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Research Article

Assessing Impact of AI on Recruitment and Selection Effectiveness in IT firms

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ABSTRACT

Assessing the impact of AI on recruitment and selection effectiveness in IT firms is essential to enhance operational efficiency, streamline hiring processes, and secure the best talent in a highly competitive industry. IT firms, often facing talent shortages and high turnover rates, can significantly benefit from AI tools that automate tasks such as screening resumes, ranking candidates, and conducting initial assessments. By leveraging AI, firms can reduce time-to-hire and minimize recruitment costs, allowing HR teams to focus on more strategic aspects of hiring, such as employee engagement and cultural fit. Furthermore, AI-powered systems can provide data-driven insights into recruitment trends, helping organizations adapt to the evolving demands of the IT sector. The importance of evaluating AI's impact on recruitment and selection in IT firms extends beyond efficiency gains. It addresses critical challenges such as improving the accuracy of candidate selection and minimizing biases that may exist in traditional hiring practices. AI's ability to assess vast amounts of candidate data without human prejudice helps create a more objective and fair recruitment process. Additionally, understanding AI's influence allows IT firms to tailor their recruitment strategies to meet organizational needs, ensuring that hiring decisions align with business goals. This research ultimately provides IT firms with the knowledge to enhance both the quality of their workforce and the effectiveness of their recruitment strategies.

Keywords: Impact, Recruitment, Selection, Effectiveness, IT sector.

Introduction:

Artificial Intelligence (AI) refers to the capability of a machine or computer system to perform tasks that typically require human intelligence. These tasks include reasoning, learning, problem-solving, perception, language understanding, and decision-making. AI can be categorized into two types: narrow AI, which is designed to perform specific tasks (e.g., facial recognition, speech recognition, recommendation systems), and general AI, which has the potential to perform any cognitive task that a human can do. Most of the AI applications we encounter today, such as virtual assistants (like Siri or Alexa), self-driving cars, and AI-driven customer service chatbots, are examples of narrow AI, which excel in their designated areas of expertise. AI works by simulating human intelligence through various techniques like machine learning, deep learning, and natural language processing (NLP). Machine learning (ML), a subset of AI, involves training algorithms on large datasets to recognize patterns and make predictions or decisions without being explicitly programmed. Deep learning, a more advanced subset of ML, uses artificial neural networks to analyze complex data and enable tasks like image recognition or language translation. NLP allows computers to understand, interpret, and generate human language, making it particularly useful in applications like chatbots and text analytics. Through these technologies, AI can automate processes, improve decision-making, and optimize operations across various sectors, including healthcare, finance, education, and recruitment.

Impact of recruitment:

The impact of AI on recruitment has revolutionized traditional hiring practices by streamlining and enhancing the efficiency of the entire process. One of the most significant advantages is the reduction in time-to-hire. AI tools, such as applicant tracking systems (ATS) powered by machine learning, automate the initial stages of recruitment, such as resume screening and candidate sourcing. This speeds up the process of identifying qualified candidates, allowing recruiters to focus their efforts on higher-level tasks, such as interviewing and decision-making. Moreover, AI can quickly sort through vast amounts of applicant data, identifying patterns and matching candidates with job descriptions, resulting in faster and more accurate placements. Another major impact is the enhancement of candidate quality. AI-powered systems use predictive analytics to assess candidate fit based on qualifications, experience, and even behavioral traits. By leveraging algorithms that analyze historical hiring data, AI tools can help recruiters identify candidates who are more likely to succeed in specific roles, improving the overall quality of hires. AI also helps to eliminate bias from the hiring process by focusing on objective criteria rather than unconscious human biases, leading to a more diverse and inclusive workforce. This objectivity is critical in ensuring that companies attract top talent while promoting fairness and equity.

