CHAPTER 70

The Impact of ChatGPT on Employment Dynamics

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ABSTRACT

The introduction of Chat GPT has brought significant changes across industries, reshaping traditional job roles while simultaneously creating new employment opportunities. This research investigates the shifting employment landscape influenced by Chat GPT, with particular attention to how existing roles are being redefined and how emerging opportunities are developing. By exploring its effects across multiple sectors, the study highlights the evolving nature of work and the competencies required to succeed in environments shaped by AI-driven tools. The research was conducted with a sample of 220 professionals employed in industries currently adopting artificial intelligence within their operational processes. To evaluate the relationship between AI integration and employment dynamics, the Chi-square test was applied. Findings revealed that organizations implementing AI technologies are experiencing substantial changes in job responsibilities, along with a negative association between AI adoption and the overall demand for employees. At the same time, these organizations are also witnessing the creation of new categories of work. Most participants expressed a positive view of ChatGPT's role in enhancing task efficiency and productivity. Nevertheless, respondents also recognized that certain job functions may be substituted by ChatGPT, requiring workers to adapt to new skill demands and qualifications. The results underscore both the opportunities and challenges presented by AI adoption, indicating a fundamental transformation in employment dynamics.

Keywords: ChatGPT; Artificial intelligence; Employment dynamics; Emerging job opportunities; AI-driven environment.

1.0 Introduction

In recent years, artificial intelligence (AI) has advanced rapidly, giving rise to sophisticated language models such as ChatGPT. These conversational agents have significantly transformed human-technology interaction by enabling dialogues that

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resemble natural human communication, while simultaneously influencing practices across various industries. ChatGPT emerged as part of OpenAI's Generative Pre-trained Transformer (GPT) series, which introduced the concept of *unsupervised learning*—a technique that allows models to process and learn from massive datasets of publicly available text. The release of GPT-2 in 2019 marked a major milestone, as it demonstrated remarkable capabilities in generating coherent and contextually relevant text, setting the stage for further progress. GPT-3, unveiled shortly afterward, represented an even greater breakthrough. With an unprecedented 175 billion parameters, GPT-3 became the largest language model of its time, showcasing exceptional performance in tasks such as text generation, completion, translation, and question answering. Its versatility generated widespread interest in potential applications of conversational AI. OpenAI later demonstrated these capabilities through interactive chatbots that engaged users with logical and context-rich responses across diverse topics.

The progression continued with GPT-4, which powers Microsoft's Bing search engine, significantly enhancing its ability to create, edit, and refine both creative and technical content. GPT-4's collaborative and imaginative features have expanded the scope of tasks it can perform, including adapting to individual writing styles, assisting in storytelling, and supporting professional content creation. To extend these benefits to businesses and developers, OpenAI introduced an Application Programming Interface (API), enabling seamless integration of ChatGPT into various platforms and services such as customer support systems and digital assistants. Further advancements included customization and fine-tuning, allowing organizations to adapt ChatGPT for specific domains and applications, thereby improving control over its responses and ensuring industry-specific utility. Ongoing refinements—driven by user feedback and continuous research—have strengthened ChatGPT's contextual understanding, broadened its knowledge base, and enhanced its reliability.

The evolution of ChatGPT parallels other innovations in conversational AI developed by leading organizations. Google's Meena (2020) was designed to deliver meaningful and natural conversations, while Facebook's Blender (2020) represented an open-source conversational model with advanced natural language generation. Alibaba's DuerOS (2018) integrated AI-driven dialogue into smart devices and virtual assistants, and Apple's Siri remains a notable example of a voice-enabled personal assistant combining speech recognition with natural language processing. The widespread adoption of AI-powered systems like ChatGPT is expected to reshape workforce structures and job dynamics. While certain roles may face replacement—particularly in content-heavy fields such as advertising, journalism, technical writing, and digital media production—new opportunities will simultaneously emerge. These technologies excel in processing,

interpreting, and generating text-based information at scale, making them highly effective in automating language-intensive tasks. Moreover, advancements in generative AI are anticipated to further strengthen the ability to analyze large volumes of textual data, influencing decision-making, business operations, and the future of human-computer collaboration.

