

The Role of Digital Tools in Creating Employment Opportunities in India

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DOI:10.37648/ijps.v21i03.038

¹Received: 30/11/2025; Accepted: 31/12/2025; Published: 07/01/2026

Abstract

It has become clear that digital enablement has been a game-changer in every region of the world. At one point in time, the concept of information and communication technology (ICT) was mostly limited to the services sector in India. However, since the launch of the Digital India program in 2015, digitalization has spread throughout every aspect of human existence. Through the promotion of entrepreneurial innovation and productivity, digitalization has been shown to have a beneficial effect on the economic growth of a nation, according to studies conducted all over the world. The present study will attempt to assess its influence on employment in India, with particular reference to the restructuring of employment and changes in job composition as a result of digitization. Although it has had an impact on a variety of economic indicators, the present study will aim to analyse its impact on employment. There is a possibility that it will result in the development of new skilled jobs; nevertheless, there is also the possibility that it could result in the replacement of routine work and other cyber security issues. Therefore, an attempt is made to examine the change from the point of view of labor markets, as well as the capacity of individuals to adjust to the shifting employment pattern in the nation, and the obligation of the education sector to reform in accordance with the changes in the required skill sets that are requested by the industry. The incorporation of digital skill sets into the curriculum of higher education institutions has the potential to contribute to the improvement of labor market efficiency and flexibility, as well as to the closing of the digital skill gap in India. According to the findings of the study, digitization has the potential to not only close the gender gap in employment but also to offer chances for vocational training to young people, which can potentially assist in capitalizing on the benefits of the demographic dividend. It is the responsibility of the government to work toward reducing the digital divide by increasing the availability of internet access in both urban and rural areas.

1. Introduction

An undertaking that is both dynamic and strategic, digitalization was initiated with the intention of transforming India into an economy that is knowledge-based and digitally enabled. These days, the economic and social transformation of every nation is strongly dependent on the rise of digital technology. It is possible that digitization, which has prompted increased productivity, innovation, and expansion across a variety of businesses, would have an impact on the lives of millions of people in India. New opportunities are being made available in a variety of fields as a result of the impact that digital technologies are having on many businesses. Digital payments, artificial intelligence (AI), blockchain technology, 5G connectivity, big data, and the Internet of Things (IoTs) are some of the technologies that are reshaping companies and generating new opportunities in a variety of disciplines. As a result of the high density of digital transactions, the circulation of money and the velocity of money are both increasing, which is having a multiplier effect on the economy of India? The purpose of this article is to assess the effects that digitalization has had on the Indian economy, with a primary focus on the effects that digitalization has had on the financial sector, industries, health care, and agriculture. Additionally, this paper discusses the issues that the digital system is currently facing. In

¹How to cite the article; Nagaraju. K. (2026); The Role of Digital Tools in Creating Employment Opportunities in India; *International Journal of Professional Studies*; Vol 21, Special Issue 3, 250-254; DOI: <http://doi.org/10.37648/ijps.v21i03.038>

addition to that, the paper examines the fundamental aspects of the digital economy existing in India. The process of digitalization in India involves a number of issues, such as the loss of jobs due to automation, the digital divide, and the hazards associated with cybersecurity.