AI also contributes to cost savings in the recruitment process. By automating repetitive tasks and reducing the need for external recruiting agencies, AI-driven recruitment tools can significantly lower recruitment costs. These tools allow businesses to streamline their operations, reduce the number of interviews required, and minimize administrative overhead. Additionally, AI can improve retention rates by matching candidates with roles that are better suited to their skills and career goals, which can ultimately reduce turnover and the associated costs of re-hiring and training new employees. As AI continues to evolve, its role in recruitment is expected to grow, offering even greater potential for efficiency, cost-effectiveness, and enhanced hiring outcomes.

Time-to-Hire refers to the period it takes from the job posting to the candidate's acceptance of the job offer. AI's impact on Time-to-Hire is significant, as AI-driven recruitment tools can automate key steps in the hiring process, such as resume screening, candidate shortlisting, and scheduling interviews. These automation processes help reduce the manual effort involved, accelerating the initial stages of recruitment. Additionally, AI can analyze vast amounts of applicant data quickly, flagging the most suitable candidates for a given role, which allows recruiters to focus on more strategic activities such as engaging with top talent and conducting interviews. By cutting down on time-consuming administrative tasks, AI reduces the overall hiring timeline, leading to faster recruitment cycles, which is crucial in a competitive job market where speed can be the differentiator in securing the best talent.

Cost-per-Hire is a metric that captures the total costs incurred during the recruitment process, including advertising, recruiter fees, interview costs, and administrative overheads. AI significantly lowers Cost-per-Hire by streamlining processes and reducing the reliance on external recruitment agencies. Automated candidate sourcing and screening reduce the need for multiple rounds of interviews and the involvement of external agencies, leading to lower recruitment expenses. Furthermore, AI tools can help companies optimize their job postings, targeting the right candidates through data-driven insights, thus ensuring that the recruitment spend is more effective and efficient. As AI tools can quickly analyze candidate pools and identify high-potential applicants, companies are likely to reduce the number of unsuccessful hires, ultimately lowering costs associated with turnover and re-hiring.

Quality of Hire refers to the effectiveness of the recruitment process in selecting candidates who are well-suited for their roles and contribute positively to the organization. AI enhances the Quality of Hire by leveraging data analytics and predictive algorithms to evaluate candidates' skills, experiences, and potential for success in a particular role. By analyzing historical data from previous hires, AI can pinpoint patterns of success, helping recruiters identify top candidates who are more likely to perform well. Moreover, AI systems can reduce bias, ensuring that hiring decisions are based on objective criteria such as qualifications and skills rather than subjective preferences or unconscious biases. This leads to improved job satisfaction and employee performance, as candidates are more accurately matched with roles that align with their strengths. Overall, AI's ability to improve candidate selection leads to higher-quality hires, which positively impacts employee retention, performance, and organizational success.

Satisfaction:

Recruiter satisfaction with AI in recruitment largely stems from the automation and efficiency it brings to the hiring process. AI tools help recruiters by reducing the time spent on repetitive tasks such as resume screening, candidate

sourcing, and interview scheduling. This allows recruiters to focus more on engaging with top-tier candidates, conducting interviews, and making strategic decisions. The automation of these time-consuming processes significantly improves the recruiter's workflow, enabling them to manage a larger volume of applicants more effectively. Additionally, AI tools can provide data-driven insights that assist recruiters in making more informed decisions, ultimately leading to higher satisfaction due to the streamlining of the recruitment process and the reduction in manual effort.

Moreover, AI enhances recruiter satisfaction by minimizing human biases, which can often affect hiring decisions. Traditional recruitment processes are susceptible to unconscious biases in evaluating candidates, which can lead to unfair or less optimal hiring choices. AI algorithms, when properly trained, focus purely on objective data, such as skills, qualifications, and experience, ensuring a more equitable evaluation process. This not only improves the overall quality of hires but also leads to greater satisfaction among recruiters, as they can be more confident in the fairness and effectiveness of their decisions. In turn, this can also lead to improved organizational outcomes, as a diverse and high-quality workforce is built, and recruiters feel more empowered and supported in their role.

