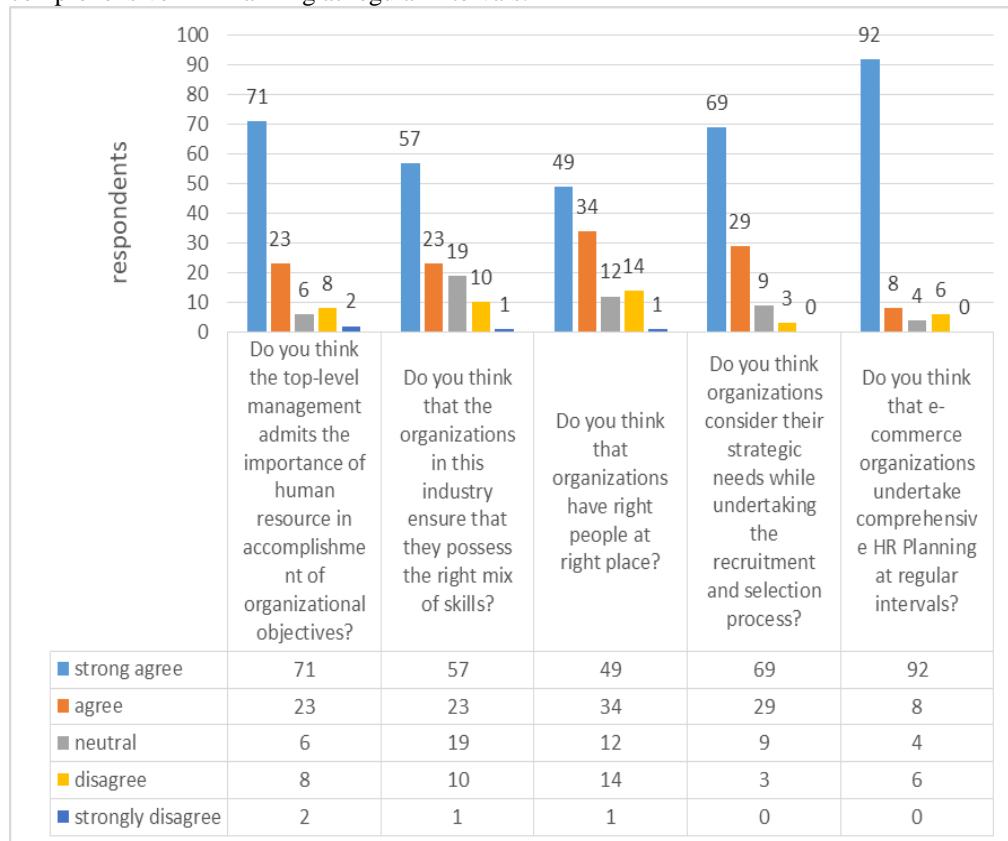


Fig. 5. Presence of human resource planning on the organizational level in the e-commerce industry

4.4.3. Graph

This graph includes questions regarding the involvement of employees in human resource planning in the e-commerce industry.

