

Effects of Digitization on Employment: "Unlocking India's Gig Workforce Potential through Digital Transformation"

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Abstract

Digital transformation has significantly increased global trade volumes. Updated technology is no longer excluding people from utilizing it, which has had a significant impact on the employment landscape for growing gig workers in India. With a population of over 1.4 billion people, India has emerged as one of the world's fastest-growing economies, offering new opportunities to its workforce through online jobs.

India currently boasts 8 million gig economy jobs, and over the next 8 to 10 years, this number is projected to surge to approximately 90 million jobs in the non-farm sector, with a total transaction value of USD 250 billion, equivalent to 1.25% of India's GDP (Michael & Susan, 2021). By 2029-2030, it is anticipated that there will be 23.5 million workers engaged in the gig economy. During this period, gig workers are expected to contribute about 4.1% of India's total income or 6.7% of non-agricultural employment.

Introduction

Global economies have experienced significant changes in terms of technical know-how, paving the way for increased global trade through improved digitalization of services. Digital transformation has created numerous opportunities for the labor force, promoting significant changes in the employment landscape. E-commerce has had a substantial impact on the growth of gig workers in India, particularly in urban areas. Digitization has positively affected efforts to address youth unemployment in the country. On average, a 1% increase in the level of digitalization leads to a 0.025% decrease in the unemployment rate in Nordic countries (Violetta Ivanitskaia, 2022).

Digital transformation has brought about a drastic change in the economy over the last couple of decades. The digital economy has contributed to economic growth. A recent report indicates that around 500 million people are using smartphones in India alone.

With technological advancements, the rise of the internet, increasing urbanization, and more recently, the COVID-19 pandemic, employers have become increasingly interested in "the future of work" in recent decades.

The World Bank Group's 2019 report on the 'Changing Nature of Work' estimated that less than 0.5% of the active labor force worldwide participates in the gig economy, with less than 0.3% in developing countries. According to India's public policy think tank, NITI Aayog's 2022 report on 'India's Booming Gig and Platform Economy' (NITI Report), the proportion of gig workers has increased from 0.54% in 2011-

Digitization

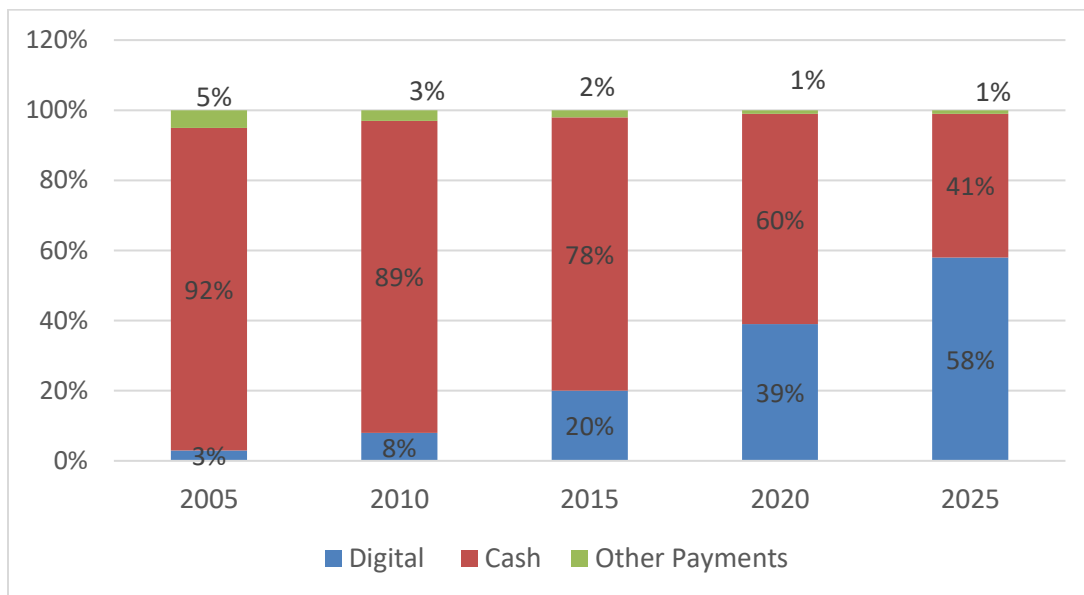
Modern society is characterized by the rapid development of digital resources and technologies in various domains. The term "digitalization" encapsulates the phenomenon of integrating digital technologies into both business and society. This transformative process is ushering in significant changes in the world of work.