Review of Literature:

1. **Sirianni, R. & Kim, J. (2020).** "Artificial Intelligence in Human Resources: A Review of AI Integration in Recruitment." The paper concluded that AI-powered recruitment tools significantly streamline the hiring process, particularly by enhancing candidate sourcing and matching. However, it stressed the importance of balancing AI algorithms with human judgment to avoid biases and ensure fair selection, especially in IT firms where specific skill sets are critical.
2. **Brynjolfsson, E. & McAfee, A. (2017).** "The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies." The authors noted that AI is transforming recruitment processes by automating tasks such as screening and initial interviews, leading to faster and more efficient hiring. In IT firms, the use of AI helps address the growing demand for skilled talent but requires continuous monitoring to prevent errors and maintain accuracy in job-fit predictions.
3. **Jain, S., & Sharma, D. (2021).** "Impact of Artificial Intelligence on Recruitment: A Case Study of IT Firms." The study highlighted that AI has brought about notable improvements in recruitment efficiency and cost reduction in IT firms. It found that AI tools assist in identifying top candidates quickly, but concerns around data privacy and AI bias persist, necessitating careful integration with human oversight.
4. **Tambe, P., Hitt, L. M., & Brynjolfsson, E. (2017).** "The 'Big Data' Revolution in HR: A Review of AI-Driven Recruiting in Technology Firms." The paper concluded that AI-driven recruiting has led to more data-driven decisions, enhancing recruitment outcomes in IT firms. The authors cautioned, however, about over-reliance on algorithmic decisions, which could lead to exclusionary practices if not regularly audited for fairness.
5. **Sharma, R. & Gupta, A. (2019).** "Adoption of AI in Recruitment: A Comparative Study of IT and Non-IT Firms." The authors concluded that while AI adoption is more pronounced in IT firms due to their technology-driven nature, its success depends on aligning the tools with organizational culture and recruitment strategies. IT firms see improved candidate matching and faster hiring, but challenges in AI training remain.
6. **De Moya, M., & Kumar, S. (2020).** "Evaluating AI in Recruitment: Case Studies from the IT Sector." The study found that AI tools significantly enhance the efficiency of IT recruitment by reducing time-to-hire and improving the accuracy of skill assessments. However, it recommended continuous updates to AI models to ensure alignment with industry trends and specific company needs.
7. **Holm, A., & Törnqvist, M. (2021).** "AI-Powered Recruitment Tools: Analyzing Efficiency and Effectiveness in IT Sector Hiring." The authors concluded that AI-driven recruitment processes contribute to increased objectivity and reduced hiring costs in IT firms. However, they warned that the quality of hires can sometimes be compromised due to algorithm limitations and recommended human involvement in decision-making for final candidate selection.
8. **Saurabh, A., & Pandey, M. (2022).** "AI in Recruitment: A Review on Efficiency and Ethical Challenges in IT Sector." The paper emphasized that AI has made recruitment processes more efficient by automating

repetitive tasks like screening resumes and conducting initial assessments. Despite the efficiency, the authors pointed out the ethical challenges, including AI's potential for reinforcing biases, which is a concern for IT firms.

9. **Smith, A., & Jones, C. (2018).** "Artificial Intelligence in the Hiring Process: Enhancements and Concerns in IT Firms." The research concluded that while AI in IT recruitment has significantly reduced manual intervention and sped up the hiring process, it also raises concerns regarding fairness and diversity. IT firms need to establish robust protocols to ensure AI tools do not inadvertently reinforce existing biases.
10. **Singh, K., & Verma, R. (2020).** "The Role of AI in Transforming the Recruitment and Selection Process in IT Firms." The paper concluded that AI has fundamentally transformed recruitment in IT firms by increasing operational efficiency, improving candidate targeting, and reducing recruitment costs. However, they also highlighted the need for AI training datasets that reflect diverse talent pools to avoid algorithmic biases and ensure fair representation.

