AI, GIG Economy and Unemployment Foresight: A glance on the Global Economy

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Abstract. The study examines the relationship between the Gig economy and AI that has highlighted their impact on the global labor market, with the Gig economy providing short-term jobs and AI revolutionizing industries. The Gig economy drive by technology and changing work patterns, offers flexibility but also presents challenges like job insecurity and income inconsistency that has been highlighted from human capital theory and social network theory. The Gig economy significantly contributed to global GDP, with projections for further growth however, AI's economic implications are vast, but challenges include job displacement. The interplay among Gig economy and AI us dynamic with AI automating tasks for Gog workers and platforms in using data for improved efficiency. The study has used secondary quantitative research methodology in giving a comprehensive analysis drawing on recent statistics. The study has examined the impact of Gig workers on the global labor market, that has highlighted the potentials job losses and gains. Further, its emphasis the need for policy interventions to ensure fair compensation, social protection, and skills development, promoting transparency and safeguarding against discrimination.

Keywords: GIG economy, AI, future jobs, labor market, freelance, youth.

1 INTRODUCTION

The Gig economy is a term used to describe the growing trend of people working in short-term temporary jobs (Banik & Padalkar, 2021). This trend is being driven by a number of factors, including the rise of technology, the globalization of the workforce, and the changing nature of work itself. There are several benefits to the Gig economy for workers, it can offer flexibility, autonomy, and the opportunity to work from anywhere in the world. For businesses, it can reduce costs and increase efficiency (Vallas & Schor, 2020). Artificial intelligence (AI) is a rapidly advancing field of computer science that aims to build intelligent machines that simulate human cognitive functions, automating tasks, making decisions, and solving problems (Sarker, 2022). This study examines the relationship between AI and the Gig economy, focusing on the global employment market. It uses quantitative secondary research methodology and recent statistics to analyze the impact of AI on the Gig economy. The study is divided into four sections, discussing the foundation of the Gig economy, AI's impact on the economy, the interaction between Gig and AI, and the implications of AI and Gig on the labor market.

2 LITERATURE REVIEW

2.1 Human capital

Human capital theory has suggested that in education and skill development it boosts employability, especially in the gig economy and AI, highlighting the necessity of the continues learning and skill acquisition (Strober, 1990).

2.2 Social network theory

Social network theory can be applied to the gig economy, in which the role of interpersonal relationship in the job opportunities (Liu et al., 2017). Though the gig economy relied on the digital platforms and networks for job matching and understanding the social structures that are crucial in finding the distribution of work and their impact on unemployment (Borgatti & Ofem, 2010).

2.3 Economic definitions and foundation of AI

There are a few different economic definitions of AI. One common definition is that AI is "a technology that can perform tasks that were previously thought to require human intelligence (Brynjolfsson, 2022). It has been found that AI and machine learning provoked a genuine disruption to the production process which was reflected in both technological breakthroughs and economic growth (Balakrishnan et al., 2022). AI's machine learning is revolutionizing business practices, driving profit maximization, and despite job losses and unconventional lifestyles, it continues to drive growth in various sectors (Chojecki, 2020). AI growth is facilitated by factors like data availability, career regulations, innovation, entrepreneurial ecosystems, digital skills, R&D foundations, and digital ecosystems, which directly impact economic growth and sectors in any country (Arenal et al., 2020; Hanandeh et al., 2023). Recent research predicts AI will evolve into Artificial General Intelligence (IGA), disrupting the economy by using AI's capabilities to perform and complete intellectual tasks that humans can perform, potentially taking over human intellectual tasks (Arsenault, 2020).

2.4 GIG economic foundation and impact

The gig economy, driven by technology, globalization, and changing work patterns, has become a significant model of commissioning, and hiring worldwide, accounting for 7% of full-time workers in 2019 (Barrero et al., 2021; Al Freijat & Hammouri, 2022). The Gig economy has presented challenges for workers that have included job insecurity, income inconsistency, and concerns related to work quality and commitment. Traditional employment lacks stability, making gig workers vulnerable (Roy & Shrivastava, 2020). The transient nature of the gig work affects reliability and dedication. However, addressing those issues is essential for a sustainable equitable gig economy.

Fig. 1. GIG Ecosystem.

Fig. 2. GIG Challanges.