The growing utilization of information and communication technology in every facet of our lives has left its mark on all strata of society, altering the way we conduct business. As digitalization progresses, it introduces numerous challenges along with excellent opportunities, both in the workplace and in our daily lives.

According to the report on 'Economic Outlook for Southeast Asia, China, and India' released by the OECD Development Center, it is estimated that a 10 percent increase in digital flows leads to a 0.2 percent increase in the country's GDP.

India's Digital Payment Transformation

The impact of digitization on the economy in India has been significant and transformative. The widespread adoption of digital payment methods, such as mobile wallets, UPI (Unified Payments Interface), and digital banking, has reduced the reliance on cash transactions. This has not only improved financial inclusion but has also enhanced transparency in financial transactions.



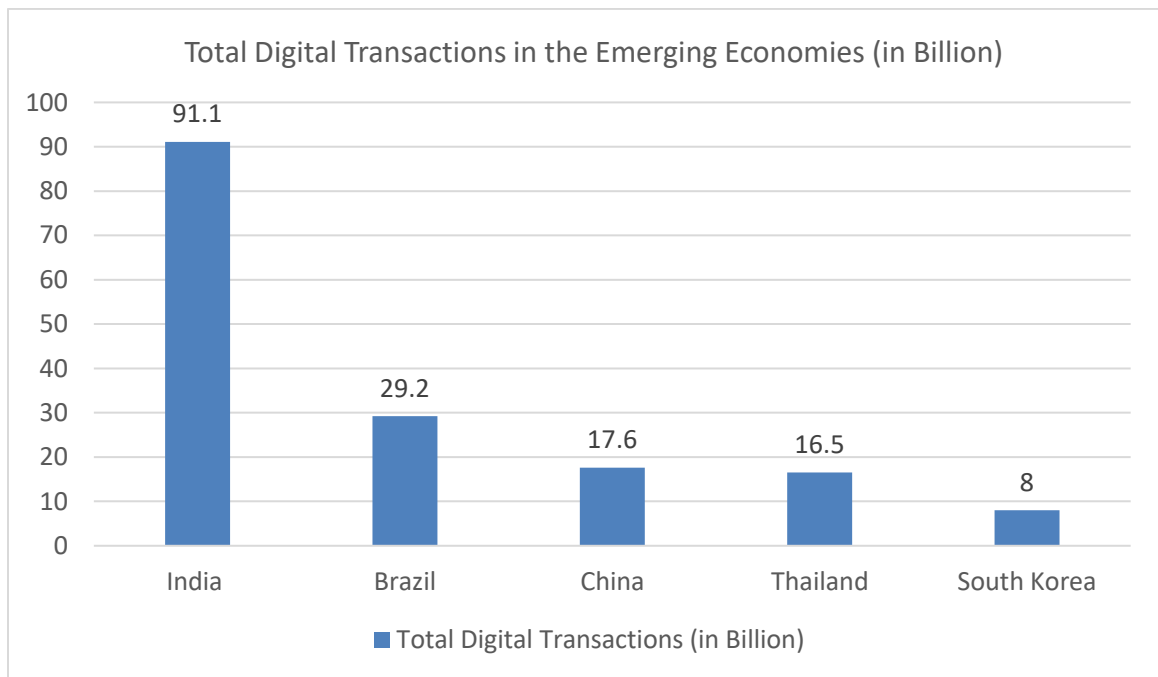
Digital Payment Growth Journey: India: From 3% in 2005 to 58% in 2025