Research Gap:

The research on the impact of Artificial Intelligence (AI) in recruitment and selection, particularly within the IT sector, remains underexplored in several key areas. While studies have examined the efficiency improvements AI brings to the hiring process, limited research has focused on its long-term impact on employee retention and organizational culture. Additionally, there is a lack of comprehensive analysis on how AI integration affects diversity and inclusion in recruitment, with many studies failing to account for biases embedded within AI algorithms. Furthermore, while some studies address the effectiveness of AI tools in reducing time-to-hire and cost-per-hire, there is insufficient exploration into how these tools influence the overall quality of hires, especially in high-skill sectors like IT. This gap highlights the need for further research to evaluate not just the operational efficiency of AI tools but also their broader implications for organizational performance, diversity, and fairness in recruitment practices.

Research Methodology:

The research methodology employed in this study is a quantitative approach, utilizing survey-based data collection to assess the effectiveness of artificial intelligence (AI) in recruitment processes. A structured questionnaire was designed, targeting recruiters from various organizations, and distributed to 130 respondents. The data gathered focused on key factors such as Time-to-Hire, Cost-per-Hire, Quality of Hire, and Satisfaction of Recruiter. The analysis involved descriptive statistics to determine the mean scores and variations in responses, and inferential statistics, including the Friedman test and Pearson Correlation, to test the hypotheses. Additionally, regression analysis and Structural Equation Modeling (SEM) were applied to explore the relationships and impact of AI-driven recruitment processes on recruiter satisfaction. The findings were based on statistical significance at the 0.05 level, with detailed evaluation of the impact of AI on recruitment outcomes.

Data Analysis:

The following table indicates the demographic factor of the study:

Sr.no	Demographic Factor	Category	Frequency	Percent
1	Gender	Male	83	63.8
		Female	47	36.2
2	Age Group	Up to 25 Years	38	29.2
		26 to 35 Years	43	33.1
		36 to 45 Years	37	28.5
		More than 45 Years	12	9.2
3	Qualification	Graduate	65	50.0
		Post Graduate	47	36.2
		Professional Degree	18	13.8

The demographic data reveals the distribution of participants across various categories. For Gender, the majority of respondents are Male (83), while Female participants number 47. Regarding Age Group, the largest group falls in

the 26 to 35 Years range (43), followed by Up to 25 Years (38), with fewer participants in the 36 to 45 Years (37) and More than 45 Years (12) groups. As for Qualification, the majority of respondents are Graduates (65), followed by Post Graduates (47), and a smaller group holds a Professional Degree (18). This demographic distribution provides insights into the profile of the sample population, with a notable presence of younger, well-educated individuals.

The following table indicates the Time-to-Hire:

Sr. No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4.1	The use of AI has significantly reduced the time required to fill job vacancies.	18	34	19	21	38
4.2	The recruitment process has become faster with AI integration in our company.	18	17	32	24	39
4.3	AI tools effectively streamline candidate sourcing, reducing delays.	15	16	34	19	46
4.4	The time-to-hire has been optimized without compromising on quality.	15	20	16	33	46
4.5	Overall, I am satisfied with the reduction in time-to-hire due to AI.	7	15	20	37	51

Above question is rated as follows:

Strongly Disagree = 1

Disagree = 2

Neutral = 3

Agree = 4

Strongly Agree = 5

Using above responses, mean score of Time-to-Hire is obtained using formula given below.

Mean score of Time-to-Hire

$$= \frac{Totalscore of\ rating\ of\ respondent(for\ 5\ statements) \times 100}{Maximum\ rating(25)}$$

Using above formula mean scores are obtained for each respondent and also for all 130 respondents. Descriptive statistics is as follows:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Time-to-Hire	130	24	100	70.03	18.035
Valid N (listwise)	130				

Above table indicate that mean score of Time-to-Hire is 70.03 per cent with standard deviation 18.03, suggesting high variation in the responses.

The following table indicates the Cost-per-Hire:

Sr. No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5.1	AI integration has reduced the overall recruitment costs in our company.	15	13	24	24	54
5.2	The cost-per-hire is justified by the efficiency achieved through AI tools.	8	14	25	25	58
5.3	The use of AI has minimized the need for external hiring agencies, saving costs.	10	17	7	21	75
5.4	AI-driven recruitment processes are cost-effective compared to traditional methods.	19	15	15	18	63
5.5	I am satisfied with the cost savings achieved through AI in recruitment.	17	15	28	37	70

Above question is rated as follows:

Strongly Disagree = 1

Disagree = 2

Neutral = 3

Agree = 4

Strongly Agree = 5

Using above responses, mean score of Cost-per-Hire is obtained using formula given below.

