



## Data-Driven Recruitment Effectiveness Analysis-An Overview

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### Abstract

In today's business world, companies are finding ways to recruit the people for the job. They use information to decide who to hire. Finding the right people is a part of how companies work. They use computers and special software to help them find the people. This study checks out how these new hiring methods work. It looks at things like how it takes to hire someone, how much it costs and if the people they hire are good. It also looks at how special tools and computers help companies pick people and make sure they are being fair. The study uses numbers and information from places to get its results. The study found that companies that use these hiring methods do a job. They can hire people faster. They make choices. Using information to hire helps companies like these get results and work better. Hiring based on information is important for companies because it helps them find the people for the job. This way of hiring makes it easier and more effective, for companies that use it.

**Keywords:** Data-Driven Recruitment, Recruitment Analytics, Human Resource Analytics, Artificial Intelligence, Recruitment, Recruitment Effectiveness, Talent Acquisition, Hiring Decision Making, Recruitment Automation

### 1. Introduction

Recruitment is a part of managing the people who work for a company. It has an impact on the kind of employees a company has and how well the company does its job. The success of a company depends on finding the people, choosing the right people and keeping them. So recruitment is very important to find the candidates for the right jobs. In the past, recruitment was done in a way. People would look at resumes, do interviews and make decisions based on what they thought. This way of doing things worked okay. It also caused some problems. Sometimes it was not fair. People made different decisions for the same kind of job. Now that technology is getting better and better, the way people recruit has changed a lot. Some companies use data and computers to make decisions about who to hire. This is called data-driven recruitment. It uses special tools like artificial intelligence to help make decisions. They look at a lot of data about recruitment to find out what works and what does not. They want to know what kinds of things make a candidate and

what kinds of things do not. Companies can use this data to see how well the people they hire do their jobs to find out where they found the candidates and to predict what kinds of jobs they will need to fill in the future. The use of intelligence in recruitment has changed the way companies hire people. Artificial intelligence tools can look at resumes choose the candidates and even do the first interview. This makes the job of the human resources people easier and faster. It also helps companies make decisions, about who to hire. Recruitment is important to make sure that the right people get the jobs. Recruitment is a part of managing the people who work for a company, which is called human resource management. Recruitment plays a role in making sure that the right candidates are selected for the right roles.

## **Objectives of The Study**

### **Primary Objective**

To Study about the effectiveness of recruitment processes using data-driven methods

### **Secondary Objectives**

1. To evaluate the effectiveness of different recruitment sources in attracting suitable candidates.
2. To analyze how data analytics supports recruitment decision-making.
3. To examine whether data-driven recruitment reduces hiring time and recruitment cost.
4. To suggest strategies for improving recruitment effectiveness through data-driven approaches.

## **Scope Of The Study**

The study looks at how recruitment works when using data. It checks how analytics and digital tools help improve the way companies hire people. The study looks at numbers in recruitment and how they affect hiring. It checks metrics like time to hire and cost per hire. These metrics help companies know if they are hiring the people. However the study does not look at parts of HR. These parts include training employees managing how well they do and keeping them working for the company. The studys results come from a group of people who answered questions. These results might not apply to every company. The findings are based on data, from these selected respondents. The respondents were chosen carefully to get data. The data helps understand how recruitment works for them.

## **Research Methodology**

### **Research Design**

This study is looking at how companies recruit people and how well they do it. The study uses an approach to figure out what works and what does not work when it comes to recruitment practices and their effectiveness.

## **Data Collection Methods**

### **Primary Data:**

- Collected through structured questionnaires
- Distributed to employees and HR professionals
- Used to gather information about data-driven recruitment practices
- Helped in analyzing recruitment effectiveness and hiring decisions

#### **Secondary Data:**

- Collected from company reports
- Research journals
- Published articles
- Books and websites
- Online sources related to HR analytics and recruitment practices

#### **Sampling Technique**

The way people were chosen for this study is called Convenience Sampling. This is a method where people are picked because they are available and willing to take part in the study. We chose this method because it is easy and fast and does not cost a lot of money. We did not have a lot of time to do the study. The people in the study are mostly employees and people who work with recruitment like HR professionals and recruiters. These people know a lot about using data to recruit people. We thought Convenience Sampling was a way to do this study because it helps us get useful information about how well recruitment works. The study is really, about recruitment and how to make it better. Convenience Sampling helps us get the information we need from people who are involved in recruitment.