Source: Community.nasscom

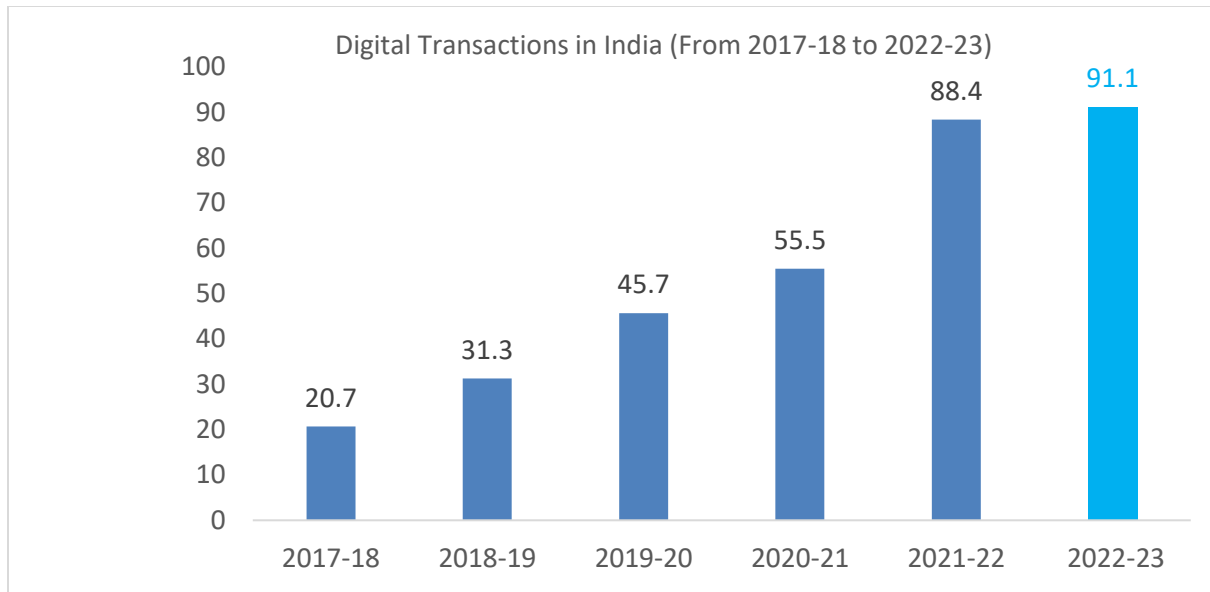
The Indian economy has undergone a remarkable transformation in the age of digitalization. There have been continuous changes in payment methods facilitated by advanced technology, effectively shifting from a cash-based economy to a card-based one. According to data, in 2005, only 3% of transactions were digital, with cash transactions dominating the economy. However, over time, digital transactions have surged, reaching 39% by 2020. It is expected that this figure will further increase to 58% by the end of the fiscal year 2025, largely driven by UPI-based transactions.

In the year 2022, India recorded an impressive 91.1 billion digital transactions, showcasing its remarkable prowess in the digital payments landscape.

According to data, India accounted for a remarkable 46% of global real-time payments, surpassing the combined digital payment transactions of the other four leading countries. Brazil secured the second spot with 29.2 billion transactions, followed by China, which registered 17.6 billion transactions. Thailand secured the fourth position with 16.5 billion digital transactions, while South Korea recorded 8 billion worth of transactions as per data from MyGovIndia.



Source: mygovindia.com



Source: Ministry of Electronics & IT

According to data, India has emerged as a frontrunner in the realm of digital payments, particularly supported by UPI-based transactions. In 2017-18, the country saw a modest 20.7 billion transactions through digital platforms. Fast forward to December 31, 2022, and this figure has skyrocketed to a remarkable 91.1 billion transactions. This ongoing success story is driving the rapid transformation of our cash-based economy into a dynamic digital one.

Key Areas of Functional Digitization in India

Financial Inclusion: Digitization has brought financial services to previously underserved and unbanked populations in India, empowering them to access banking, insurance, and investment services. This has contributed to economic growth and reduced poverty.

E-Governance: The Indian government has launched numerous digital initiatives, such as Digital India, which aim to provide government services electronically. This has improved efficiency, reduced corruption, and made public services more accessible.

E-commerce Boom: The growth of e-commerce platforms in India has revolutionized the retail sector. Consumers can now shop online for a wide range of products, leading to increased convenience and access to a broader market for sellers.

Startup Ecosystem: India has witnessed a burgeoning startup ecosystem, with numerous technology-based startups emerging in sectors like fintech, edtech, healthtech, and more. These startups have contributed to economic growth, job creation, and innovation.

Job Creation: The digitization of various industries, including IT, e-commerce, and digital marketing, has led to significant job opportunities. India's IT sector has been a major driver of employment.