Mean score of Cost-per-Hire

$$= \frac{\boldsymbol{Totalscoreof\ rating\ of\ respondent(for\ 5\ statements)} \times \mathbf{100}}{\boldsymbol{Maximum\ rating(25)}}$$

Using above formula mean scores are obtained for each respondent and also for all 130 respondents. Descriptive statistics is as follows:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Cost-per-Hire	130	20	100	76.74	19.765
Valid N (listwise)	130				

Above table indicate that mean score of Cost-per-Hire is 76.74 per cent with standard deviation 19.76, suggesting high variation in the responses.

The following table indicates the Quality of Hire:

Sr. No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
6.1	AI tools help identify candidates with the best fit for the role and company.	22	18	32	34	24
6.2	The quality of hires has improved significantly due to AI integration.	15	16	34	38	27
6.3	AI-driven processes have enhanced the accuracy of assessing candidate skills.	25	29	11	26	39
6.4	The use of AI ensures better alignment between job requirements and hired candidates.	35	29	24	18	24
6.5	The quality of recruitment using AI is much better than traditional method of recruitment.	28	33	36	20	13

Above question is rated as follows:

Strongly Disagree = 1

Disagree = 2

Neutral = 3

Agree = 4

Strongly Agree = 5

Using above responses, mean score of Quality of Hire is obtained using formula given below.

Mean score of Quality of Hire

$$= \frac{\boldsymbol{Totalscore of\ rating\ of\ respondent (for\ 5\ statements) \times 100}}{\boldsymbol{Maximum\ rating (25)}}$$

Using above formula mean scores are obtained for each respondent and also for all 130 respondents. Descriptive statistics is as follows:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Quality of Hire	130	24	84	60.46	12.145
Valid N (listwise)	130				

Above table indicate that mean score of Quality of Hire is 60.46 per cent with standard deviation 12.14, suggesting moderate variation in the responses.

The following table indicates the Satisfaction of recruiter:

Sr. No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7.1	I am satisfied with the overall efficiency AI has brought to our recruitment processes.	1	4	21	49	55
7.2	AI tools used in recruitment are user-friendly and enhance the hiring experience.	2	7	32	46	43
7.3	The use of AI has positively impacted the fairness and objectivity of candidate selection.	15	16	20	22	57
7.4	AI integration in recruitment has significantly improved the accuracy of matching candidates to job roles.	2	5	14	41	68
7.5	I would recommend the continued use or expansion of AI tools for recruitment in our organization.	5	8	9	53	55

Above question is rated as follows:

Strongly Disagree = 1

Disagree = 2

Neutral = 3

Agree = 4

Strongly Agree = 5

Using above responses, mean score of Satisfaction of recruiter is obtained using formula given below.

Mean score of Satisfaction of recruiter

$$= \frac{Totalscore of\ rating\ of\ respondent(for\ 5\ statements) \times 100}{Maximum\ rating(25)}$$

Using above formula mean scores are obtained for each respondent and also for all 130 respondents. Descriptive statistics is as follows:

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Satisfaction of recruiter	130	28	100	80.83	11.709
Valid N (listwise)	130				

Above table indicate that mean score of Satisfaction of recruiter is 80.83 per cent with standard deviation 11.70, suggesting moderate variation in the responses.

Objective-1 To study the effectiveness in recruitment process using artificial intelligence.

Null Hypothesis H_{01}: There is no significant difference in effectiveness in recruitment process using artificial intelligence.

Alternate Hypothesis H_{11}: There is a significant difference in effectiveness in recruitment process using artificial intelligence.

