

Impact of Artificial Intelligence on Employee Satisfaction

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ABSTRACT

Employee satisfaction and engagement can lead to multiple positive impacts in an organization, as the AI is becoming more and more popular in today's world, it is the only one of the viable option for the companies to deploy Artificial intelligence-based services in their organization. AI based chatbots, ticketing issues, conversational AI, etc. can help in increasing the productivity level and job happiness for the employees by many folds.

This research paper aims to find the impact of artificial intelligence on employee satisfaction majorly in 2 sectors IT and Banking & Finance. Research is based on descriptive as well as Explorative and gathers the data through survey from over 236 employees from both the sectors and then the collected data has been used for further analysis correlation between the variables included for the analysis and the regression test along with the reliability test.

Keywords- Artificial intelligence, employee satisfaction, IT, Banking & Finance sector, Job happiness and chatbots

INTRODUCTION

The term "Artificial Intelligence" was first coined by John McCarthy in 1956 and started the development of 1st AI programming language, LISP, in 1960s. And since then we have seen many evolutionary changes in AI and its applications in various fields and sectors like in Banking & Finance, IT, Healthcare, Insurance. etc. So, What Actually is Artificial Intelligence (AI)? Artificial intelligence is a potentially world-changing technology, AI is the development of computer systems that are able to perform tasks that would require human intelligence (artificial intelligence and its effect on employee work assignment and job satisfaction, 2022). On an operational level for businesses, AI can be referred to as set of technologies that are based primarily on machine learning and deep learning, used for data analytics, predictions and forecasting, etc. And because of its diversified applications in various fields and sectors, this study's main concern is related to the employee satisfaction and engagement in IT and Banking & Finance.

In today's competitive business landscape, employee satisfaction is paramount for success. Employee satisfaction leads to enhanced employee retention (Artificial Intelligence with Improved Employee Satisfaction, 2023), employee development and training and quick resolution of employee issues. AI is already transforming the nature of work (The impact of AI on the workplace, 2023). In the 60 years of its existence, it has celebrated dramatic successes and equally dramatic failures. While AI promises to streamline processes, boost productivity, and improve decision-making, its impact on employee satisfaction and engagement remains a topic of intense debate. This exploration delves into the complex relationship between AI and the human element of work.

One of the major contributor in employee satisfaction and engagement has been the introduction of AI based chatbots and effective ticketing systems for the employees at workplace. Chatbots integrated into the company's communication systems will also help to improve management of employee productivity and results. Many businesses have started developing various virtual and conversational AI chatbot services which are specific to employees for their growth prospects, handling their issues, providing at a time employee data, etc. An important role is played by the human resource management of any business to use artificial intelligence up to its full extent

for employee satisfaction. Although even after all of its merits, AI still faces some backlash from the employees and businesses, like chances of their jobs getting replaced by AI, privacy concerns or shadow AI which is being a very concerning problem for the AI driven businesses nowadays.

OBJECTIVES

- Identifying employee viewpoints or growth prospects with introduction of AI at Workplace.
- How chatbots are an effective tool in employee satisfaction and engagement.
- Analyzing the impact of various factors affecting the level of Employee satisfaction with the introduction of AI at workplace in different sectors (IT and Banking & Finance).

LITERATURE REVIEW

Glazkova Valeriya, Vivek John, Atul Singla, J. Yamini Devi and Kaushal Kumar, 2024 “AI-Powered Super-Workers: An Experiment in Workforce Productivity and Satisfaction”- As AI based tools and services are increasingly empowering human workers at the workplace, focusing on the qualitative and quantitative this study states differences on before and after effects of AI implementation on job happiness to employees.

Deepthi.B, Priya Gupta, Pratibha Rai and Himanshu Arora, 2022 “Assessing the Dynamics of AI driven Technologies in Indian Banking and Financial Sector” - With the advent of artificial intelligence in banking and finance sector, this focuses how Artificial intelligence driven technologies has been a transformational change to such an important domain.

Manisha Saxena and Dharmesh K. Mishra, 2023 “Artificial intelligence: the way ahead for employee engagement in corporate India” - Employee engagement can have multifaced advantages not only to an individual, but also to his/her team and the organisation, thus this research emphasises on the ups and downs with application of AI in employee engagement.