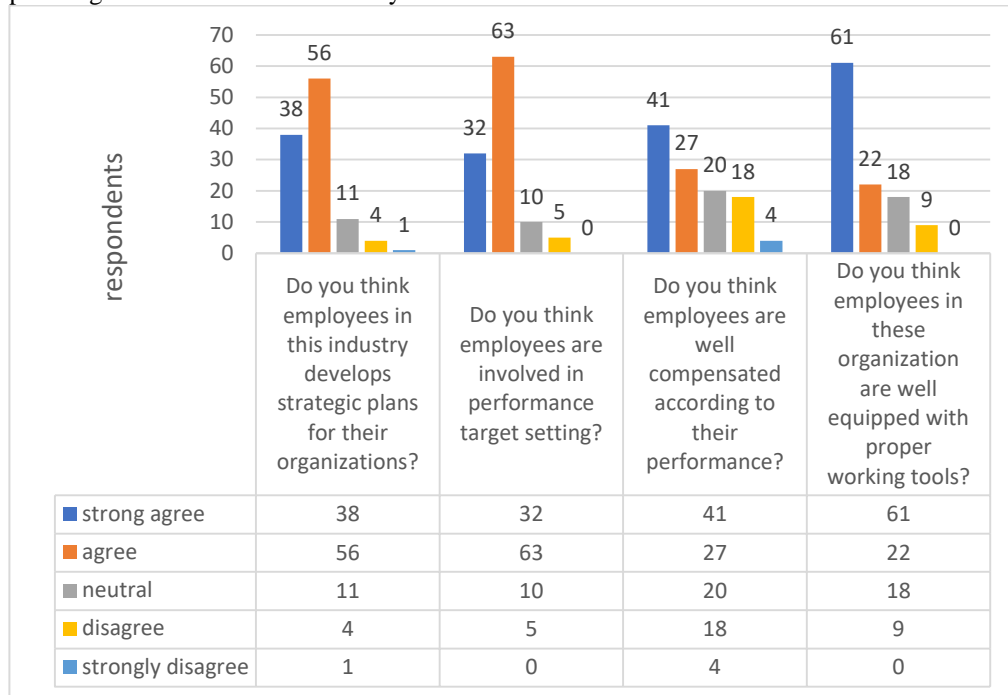


Fig. 6. Involvement of employees in human resource planning in the e-commerce industry

On the Likert scale, 38 respondents chose strongly agree, 56 respondents chose to agree, 11 respondents chose neutral, 4 respondents chose to disagree and 1 respondent chose strongly disagree for the first question which was if employees in this industry develop strategic plans for their organizations.

On the Likert scale, 32 respondents chose strongly agree, 63 respondents chose to agree, 10 respondents chose neutral, 5 respondents chose to disagree and no respondent chose strongly disagree for the second question which was if employees are involved in performance target setting.

On the Likert scale, 41 respondents chose strongly agree, 27 respondents chose to agree, 20 respondents chose neutral, 18 respondents chose to disagree and 4 respondents chose strongly disagree for the third question which was if employees are well compensated according to their performance.

On the Likert scale, 61 respondents chose strongly agree, 22 respondents chose to agree, 18 respondents chose neutral, 9 respondents chose to disagree and no respondent chose strongly disagree for the fourth question which was if employees in these organizations are well equipped with proper working tools.

4.4.4. Graph

This graph includes questions doing a comparison of the E-commerce industry with other industries with respect to human resource planning.

On the Likert scale, 38 respondents chose strongly agree, 34 respondents chose to agree, 15 respondents chose neutral, 19 respondents chose to disagree and 4 respondents chose strongly disagree for the first question which was if employees are provided with the same opportunities for promotion and training as in any other industry.