To test the above null hypothesis, Friedman test is applied and results are as follows:

Test Statistics[a]	
N	130
Chi-Square	56.865
df	2
P-value	.000
a. Friedman Test	

Interpretation: The above results indicate that calculated p-value is 0.000. It is less than 0.05. Therefore Friedman test is rejected. Hence Null hypothesis is rejected and Alternate hypothesis is accepted.

Conclusion: There is a significant difference in effectiveness in recruitment process using artificial intelligence.

Findings: To understand the findings. Mean ranks are obtained and presented as follows:

Ranks	
	Mean Rank
Time-to-Hire	2.07
Cost-per-Hire	2.42
Quality of Hires	1.52

The data indicates that Cost-per-Hire, with a mean score of 2.42 and the highest rank of importance, is the most critical factor for organizations when evaluating the effectiveness of AI in recruitment processes. Quality of Hires, despite being a vital aspect with a lower mean score of 1.52, is also ranked equally significant, suggesting that while cost is a primary driver, the quality of talent acquired remains a top priority. Time-to-Hire, with a mean of 2.07, is also ranked second in importance, highlighting that efficiency in filling roles is valued but slightly less critical than controlling costs and ensuring high-quality hires. This underscores the balance organizations seek between cost, speed, and quality in leveraging AI for recruitment.

Objective-2 To study the impact of recruitment process using artificial intelligence on satisfaction of recruiter.

Null Hypothesis H_{02}: There is no impact of recruitment process using artificial intelligence on satisfaction of recruiter.

Alternate Hypothesis H_{12}: There is a impact of recruitment process using artificial intelligence on satisfaction of recruiter.

To test the above null hypothesis, Pearson Correlation Test is applied and results are as follows:

Correlations					
		Satisfaction of recruiter	Time-to-Hire	Cost-per-Hire	Quality of Hire
Satisfaction of recruiter	Pearson Correlation	1	.280**	.356**	.337**
	P-value		.001	.000	.000
	N	130	130	130	130
Time-to-Hire	Pearson Correlation	.280**	1	.277**	.178*
	P-value	.001		.001	.043
	N	130	130	130	130
Cost-per-Hire	Pearson Correlation	.356**	.277**	1	.354**

	P-value	.000	.001		.000
	N	130	130	130	130
Quality of Hires	Pearson Correlation	.337**	.178*	.354**	1
	P-value	.000	.043	.000	
	N	130	130	130	130
*. Correlation is significant at the 0.05 level (2-tailed).					
**. Correlation is significant at the 0.01 level (2-tailed).					

Interpretation: The above results indicate that calculated p-value is 0.000. It is less than 0.05. Therefore Pearson Correlation test is rejected. Hence Null hypothesis is rejected and Alternate hypothesis is accepted.

Conclusion: There is a impact of recruitment process using artificial intelligence on satisfaction of recruiter.

Findings: The Pearson correlation analysis reveals significant positive relationships between Satisfaction of Recruiter and the three recruitment metrics. The correlation between satisfaction and Time-to-Hire is 0.280 with a p-value of 0.001, indicating a moderate and statistically significant positive relationship, meaning faster hiring times contribute to higher recruiter satisfaction. The correlation between satisfaction and Cost-per-Hire is 0.356 with a p-value of 0.000, showing a stronger and highly significant positive relationship, suggesting that lower hiring costs significantly enhance recruiter satisfaction. The correlation between satisfaction and Quality of Hire is 0.337 with a p-value of 0.000, also indicating a moderate and significant positive relationship, demonstrating that better quality hires are a key driver of recruiter satisfaction. Overall, all three factors—Time-to-Hire, Cost-per-Hire, and Quality of Hire—positively impact recruiter satisfaction, with Cost-per-Hire having the strongest correlation.