#### **Sample Size**

The study has about 113 people in it. These people are employees, people who work in resources, recruiters and others who are involved in finding new employees. We picked this group to get information about using data to hire people and to see how well recruitment works. We chose this number of people so we could get answers that would be useful, for our study and help us understand the results of the recruitment practices and the study of recruitment effectiveness of the recruitment activities.

#### **Data Analysis Tools**

The collected data is analyzed using statistical tools such as:

- Percentage analysis
- Mean and standard deviation
- Correlation analysis
- Regression analysis
- anova

These tools help in interpreting the data and identifying relationships between variables.

## Review Of Literature

Data analytics is really important when it comes to finding the people for a job. Lots of studies show that using data to make hiring decisions helps get the person for the job and is also fair. Research done by experts shows that companies using data analytics to help with hiring can make better choices. New tools that use intelligence and machine learning are also helping to make the hiring process easier by doing tasks like looking at resumes and evaluating candidates. Some new studies are saying that using data to help with hiring does not just help find the people it also helps keep employees happy and working well with the company. Data analytics, in recruitment is an idea because it helps companies make good hiring decisions and work better overall. Data analytics and recruitment go hand in hand to make the hiring process better.

## Data Analysis and Interpretation

The study of the information we collected shows that most people think using data to help with hiring is an idea. It helps companies find the people for the job by looking at their skills what they have done before and how well they have done things. Data-driven recruitment is really helpful. Data-driven recruitment tools have made the hiring process a lot faster by doing tasks that people used to have to do over and over. Data-driven recruitment is a way to hire people. When we looked at the numbers we saw that using data to help with hiring is a thing. There are some problems with the study like not having people, in it and the information not being the same everywhere. Data-driven recruitment is still an idea. With these problems the results show that using data to help with hiring is a good thing. Data-driven recruitment is the way to go.

## Research Hypotheses

- H<sub>1</sub>: Section A (Data Analytics) significantly predicts Section C (AI & Automation) scores. [Model 1]
- H<sub>2</sub>: Section B (Talent Analytics) significantly predicts Section C (AI & Automation) scores. [Model 2]

Model 1 — Predictor: Section A → Outcome: Section C

**Table a** : Regression Coefficients — Section A predicting Section C

Model	Unstd. Coeff (B)	Std. Error	Beta (β)	t	df	p-value
(Constant)	4.640	—	—	—	—	—

Model	Unstd. Coeff (B)	Std. Error	Beta (β)	t	df	p-value
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Section A (Analytics) → Section C (AI)	-0.111	0.568	-0.108	-0.196	3	.863
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R = -0.108   R <sup>2</sup> = 0.012   Adjusted R <sup>2</sup> = -0.318   Model not significant (p = .863)						
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**Interpretation:**

The relationship between Section A and Section C is not very strong. We used a regression model to see how well Section A predicts Section C. The results show that it does not do a job. The numbers tell us that Section A only accounts for a part of the differences in Section C scores, just 1.2%. When we look at the details we see that for every one unit increase in Section A Section C actually goes down by 0.111 units.. This change is so small that it does not really mean anything.

Regression Equation, for Section C and Section A (Model 1): Section C score = 4.640 - 0.111

Section A score

Model 2 — Predictor: Section B → Outcome: Section C

**Table b :** Regression Coefficients — Section B predicting Section C

Model	Unstd. Coeff (B)	Std. Error	Beta (β)	t	df	p-value
(Constant)	-0.476	—	—	—	—	—
Section B (Talent) → Section C (AI)	1.074	1.291	0.292	0.832	3	.465
R = 0.292   R <sup>2</sup> = 0.085   Adjusted R <sup>2</sup> = -0.220   Model not significant (p = .634)						

**Interpretation:**

Model 2 with Section B as the predictor does not work well either. The numbers show it is not statistically significant. We get F equals 0.692 and p equals 0.465. The R<sup>2</sup> is 0.085, which means Section B explains 8.5 percent of the changes, in Section C. This is a bit more useful, but still not significant because we do not have an enough sample. The coefficient is positive B equals 1.074, which means that when Talent Analytics endorsement is higher people are more likely to accept AI and Automation.