The Gig economy, which encompasses the previously defined domains, has emerged as a significant contributor to global GDP (Raval, 2020). While precise estimates vary due to the informal nature of Gig work, some studies suggest that it generates substantial economic value (Koutsimpogiorgos et al., 2020). According to a 2020 report by the McKinsey Global Institute, the Gig economy could contribute up to $2.8 trillion to global GDP by 2025 (Bruckner & Forman, 2021). This projection assumes that the Gig economy continues to grow at its current pace of 17% per year till 2025 (McKinsey, 2024). As for the USA, Karolina Kulach estimated in a recent study that Gig economy is projected to reach to almost half a billion US$ in 2023, growing up from around $ 200 billion in 2018 (McKinsey, 2024). Figure (2) shows the projection of the volume of the Gig economy contribution to GDP in the USA during 2018-2023 (Kulach, 2023).

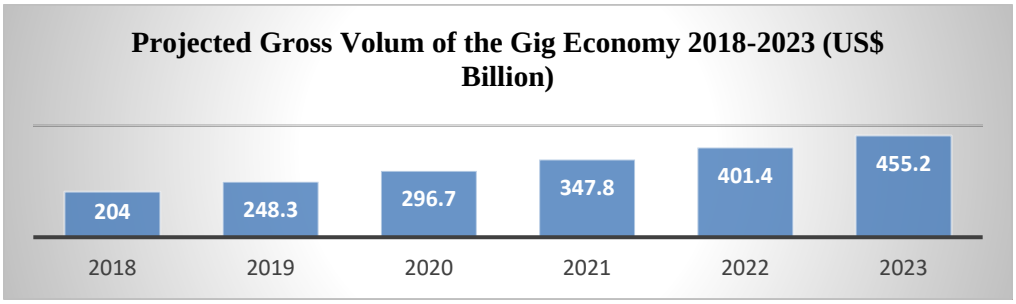

Figure 3. USA Gig economy

Figure (3) shows a projected 123% growth in the Gig economy contribution in the USA from 2018 to 2028, with an average 20% increase per year. Figure (4) shows global Gig economy evolution, with Japan leading with a 513% growth since Covid-19. India is considered today as the largest freelance employment workplace globally (Leung et al., 2021). Finally, it is worth mentioning that 80% of the Gig employees feel that they are enjoying a better work-life balance, and 68% feel more control over their work (Ghosh et al., 2021).

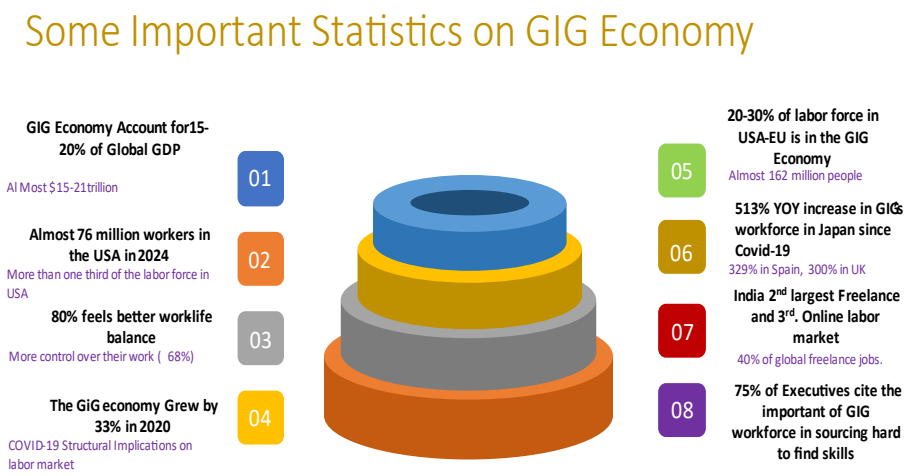

Figure 4 (Kulach et al., 2023)

From the above economic literature and studies that the Gig economy's impact on GDP can be driven by several factors that has included:

The gig economy boosts economic growth by offering flexible work opportunities, attracting unemployed or underemployed individuals and promoting flexible work arrangements (Shaw et al., 2023). Gig work platforms like Uber, Careem, and Freelance Consulting generate revenue from transaction fees and commissions, contributing to the overall growth of the Gig economy (Raval, 2020; Stephens, 2019). Gig work boosts productivity by providing businesses with specialized skills and expertise on an as-needed basis, enabling swift adaptation to market changes (Turban et al., 2021). The gig economy's GDP contribution is uneven across countries and industries, with developed economies having larger Gig economies. In 2022, USA's national income from freelance management consulting exceeded $320 billion, with global revenue reaching $900 billion (Younger, 2023).