2.0 Review of Literature

Artificial intelligence (AI) adoption has significantly influenced the employment landscape in recent years, particularly in the Indian private sector. Nandy *et al.* (2018) found that improved hardware accessibility and AI breakthroughs encouraged organizations to redesign their products by embedding AI into their operations. Their study revealed that 49% of surveyed firms had already implemented AI, reporting productivity gains, while 74% believed that automated alerts and notifications prompted proactive organizational responses. The study further emphasized professionals' preferences for digital assistance in routine tasks such as timesheet completion, calendar management, email tracking, and financial updates.

However, tasks requiring contextual awareness, such as proposal drafting and team collaboration, still showed lower preference for automation. Notably, 70% of respondents believed AI would allow them to dedicate more time to creative pursuits while enhancing job value. Other researchers have similarly examined the impact of AI tools on work and user experiences. Cheng and Jiang (2020) reported that user satisfaction with AI-driven chatbots was linked to four gratifications—information, entertainment, media appeal, and social presence—although privacy risks reduced satisfaction levels. Positive experiences with chatbots were also found to increase loyalty and long-term use.

Gesikowski (2023), in an experimental study of 444 professionals, demonstrated that ChatGPT enhanced productivity by reducing task completion time by 44% and improving output quality by 22%. Importantly, ChatGPT shifted work focus from initial drafting to ideation and editing, raising both excitement and anxiety about automation while improving job satisfaction and self-efficacy.

In the context of human resources, Springworks (2023) highlighted the role of ChatGPT in strengthening employee engagement by providing personalized support, instant responses to queries, and feedback collection through polls or surveys. It also noted the potential of chatbots to personalize communications such as greetings, work anniversaries, and wellness support, thereby improving staff morale, reducing turnover, and enhancing organizational performance.

Similarly, Okeke (2023) observed that ChatGPT improved customer experience by offering 24/7, real-time, and personalized interactions. By tailoring responses based on user history and preferences, AI systems enhanced satisfaction, brand loyalty, and revenue generation while simultaneously reducing customer service costs. Despite these advantages, Okeke noted that human agents would remain necessary in complex or sensitive situations, positioning ChatGPT as a supplement rather than a full replacement.

The broader labor market implications of generative AI have also been explored. Cohen (2023), citing a Goldman Sachs analysis, emphasized that nearly 300 million jobs worldwide could be affected by automation, with about one-fourth of all tasks potentially replaced by AI. While repetitive tasks in sectors such as design, content creation, and software development may be automated, the role of senior leadership and middle management will shift rather than disappear. New positions, such as Chief AI Officer, are likely to emerge, while service organizations may expand employment opportunities as AI reduces skill and entry barriers for roles like technicians and call center agents.

The study also stressed that middle management must adapt quickly to AI integration, as this tier of employment will play a critical role in balancing technological adoption with human oversight. Collectively, these studies underline both the opportunities and risks of AI integration in employment contexts. While AI significantly improves efficiency, productivity, and customer engagement, it also raises questions about job displacement, skill requirements, and ethical considerations. The evidence suggests that successful adaptation requires embracing AI as a tool that complements human creativity and judgment, rather than viewing it solely as a substitute for human labor.

3.0 Objectives of Research

These are the goals of the research that has been done:
- To explore the concept and functioning of ChatGPT as an emerging artificial intelligence tool.
- To analyze the present trends and characteristics of employment dynamics.
- To assess the influence of ChatGPT on changing patterns in the world of work.

4.0 Methodology

Population: Professionals from industries integrating ChatGPT into their operations consists of the population for the study.

