

"ChatGPT and other Artificial intelligence tools and the Future of Employment: An Examination of AI's Influence on Labour Markets and Workforce Dynamics"

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ABSTRACT

Workforce dynamics and labour markets are changing as an implication of rapid development of artificial intelligence (AI) technologies, especially ChatGPT and other generative models. This study analyses the potential and difficulties that artificial intelligence (AI) brings in order to investigate the complex effects of AI on employment. AI is increasing productivity, generating new job positions, and automating monotonous work as it is incorporated into more industries. Nonetheless, worries about the skills gap, job displacement, and the evolving nature of employment are becoming more widespread. This study examines the ways in which artificial intelligence is impacting industries like healthcare, banking, education, and customer service, offering factual data on how labour markets are adjusting to these developments.

Keywords:

Artificial intelligence, ChatGPT, labour markets, workforce dynamics, automation, job displacement, reskilling, employment trends, economic growth, AI ethics, regulatory frameworks.

1. Introduction

Launched on November 30, 2022, ChatGPT is the abbreviated version of the Chat Generative Pre-Trained Transformer. In a sense, the idea of artificial intelligence tools is new and redefines the way humans and machines communicate with one another. Using cutting-edge artificial intelligence algorithms, OpenAI created ChatGPT, a sizable language model that can provide natural language answers to input or cues. The invention has been felt in various sorts of sectors, from content artificial intelligence tools, so let's check out its history, operation, and its influence on the labour market.

Numerous businesses, like customer service, content development, and many more, may use it. Utilising ChatGPT and additional AI technologies, the company created a system that automates customer support and response times. Along with the aid of a big database of customer's enquiries and answers, the Artificial intelligence tools system were also educated on contextual and intent-based interpretation of the client's searches. Customer satisfaction ratings increased by over 30% as the average response time decreased from many hours to just a few minutes. The researchers also found that several questions might be handled with ChatGPT and other artificial intelligence methods, however the calibre of the answers is being compromised. In addition, it was also established that more than 90% of questions raised could be answered correctly through the algorithm without human interaction. In simple terms, this case study demonstrates these tools may be used to enhance customer services. It is quite possible to increase response times and satisfaction level among customers by automating customer care and customized responses.

2. Literature Review

Artificial intelligence (AI) underwent a boom in the 1950s and 60s, with major advancements being achieved in the creation of new AI methods and algorithms. However, by the early 1970s, there was rising discontent with AI as researchers struggled to construct systems that could match the high requirements that had been set. learning as well as in-depth learning. AI systems may use machine learning techniques to learn from data without intentional design. Deep learning algorithms, which mimic the structure and operation of the human brain, are one type of machine learning algorithm.

Early in the 20th century, mathematicians and scientists had the idea to build computers that could think and learn like people. That signified the beginning of AI and automation's historical advancement. Alan Turing released a paper titled "Computing Machinery and Intelligence" in 1950, setting the standard for artificial

intelligence research. He developed the Turing test for it, which assesses a machine's ability to behave intelligently in a way that is either distinct from or comparable to human conduct.

Dinesh Kalla and Nathan Smith claim that these tools: It's a cutting-edge system that responds to inputs or prompts in natural language using potent artificial intelligence algorithms. It is employed in a wide range of industries, including content production, customer support, and natural language processing. It discusses the formation of ChatGPT, its operation, and its impact on many academic disciplines that are the subject of this inquiry and analysis. It looks at the characteristics and limitations of ChatGPT in addition to its advantages and disadvantages.

It discusses how the program may be used by academics and researchers, as well as how it might impact software development, employment, cyber security, and customer service. The revolutionary benefits of artificial intelligence (AI) in productivity, cost reduction, decision-making, and creativity have been highlighted by Gabriel Martin (2023) as we discuss challenges such as data privacy, security, ethical difficulties, and employment displacement. They also emphasised the need for job transition assistance, legislative actions, and reskilling and upskilling techniques to address the problems brought on by the increasing usage of AI technology in the workplace. They used a poll to help them with this.

Zarifhonarvar, Ali (2023) provided further details on the impact of ChatGPT and other AI technologies on the job market. First, a comprehensive review of prior research articles on the topic was conducted in order to begin gaining an understanding of how ChatGPT and all other AI-related services are impacting the labour market. The implications of artificial intelligence technology are then evaluated via the lens of the supply and demand paradigm.

This study would consider the potential and challenges that such an invention brings while examining the short- and long-term implications on the labour market. It also extracts different vocations from the International Standard Occupation Classification using text mining techniques, producing an extensive list of jobs that are most susceptible to ChatGPT and other AI technologies. While certain professions have been replaced by artificial intelligence tools, other AI technologies have had varied impacts on the labour market and cannot be argued to have fully destroyed jobs in some areas. However, AI will surely have a big influence and maybe even be helpful in the long term.

3. Research Methodology

The base research approach for this study is qualitative, wherein the SLR framework will be used to survey the influence of ChatGPT as well as other forms of AI tools on labor markets and workforces. This study, through a critical analysis of academic and industry literature about discernible trends, impacts, and emerging themes outlining the role of AI in employment opportunities, displacement from jobs, in-demand skills, and workforce adaption.

4. Themes

Artificial intelligence tools and Labour market:

The application of ChatGPT and other Artificial intelligence tools can be seen on various Industries and profession such as;

Data analyst:

This type of artificial intelligence is good in writing and creating report, summarising and translating insights into words which helps analyst and decision makers to make more efficient decisions.

Customer Services:

Chatbots can be powered by the use of Chat GTP and can act in front line for handling customers inquiries. It can be used to automate the responses of FAQ and make the work easier.

Computer Programmer:

In addition to human languages, Chat GPT can create code in a number of computer languages, including as Python, JavaScript, and C++. Fortunately, it cannot (yet) generate exceedingly complicated programs, as

would be necessary to produce current software applications, saving programmers who don't want to retrain for an entirely other job.

Human Resources:

ChatGPT or any other tools using AI would help designers design jobs and automate routine processes, which will include reports on performance review results, questions for potential new hires, and onboarding materials preparation. This can be done by any routine question: where can one find policy documents or even deeper more specific questions for actual policy analysis.

Potential impact of ChatGPT on labour markets:

ChatGPT and other AI technologies are going to automate a lot of jobs in many kinds of professions, such as customer service, technical support, writing, and translation. This form of automation may render certain jobs obsolete in specific industries where jobs primarily depend on repetition. However, it may lead to the creation of more jobs in the development, deployment, and maintenance of AI tool systems. A far more thorough analysis of the ways in which these technologies are impacting labour markets can be seen in the film "ChatGPT and other Artificial intelligence tools and the Future of Work - Microsoft March 2023 Event". The idea that this labour market would be marked by a polarisation of the workforce between high-skilled jobs and a decline in low-skilled ones appears to be supported by the video.