2.5 GIG economy

The Gig economy, driven by the digital economy, is expected to expand, shifting from full-time jobs to temporary, contract work. This shift offers flexibility, autonomy, and remote work, but also presents challenges like worker uncertainty and quality control issues (Dolber). The gig economy, facilitated by ride hailing services, boosts new business establishment and lending to small businesses by 5% and 7%, particularly in low-income regions with credit access limitations (Barrios et al., 2022). The gig economy, a trillion-dollar business, has expanded significantly due to technological advancements, providing individuals with convenient remote employment opportunities (Hibrida, 2023). The UAE's tourist competitiveness is significantly influenced by factors like destination resources, infrastructure, support services, and the overall business climate (Gamor & Mensah, 2022). The UAE's SMEs sector is expanding due to government policies, technological resources, and emerging finance options, enhancing innovation and international market reach (Ali Al Khazraji, 2022).

2.6 GIG economic foundation in the Arab region

The Gig economy is growing rapidly in the region, driven by a number of factors, including the rise of technology, the globalization of the workforce, and the changing nature of work itself. In this respect the, a study by World Bank (2022) on "The Gig Economy in the Arab World" stated that the Gig economy in the Arab world is expected to grow by 20% per year between 2020 and 2025 (WorldBank, 2020). However, survey by Bayt.com (2022) found that 52% of respondents in the Arab world are considering taking on Gig work in the next 12 months (Bayt.com, 2022). The Gig economy, particularly in transportation, food delivery, and online services, is gaining popularity in the Arab world, providing new employment opportunities, particularly for young people and women (Ahmad, 2020). It reduces unemployment and contributes to the growth of the digital economy (Huang et al., 2020). However, challenges include lack of social protection and concerns about work quality. In Egypt, it's worth over $5 billion, UAE over $2 billion, and Saudi Arabia over $1 billion (Wires, 2013).

2.7 AI economic implications

The global economy, particularly in developed nations, is experiencing stagflation since 2020, triggered by the Covid-19 pandemic, Russia-Ukraine conflict, and monetary policies that raised interest rates thirteen times (AndrewMichaelWells, 2023). As the Fourth Industrial Revolution transitions into a digital space, emerging economies are leveraging AI and big data to capitalize on opportunities such as global job penetration, productivity enhancement, and a global presence in innovation and creativity, despite the volatility, uncertainty, and complexity faced by developed countries (Esposito & Kapoor, 2022; Patanjali & Subramaniam, 2019). AI is expected to have a significant impact on economic growth. According to a study by PwC, AI could contribute up to $15.7 trillion to the global economy by 2030 (PwC, 2017). AI-driven productivity gains, innovative products, and increased demand for AI-related goods and services are driving growth in industries like manufacturing, finance, and healthcare (Gao & Feng, 2023). AI is revolutionizing industries with innovations like self-driving cars, personalized medicine, and virtual assistants, creating new markets and opportunities, and demonstrating a rapidly growing demand for AI-related goods and services (Verma et al., 2021). AI is driving demand for its technologies, transforming industries, creating jobs, and driving economic growth. Businesses and consumers are investing in AI, resulting in a profound impact on global economies however, AI also presents challenges that need careful attention (Trammell & Korinek, 2023; Wang et al., 2021).

2.7 AI economic implications

PWC's 2017 study predicts AI could contribute $15.7 trillion to the global economy by 2030, surpassing China and India's combined output (PwC, 2017). AI boosts productivity, creates new jobs, and creates opportunities for entrepreneurs. It boosts economic growth, enhances productivity, encourages product innovation, and increases AI demand (Ughulu, 2022; Raed et al., 2023), as illustrated in Figure (5). According to PwC (2017), AI is expected to have a positive impact on global GDP growth. The study predicts that AI could contribute $15.7 trillion to the global economy by 2030, accounting for 1.5% of GDP, due to productivity gains, innovative products, and increased demand for AI-related goods and services (PwC, 2017). The study reveals that automation is boosting productivity in industries like manufacturing, finance, and healthcare, while AI is transforming them through self-driving cars, personalized medicine, and virtual assistants, creating new markets and opportunities for businesses (Haleem et al., 2021).