4.1 Sample and sampling technique

A sample of 220 professionals from industries integrating ChatGPT into their operations particularly customer service, content creation, and knowledge based industries. The sample was selected using the convenience sampling techniques. As the number of professional from customer service, content-creation, and knowledge based industries is very large and it was very difficult to list all the professionals and then select 200 professional using a more scientific method of selection of sample.

4.2 Data sources

The primary data was collected from 200 professional using a survey method of data collection.

4.3 Questionnaire

A dichotomous (Yes/No) answer questionnaire was designed to seek answers from the respondents relating to different areas changes in job roles and responsibilities in the organizations as a result of integrating ChatGPT, effect on the demand for human employees in the organizations, emergence of new job opportunities, improvement in the efficiency and productivity of tasks within job roles, potential to replace certain job roles or functions, impact on the skills and qualifications required for job roles, challenges to the ethical implications of using in job roles, influence on the job satisfaction and engagement of employees, resistance among employees towards adopting and working with AI, impact on the customer experience and service quality, specific areas or job roles within the organization experiencing significant changes, cost savings or operational efficiencies. Out of the 200 questionnaires distributed, 195 were received and 190 questionnaires were usable for further analysis.

5.0 Analysis of Data and Interpretation

The following table provides the data for sample profile in terms of age, gender, annual household income, higher level of education, corporate chatbot services.

5.1 Sample profile

The mean age of 200 participants of this study was (56.5% male; 41.5% female;.2% other) was 34.44 (SD = 9.89). A total of 200 participants (20.0%) reported their annual household income range as Rs. 50 to 60 lakhs followed by 60 to 70 lakhs (n = 130 65%), 70 lakhs and above (n = 30; 19.8%). In terms of participants' highest level of education, three largest groups included 59 Bachelor's degree (67.5%%), 137 (67%) master's degree,

and 6 (3% college but not degree The top three corporate chatbot services that participants selected included Bank of America (n = 40 (20%), Microsoft (n = 120; 60%%, and PayPal (n = 40; 20%)'

Age	40 and Below	40-50	050 above
	41(20.5%)	101 (50.5%)	58 (29%)
Gender	Male	Female	Other
	113 (56.5%)	83 (41.5%)	4 (2%)
Income	50-60 lakh	60-70 lakh	70 and above
	40 (20%	130 (65%)	30 (15%)
Level of Education	Bachelor's Degree	Master's Degree	College but no degree
	59 (29.5$)	135(67.5%)	6 (3%)
Corporate Chatbot Services	Local	Microsoft	Paypal
	40 (20%)	120 (60%)	40 (20%)

5.1.1 Changes in job roles and responsibilities in the organizations as a result of integrating ChatGPT

Table 1: Job Roles and Responsibilities

Area of Concern	Yes	No	Not sure	Total
Changes in job roles and responsibilities in the organizations as a result of integrating ChatGPT,	170	25	5	200
Percentage	85	12.5	2.5	100

According to the aforementioned table, the majority of respondents (85%) agreed that organisations are likely to see sizable changes in job roles and responsibilities as a result of ChatGPT integration. It is not noteworthy how many answers were unfavourable or indifferent. An AI interface called ChatGPT, which is based on the GPT-3 big language model, can create practically any text or printed output with a level of quality that almost makes it appear as though it was authored by a person. The World Economic Forum pointed out that although some jobs might become obsolete, people won't. As an alternative, humans could learn how to work with AI, using it to automate daily tasks while honing their talent. AI has the advantage of freeing up time to concentrate on creating and utilising abilities that machines lack. These involve complicated problem solving, innovation, and strategy that call for emotional intelligence and empathy. Therefore, ChatGPT can be utilised to enhance professional abilities to boost employee productivity and efficiency in the settings where it has the greatest potential for transformation. In addition, it provides an opportunity to build human abilities that will likely be more crucial for job advancement as we go into the era of automation and artificial intelligence.