Richa Verma and Srinivas Bandi, 2023 “Artificial Intelligence & Human Resource Management in Indian It Sector” - Information Technology (IT) being one of the most important sector for any country, especially for India, which is world famous for its IT services, this study focuses how AI is playing a major role on IT sector especially in its HRM services.

Sanjana Rao, Jaya Chitranshi and Neha Punjabi, 2020 “Role of Artificial Intelligence in Employee Engagement and Retention” - Artificial Intelligence being an important in businesses in today’s world, research critically examines the role of Ai in employee satisfaction and engagement and its potential impact on future employee engagement.

OECD, 2023 “The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers” – this publication contributes to the OECD’s Artificial Intelligence in Work, Innovation, Productivity and Skills (AI-WIPS) programme.

Sujay Suresh, 2023 “How can a company enhance employee satisfaction and time effectiveness by enabling AI in their ticketing system?” - Effective ticketing system is very important for any business for quick resolution of employee issues, the study aims to examine the employee satisfaction and effectiveness of AI-based ticketing systems.

Ms Pushpanjali Datar and Dr Shamal Pradhan, 2022 “Usage of artificial intelligence and its effect on employee work assignment and job satisfaction: a descriptive study of selected private sector bank employees of Vadodara” - Before implementing AI at workplace, it is important to make employees aware about the benefits and usage of AI, this study focuses on employees’ awareness on AI and knowing the changes, AI has brought in work assignments.

Nishtha Malik, Shalini Nath Tripathi Jaipuria, Arpan Kumar Kar and Shivam Gupta, 2021 “Impact of artificial intelligence on employees working in industry 4.0 led organizations” - Covering the important aspects of AI on employees, this research attempts to develop a practical understanding of the positive and negative employee experiences due to artificial intelligence (AI) adoption and the creation of technostress.

Mamata Rath, Namrata Mishra and Juliet Gladies Jayasuria, 2023 “A Smart Human Resource Approach using Artificial Intelligence with Improved Employee Satisfaction for Better Sustainability in Organisation” - Demonstrating the impact of AI on employee welfare, the study aims to know driving factors impacting employee happiness and welfare, getting impacted by AI.

Ms. Samreena Jeelani and Dr. Priyanka Chhibber, 2022 “A study on Artificial Intelligence in Employee Engagement” - Study focuses on employee engagement with AI and how chatbots can be an effective tool for employee conversation and queries.

Dr. Rajendra Mishra and Dr. Kavita Shastri, 2023 “Traversing the impact of AI in HRM-A Case Study” – This case study deliberates over the evolutionary impact of artificial intelligence in the human resource practices of the businesses and aiding the employees to better suit themselves at their workplace.

STATEMENT OF PROBLEM

The IT and Banking & Finance sector has been the key domains, and they are the lifeline of economy, as the development of these sectors represents the overall development of economy. In recent years, these sectors have seen transformational changes as the advent of artificial intelligence started to become more pervasive. Artificial intelligence (AI)-driven tools and systems are rapidly complementing and empowering human workers in the workplace as a result of the fast advancement of AI technology (AI-powered super workers, 2024).

The study focuses on the impact of artificial intelligence on employee satisfaction and engagement in IT and Banking & Finance sector. How AI can provide better level of satisfaction at workplace to employees and what negatives and positives it has caused due to its implementation. Effects of introduction of AI based chatbots services to employees and in resolution of their queries. As the application of AI are surging, the study identifies how employees feel about it and analysis their viewpoints regarding artificial intelligence.

RESEARCH METHODOLOGY

The research focuses on the explorative cum descriptive research design both. Using a systemised and methodical approach, the technique used in this research aims to thoroughly evaluate the effect of AI on job satisfaction and engagement. It includes collecting and analysis of quantitative data, offering a comprehensive picture of the workforce driven by AI. For gathering the quantitative data, survey has been taken from 236 hundred employees of various firms related to IT and Banking & Finance sector. Survey consisted of seven different questions, having a scale from 1 to 5, using Likert scale, ranked from highly satisfied to highly dissatisfied.