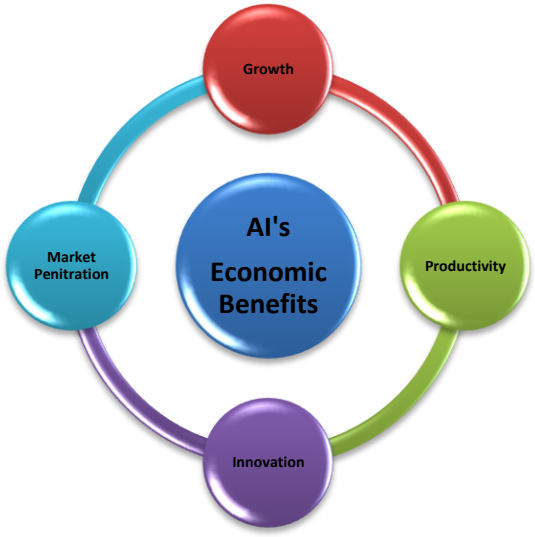

Figure 5. Economic benefits of AI

AI's economic benefits include significant growth, but challenges include job displacement as it automates human tasks (Tschang & Almirall, 2021). This could lead to job losses in some industries. Another concern is potential bias. AI algorithms are trained on data, and if that data is biased, the algorithm will be biased as well. This could lead to discrimination against certain groups of people (McKinsey, 2024). Figure (6) Summarizes the potential challenges of AI on economies.

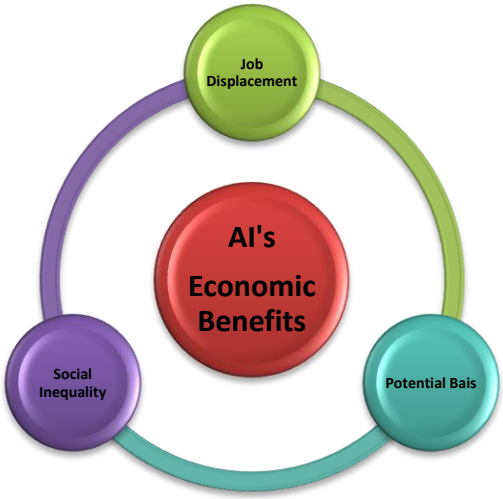

Figure 6. AI's Economic challenges

As AI becomes more sophisticated, it is likely to automate many tasks that are currently performed by humans. This could lead to job displacement in some industries. According to a study up to 800 million jobs could be lost to automation by 2030. Furthermore, AI algorithms are trained on data, and if that data is biased, the algorithm will be biased as well

(McKinseyGlobalInstitute, 2018). This could lead to discrimination against certain groups of people, such as women and minorities. Finally, the benefits of AI are likely to be unevenly distributed, with some people and companies benefiting more than others this could lead to increased social inequality (McDuie-Ra & Gulson, 2020).

2.8 The interrelationship between GIG economy and AI

The Gig economy and artificial intelligence (AI) are two rapidly evolving trends that have a significant impact on each other (Tschang & Almirall, 2021). As previously mentioned, AI is being used to automate many tasks that were previously performed by humans, which is creating new opportunities for Gig workers. AI-powered chatbots handle customer service inquiries, freeing up human representatives for more complex tasks (Lakhani, 2023). However, it has been also found that AI is also used in Gig work platforms like Up work and Fiverr (Waldkirch et al., 2021). On the other hand, the Gig economy is utilizing vast data from ride-sharing and delivery apps to develop AI algorithms for improved traffic routing and reduced congestion the survey of literature in sections (3) and (3.1) of this study, and in the light of other previously mentioned reports such as the (WorldBank, 2020) and (McKinsey, 2024) below are some specifications (Seng et al., 2023). AI is revolutionizing the gig economy through personalizing work recommendations, matching with the workers with suitable tasks, automating payments and developing real-time performance feedback and productivity tracking for business (WorldBank, 2020). The Gig economy and AI are expecting to grow together, with AI automating tasks, developing new platforms, and transforming business management (Tschang & Almirall, 2021). Further, AI is being utilized in different industries that have included ride-sharing apps, delivery apps, freelance platforms, customer service, and virtual assistance (Won et al., 2023).