5.1.2 Effect on the demand for human employees in the organizations

Table 2: Demand for Employees

Area of Concern	Yes	No	Not sure	Total
Effect on the demand for human employees in the organizations.	150	20	30	200
Percentage	75	10	15	100

Data on the impact on the need for human employees in the organisations is shown in the table above. The majority of respondents (75%) agreed that the integration of ChatGPT will likely have a negative impact on the demand for human employees in the organisation. 25% of respondents predicted that the impact of AI on the need for workers would not be particularly substantial. The responders who expressed no opinion are not noteworthy. The use of ChatGPT in human resources is widespread. OpenAI's development of ChatGPT has made a whole new range of opportunities available that weren't there before. In order to properly integrate this new technology for the benefit of the firm, HR departments should retain an open mind. Everywhere, managers and employees use ChatGPT in a variety of ways. The possible effects on workplaces, from writing email replies to summarising lengthy notes, remain to be observed. This chatbot is used by HR professionals to enhance their work and businesses. As a virtual teaching assistant, ChatGPT can help managers pre-screen CVs, link profiles or intention letters, find the best candidates, generate personalised interview questions, summarise courses and learning materials, create and assess quizzes from courses, evaluate performance, pinpoint insights from engagement, forecast employee attrition risk, and open up in-depth people analytics. ChatGPT isn't flawless and doesn't pretend to be. However, when it examines fresh data sets and information, it has the capacity to continuously learn and develop. Nestor (2023)

5.1.3 Emergence of new job opportunities

Table 3 New Job Opportunities

Area of Concern	Yes	No	Not sure	Total
Emergence of new job opportunities,	100	95	5	200
Percentage	50	47.5	2.5	100

The data in the table above pertains to the appearance of new employment chances within the organisation as a result of the integration of ChatGPT. Almost 50% of

respondents think that ChatGPT integration will probably result in new employment opportunities within the organisation. The same amount of respondents think it's unlikely that ChatGPT integration will lead to more employment chances in organisations. Only a tiny portion of responders are unsure of both.

Susheel Bhatt (2023) looked at how the employment market is affected by ChatGPT and how that perception varies across a range of industries. ChatGPT can be used in the customer service sector, for instance, to automate some customer service tasks like answering frequently asked questions or handling straightforward requests, potentially reducing the need for human customer service representatives as ChatGPT can handle these tasks more effectively and economically. ChatGPT can be used to create written content like news articles, product descriptions, or social media postings in the same way that it used in the content development sector. Thus, fewer human content developers may be required. Nevertheless, ChatGPT-generated content is not always flawless and may need to be reviewed and edited by a human. But not all jobs are definitely in danger from ChatGPT. In fact, ChatGPT may open up new career prospects in fields like data analysis, AI development, and other disciplines requiring highly technical expertise. Additionally, ChatGPT can help with linguistic activities like translation, enhancing intercultural contact and even opening up new career options in international trade and communication.

5.1.4 Improvement in the efficiency and productivity of tasks

Table 4: Efficiency and Productivity

Area of Concern	Yes	No	Not sure	Total
Improvement in the efficiency and productivity of tasks	180	20	0	200
Percentage	90	10	0	100

The information in the table above pertains to the increase in job productivity and efficiency in businesses using ChatGPT. The majority of those surveyed supported the role that ChatGPT may play a role in enhancing task productivity and efficiency. 10% of the respondents said that the efficiency and productivity of tasks in the organisation integrating artificial intelligence in their operations were not likely to improve. 444 college-educated professionals were given occupation-specific writing tasks by Cezary Gesikowski (2023), and half of them were randomly exposed to ChatGPT. According to the study, ChatGPT significantly increased average productivity by reducing the amount of time required by 0.8 standard deviations (or about 44%) and boosting output quality by 0.4 standard deviations (or about 22%). This suggests that ChatGPT reorganised duties away from crude drafting

and towards idea generation and editing, primarily substituting worker effort rather than complementing worker talents.