Data Analytics and Insights: Access to digital data and analytics has helped businesses make data-driven decisions, enabling them to better understand customer behavior and market trends.

Access to Education and Skills Development: Online education and e-learning platforms have made education more accessible, helping individuals acquire new skills and advance their careers.

Global Trade and Export: Digitization has facilitated international trade and export activities, allowing Indian businesses to connect with a global customer base and boost exports.

Determinants of Digitization:

Internet Affordability
Internet Quality
e-infrastructure
e-security and
e-government

Challenges and obstacles for Digitization

Digitization in India has made significant progress, but it also faces various challenges that need to be addressed for its successful and equitable implementation.

Digital Divide: There is a substantial gap in digital access and literacy between urban and rural areas. Rural populations often have limited access to the internet and digital devices, hindering their participation in the digital economy.

Infrastructure: Expanding and improving digital infrastructure, including reliable internet connectivity and electricity supply, is crucial for ensuring that more areas in India can access digital services.

Cybersecurity: As digital transactions and data sharing increase, the risk of cyberattacks and data breaches also grows. Strengthening cybersecurity measures is essential to protect individuals, businesses, and government systems.

Data Privacy: India has introduced data protection regulations, but ensuring that individuals' personal data is secure and used responsibly remains a challenge, especially in a digital ecosystem with vast amounts of data.

Digital Literacy: Enhancing digital literacy and digital skills is vital to ensure that individuals can effectively and safely use digital tools and services. This includes both basic digital literacy and advanced technical skills.

Regulatory Framework: India's regulatory framework for emerging technologies and digital services is evolving. Ensuring that regulations promote innovation while safeguarding consumer rights and data privacy is a complex balancing act.

Digital Payments Security: As digital payments gain popularity, the risk of fraud and unauthorized transactions increases. Implementing secure payment systems and educating users about safe practices is essential.

Language Barriers: A large part of India's population is not proficient in English, and most digital content and services are available in English. Overcoming language barriers is important for digital inclusion.

Digital Identity: Establishing secure and widely accepted digital identity systems is essential for accessing various digital services. India has Aadhaar, but issues related to privacy and misuse need to be addressed.

E-Governance Challenges: While digital governance services have been introduced, challenges related to service quality, accessibility, and citizen engagement need to be tackled to realize the full potential of e-governance.

Intellectual Property Rights: Protecting intellectual property rights is crucial for encouraging innovation, but striking the right balance is necessary to avoid stifling creativity and digital entrepreneurship.

Sustainability: The digital economy's growth should be sustainable, with attention to reducing e-waste and minimizing the environmental footprint associated with increased digital device usage.

Addressing these challenges is essential for India to maximize the benefits of digitization while ensuring that the benefits are accessible and equitable across all segments of society. It requires a concerted effort from the government, the private sector, and civil society.

Objectives of the Study

To examine the impact of digitization on employment in India.

To elucidate the working patterns of platform workers in India.

Methodology

The study exclusively relies on secondary data, compiling information on the degree of digitization and its effects on employment from various sources. Recent data from NITI Ayog, ILO, and RBI has been utilized to analyze the impact of digitization on the working patterns of the young workforce. Simple statistical tools have been employed to discern the effects of the growing application of digital tools in the business world.

Literature Review

Sarah Kaine et al., (2019) observed that the gig economy, a subject of increasing interest in public and policy circles, is becoming a focal point in academic research. This surge in attention has ignited discussions surrounding the future of work, labor regulation, and the impact of technology on job quality. The study sheds light on the significant insights into the organization and experience of work within the digitally enabled gig economy across diverse national settings.

Graham et al., (2017) investigated that in order to exist in this competitive market, gig professionals should upgrade their skill through certifications and simultaneously, the industry should be strengthened by good regulatory strategies and democratic control over the digital platforms. Moreover, digital disruption brings many major changes/trends in the ways gig professionals adopt the new work environment to manage their professional and personal lives.

Meijerink & Keegan, (2019) highlighted that gig working environment is characterized by three actors such as gig workers (also known as freelancers or independent contractors), the requester (clients), and intermediary platform firms. Intermediary digital platform plays a crucial human resource role in connecting gig workers and clients without any formal employment contract, however ensuring project delivery and payment process.