After gathering the quantitative data, it was further used to get evaluated statistically. The software used for statistical analysis of the quantitative data was IBM SPSS 24. Major tests were conducted to know about the behaviour of employees towards AI at workplace and how introduction of AI actually impacting the job satisfaction level and happiness for the employees. To know the significance of the various factors included in the study for analysing job satisfaction with the introduction of AI at work place comparing the P values, hypothesis test has also been conducted (Table 3). Cronbach alpha also was taken into consideration for knowing the reliability of the questionnaire.

DATA ANALYSIS AND INTERPRETATION

As the study focuses on the primary data and is an explorative cum descriptive style research, 236 employees from IT (56% responses) and Banking & Finance (44% responses) has been surveyed in collection of data. We took the total of nine variables:

TABLE 1		
Demographic variable		
V0(Age group)	25-40	40-55
Percentage	67%	33%
V1 (gender)	Male	Female
Percentage	42%	58%
V2(Sector)	IT	Banking and Finance
Percentage	56%	44%

V3- With the help of AI, do you feel that now you can focus more on core activities instead of repetitive one's?

V4- Does your company provide any kind of AI chatbot services for your betterment and ease of communication?

V5- How do you feel regarding the chatbot's responses to your queries?

V6- Does that chatbot give you repetitive answers and couldn't understand any complex queries?

V7- In case the chatbot is unable to solve your query does it pass that query to any HR personnel?

V8- Are you getting any learning and developmental opportunities considering AI being able to assess your performance?

V10- Overall what are your viewpoints regarding the use of AI in employee satisfaction and engagement?

TABLE 2			SCALE		
Variables	1	2	3	4	5
V5 and V10	Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied
V3,4,6,7,8	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.624	.626	9

Item Statistics

	Mean	Std. Deviation	N
V1	1.36	.482	236
V2	1.47	.500	236
V3	3.94	.851	236
V4	3.96	.859	236
V5	3.88	.674	236
V6	3.52	.729	236
V7	2.73	1.012	236
V8	3.34	.943	236
V10	3.88	.686	236

Showing about the reliability of the data collected, the author got the Cronbach's Alpha as 6.26. which represents the data collected is reliable and can be used for further analysis Showing the descriptive statistics for the included variables for their mean and standard deviation.

Correlations

		V1	V2	V3	V4	V5	V6	V7	V8	V10
V1	Pearson Correlation	1	.027	-.034	.109	.107	.067	.081	.139*	.067
	Sig. (2-tailed)		.676	.605	.094	.100	.305	.213	.033	.306
	N	236	236	236	236	236	236	236	236	236
V2	Pearson Correlation	.027	1	.041	.086	-.010	.159*	.093	-.105	-.010
	Sig. (2-tailed)	.676		.530	.187	.873	.015	.153	.108	.875
	N	236	236	236	236	236	236	236	236	236

V3	Pearson Correlation	-.034	.041	1	.567**	.582**	-.043	.017	.363**	.491**
	Sig. (2-tailed)	.605	.530		.000	.000	.510	.793	.000	.000
	N	236	236	236	236	236	236	236	236	236
V4	Pearson Correlation	.109	.086	.567**	1	.469**	.110	-.072	.354**	.468**
	Sig. (2-tailed)	.094	.187	.000		.000	.092	.271	.000	.000
	N	236	236	236	236	236	236	236	236	236
V5	Pearson Correlation	.107	-.010	.582**	.469**	1	-.013	-.016	.445**	.494**
	Sig. (2-tailed)	.100	.873	.000	.000		.840	.805	.000	.000
	N	236	236	236	236	236	236	236	236	236
V6	Pearson Correlation	.067	.159*	-.043	.110	-.013	1	-.098	-.015	.217**
	Sig. (2-tailed)	.305	.015	.510	.092	.840		.135	.824	.001
	N	236	236	236	236	236	236	236	236	236
V7	Pearson Correlation	.081	.093	.017	-.072	-.016	-.098	1	-.033	.027
	Sig. (2-tailed)	.213	.153	.793	.271	.805	.135		.618	.680
	N	236	236	236	236	236	236	236	236	236
V8	Pearson Correlation	.139*	-.105	.363**	.354**	.445**	-.015	-.033	1	.503**
	Sig. (2-tailed)	.033	.108	.000	.000	.000	.824	.618		.000
	N	236	236	236	236	236	236	236	236	236
V10	Pearson Correlation	.067	-.010	.491**	.468**	.494**	.217**	.027	.503**	1
	Sig. (2-tailed)	.306	.875	.000	.000	.000	.001	.680	.000	
	N	236	236	236	236	236	236	236	236	236