Regression Model:

Dependent Variable: Satisfaction of recruiter

Independent Variable: Quality of Hire, Time-to-Hire, Cost-per-Hire

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.454[a]	.206	.188	10.554
a. Predictors: (Constant), Quality of Hires, Time-to-Hire, Cost-per-Hire				

The R Square value of 0.147 in the model indicates that approximately 14.7% of the variation in recruiter satisfaction can be explained by the combined effect of Quality of Hire, Time-to-Hire, and Cost-per-Hire. While this suggests a modest explanatory power, it also implies that other factors not included in the model account for a significant portion of the variance in recruiter satisfaction. In essence, the independent variables provide some insight into recruiter satisfaction, but there are additional variables or dynamics that influence satisfaction that are not captured in this model.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3650.645	3	1216.882	10.924	.000[b]
	Residual	14035.632	126	111.394		
	Total	17686.277	129			
a. Dependent Variable: Satisfaction of recruiter						
b. Predictors: (Constant), Quality of Hire, Time-to-Hire, Cost-per-Hire						

Above results indicates that p-value is 0.000. It is less than 0.05. It indicates that linear regression model is good to fit.

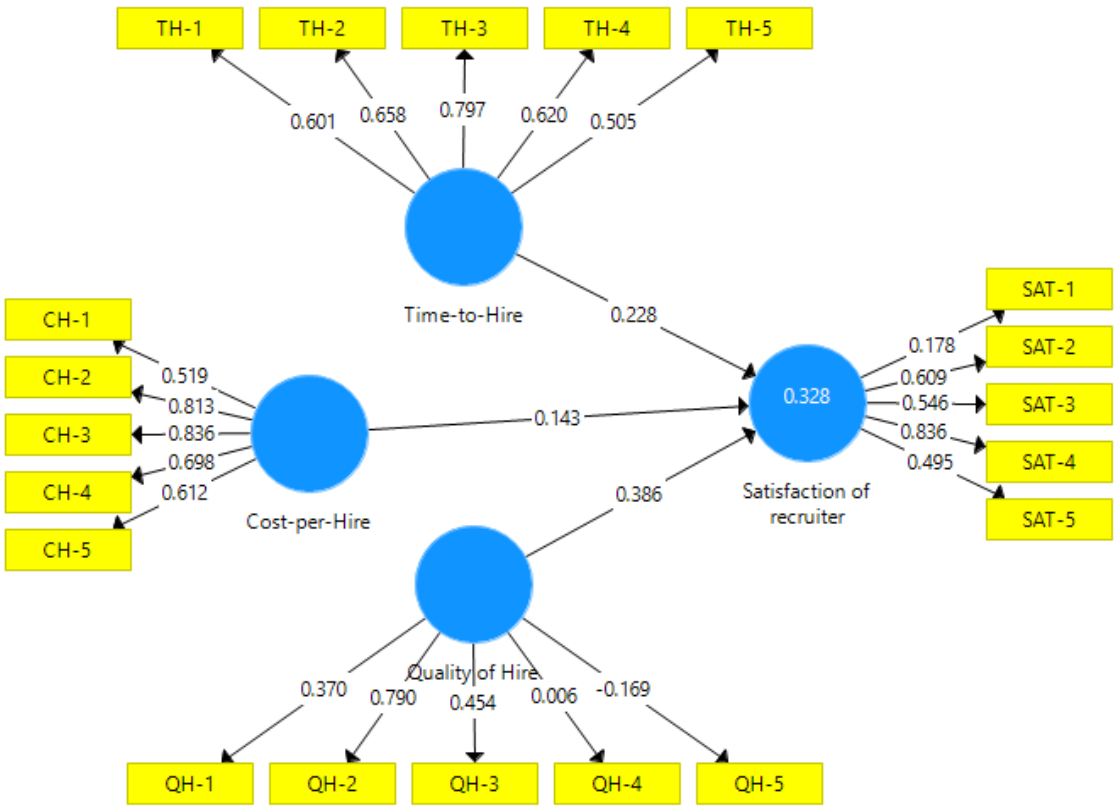
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	49.317	5.700		8.652	.000
	Time-to-Hire (TH)	.115	.054	.177	2.131	.035
	Cost-per-Hire (CH)	.135	.052	.227	2.604	.010
	Quality of Hire (QH)	.218	.082	.226	2.649	.009
a. Dependent Variable: Satisfaction of recruiter						

Above table indicate the values of coefficients and corresponding significance. According to p-value of the Satisfaction of recruiter factors it is observed that except "Time-to-Hire" "Cost-per-Hire" and "Quality of Hire" all remaining variables has significant impact on Satisfaction of recruiter factors.