Beginning with the third industrial revolution, the process of digitization and rapid technological advancement has continued in the fourth industrial revolution. This has been accomplished through the incorporation of new technologies such as artificial intelligence, the internet of things, robotics, and machine learning by industries all over the world. In addition to the majority of our day-to-day activities, the majority of our industries are also extremely dependent on cutting-edge digital technologies. According to a report published by the National Payments Corporation of India (NPCI), the number of transactions conducted over the United Payments Interface (UPI) surpassed the 10 billion mark in August of 2023. According to a survey published by the Internet and Mobile Association of India (IAMAI), India is expected to have over 900 million internet users by the year 2025. Additionally, the pandemic caused by the Corona virus has resulted in a large increase in the number of online transactions over the course of the previous two years. Considering that the digital economy is projected to contribute approximately 11 percent to India's gross domestic product in 2023, it is anticipated that digitization will play a significant part in the realization of the dream of an Indian economy worth US \$26 trillion. In spite of the fact that digitalization is not expressly addressed in any of the seventeen Sustainable Development Goals (SDGs) that were set by the United Nations in 2015, it has the potential to considerably accelerate the progress that is being made toward achieving each and every one of the seventeen SDGs. It is difficult to accomplish the Sustainable Development Goals by the year 2030 if digital technology is not properly developed. Access to the internet has been recognized as a fundamental human right in a number of sovereign nations, including Finland and France. However, a report that was published in 2023 by IAMAI and Kantar found that in 2023, fifty-two percent of the total population in India has access to the internet at least once per month, and that the digital divide between states remains significant. The Cabinet has given its approval for the establishment of Public Wi-Fi Networks, which will enable the provision of Wi-Fi service through Public Data Offices (PDOs) located all across the country. This would allow the people of the country to have access to internet connectivity for the final mile. This is going to function in the same way as PCOs, and it has a significant potential to create employment opportunities in the small and medium scale categories. At the most recent G20 summit, which was hosted by India, digital inclusion through digital public infrastructure (DPI) was also a significant topic of debate. At the conference that took place in Bali in 2022, the implementation of digital public infrastructure was referred to as the most remarkably significant shift. The most recent G20 Summit, which took place in Delhi, saw all of the participants make a commitment to halve the gender digital divide by the year 2030. A number of issues are addressed in the G20 document, including the elimination of all forms of online and offline abuse, the reduction of barriers to the affordability, accessibility, and utilization of digital technologies, and the implementation of appropriate measures to improve digital literacy and skills. In addition, the members made a commitment to support women's livelihoods and ensure their incomes, which would contribute to the advancement of women's empowerment in the context of a digital economy. As a result, the primary objective of the latest G20 summit was to narrow the digital divide that exists throughout the economy.

A reorganization of labor markets has occurred as a result of digitalization's effects on company operations; as a result, companies are moving toward automated business models to maintain market competitiveness. Skilled experts with specific knowledge in robotics, artificial intelligence, etc., are in high demand, while labor demand connected to low-skilled work is on the decline. As a result, new types of jobs have emerged as a result of digitization, while old types of jobs that required manual labor are becoming automated. The first McD in the US that is run entirely by robots, eliminating the need for human workers, opened its doors not long ago. Due to the digitization of formerly manual processes, such as updating pass books, cash deposits, and customer KYC checks, the demand for manual personnel in the banking industry's back end has diminished. The rise of the gig economy and work-from-home jobs are direct results of the growing demand for online jobs brought about by the proliferation of internet access and digitization. Companies have been able to lower their operational costs as a result, and employees have benefited from increased flexibility and a better work-life balance. Because digitalization allows women to better balance work and family life, it can increase their involvement in the labor market, which in turn reduces the gender gap in the economy. But this can only be achieved if the workforce is continuously re-skilled and up-skilled to improve and upgrade their abilities

in response to evolving job demands; doing so will also contribute to lowering the economy's structural unemployment rate. Thus, digitization has changed the way labor markets function and the culture of employment.