In order to lessen the negative effects of AI on the workforce and ensure that this new technology becomes widely available for everyone to use, the paper makes many recommendations to businesses and politicians, including putting money into education and training to assist employees in acquiring the skills necessary in an AI-powered economy. In order to ensure the fair and ethical use of AI, procedures that would safeguard workers' rights and privacy should be adopted. Provide unemployment payments, retraining programs, and help finding new jobs for all the displaced workers who become redundant due to AI automation.

Workforce Dynamics and Adaptation

While ChatGPT and other AI tools and services can automate a great deal of tasks that have historically been completed by humans, their debut is probably going to cause a significant amount of disruption in some market sectors. Because ChatGPT and other artificial intelligence technologies will make certain employment obsolete, they are expected to have a significant influence on the labour market. That may result in the development of more jobs. For workers who require more training or support to be competitive in the labour market, the transitional period may provide challenges.

A recent research by McKinsey modelled the potential global impacts of artificial intelligence on the global economy. The majority of artificial intelligence may be divided into five categories: advanced machine learning, robotic process automation, virtual assistants, natural language, and computer vision. They conclude that while 70% of businesses have adopted at least one AI category, less than 50% have completely adopted all of them. By 2030, artificial intelligence may have an impact on the world economy equivalent to almost thirteen trillion dollars. Increased productivity and other channels related to AI deployment would be the result of such an influence.

AI and the labour market are arguably the most important interaction regarding AI in the global economy. Artificial intelligence has a significant and complex impact on labour and occupations, both positively and negatively. AI can automate a lot of processes, which might result in job losses in a variety of sectors, even specialised ones. AI, however, may also make labour easier and provide new employment. Digital assistant engineers, warehouse robot engineers, and AI marketing professionals are a few new vocations that AI is expected to produce. The contest between automation and augmentation will thus revolve around the impact of AI on the worker—that is, how much technology can replace or assist duties in certain occupations.

Job displacement vs. Job creation:

Automation in the workplace and the development of artificial intelligence (AI) have, by definition, changed the workplace. Nonetheless, this may jeopardise people's employment prospects. The purpose of this study was to determine how AI and automation are affecting employment held by people. This research paper will be completed using a descriptive qualitative technique. The data used in this study is based on several research

findings and earlier investigations that continue to address the problems associated with automation and artificial intelligence in the workplace. According to this survey, a lot of jobs are now being replaced by automation and AI. However, some qualities of human intelligence, such as intuition and empathy, are still challenging for AI to duplicate.

Changing nature of Work and Job roles:

Concerns from companies and government organisations over the widespread use of technology that might eliminate the majority of jobs are understandable. This essay will list and evaluate the many technical advancements that have been made in recent years, as well as the kinds of employment that will be available in the future and the new or essential human qualities that will be needed to adapt to the ever-changing workplace. The approach's nature almost looks futuristic, especially when combined with a clinical analysis of the most recent ideas and research on how work was changing and the assessment of the consequences this evolving workplace had on businesses and society as a whole.

The general conclusion is that, because new technology is viral in nature, even developing countries are witnessing rapid dispersion of this technology; nevertheless, the effects of this process are not felt equally by all countries. Strategic organisational policy recommendations will be required in such a situation, with an emphasis on the following areas: resolving the talent-workforce imbalance; new learning initiatives; collaborative educational awareness; strategic policy actions; and environmentally friendly behaviour within an organisation.

Ethical and Social Consideration:

Once more, there are a number of ethical and societal issues with using ChatGPT and other artificial intelligence applications. The most obvious example of prejudice and unfairness in AI hiring is still the use of specific datasets for training ChatGPT systems, which may lead to bias against particular groups based on those dataset's lack of contribution to population characteristics. Unfair hiring may result from this in turn. The creation of erroneous material or information is another problem associated with ChatGPT or other AI model's usage. Once more, these factors highlight the necessity of appropriate technology use and laws with the aim of making advanced technologies a benefit to society rather than a burden to individuals or institutions.

Concerns about potential risks to individuals' privacy when using ChatGPT and other AI technologies at work and engaging with them are equally pertinent. Artificial intelligence systems have the capacity to gather vast amounts of information on employees, including preferences, hobbies, and writing styles. All of this data might be utilised to monitor the employee's actions and create a plan for promoting to him specifically. The psychological and social effects that ChatGPT and all other artificial intelligence systems have on employees should also be taken into consideration. Job loss and insecurity are a some of the problems associated with ChatGPT use.

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Government Policies and Regulations

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Such chatGPT-specific policies from the Indian government are not yet available to the general public. Still, there are additional broad rules and regulations that apply to chatGPT as well as all other AI tools: One of the extensive pieces of legislation that governs information technology in India is this one. Cybercrime, electronic signatures, and data protection are all governed under the IT Act, 2000. 2019 Personal Data Protection Act the Parliament has been presented with a draft measure that will be known as the Personal Data Protection measure. This proposed legislation will offer comprehensive protection for personal data in India. The Bill is now being studied by the Indian Parliament.

The government policy document, the National Artificial Intelligence Strategy, 2019 National Artificial Intelligence Strategy puts out the goal for AI creation and its use in India. The Strategy places a strong focus on the need of creating new technologies and using them responsibly and ethically. In the near future, the Indian government may release explicit regulations on ChatGPT and other forms of artificial intelligence. However, ChatGPT and other artificial intelligence technologies may still be subject to the general rules and principles mentioned above in the near future.

5.Future Scenarios

5.1Short run impact:

It is highly difficult to estimate the short-term effects of ChatGPT and other comparable AI services, such as ChatGPT4, Google Bard, Chatsonic, Midjourney, and DALL-E generative. These effects might be both beneficial and harmful. On the one hand, these services' potential is claimed to automate particular operations, which would lower the need for labour in particular sectors. However, they also open up new job prospects in the field of AI development. In addition, increasing pay can also boost the workforce's general productivity. But as technology develops further, it's anticipated that overall demand for labour for particular occupations will diminish. The consequences will also be determined by how quickly new abilities are acquired and how quickly technology is adopted.

AI's initial effects on the labour market would be nuanced and intricate. Additionally, it is possible that there would be a temporary mismatch between the skills that businesses need and the abilities that individuals have, which would result in underemployment or unemployment in some places. The short-term effects on the labour market should level off, though, as workers pick up new skills and the labour market adjusts to AI-induced changes. The short-term effect is predicted to be quite complicated.