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

From V3 we can see the correlation started to increase between the variables as we can see that relevant study factors are related to each other.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.677 ^a	.458	.444	.512

a. Predictors: (Constant), V8, V6, V7, V3, V4, V5

b. Dependent Variable: V10

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.704	6	8.451	32.267	.000 ^b
	Residual	59.974	229	.262		
	Total	110.678	235			

a. Dependent Variable: V10

b. Predictors: (Constant), V8, V6, V7, V3, V4, V5

As we can see that by taking the major Variables like V3, V4, V5, V6, V7 and V8 we can predict the value of V10 which represents the overall satisfaction of employees with the introduction of AI at their workplace can be predicted with the accuracy of having R square as 0.436. This shows Variables are moderately good predictor of our dependent variable V10.

HYPOTHESIS

Hypothesis testing has been conducting finding the correlation and dependence between the included major variables, stating:

H0: The variable does not have a significant impact on the employee satisfaction through Artificial Intelligence.

H1: The variable does have a significant impact on the employee satisfaction through Artificial Intelligence.

TABLE 3

S.No.	HYPOTHESES	P - Value / F - Value	Decision
V3	There is a significant impact of AI on handling the repetitive activities for employees	$p < 0.00001$ / F - 74.48	Reject H0
V4	There is a significant impact by companies providing Any kind of AI services to the employees	$p < 0.00001$ / F = 65.48	Reject H0
V5	There is a significant impact of how the AI chatbots responses to the queries	$p < 0.00001$ / F = 75.54	Reject H0
V6	There is a significant impact of whether the AI chatbots are able to response to complex queries or not	$p = 0.001$ / F = 11.52	Reject H0

V7	There is not a significant impact of whether the AI chatbots are sending the unanswered queries to HR personnel or not	$p = 0.680 / F = 0.17$	Fail to reject H_0
V8	There is a significant of whether the employees are getting any training and developmental opportunities through AI	$p < 0.00001 / F = 79.29$	Reject H_0

The table 3 shows the F- test and P values for each variable. It was found that only V7 is not individually statistically significant to the study, whereas rest of the other variables are significant at 5% significance level. Thus, H_0 for V7 is failed to reject and for all other variables it is rejected.

CONCLUSION

With the introduction of Artificial Intelligence at workplace in various forms, we see that companies have been implementing it for the greater satisfaction and engagement of the employees. This study primarily focused on the two major AI driven sectors namely IT and Banking & Finance sector. And with primary research methods and with the hypothesis testing conducted by this study we can somewhat conclude that AI is becoming a major tool for the employees in their day to day professional work and impacting the higher level of satisfaction and job happiness

Artificial Intelligence providing various services to the employees like from training and developmental programs to AI powered chatbots services, so that employees can raise their tickets easily and get them solved as fast as possible, aiding HR in conducting smooth operations and to be in regular contact with the employees. Artificial Intelligence is a revolutionary change for the management and companies, which if utilised effectively can increase their productivity by many folds and provide services to customers as well as to their employees with ease. As this research was limited to only 2 major sectors, many useful aspects of AI and employee satisfaction has been ignored and due to limited responses, data, might give some drawback to its reliability.

LIMITATIONS AND FUTURE RESEARCH

The study contains some limitations, the first and foremost limitation of this study is that the data was gathered from 236 employees only from the IT, Banking and Finance sector. Other major sectors have not been included and taken into consideration. Secondly, the data is based on the perception and also it may happen that participants may take the positive aspect of the questionnaire more positively than the negative aspects of questionnaire. There are certain other variables which can influence job satisfaction like organizational culture, commitment and happiness of employees, work life balance which has not been taken into consideration. Thus, future research studies may consider these variables to confirm in detail the impact of such variables on job satisfaction. The future work can also focus on various other sectors, irrespective of the work and nature of organization, so as to establish a comprehensive base for interpretation of the effect of the artificial intelligence on job satisfaction.

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