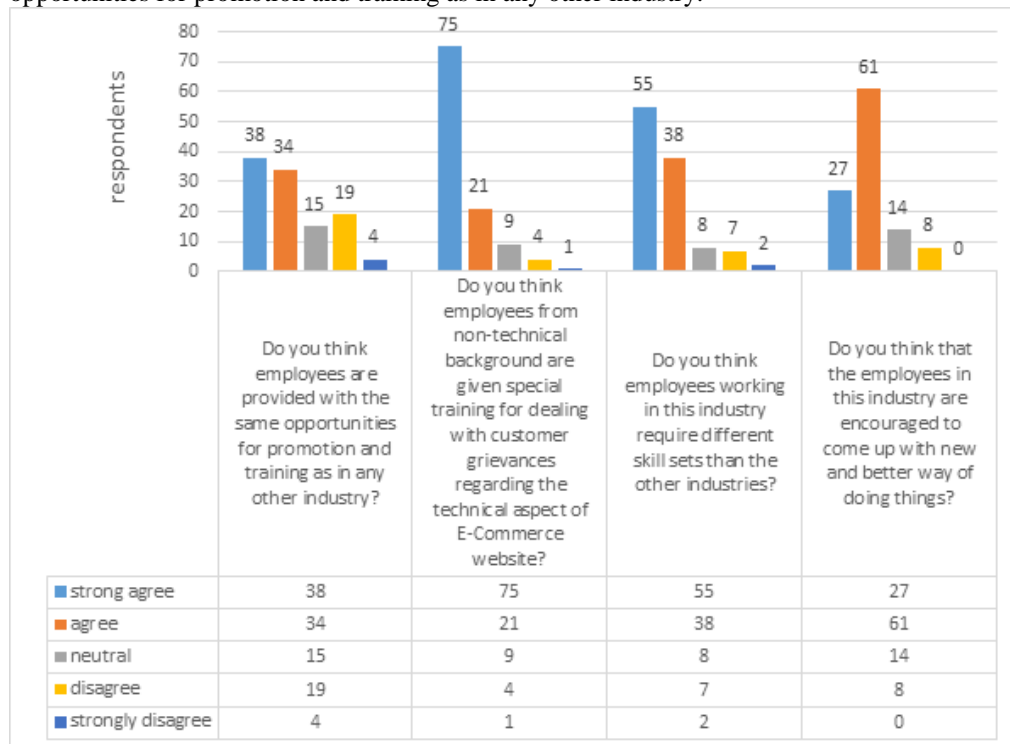


Fig. 7. E-commerce industry with other industries with respect to human resource planning

On the Likert scale, 75 respondents chose strongly agree, 21 respondents chose to agree, 9 respondents chose neutral, 4 respondents chose to disagree and 1 respondent chose strongly disagree for the second question which was if employees from non-technical backgrounds are given special training for dealing with customer grievances regarding the technical aspect of the E-Commerce website.

On the Likert scale, 55 respondents chose strongly agree, 38 respondents chose to agree, 8 respondents chose neutral, 7 respondents chose to disagree and 2 respondents chose strongly disagree for the third question which was if employees working in this industry require different skill sets than the other industries.

On the Likert scale, 27 respondents chose strongly agree, 61 respondents chose to agree, 14 respondents chose neutral, 8 respondents chose to disagree and no respondent chose strongly disagree for the fourth question which was if the employees in this industry are encouraged to come up with a new and better way of doing things.

4.5. Sentiment analysis

References for positive sentiments are 1501 including 926 for very positive and 575 for moderately positive. References for negative sentiments are 164 including 143 for moderately negative and 21 for very negative.

Sentiment		Search Project	
⊕	Name	Files	References
⊕	Positive	1	1501
⊕	Very positive	1	926
⊕	Moderately positive	1	575
⊖	Negative	1	164
⊖	Moderately negative	1	143
⊖	Very negative	1	21

Fig. 8. Results of Sentiment Analysis

4.5.1. Coding Matrix

	A : Very negative	B : Moderately negative	C : Moderately positive	D : Very positive
1: Codes\Q\1. Undertake comprehensive HR Planning ...	0	6	8	92
2: Codes\Q\10. Consider their strategic needs while und...	0	3	29	69
3: Codes\Q\11. Employees in this industry develops stra...	1	4	56	38
4: Codes\Q\12. HR Planning ensures the fair distributio...	2	7	32	52
5: Codes\Q\13. HR Planning helps in the effective utiliz...	1	8	43	47
6: Codes\Q\14. HR Planning affects the overall performa...	1	6	36	58
7: Codes\Q\15. Employees are well equipped with prope...	0	9	22	61
8: Codes\Q\16. Employees require different skill sets tha...	2	7	38	55
9: Codes\Q\17. Employees from non-technical backgrou...	1	4	21	75
10: Codes\Q\2. Employees are involved in performance...	0	5	63	32
11: Codes\Q\3. Employees are well compensated accor...	4	18	27	41
12: Codes\Q\4. Employees are provided with the same o...	4	19	34	38
13: Codes\Q\5. Human Resource Planning prevents un...	1	7	25	64
14: Codes\Q\6. Top-level management admits the impor...	2	8	23	71
15: Codes\Q\7. Employees are encouraged to come up ...	0	8	61	27
16: Codes\Q\8. Organizations ensure that they possess ...	1	10	23	57
17: Codes\Q\9. Organizations have right people at right ...	1	14	34	49

Fig. 9. Coding Matrix

Each word that contains emotion has a predefined score. Each emotion node represents a range of (sentiment) scales. The score for each word determines the emotion node in which it is encoded. Words with values in the neutral range are not coded.