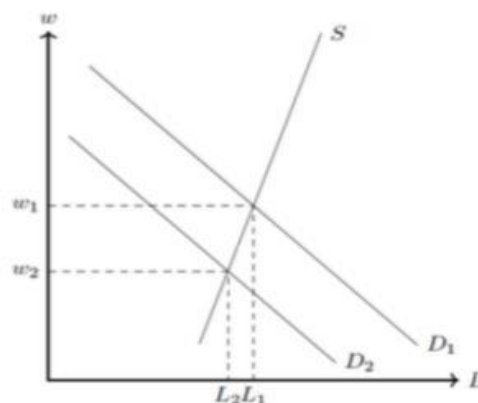


Figure 2 - Short Run Impact of ChatGPT on Labor Demand and Labor Supply

SOURCE: Zarifhonarvar, Ali (2023) : Economics of ChatGPT and other Artificial intelligence tools: A Labor Market View on the Occupational Impact of Artificial Intelligence, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

5.2Long-term impact:

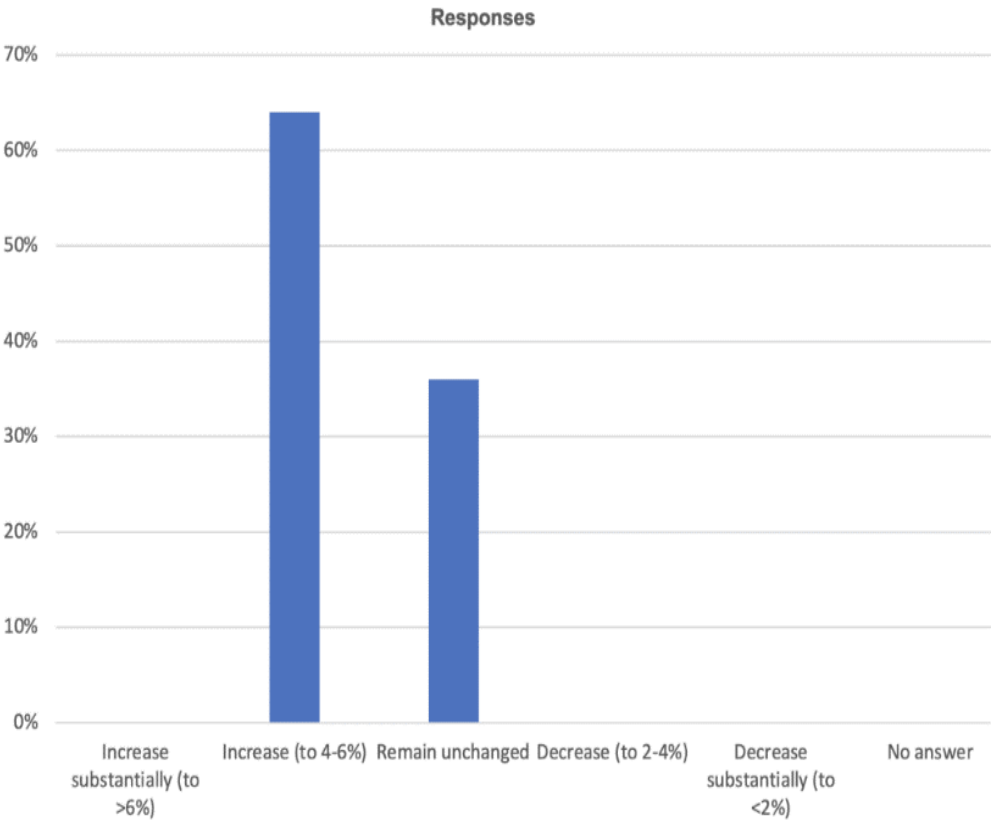
It is extremely impossible to forecast and mostly unknown what effect ChatGPT and other AI tools, as well as other kinds of generative AI, will have in the long run on the labour market. But there are two situations that come to mind: One scenario is that if ChatGPT and other AI tools and generative AI services were real, there

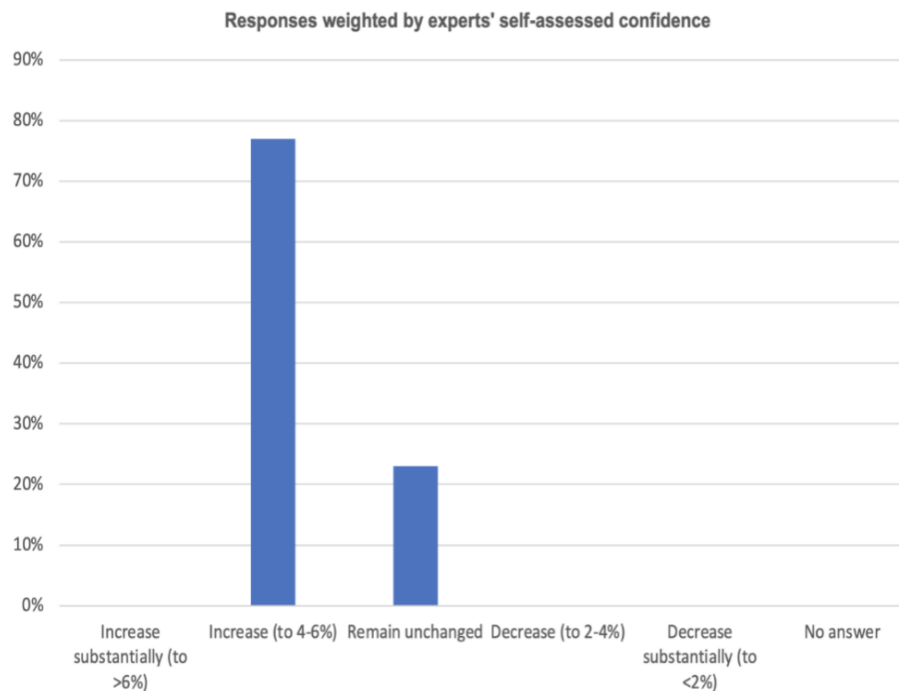
would be more employment overall, which would lead to an increase in the pay for those occupations. This is because it is anticipated that such services would boost productivity, which will stimulate economic development and raise the need for labour. As a result, there is an increase in employment and pay, and the workplace atmosphere improves.

On the other hand, the opposite situation would arise if the demand for human work declines due to the greater level of automation brought about by generative AI. Chatbots might eventually replace human call operators in whole call centres, for instance. A decrease in labour demand in such a scenario would result in a drop in certain people's employment and income. For those people working in industries where automation is already pervasive, it will get rather difficult.