Gig Economy

The gig economy, also known as the sharing economy or on-demand economy, is a labor market characterized by the prevalence of short-term contracts, freelance work, and temporary jobs as opposed to traditional, long-term employment. In the gig economy, individuals typically work on a project-by-project basis or provide services as independent contractors rather than being employed by a single employer.

According to the Code on Social Security, 2020, a gig worker is defined as an individual who engages in work or work arrangements and earns income from such activities, all of which occur outside the conventional employer-employee relationship. A gig worker is a person who engages in income-earning activities outside of a traditional employer-employee relationship, as well as in the informal sector (Ministry of Labour and Employment, 2020).

The gig economy disrupts the traditional model of full-time workers who seldom switch jobs and instead concentrate on lifelong careers. In this evolving landscape, individuals tend to change jobs more frequently, and many value the flexibility to determine when and where they work.

Features of Gig Economy

Flexibility: Workers in the gig economy often have the freedom to choose when, where, and how much they work. This flexibility can be appealing to those who want to balance work with other responsibilities or preferences.

Digital Platforms: Many gig workers find jobs through online platforms or mobile apps that connect them with clients or customers, such as Uber, Lyft, Airbnb, Upwork, and TaskRabbit.

Diverse Work Opportunities: Gig work spans various industries, including transportation, hospitality, freelance writing, graphic design, and more. The gig economy provides opportunities for a wide range of skills and services.

Independent Contractors: Most gig workers are classified as independent contractors, which means they are responsible for their own taxes, insurance, and other benefits. They don't typically receive the same protections or benefits as traditional employees.

Income Variability: Gig workers often face income instability as their earnings depend on the number of gigs they secure and the demand for their services.

The gig economy has grown in recent years with the proliferation of digital platforms, enabling people to find and perform short-term, task-based work. While it offers flexibility and income-earning opportunities, it also presents challenges and questions about labor regulations, worker rights, and the long-term implications of a workforce that relies heavily on gig-based employment.

Types of Gig Workers

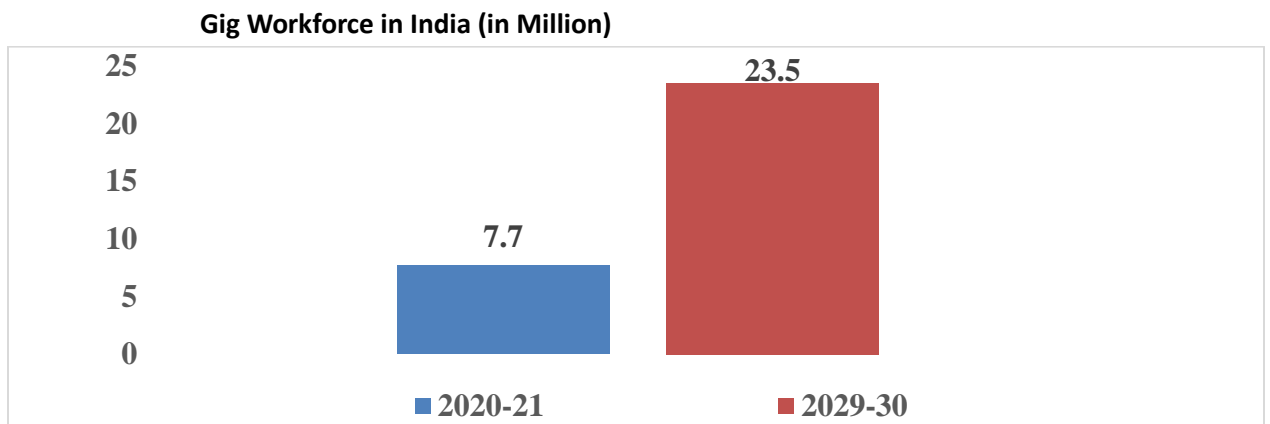
1. Non-platform gig workers: Non-platform gig workers are generally casual wage workers and own-account workers in the conventional sectors, working part-time or full time.

2. Platform workers: Platform Worker are whose work is based on online software apps or digital platforms.

Gig Workforce in India:

The gig economy is reshaping India's workforce. Currently, there are between 8 to 18 million gig economy jobs in the country, and this number is expected to surge to more than 90 million non-farm sector jobs in the next eight to ten years (References: Tiwari, Ram & Roy, 2019; BCG and Michael & Susan Dell Foundation, 2021).