According to a study that was carried out by the Reserve Bank of India, the digital economy of India increased at a rate that was 2.4 times faster than the overall economy of the country. This indicates that the Indian economy is making efforts to transition into the period of digitalization that is currently taking place. Additionally, in recent times, digital technology has been utilized in order to offer individuals with access to various public services. Citizen empowerment has been facilitated as a result of this, as has the reduction of bureaucratic hurdles at all levels of government, which citizens were previously had to overcome. In addition, the government has initiated the India Stack initiative with the purpose of utilizing digital infrastructure in order to transition towards a paperless, presence-less, and cashless service delivery system. In light of this, the digital transformation of the Indian economy will be of great assistance to the nation in maintaining its place on the path of innovation and competitiveness. The fact that digitalization has the potential to have an effect on all three sectors of the Indian economy is another significant point to consider in this context. There is a possibility that digitalization in agriculture may play a significant part in the achievement of the objective of doubling the income of farmers. The application of artificial intelligence in agriculture has the potential to boost agricultural productivity by assisting farmers in selecting the most suitable crops for their farms and aiding them in the adoption of technologies that are favourable to the environment in order to move toward more sustainable agricultural practices. The government of India has also worked along with a number of private information technology companies in the market, such as Microsoft and IBM, to offer artificial intelligence-based assistance to Indian farmers. This assistance has the potential to play a significant part in the enhancement of agricultural productivity. It has been observed that technology that is based on artificial intelligence and automation also has a significant potential to boost India's industrial output, which is gradually becoming less of a contributor to the country's overall gross domestic product. This is due to the fact that it has the potential to improve India's manufacturing efficiency, which in turn can assist the Indian economy in remaining competitive on a worldwide scale. It is possible that this will prove to be a boom for our country, which has a poor employment elasticity in the industrial sector. Increasing employment prospects in the industrial industry can be accomplished by the proper upskilling of young people in these emerging technology sectors. E-commerce, financial services, education services, health care services, transportation and communication, logistics, and other areas of the economy have all been significantly impacted by digital technologies, which have had a remarkable impact on the service sector of the economy. The entire production of the services sector in India has expanded as a result of this, and it has also contributed to the creation of jobs in this sector, which has led to the rise of jobs in the gig economy and online jobs. These occupations have a significant potential to increase the number of women who participate in the labor force in the Indian economy. The reason for this is that it makes it easier to balance the demands of job and family. Digital platforms such as Amazon, Zomato, Swiggy, Big Basket, Ola, and Uber, amongst others, not only make our day-to-day work easier, but they also create employment opportunities for thousands of people who were previously without jobs.

Through a series of initiatives that have been implemented in the past, the government of India has been able to bring about a digital transformation in the economy by ensuring that all members of the population have access to internet services. Various economic factors are affected differently by digital transformation, which necessitates an in-depth investigation of the impact that digitalization has on these economic variables. Some examples of these variables are gross domestic product, employment, consumption, investment, and exports. As part of an effort to investigate the impact that digitalization has on employment patterns in India, it has been observed that digitalization has the potential to result in the creation of employment opportunities in India and can contribute to the elimination of the gender gap in the economy. This is due to the fact that it has been discovered that it has decreased the rate of unemployment among women and also raised the number of people who are engaged in the economy on a part-time basis. The government of India should make additional efforts to expand access to internet services by lowering tariff rates and expanding access to public-distribution organizations (PDOs) in both rural and urban regions. This will allow the Indian economy to shed the label of a growing gender gap in employment within the country. The rate at which women participate in the labor force in the economy can be significantly increased as a result of this, which will, in turn, lead to an increase in the empowerment of women in the economy, which will ultimately lead to an increase in the total economic growth rate of the nation.