In May 2023, the panellists for the CfM-CEPR poll were asked to forecast the impact of artificial intelligence (AI) on global economic growth and high-income country unemployment rates over the following 10 years. The survey consisted of two questions in total. Predicting how AI would affect global economic growth over the next 10 years was the first assignment. The second objective was projecting how artificial intelligence might affect high-income nations' unemployment rates over the next ten years.

Implications of recent developments in AI on global economic growth and unemployment in high-income countries as they mature over the upcoming decade.

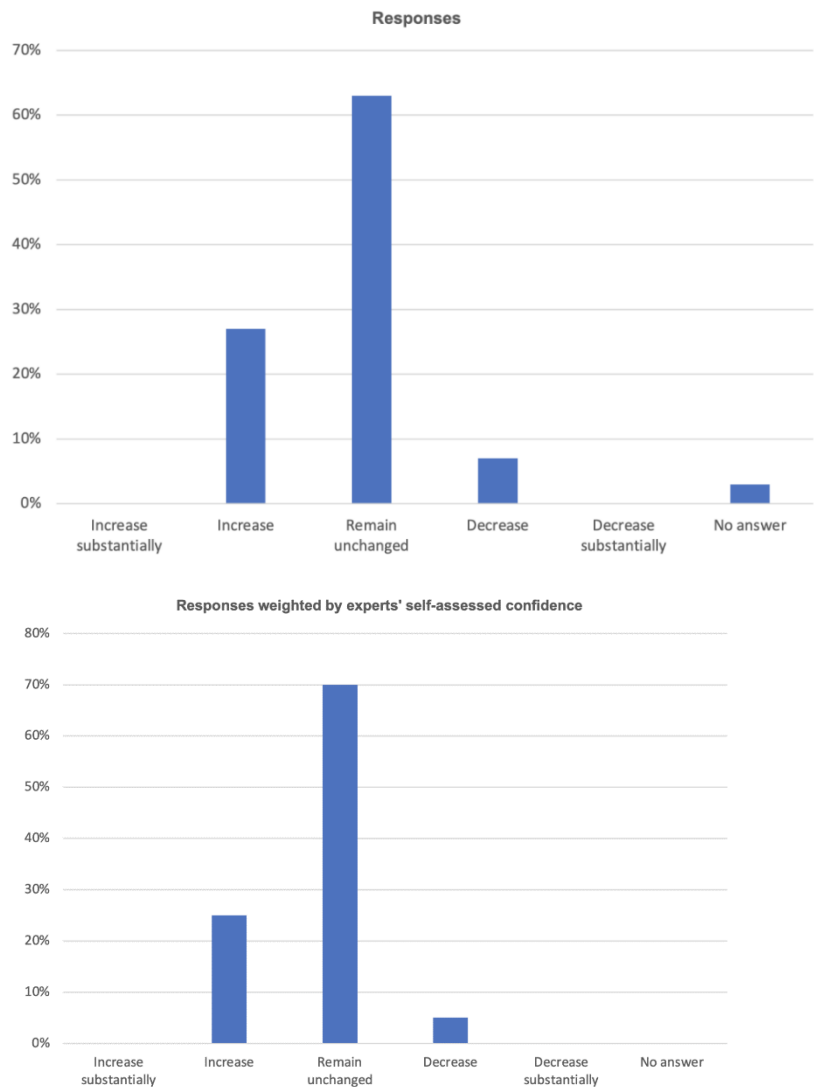




SOURCE: Jain, E. I. (2023, June 20). *The impact of artificial intelligence on growth and employment*. Retrieved from CEPR: <https://cepr.org/voxeu/columns/impact-artificial-intelligence-growth-and-employment#:~:text=The%20World%20Economic%20Forum%20concluded,Lawrence%20et%20al.>

This question received responses from 27 panellists. The majority of panellists (64%) believe artificial intelligence would boost global economic development to 4-6% yearly over the course of the next 10 years. That was the opinion held by 36% of the panellists who were not persuaded that AI will significantly impact global growth. Remarkably, over two-thirds of the panel believe that over the next ten years, advances in AI would positively impact economic development; this suggests that most panellists are highly cautious of their predictions. Given that machine learning is becoming into a "general purpose technology" that is utilised by both developed and developing nations, Jorge Miguel Bravo of the Nova School of Business and Economics in Lisbon would "bet on the upside rather than no change or fall".

The statement "AI will increase productivity and thus higher economic growth" is confirmed by Ugo Panizza of the Graduate Institute, Geneva (HEID). But he adds a caveat to his forecast, saying that "AI could increase unemployment and inequality, which could have repercussions on productivity and growth." This is more than just higher output. Likely to have minimal influence on the long-term trend growth rate of the global GDP, Robert Kollmann (Université Libre de Bruxelles) believes AI could only marginally improve global growth, by roughly "0.5". The majority of panellists believe that there is little to no predicting power for how artificial intelligence will affect global economic development in the remaining years. The University of Oxford's Andrea Ferrero states, "I see AI probably having huge impacts on the economy, but I'm not really sure how." "I believe a couple of sectors will shift considerably for the best, but others probably won't be fortunate enough and have to suffer." . The prospect for total economic growth is, nevertheless, somewhat murky. The way that monopolistic power is challenged, the restrictions that are put in place, and the new concepts that are finally produced will all have an impact on how much of an impact artificial intelligence has, according to Jagjit Chadha of the National Institute of Economic and Social Research. Still, he noted that he is unable to anticipate the impact "with any degree of certainty." The high degree of uncertainty in the panel is explained by Ricardo Reis (London School of Economics): "'Not confident' is the most relevant part of this answer because it is very difficult to forecast future growth over a decade."



SOURCE Jain, E. I. (2023, June 20). *The impact of artificial intelligence on growth and employment*. Retrieved from CEPR: <https://cepr.org/voxeu/columns/impact-artificial-intelligence-growth-and-employment#:~:text=The%20World%20Economic%20Forum%20concluded,Lawrence%20et%20al.>

Thirteen panellists responded to this question. For the next 10 years, the vast majority of panellists (63%) predict that AI will have little effect on employment levels in high-income nations. The vast majority of respondents (27%) said that high-income nations will see higher unemployment as a result of AI advancements. For the next ten years, just two panellists think AI will reduce unemployment in high-income nations. Remarkably, more than 50% of the panellists are uncertain if their responses are accurate, indicating the significant level of ambiguity surrounding this matter. The majority of panellists believe that long-term effects of AI advancements on unemployment in affluent nations would be minimal.