By the next decade, India's gig economy could contribute up to USD 250 billion in transactions, equivalent to 1.25% of the country's Gross Domestic Product.



Source: NITI Ayog 2022

By 2029-30, the gig workforce is projected to reach 23.5 million workers, comprising 6.7% of the non-agricultural workforce and contributing to 4.1% of the total livelihood in India.

Metro Cities with Highest Gig Workforce

Name of the Metro City	Rank	No. of Gig Workers Engaged
Bengaluru	1	2,34,000
Delhi	2	2,25,000
Mumbai	3	1,33,000
Pune	4	1,25,000
Chennai	5	93,222

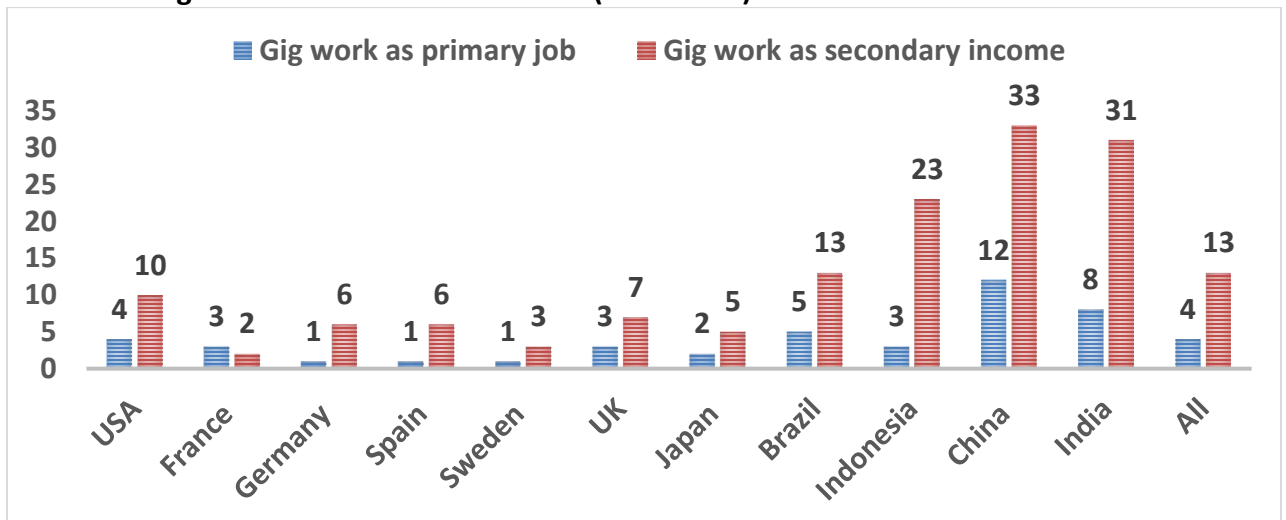
Source: ASSOCHAM & Primus Partners, 2021

The table above highlights that Bengaluru, the capital city of Karnataka, is at the forefront and possesses significant potential for generating 'gigable jobs' in the country followed by Delhi, Mumbai, Pune, and Chennai. By the end of the financial year 2021-22, Bengaluru had 2,34,000 gig workers engaged in platform-based jobs.

The application of advanced technology has permeated all aspects of human life, harnessing the advantages of the nation's demographic dividend by transforming the employment landscape for younger generations.

Gig workers, also known as independent workers, freelancers, or contingent workers, often find gig work as a secondary source of income. It is estimated that over 200 million people worldwide engage in freelancing as part of the gig workforce. Emerging economies like China and India have significant potential to create numerous gigable job opportunities for the youth.

Income Source of Gig Workers across the Countries (In Millions)



Source: NITI Ayoga 2022

In 2022, 12 million gig workers in China pursued gig jobs as their primary source of income, while 33 million gig workers supplemented their income with gig work as a secondary source. In India, 31 million workers

use gig work as a secondary income, while 8 million workers rely on gig work as their primary source of livelihood.