3 METHODOLOGY

Secondary quantitative research, often known as desk research, is a research methodology that entails using pre-existing data or secondary data. Data is condensed and compiled to enhance the overall efficacy of the investigation (Baye et al., 2019).

4 DISCUSSION

4.1 The implications of GIG economy and AI on global labor market

According to a recent report by the International Labor Organization (ILO), the global unemployment rate in 2023 is expected to remain at 6.1%, with an estimated 207 million people out of work (Organization, 2018). The ILO report reveals that 75 million youth aged 15-24 are three times more likely to be unemployed than adults, with the global youth unemployment rate reaching 13.1% in 2020 (Organization, 2018). The McKinsey Global Institute estimated in 2020 report that there were 86 million core Gig workers globally, representing 2.3% of the total workforce at the time (McKinseyGlobalInstitute, 2018). The Gig economy, estimated by the World Bank accounted for 26% and 15% of the global workforce, respectively, with 240 million workers in 2021 and 240 million in 2018, respectively (WorldBank, 2020). However, they all suggest that the Gig economy is a significant and growing sector of the global workforce. The gig economy involved the independent contractors and freelancers performing temporary, flexible jobs with 55% earning under $50,000 USD annually (Statista, 2024b). The gig economy offers high job satisfaction, diverse skills sets, and financial motivations among contingent workers. However, traditional employer-provided benefits were lacking, making retirement saving difficult. Further, baby boomers and 46% of the baby boomers also participate (Statista, 2024b). India's gig economy, accounting for 1.25 percent of GDP, requires

collaboration between platforms, companies, and partners to ensure employee safety, facilitate

Box (1) Facts from Future Job Report

- 83 million Job Lost.
- 69 million Jobs to be created.
- Workers with lower education & Women are the most challenged.
- Technology is the main key driver of skills transformation for labor force.
- 85% of industries are expected to transform their way of production using new technologies.
- Green transformation is the other driver of jobs for the coming 5 years.
- 75% of companies will adopt big data tech.
- 85% will adopt digital platforms and Apps.
- 23% of all jobs shall face labor market churn.
- 34% Machine substitution rate over the period
- 75% of Companies are interested in adopting AI.

Table 1. Font sizes and styles. Source: McKinsey (2018) & World Bank (2022).

Country	Estimated Number of Gig Workers (Millions)
United States	56
India	26
China	25
Brazil	12
Indonesia	11
Japan	10
Philippines	9
Mexico	8
United Kingdom	7
Germany	6

It has been predicted that around 83 million job losses and 69 million new ones in the job market has been engaged with the lower educated workers and women facing the most challenges. Technology is a key driver for skills transformation, with 85% of industries adopting new technologies and 75% of companies embracing artificial intelligence. Though digital platforms and big data are also crucial (Forum, 2024).

5 CONCLUSION

The study has examined the impact of the Gig economy on the global labor economic growth, employment, and the labor market that has been highlighted for the significance role of the AI in enhancing those factors. The Gig economy is known as a growing and complex phenomenon that has covered both benefits and challenges. On the other hand, Gig economy has offered flexibility, autonomy, and the opportunity to work from home anywhere in the world. Also, the study has discussed the Gig economy that has offered income for the unemployed or underemployed but also presented with uncertainty and instability for workers that lacks benefits and face unfair treatment.

5.1 Policy implications

- The study suggest that the policymakers worldwide should be given with the social protection benefits to the gig workers, ensure transparency and accountability of Gig work platforms, and protect them from discrimination and promote skills development and training.
- The Gig economy is expected to grow and understanding the potential benefits and challenges is crucial for a fair and equitable system. Further key policy considerations have included work classification, social protection, fair compensation, skills development, tax compliance, collective bargaining, data privacy.
- Government should invest in the education and training programs in helping workers to adapt to the changing workforce and giving social safety for the workers displaced by AI. Also strengthen anti-discrimination laws in protecting the individuals from bias in AI algorithms.

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