"The number of jobs and the level of unemployment will not change, but the number of hours worked will fall and leisure will increase," as stated by Michael Wickens, Cardiff Business School and University of York. That's exactly what happened in the past as technology developed. With artificial intelligence, the same thing will take place. While he acknowledges that the "effects of unemployment may be limited," Cédric Tile of The Graduate Institute in Geneva thinks that there may be a significant "impact on income inequality and the need for redistribution policy." Retraining may have an influence on unemployment, according to Maria Demertzis of Bruegel, who also asserts that "the sooner this [reskilling] happens, the less the impact on unemployment. "A number of speakers express doubt on long-term projections regarding AI's effect on employment. "The number of jobs and the level of unemployment will not change, but the number of hours worked will fall and leisure will increase," states Michael Wickens of Cardiff Business School and University of York. That's

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Andrea Ferrero of the University of Oxford concentrates on the uncertainty, saying, "I expect unemployment to rise in the short run as human labour becomes obsolete in certain tasks and jobs." Supply will adapt in the middle term, and artificial intelligence may eventually even reduce the natural rate of unemployment. I am not conscious of this. Because AI affects weak parties, several panel members remain less optimistic about its impact on the labour market, even if it may reduce unemployment in high-income countries. "My worry is that AI might be bad for the more vulnerable in the labour markets, like those who will not be so easy to adapt," says Wouter den Haan of the London School of Economics. However, other panel members argue contrary and believe it will actually cut unemployment rates in industrialised countries. AI can lower jobless rates as well as work hours, according to Volker Wieland of Goethe University Frankfurt and IMFS.

INFLUENCE OF CHATGPT AND OTHER ARTIFICIAL INTELLIGENCE TOOLS ON MAJOR OCCUPATIONS

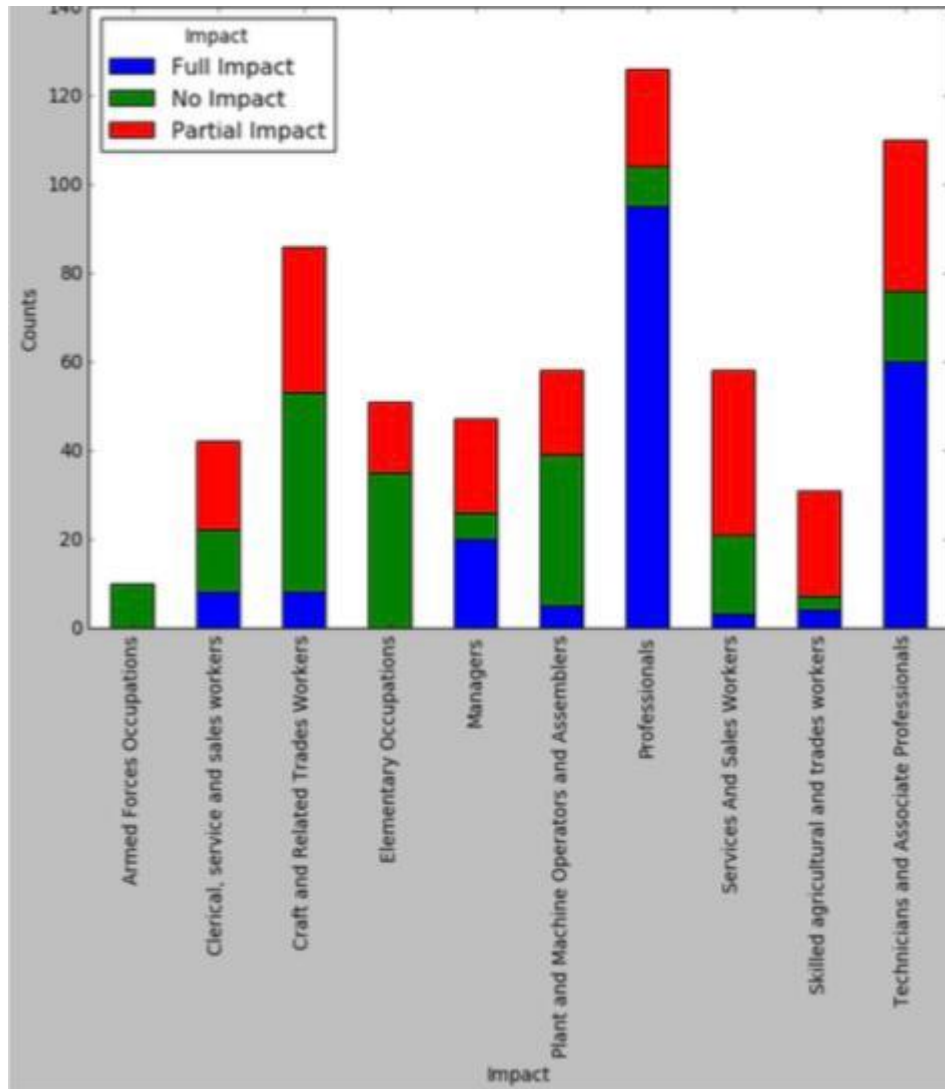
An explanation and categorisation system for the various labour types is provided by the ISCO. This may be applied globally to evaluate and compare the many types of jobs available worldwide. The key categories that fall under the various jobs are subgroups and specialised ones. Based on this reasoning, the occupations were separated for the purposes of this study. Table 1 presents the categorisation using ISSCO.

Table 1 - Number of groups at each level of ISCO

Code	Major Groups	Sub Major	Minor	Unit Groups	Skill level
1	Managers	4	11	31	3 and 4
2	Professionals	6	27	92	4
3	Technicians and Associate Professionals	5	20	84	3
4	Clerical Support Workers	4	8	29	2
5	Service and Sales Workers	4	13	40	2
6	Skilled Agricultural, Forestry and Fishery Workers	3	9	18	2
7	Craft and Related Trades Workers	5	14	66	2
8	Plant and Machine Operators, and Assemblers	3	14	40	2
9	Elementary Occupations	6	11	33	2
0	Armed Forces Occupations	3	3	3	1, 2 and 4
	Total number of groups	43	130	436	

SOURCE: Zarifhonarvar, Ali (2023) : Economics of ChatGPT and other Artificial intelligence tools: A Labor Market View on the Occupational Impact of Artificial Intelligence, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

FIGURE 1



SOURCE: Zarifhonarvar, Ali (2023)

The amount of employment in every ISCO prominent category across the three possible impact categories is displayed in Figure 1. According to the "Professionals" heading, ChatGPT and other artificial intelligence technologies are expected to have a full influence on 95 vocations, a partial impact on 22, and no impact at all on 9 occupations. Likewise, the category "Technicians and Associate Professionals" includes 60 vocations. 16 have no impact, 34 have a little influence, and their predicted complete influence is 16. Twenty professions will have full effect, twenty-one will have a little impact, and six will have no influence in the "Managers" category, according to forecasts.