5.1.5 Potential to replace certain job roles or functions

Table 5: Replacement of Job Roles or Functions

Area of Concern	Yes	No	Not sure	Total
Potential to replace Certain job roles or functions,	190	10	0	200
Percentage	95	5	0	100

The data on the ChatGPT's potential to replace certain employment roles or functions across industries integrating AI is shown in the above table. 95 percent of respondents anticipate that the ChatGPT may eventually replace particular employment responsibilities or functions. Only a very small fraction of respondents said they thought ChatGPT would never completely replace particular jobs or services. Some studies concur with our conclusions. In their post on ChatGPT may be coming for our jobs, Aaron Mok and Jacob Zinkula (2023) cited a 2013 University of Oxford study that concluded that 47% of US jobs might be displaced by AI over the next 20 years. According to Mark Muro, a senior scholar at the Brookings Institute who has studied the effects of AI on the American workforce, the idea that developing AI technologies like ChatGPT could threaten people's employment, particularly white-collar ones, is becoming an even more plausible possibility.

5.1.6 Impact on the skills and qualifications required for job roles

Table 6: Skills and Qualifications for Job Roles

Area of Concern	Yes	No	Not sure	Total
Impact on the skills and Qualifications required for job roles,	165	30	5	200
Percentage	82.5	15	2.5	100

The data in the table above illustrates how the ChatGPT has affected required skills and education for various career roles. According to the majority of respondents (82.5%), the ChatGPT will undoubtedly have an impact on the skills and requirements for employment roles. Future work responsibilities are anticipated to call for a variety of skill sets that job seekers will need to develop. According to the Future of Jobs Report from the World Economic Forum, AI is expected to eliminate 85 million jobs and create 97 million new ones by 2025. It suggests that in fact, employment creation by AI is outpacing job replacement.

5.1.7 Challenges to the ethical implications of using in job roles

Table 7: Challenges to Ethical Implications

Area of Concern	Yes	No	Not sure	Total
Challenges to the ethical implications of using in job roles	85	115	0	200
Percentage	42.5	57.5	0	100

Data for the ChatGPT's objections to the moral ramifications of deploying AI in employment roles are presented in the above table. While 42.5% of respondents believed there would be issues to the ethical implications of utilising AI in employment tasks, the majority of respondents (57.5) believe ChatGPT will not present any such challenges Gurpreet Saini (2023). When given a command, the chatbot follows the algorithm blindly and responds with the requested data. It is unable to tell whether the data are skewed. The information sent into ChatGPT is outdated, sparse, and insufficient, making it impossible to respond to questions on any subject in the world from all possible angles. Additionally, since this data has not been updated since 202, it also fails to account for progressivism. When researchers and users used ChatGPT to gather information or write articles about a subject, the results were biassed and reflected negative stereotypes. Additionally, the chatbot appeared to favour hiring men over women for computer jobs and exhibits prejudice towards individuals of colour and those with diverse sexual orientations. Chatbots and similar technology cannot employ the faculties of discrimination and critical thought like humans can. They only mine online sources for facts and figures. Users must exercise caution as a result.

5.1.8 Influence on the job satisfaction and engagement of employees

Table 8: Job Satisfaction and Engagement

Area of Concern	Yes	No	Not sure	Total
Influence on the job satisfaction and Engagement of employees	170	25	5	200
Percentage	85	12.5	2.5	100

Table 8 shows data for the ChatGPT's influence on the job satisfaction and engagement of employees. The analysis of above data shows that majority of respondents (85%) believed that there will be influence on the job satisfaction and engagement of employees in organizations integrating ChatGPT in different job roles. The smaller

percentage (12.5%) perceived no influence on job satisfaction and engagement of employees. Springworks (2023) analysed how to Use ChatGPT for Employee Engagement and reched the conclusion that ChatGPT can assist HR departments to provide employees with personalized and engaging support and improve employee engagement and satisfaction. ChatGPT can be used for employee engagement to provide employees with instant support and answers to their questions and to collect feedback from employees through surveys or polls. The model can analyse the data and spot important themes and trends, giving HR information about employee engagement and happiness. ChatGPT can also be used to send personalized messages to employees, such as birthday wishes, work anniversary messages, or congratulatory notes and to provide mental health support to employees giving advice on stress management, responding to inquiries regarding mental health difficulties, and connecting staff with appropriate services and resources