Fig 10. Represents the graphical representation of the coding matrix. Results of the sentiment analysis show positive emotions more than negative ones. The maximum number of

respondents feels that activities related to human resource planning are implemented by the organizations in the e-commerce industry and this industry does not neglect its human resource.

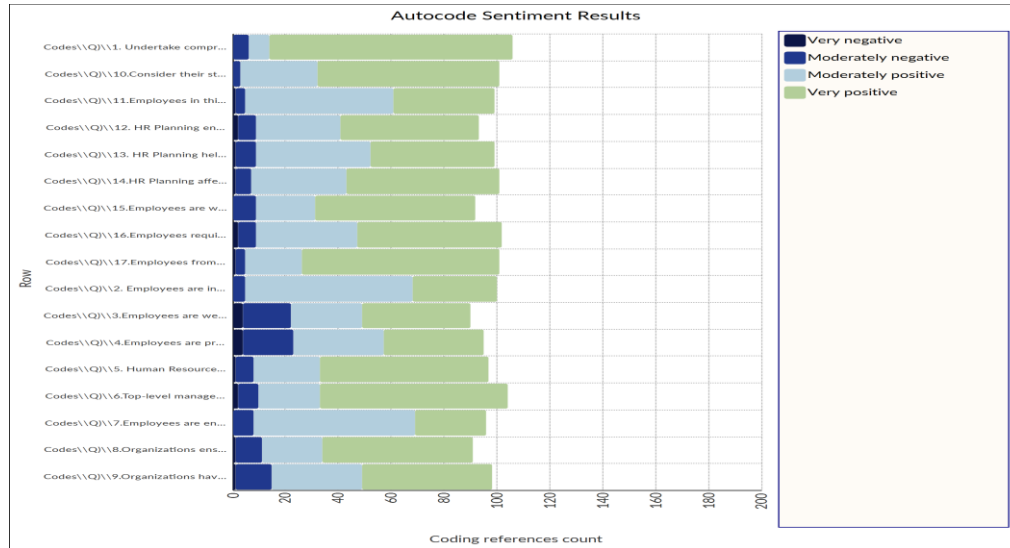


Fig. 10. Graphical representation of the coding matrix

6 Conclusion

Human resource planning is the first step in the human resource management process which ensures that an organization has an adequate number of people, placed correctly, timely, and capable of effective and efficient completion of tasks to assist in meeting the overall objective of an organization. HRP is needed to determine the number and categories of employees an organization needs to successfully perform its mission.

It is vital for every organization in the e-commerce industry to align its HRP with its organizational goals and objectives because hiring the incorrect workforce or incapacity to foresee fluctuations in appointment requirements might be expensive in the long run. incapacity to foresee fluctuations in appointment requirements might be expensive in the long run. Effective demand and supply forecasts are needed to achieve optimal staffing. Even industries that are highly dependent on technology like e-commerce need to properly implement human resource planning in order to achieve organizational objectives.

The organizations in the e-commerce industry should do comprehensive Human resource planning regularly, more time should be invested as it is really important especially for the start-up in this industry to manage its workforce properly as the employees are doing work from home due to covid -19 pandemic. To ensure optimal staffing level, the organization should undertake professional demand and supply forecasting rather than doing random hirings. The top-level management of the company should try to involve employees in developing strategic plans by asking for suggestions and ideas as it will help the organization to come up with more new or innovative ideas. An employee's survey can be conducted

regularly to keep them motivated and it will also generate a feeling of belongingness in them ultimately leading to will increase in their productivity. EHRM can be used for effective human resource planning as e-commerce is a technology-driven industry.

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