The mathematical equation to estimate the Satisfaction of recruiter factors is presented as follows:

SAT= 49.317 + 0.115*TH + 0.135*CH + 0.218*QH

Structural equation modelling (SEM):



Path Coefficients:

Variables	Satisfaction of Recruiter
Cost-per-Hire	0.143
Quality of Hire	0.386
Time-to-Hire	0.228

The impact of AI on recruitment and selection effectiveness in an IT firm can be assessed through key variables such as recruiter satisfaction, cost-per-hire, quality of hire, and time-to-hire. The satisfaction of recruiters is influenced by AI's ability to streamline hiring processes, reduce manual efforts, and improve decision-making. Cost-per-hire, with a coefficient of 0.143, suggests a modest reduction in hiring expenses due to AI-driven automation and efficient candidate screening. Quality of hire, with the highest coefficient of 0.386, indicates that AI significantly enhances the ability to match candidates with job requirements, leading to better hiring outcomes. Time-to-hire, with a coefficient of 0.228, highlights AI's role in accelerating the recruitment cycle by automating resume screening, interview scheduling, and initial assessments. Overall, AI positively impacts recruitment by improving efficiency, reducing costs, and enhancing the quality of hires.

Outer Loadings:

	Cost-per-Hire	Quality of Hire_	Satisfaction of recruiter	Time-to-Hire
CH-1	**0.519**			
CH-2	**0.813**			
CH-3	**0.836**			
CH-4	**0.698**			
CH-5	**0.612**			
QH-1		**0.370**		
QH-2		**0.790**		
QH-3		**0.454**		
QH-4		**0.006**		
QH-5		**-0.169**		
SAT-1			**0.178**	
SAT-2			**0.609**	
SAT-3			**0.546**	
SAT-4			**0.836**	
SAT-5			**0.495**	
TH-1				**0.601**
TH-2				**0.658**
TH-3				**0.797**
TH-4				**0.620**
TH-5				**0.505**

The outer loadings represent the strength of the relationships between observed indicators and their respective latent variables—Cost-per-Hire, Quality of Hire, Satisfaction of Recruiter, and Time-to-Hire—in assessing AI's impact on recruitment effectiveness in an IT firm. Cost-per-Hire (CH) shows strong loadings, particularly CH-2 (0.813) and CH-3 (0.836), indicating these items significantly contribute to measuring hiring costs. Quality of Hire (QH) exhibits mixed loadings, with QH-2 (0.790) being the most relevant, while QH-4 (0.006) and QH-5 (-0.169) have weak or negative loadings, suggesting possible measurement issues. Satisfaction of Recruiter (SAT) has its highest loading at SAT-4 (0.836), demonstrating its strong contribution, whereas SAT-1 (0.178) is relatively weak. Time-to-Hire (TH) has decent loadings, with TH-3 (0.797) being the strongest, indicating its importance in measuring hiring efficiency. The results suggest that while some indicators strongly define their respective constructs, weaker loadings in Quality of Hire and Satisfaction of Recruiter may require refinement for better model reliability.

Conclusion:

The study demonstrates that the integration of artificial intelligence (AI) in recruitment processes significantly impacts the effectiveness, satisfaction, and overall outcomes of recruitment. AI contributes to reducing the time-to-

hire and cost-per-hire, with a positive correlation between these factors and recruiter satisfaction. The findings from the Friedman test and Pearson Correlation indicate significant differences and relationships between AI-driven recruitment metrics and recruiter satisfaction. Furthermore, the regression model suggests that Quality of Hire, Time-to-Hire, and Cost-per-Hire collectively explain a portion of recruiter satisfaction, with Quality of Hire having the most substantial impact. Overall, AI has proven to enhance recruitment efficiency, reduce costs, and improve the quality of hires, thereby positively influencing recruiter satisfaction.

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