5.1.9 Impact on customer experience and service quality

Table 9: Customer Experience and Service Quality

Area of Concern	Yes	No	Not sure	Total
Impact on the customer experience and service quality	175	25	0	200
Percentage	87.5	12.5	0	100

Table 9 shows data for ChatGPT's impact on customer experience and service quality. The analysis of the data shows that the majority of the respondents (87.5%) believed that ChatGPT will have an impact on customer experience and service quality. This shows that there is a significant impact of ChatGPT on customer experience and service quality. Merely (12.5%) of respondence thought that there will be no impact of ChatGPT on the customer experience and service quality. Kelechi Okeke (2023) studied ChatGPT's impact on customer experience. His findings included that ChatGPT can provide instant and personalized customer service 24/7, with no waiting time. Multiple customer inquiries can be handled at once, cutting response times and raising customer satisfaction. Customers will feel valued and appreciated, which has the potential to dramatically improve customer satisfaction and brand loyalty.

5.1.10 Experiencing significant changes specific areas or job roles within the organization

Table 10 shows data for the employees experiencing significant changes in specific areas or job roles. The analysis of data makes it clear that 67.5 percent of professionals

believed that employees are experiencing significant changes in specific areas or job roles. Only 27.5% of professionals expressed their opinion in the negative and expect that there will not significant changes in specific areas or job roles due to increasing use of ChatGPT in organizations integrating the technology.

Table 10: Changes in Job Roles

Area of Concern	Yes	No	Not sure	Total
Experiencing significant changes specific areas or job roles within the organization	135	55	10	200
Percentage	67.5	27.5	5	100

5.1.11 Specific areas or job roles within the organization experiencing significant changes

Table 11: Changes in Job Roles

Area of Concern	Yes	No	Not sure	Total
Specific areas or job roles within the organization experiencing significant changes	140	50	10	200
Percentage	70%	25%	5%	100%

Table 11 shows data for the specific areas of job roles within the organisation experiencing significant changes. The analysis of data makes it clear that 70 percent of professionals believed that specific areas or job roles that involve intensive technology will potentially exeroemce significant changes. Only 25% of professionals expressed their no specific areas or job roles within the organiation are likely to experience significant changes.

5.1.12 Cost savings or operational efficiencies.

Table 12 shows data for Operational efficiencies. The data shows that majority of respondents (92.5%) believed that ChatGPT is likely to bring significant operational efficiencies in the organizations integrating ChatGPT.

Table 12: Operational Efficiencies

Area of Concern	Yes	No	Not sure	Total
Cost savings or operational efficiencies.	185	15	0	200
Percentage	92.5	7.5	0	100

6.0 Conclusion

The study shows that when organizations use AI tools like ChatGPT, there will be big changes in the jobs and duties people do. Even though some worry that human workers might lose their jobs, the research shows that the total number of jobs needed in the workforce won't drop much. Instead, using ChatGPT is expected to create new kinds of job opportunities within companies. Most people surveyed believed that ChatGPT could make tasks easier and help improve how productive workers are.

About 95% of those surveyed thought that ChatGPT might eventually take over certain tasks that humans usually do. This means that future jobs will change a lot, and people looking for work will need to learn new skills to keep up with what employers need. When it comes to ethics, people had different opinions.

Around 42.5% worried about possible issues with using AI in the workplace, while 57.5% didn't think there would be big ethical problems. A large number of people—85%—agreed that using ChatGPT would affect how happy and involved employees feel at work. Similarly, 87.5% believed that ChatGPT would have a big impact on how customers experience services and the quality of work provided by companies.

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