Potential Areas of Gig Economy in India:

India has identified four industries with substantial potential to create gig jobs in the future: Construction, Manufacturing, Retail, and Transportation and Logistics. Together, these sectors are projected to offer over 70 million gig jobs in the future (BCG and Michael & Susan Dell Foundation, 2021).

Moreover, the gig economy is rapidly expanding its presence in other industries such as textiles, banking and financial services, electricity, gas, and water; real estate, IT and ITES, education, and personal services (IBEF, 2021).

Thriving Areas of Gig-Startups	
Commerce Sector	Amazon, FlipKart
Information Sector	Google, Microsoft Bing
Urban transportation (ride-sharing service)	Ola and Uber, Rapido
Food sector by delivering apps like	Swiggy, Zomato
Education sector	Unacademy
Payment structures	Paytm, phonepe

Advantages of Gig Economy

For Gig Workers	For Gig Employers
Flexibility	Cost Efficiency
Diverse Income Source	Access to Specialized Skills
Skill Development	Scalability
Work-Life Balane	Reduced Administrative Burden
Independence	Global Talent Pool
Entrepreneurship	Innovation and Fresh Perspectives
Global Opportunities	Reduced Legal Obligation
Reduced Commuting	
Skill Development	

Challenges

The gig economy, while offering numerous advantages, also presents a range of challenges for both gig workers and employers.

Accessibility issues- Access to internet services and digital technologies

Job and Income Insecurity: Platform workers are often paid on a piece rate basis (i.e., per task)

Occupational Safety and Health Risks-ILO global surveys on freelance platforms show that employees, particularly women, in the taxi and delivery app industries also suffer several occupational safety and health concerns relating to road safety, theft, and physical assault.

Skills Mismatch -ILO surveys reveal that "workers with higher educational accomplishments are not always finding work commensurate with their skills. Web-based survey platforms stated that Gig-workers possess more talents than needed for the activities.

Vulnerability to Economic Downturns: During economic downturns, gig workers may experience a reduction in job opportunities, making them vulnerable to financial hardship.

Regulatory Challenges: Navigating labor laws and regulations related to gig workers can be complex and varies by jurisdiction, creating compliance challenges.

Quality Control: Employers may find it challenging to maintain quality control and consistency when working with a dispersed and diverse group of gig workers.

Dependence on Third-Party Platforms: Employers that rely on third-party gig work platforms may have limited control over their workforce and may be subject to platform fees and terms.

Suggestions

Platformization of all occupations and industries must be catalyzed: Encourage the transition of various industries and occupations into the platform economy to expand opportunities.

Expand the availability of institutional loans for platform users and those planning on starting their own platforms.

Accelerate Financial Inclusion of Platform Workers: Extend financial services and access to banking to platform workers to enhance their financial stability.

Unlock for Platform Businesses: Encourage the development and growth of platform-based businesses to stimulate economic opportunities.

Promote Digital and Financial Proficiency across India: Promote digital and financial literacy nationwide to ensure that all citizens can effectively participate in the digital economy.

Accelerate Skills Training for Women and Persons with Disabilities (PwDs): Provide focused training programs for women and individuals with disabilities to enable them to participate in platform jobs.

Skilling, upskilling, and reskilling programmes must all be aligned to jobs of the 21st century, i.e. platform jobs of today and tomorrow: Ensure that education and training programs are aligned with the skills needed for the evolving platform job market.

Conclusion

Digitization has brought substantial changes to youth employment in the gig sector. If all the challenges addressed in a timely manner, the economy can transform the unemployed workforce into a productive community, making a significant contribution to India's global stature.

The benefits of the gig economy in India can be even greater when we consider the associated advantages of formalizing unregistered labor and promoting financial inclusion. The low entry barriers for gig and platform jobs in India have the potential to reduce the unemployment rate. India holds immense potential to transform its underutilized labor force by leveraging enhanced digitization of services.

The employment landscape for gig workers has undergone substantial changes, propelled by the emergence of new startups spurred by fiscal initiatives. The evolving business dynamics in e-commerce have, in turn, opened up substantial opportunities for the gig workforce in the country. Although the gig sector exhibits high employment elasticity, it does not guarantee a formal or permanent income for workers. Nevertheless, it presents significant potential to address the needs of the youth and thereby increase the overall labor force participation rate, contributing substantially to the nation's development.

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