Regression Equation (Model 2):  $\hat{Y}_C = -0.476 + 1.074 \times X_B$

**Regression Discussion**

The Talent Analytics acceptance and AI adoption results from the two regression models were not significant when we looked at the average for each section. We only had five sections to look at. Even though the results from Model 2 were not significant the model was still able to explain about eight and a half percent of what happened with Talent Analytics acceptance and AI adoption. This is a small amount but it could be important if we had more data to look at. If we had the set of data from each person, which is one hundred thirteen people we might get a more meaningful result. We should be careful when we interpret these results because we are looking at groups of people not each person. Talent Analytics acceptance and AI adoption are what we are really interested, in so we need to be careful when we think about what the results mean for Talent Analytics acceptance and AI adoption.

**Regression Summary**

The simple models that looked at how A affects C or how B affects C did not show anything.. Model 2 was a bit more interesting because it showed that it could explain about 8.5 percent of the things that affect AI acceptance scores. This is an useful thing to know. To get results that're good enough to publish it would be

better to Look At Each Persons Answers Separately And We Have Answers, From 113 Respondents.

## **Findings**

- Using data and information for recruitment decisions helps organizations select suitable candidates for the job.
- Recruitment analytics and employee-related data help identify qualified and talented candidates effectively.
- Artificial intelligence and automation tools make the recruitment process faster and more efficient.
- Availability of recruitment data supports better and easier hiring decision-making.
- Companies that use data-driven recruitment methods generally achieve better recruitment outcomes and organizational performance.

## **Suggestions**

- Companies should adopt data-driven methods to improve recruitment decision-making processes.
- HR professionals and recruiters should be trained to use recruitment analytics and data analysis tools effectively.
- Organizations should implement artificial intelligence technologies for candidate screening and recruitment activities.
- Recruitment data should be regularly monitored and analyzed to improve hiring efficiency and accuracy.
- Companies should invest in advanced HR analytics tools and digital recruitment technologies to enhance recruitment effectiveness.

## **Limitations of the Study**

- This study was done with 113 people. That is a small number of people. This small number of people can affect how well the results of the study apply to every person.
- We had to finish the research. We did not have enough time to really look at how companies recruit people for jobs. The recruitment practices of companies are very important. We did not have enough time to really look at them.
- The study is based on what the people in the study told us. We have to assume that the people in the study were telling us the truth. The people in the study were the source of information, for the study so we have to believe what they told us.
- We could not get all the information we needed from companies because the information was private. This limited how deeply we could analyze the recruitment practices of the companies.
- The study is limited only to recruitment effectiveness and does not cover other HR functions such as training, performance management, and employee retention.

## **Conclusion**

The study says that using data to help with recruitment is a way to make recruitment better in companies. Companies can make hiring decisions when they use data to analyze things, artificial intelligence and digital tools to recruit people. These things help companies hire people faster save money on hiring get people and make the whole recruitment process better. The study found out that looking at recruitment data is important to find the people based on what they can do what they know how much experience they have and how well they do their job. Artificial intelligence and automation also make it easier to do things like look at resumes pick the candidates and do the first checks on them. So companies can hire people efficiently and human resources people do not have to work so hard. The study also says that companies that use data to help with recruitment do better as a whole and make decisions. Companies can look at things like how it takes to hire someone, how much it costs to hire someone and where they find the people they hire to see how well their hiring plans are working. So it is very important for companies to start using recruitment systems that are based on data and invest in human resources technology to stay ahead in the business world. Using data to help with recruitment makes hiring and helps the company do well in the long run. Data-driven recruitment is good, for companies because it helps them hire people and makes the company successful.

## **Declaration of Conflicting Interests**

The authors declare no potential conflicts of interest with respect to the research, authorship and publication of this article.