There has been a significant transformation in the gig economy in India as a result of the proliferation of digital platforms. This has resulted in the creation of new opportunities for both workers and enterprises, while also presenting a number of extremely difficult difficulties. Worker autonomy and earning potential have been increased as a result of the availability of new forms of flexible and on-demand work that have been made possible by these platforms. Workers now have the ability to select when, where, and how they work. In contrast, businesses are utilizing these platforms to gain access to labor that is both scalable and cost-efficient, which enables them to expand their operations more quickly and create a workforce that is more dynamic. In spite of this, there are substantial worries regarding the wellbeing of gig workers, which makes the benefits of this digital transition somewhat less significant. There is a lack of stability in income, weak social security safeguards, and the absence of traditional labor rights and protections, all of which create vulnerabilities for workers who are engaged in platform-based work. It is possible that these issues may result in job insecurity, income inequality, and a rising discrepancy between workers who are employed on platforms and those who are employed in more traditional and regulated employment sectors. As the gig economy in India continues to flourish, the role of digital platforms will only become more prominent as time goes on. On the other hand, this expansion must be accompanied by comprehensive policy reforms that make an effort to find a balance between encouraging innovation and safeguarding the interests of workers. It is imperative that policymakers and players in the gig economy, including digital platforms, labor unions, and business groups, collaborate in order to develop legal frameworks that are capable of addressing these problems. Proposals such as the extension of social security benefits, the introduction of minimum wage standards, and the establishment of grievance redressal mechanisms could be an essential component in the process of protecting the rights of gig workers while simultaneously preserving the flexibility and dynamism that digital platforms offer. The extent to which these difficulties are successfully handled will determine the trajectory of the gig economy in India in the years to come. India possesses the potential to become a global leader in responsible gig labor, thereby serving as a model for other rising countries. This might be accomplished by establishing an ecosystem that is more equitable and supportive. In the end, the success of the gig economy will not be primarily determined by its capacity to innovate; rather, it will be determined by its capacity to guarantee that innovation results in improved outcomes for all stakeholders, notably the workers who constitute the backbone of this quickly evolving sector.

A labor market that is characterized by short-term, flexible, and task-oriented work that is frequently mediated through digital platforms is referred to as the gig economy. This labor market is expanding at a rapid rate. Gig workers are often categorized as independent contractors or freelancers, in contrast to traditional employment, which requires workers to be bound by long-term contracts that include fixed salary and benefits. Gig workers are afforded additional flexibility and autonomy as a result of this designation, which enables them to select when and where they find employment. Gig workers, on the other hand, frequently find themselves in a position where they do not have job stability, limited access to social benefits such as health insurance, and few legal safeguards. This has led to discussions over the rights of gig workers. The gig economy is a varied economy that encompasses a wide range of activities, ranging from physical labor (such as ride-sharing, food delivery, and home repairs) to intellectual employment (such as freelance writing, graphic design, and software development). Gig labor has spread into practically every industry as a result of technical improvements and the prevalence of smartphones and mobile applications. This has provided individuals with chances to monetize their skills on a flexible and project-by-project basis. As the gig economy in India continues to expand, digital platforms are becoming an increasingly important component in determining the future of the gig economy. These platforms are not only acting as mediators of labor, but they are also actively affecting the character of work itself. This includes the borders of employment, the way tasks are arranged, and the way workers interact with the economy. The gig economy, in conclusion, represents a new frontier in labor markets all over the world, with increasingly becoming a big player is India. Digital platforms are the enablers of this transformation, allowing gig workers to connect with clients, streamline work processes, and access new economic opportunities. However, the importance of these platforms in influencing the future of the gig economy also raises fundamental considerations about labor rights, wage inequality, and the long-term sustainability of gig work.

2. Conclusion

The rate of digitalization has accelerated all around the world, particularly following the pandemic, as a result of the implementation of Industry 4.0. People are increasingly connecting to the internet and utilizing their personal computers and laptops to complete tasks that they previously carried out manually. This trend is expected to continue. The functioning of labor markets has also been altered as a result of this, which has led to the creation of jobs in the gig economy and part-time work. On the one hand, it results in the creation of new types of occupations; on the other hand, there is a concern that it will result in the replacement of regular work and also contribute to an increase in the risks associated with cyber security. The digital revolution of the Indian economy has a huge potential to minimize the gender gap in employment and raise the percentage of young people who have vocational training and technical degrees, despite the fact that it is associated with a number of obstacles. Our young people will have a plethora of options to improve their skills and acquire new ones, which will enable them to become more job-ready. It is an opportunity for the Indian economy as a whole to realize its demographic dividend by contributing to a reduction in the unemployment rate through the creation of new types of work and the provision of possibilities for young people to develop their skills and work part-time jobs. In order to narrow the digital gap and raise the rate of digitalization in the economy, the government of India should further intensify its actions to boost internet penetration in India, particularly in rural regions. Additionally, the government should engage with commercial companies and developed nations in the market to accomplish this goal.

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