It is anticipated that eight jobs in the "Clerical, Service, and Sales Workers" category would be entirely impacted, twenty jobs will be partly impacted, and fourteen jobs will not be touched at all. There are eight occupations categorised as "Full Impact," thirty-three as "Partial Impact," and forty-five as "Craft and Related Trades Workers." It is anticipated that five positions in the "Plant and Machine Operators and Assemblers" category will have a full impact, 19 jobs will have a partial impact, and 34 jobs will have no impact at all.

Additionally, Figure 1 demonstrates that of the vocations in the "Skilled Agricultural and Trades Workers" group, 4 will have a full impact, 24 will have a partial impact, and 3 will have no influence. 18 positions in "Services and Sales Workers" have no effect at all, 37 have a partial influence, and 3 positions are expected to have a total impact. Not all jobs under "Armed Forces Occupations" will be affected by ChatGPT or any other AI program.

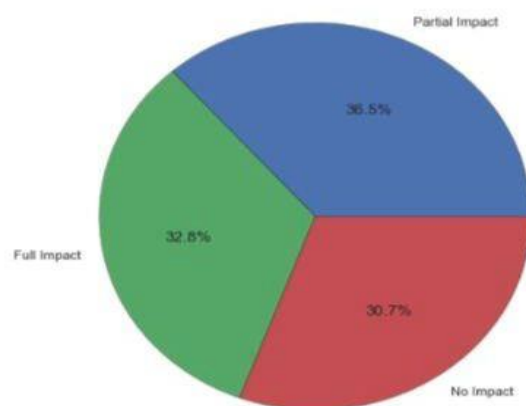
The heading "Elementary Occupations" will list the following: 35 professions that will be totally untouched, 16 occupations that will be somewhat impacted, and 0 vocations that will be entirely and completely impacted.

Functions and capacities that artificial intelligence services would replace in "Partial Impact" occupations, it can be necessary to replace some procedures and skills with AI services. Because human judgement and creativity are still regarded as being more important in certain tasks, it is doubtful that human labour will ever fully replace robots. It will be both beneficial and harmful for the workers. While certain repetitive operations can be automated to free up unproductive or delinquent individuals for more sophisticated, difficult, and even gratifying work, others may lose their employment as a result. When a job has "Full Impact," AI services may automate every skill and competency needed to do the job. That will be a great impact on labour and cause many job losses in the market. This might, however raise production level and cost-saving for businesses. "No Impact" occupations are quite unlikely to get automated because the required knowledge and abilities are too specialist and challenging for AI systems to comprehend, much less perform. It's also crucial to keep in mind that these impacts are genuine and might vary depending on how AI services are used and implemented in each sector and workplace. It's interesting to think about how different professions may be affected by ChatGPT and other AI technologies, based on the tasks involved and the level of skill required for each. The development of artificial intelligence-based products and services, like ChatGPT, will affect and transform the job market.

Figure2:

Table 2 - ISCO Classification and ChatGPT Impact (Major Label)

Major	Full Impact	No Impact	Partial Impact
Professionals	95	22	9
Technicians and Associate Professionals	60	34	16
Managers	20	21	6
Clerical, service and sales workers	8	20	14
Craft and Related Trades Workers	8	33	45
Plant and Machine Operators and Assemblers	5	19	34
Skilled agricultural and trades workers	4	24	3
Services And Sales Workers	3	37	18
Armed Forces Occupations	0	0	10
Elementary Occupations	0	16	35



SOURCE: Zarifhonarvar, Ali (2023) : Economics of ChatGPT and other Artificial intelligence tools: A Labor Market View on the Occupational Impact of Artificial Intelligence, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

IMPACT OF ARTIFICIAL INTELLIGENCE ON JOBS IN INDIA
ESTIMATION OF JOB LOSS/ GAIN DUE TO AI IN INDIA

Table 1: Share of AI Implementers that are Deploying AI at Scale (by sector)

Sector	Share (in %)
Telecom	49
Retail	41
Banking	36
Utilities	34
Insurance	31
Automotive	26
Manufacturing	20

Source: Capgemini (2017)

Table 2: Changed Job Scenario in India in 2022

Expected size of sector (billions US\$)	Expected % growth in sector	Current jobs in sector (millions)	% of current sector jobs threatened	Incremental jobs created over 5 years (millions)	Total jobs (millions)	% of jobs that will be new	% of jobs that will be changed
IT-BPM							
240	9	~3.9	20-35	0.7	4.5	10-20	60-65
Automotive OEM							
4.032	8-8.5	2.04	15-20	0.17	2.2	10-15	55-60
Automotive Components							
4,500	9.5-10	5.99	15-20	0.93	6.92	10-15	55-60
Retail: Food and Grocery							
865	11-11.5	21.4	15-20	0.52	22	5-10	20-25
Textile: Weaving							
105	12-12.5	7.7	10-15	1.6	9.3	5-10	30-35
Textile: Garmenting							
136	12.5-13	19.3	15-20	12.1	31.4	10-15	35-40
Banking							
N.A.	12.5-13	1.24	20-25	0.22	1.46	15-20	55-60

Source: NASSCOM-FICCI-EY (2017)

With AI's help, there are now more jobs in the workplace and there will soon be more. According to the NASSCOM-FICCI-EY (2017) Future of Jobs in India, the exponential expansion of technologies like artificial intelligence (AI) would lead to a 9 percent increase in the number of new jobs held by India's workforce. 37% of workers today will be employed in jobs where the requirements have changed significantly, compared to 54% of workers in jobs where the requirements have remained the same. Additionally, the paper projects that the effects of these three primary drivers would be comparatively minimal on the manufacturing sector and catastrophic on industries like IT-BPM and BFSI. the foundational do.

with apparel. as well as education. In summary, the paper included the following industry-level projections for job changes in India in 2022: IT-BPM, Automotive, Retail (Food & Grocery), Textiles, and Banking. This analysis projected that during the next three years, the gap between the supply and demand for AI and big data analytics will increase from around 62,000 to 140,000. As a result, job possibilities would proliferate without

opposition in industries other than IT/ITeS, especially manufacturing. There are new features available: Some new features that IT/ITeS organisations will soon be able to use are outlined by MoCI. Among the characteristics of these recent arrivals are:

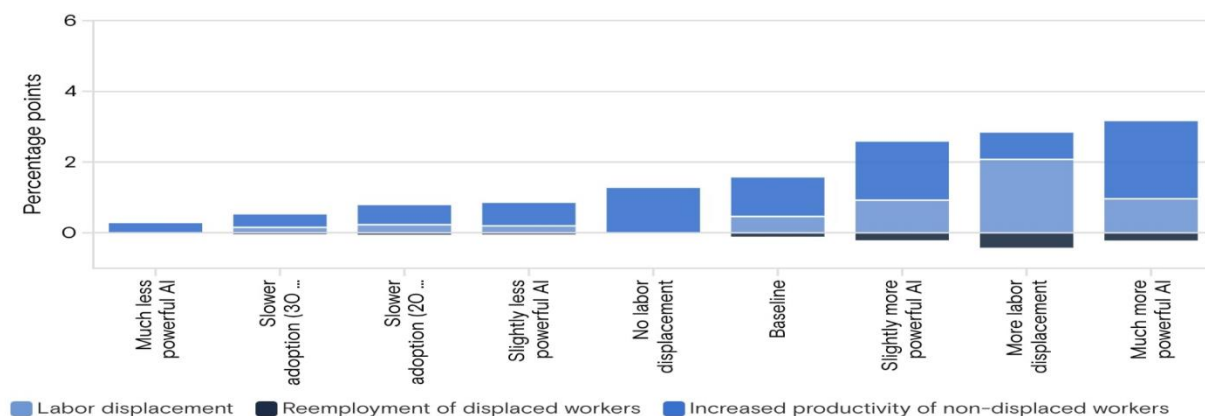
- Health care: professionals, consultants, analysts, and technologists with sufficient bioinformatics knowledge to perform AI-based robotics and diagnostics;
- Advisory and training positions on AI and associated technologies.
- IT/ITES: AI programmers, language processors, data scientists, data analysts, data designers, etc.

MeitY (2019) projects that by 2025, over 20 million new employment will be generated in India, while about 40–45 million people would lose their positions due to upskilling and digitisation interventions that include AI. The industrial, transportation, logistics, IT-BPM, and agricultural sectors will be the key sources of new jobs. Most corporate executives think AI will eventually replace labour. 18% of business leaders anticipated that the labour will be replaced by AI, and 16% believed that AI would create new employment. Interestingly, though, workers were more upbeat than leaders; only 4% thought AI would replace jobs, while 21% thought it would lead to the creation of new ones.

The NASSCOM study "Enhancing India's Digital Future through AI" was released lately. By 2025, data is expected to boost India's GDP by \$540–500 billion, with three industries accounting for 45% of the value added: offshore consumption, banking, insurance, retail, and agriculture. The media, IT, and telecommunications industries also make further contributions. energy; logistics, transportation, healthcare, and the production and assembly of automobiles come next. According to the paper, "routine and non-cognitive tasks are the only labour-intensive tasks that current AI applications cannot replace." He also mentioned that there would be a temporary replacement for him. Longer term, however, may see the creation of additional jobs. Furthermore, the research claims that the expansion of data annotation and tagging firms in India is creating a plethora of opportunities for the nation's high school pupils. By giving workers easy-to-learn tasks to do, such an opportunity can improve the employability of the growing Indian workforce. The impact on the manufacturing, transportation, shipping, and financial services industries is highlighted in the research. Particular Profiles Ready for Replacing cashiers and data entry clerks, financial analysts, telemarketers, customer service supervisors, and similar positions.

AI's impact on labor productivity depends on its capability and adoption timeline

Effect of AI adoption on annual labor productivity growth, 10-year adoption period

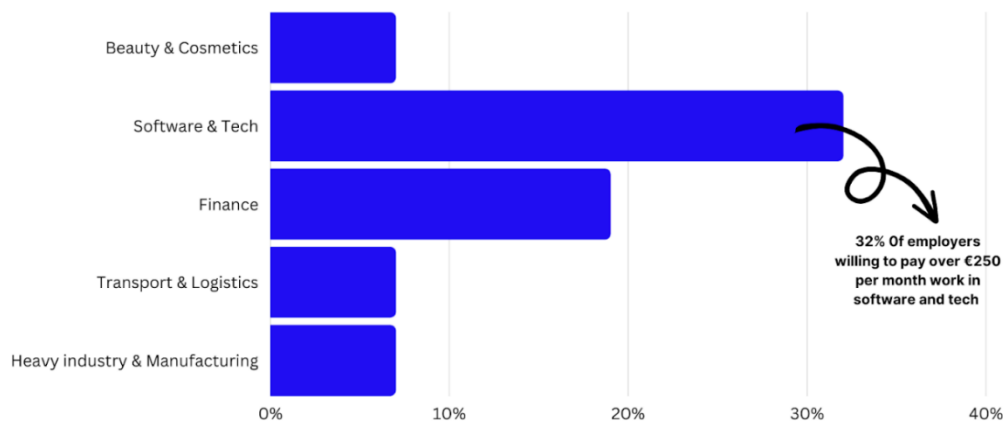


Source: Goldman Sachs Research

Goldman Sachs

EXHIBIT 1

Top 5 industries willing to pay >€250 per month for ChatGPT

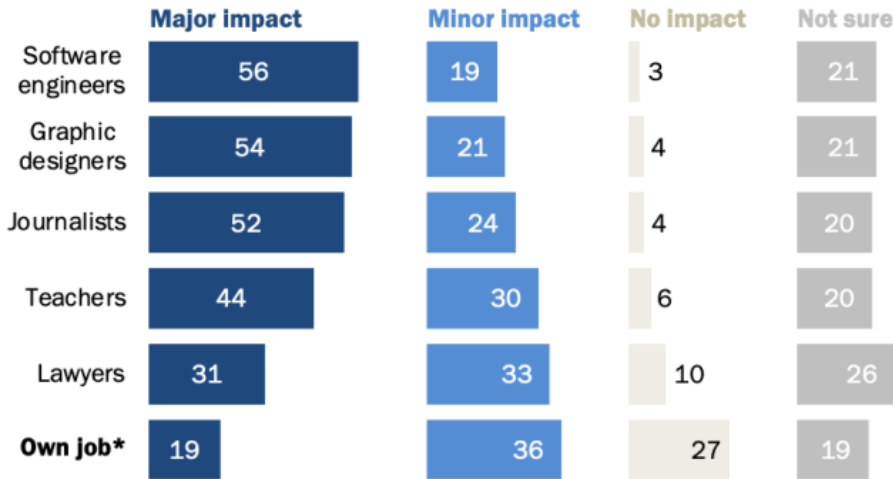


sortlist

EXHIBIT:2

Fewer think chatbots will have a major impact on their own job when compared with other industries

Among U.S. adults who have heard of ChatGPT, % who say chatbots like ChatGPT will have (a) ___ on the following jobs over the next 20 years



* Based on those who were working full or part time for pay at the time of the survey and have heard of ChatGPT.

Note: All percentages are based on those who have heard of ChatGPT. Those who did not give an answer are not shown.

Source: Survey of U.S. adults conducted July 17-23, 2023.

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EXHIBIT:3

6.Conclusion

Our usage of ChatGPT and other artificial intelligence technologies will determine how much potential and capacity the labour market and employment sector have. Although ChatGPT and other artificial intelligence tools cannot fully replace people, they may be utilised ethically and properly with the assistance of the government and in accordance with laws and regulations; otherwise, they can cause catastrophe and deceive

the public. It has already been implemented in a number of sectors in the form of various apps, in addition to a wide range of additional AI tools that may be utilised in one way or another for their daily operations.

In the above report, we have discussed various types of views on how it could be used in a labour market and some of its influence on the market which already has been made and also the future possibilities are discussed. The majority of study reports on AI jobs in India make this clear. fake employment situation However, I have a chance in the middle before it turns into organs. It can be repaid by such losses of a fresh day. In India, create jobs in other sectors. Make sure you are able to do it. There are suggestions given for the next policies on social development and economic progress in India. Our usage of ChatGPT and other artificial intelligence technologies will determine how much potential and capacity the labour market and employment sector have. Although ChatGPT and other artificial intelligence tools cannot fully replace people, they may be utilised ethically and properly with the assistance of the government and in accordance with laws and regulations; otherwise, they can cause catastrophe and deceive the public. It has already been implemented in a number of sectors in the form of various apps, in addition to a wide range of additional AI tools that may be utilised in one way or another for their daily operations.

In the research mentioned above, we have covered a range of perspectives on its potential applications in the labour market, as well as some of the market impacts that have already occurred and potential future developments.

In most study, it is obvious. Report AI jobs in India phoney work Workplace circumstances; However, I have a chance in the middle before it turns into organs. It can be made up for by these fresh day losses. In India, create jobs in other sectors. Make sure you are able to do it. There are suggestions given for the next policies on social development and economic progress in India.

Education and Training: AI expertise and the ability to instruct future pupils are necessary for education. This will need that the right personnel be assigned. adaptable enough to meet evolving requirements. Description of the position. "AI for All" . "National Artificial Intelligence Strategy Report" (NITI, 2018) is the main issue. Its development was helped by NITI Aayog (2018) and the MoCI (2017) AI Working Group Report. creating an "AI education strategy." Employees equipped with the necessary knowledge. This section needs to be precise. Programs for Education and Training: To satisfy Professional Organisations' demands and specifications Section. The Department of Electronic Information Technology, Government of India, Intel India, and NeGD will launch "national Programs for public schools: AI responsible for youth" in May 2020 across the whole nation is to increase the young students' opportunities. "AI Ready" .9. In a similar vein, from the perspective of empowerment, educating young people in national schools at the student level. the most recent digital innovations, including AI Introducing the "AI-based module" Joint Mission on Atal Innovation and NITI Aayog (AIM). Advertising may be present along with NASSCOM.10 National Opportunity Development Corporation (NSDC). Program for AI Skills Training In the government's aim of Skills India. These efforts could be fruitful. has a significant impact on the development of skills.

Human resources going forward. There is Ensuring the presence of these strategies is crucial. executed with promptitude and effectiveness. including everyone who is pertinent. They will have made a substantial contribution. Social policies need to be planned. Rethinking social protection is necessary. The Fundamentals of Governance. Compliant 19th rank in the proportion of workers according to the World Social Protection Report 2017 (ILO, 2017) At least one Social Security benefit is given to you. In India, there are just 19 programs or plans. percentage. Because of the inadequate social safety net, employees may be more vulnerable. Job losses brought on by AI are not good. Ideas are entities in this sense. Universal Insurance and Living Wage .We must discuss basic income and the political system that supports it.

Somwansi and Desouza (2019) Rather than engaging in politics, promotes employment growth Opportunities for implementation have a detrimental effect Thanks to AI, professions will undoubtedly grow more similar. More employment being created is a positive thing. Field properties Medical, education, tourism, and art with exceptional aspects are the industries least susceptible to automation. Automation of human engagement is difficult. An agency for interdepartmental adjustments in AI is required. given that these technologies will all arrive. will be helpful in bringing it to a national scale. Department of Division Adjustment in the AI case, the

focus is on monitoring and major institutions' adjustments in the applications of research in other industries; these include issues with political decision-making, replacing infrastructure, creating jobs, increasing technology and training, and not just measuring the negative input impact of a particular sector on social protection. Members of such a ministry must be delegates of the authorities such as all parties with an interest in the Department or Ministry, Business, Science, Research, Civil Society, and Garden.

Research requirements specific to India: relatively few, or almost non-existent, analysis studies on the impact of artificial intelligence on employment in the country to date. This fact is recognised and supported by NITI Aayog (2018, 2021) and MoCI (2018) AI Task Force Report I. for specialised research on India. Even the data from the studies that are now available appear insufficient to make legislators aware of the need for adequate political action in many domains. Consequently, a thorough technological impact assessment Socio-economic assessment research. It must be extensively used. The key areas vary. India provides a range of supplies, including banking services, vehicles, textiles, retail, customer service, and ITeS.

This kind of evaluation could exist. It is really helpful for power measurements. Regarding the potential issues that might emerge from it. Increasing the usage of AI Field will achieve this. In order to support politicians Choosing what steps to take, such as whether retraining and training are necessary. New course creation and RIS policy letter no. 104 ,11 modification Workforce vulnerability in the industry Given that automation is not immediately obvious constructing the social security system with artificial intelligence politics, etc. That is, I believe, the majority after all. Studies and reports demonstrate the successful outcome. AI's potential effects on hiring in India. Control exists. As most surveys indicate, there will be an increase in jobs in the near future, India powered by AI, but in the short term, yes.

Some sectors may even eliminate jobs. How to get ready for the future workforce: Possibilities and drawbacks We must spend and exert influence. Boost ability, proficiency, and in relation to matching and training All parties may be obligated to implement social policies for low-skilled workers in the case of a layoff. cooperate with everybody for the sake of Permit problem-solving. In response, implement the necessary timetable and policies.

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