



Research on flexible employment mode of persons with disabilities in the context of digital economy

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Abstract

The digital economy era has given rise to new business models based on platforms and the internet, with flexible employment becoming the norm in the job market and creating opportunities for people with disabilities. However, this group still faces challenges such as digital capability gaps, inadequate institutional protections, and social stereotypes. Against the backdrop of digital economic development, this paper explores the theoretical framework of flexible employment for people with disabilities under the guidance of capability development theory, positive welfare theory, and inclusive employment theory. After analyzing the main models of flexible employment for people with disabilities in the digital economy era, the study identifies four typical models: platform-based employment, remote work, digital entrepreneurship, and digital skills services. It also examines current challenges in flexible employment for people with disabilities and proposes recommendations for sustainable development, including enhancing digital skills, improving social security systems, innovating digital employment services, incentivizing corporate hiring of people with disabilities, and strengthening interdepartmental collaboration. This research contributes to deepening theoretical understanding of employment issues for people with disabilities in the digital economy context and provides policy insights for promoting higher-quality employment opportunities for this population.

Keywords: Digital economy, employment of persons with disabilities, flexible employment, inclusive employment

Introduction

In recent years, against the backdrop of a new wave of technological revolution and industrial transformation, the digital economy—represented by the internet, big data, artificial intelligence, and digital platforms—has experienced rapid growth and is increasingly becoming a new engine for economic expansion and social structural transformation. Digital technologies are reshaping production methods and industrial structures while profoundly influencing labor market dynamics and employment patterns. Internet-based emerging industries have spawned a growing number of new professions, with diverse models of task dispatch, flexible working hours, and remote work arrangements emerging. The traditional stable employment model is gradually giving way to a more open employment structure. Among these developments, flexible employment has become one of the dominant forces in the labor market, playing an increasingly vital role in job creation and social inclusion.

The digital economy has given rise to innovative employment models such as platform-based work, remote jobs, and digital entrepreneurship, creating more opportunities for workers. Flexible employment, with its flexible hours, low entry barriers, and diverse work styles, stands out as a key solution to employment challenges. As the digital platform economy surges, a surge of networked professions has freed workers from the constraints of traditional time and space, fostering a more diverse range of labor forms.

The change of employment pattern provides new employment possibility for the groups who are in the weak position in the labor market for a long time.

As a vulnerable group, people with disabilities face unique challenges in employment. Their physical disabilities, limited educational and technical skills, and systemic and cultural barriers in society often result in unfair treatment in job opportunities, positions, and career protections. Firstly,

entrenched employment discrimination and social prejudices make it difficult for them to enter mainstream job markets. Secondly, traditional positions often require specific physical qualifications and work patterns, leading to poor job fit and further hindering their employment.

The resulting employment inequality not only affects the economic income of the disabled, but also restricts their social integration and participation.

The growth of the digital economy has partially transformed this landscape. By transcending the temporal and spatial constraints of traditional labor structures, digital technologies enable remote collaboration and task allocation, creating new opportunities for people with disabilities to integrate into the workforce. For example, roles like online customer service representatives, content creators, digital designers, and data annotators in the platform economy can be performed remotely, reducing physical demands and alleviating limitations imposed by physical conditions. Moreover, digital advancements have driven progress in assistive and accessibility technologies, enhancing people with disabilities' access to information resources, communication capabilities, and vocational training opportunities. Thus, the digital economy serves as a key social catalyst for expanding employment opportunities for individuals with disabilities.

With the development of the digital economy, flexible employment has become one of the mainstream forms for people with disabilities to enter the labor market. However, existing literature mostly discusses employment security systems or traditional employment promotion systems for people with disabilities, paying little attention to the impact of changes in employment methods under the digital economy era, especially the exploration of flexible employment methods for people with disabilities. The development of the digital economy not only changes

employment methods but also impacts the structure of employment opportunities, presenting both opportunities and challenges for people with disabilities.

Therefore, it is necessary to start from the new employment form, to systematically discuss the flexible employment of the disabled in the context of the digital economy.

Theoretical Foundations of Flexible Employment for Persons with Disabilities in the Digital Economy

In the digital economy era, flexible employment for people with disabilities represents not only a new form of labor market participation but also a manifestation of inclusive social development. Theoretically, understanding the mechanisms behind the emergence of flexible employment for people with disabilities in the digital economy requires support from multiple theoretical frameworks. Among these, the capacity development theory, positive welfare theory, and inclusive employment theory provide a theoretical foundation for understanding how digital technologies transform the employment structure for people with disabilities and enhance their labor participation.

1. Theory of Ability Development

The theory of capability development, primarily proposed by Amartya Sen, posits that human welfare depends not only on individual income or resource possession, but also on their capacity to transform these resources into the actual realization of their abilities and life goals. It asserts that the primary objective of social development is to continuously expand the scope of people's "capacities for action," enabling everyone to freely choose lifestyles with intrinsic value.

For people with disabilities, their diminished capabilities extend beyond physical limitations to encompass systemic barriers in social systems, educational access, and technological infrastructure. For decades, limited educational resources, vocational training shortages, and institutional barriers in daily life have significantly reduced their employability, thereby limiting their entry into the labor market. The digital economy, however, has partially addressed this challenge. Through digital technologies like the internet, remote work, and AI, individuals with disabilities now have greater opportunities to develop their skills.

For example, online education platforms can provide more flexible skills training channels for people with disabilities, while digital work environments reduce the limitations of physical conditions on labor participation.

From the perspective of capability development theory, the digital economy not only transforms employment patterns but more importantly expands individuals' employability by enhancing their skills acquisition, information access, and labor participation capabilities. Flexible employment reduces the dependence of traditional employment models on physical conditions and workplace environments, enabling people with disabilities to work in more suitable environments, thereby improving their employment rates and social participation.

2. Positive Welfare Theory

The Positive Welfare Theory, rooted in Giddens' concept of the "society-investing state," advocates that social policy objectives should not merely focus on post-event remediation for vulnerable groups, but rather aim to foster

long-term development and social integration by empowering individuals through capacity-building and employment opportunities. Unlike traditional welfare models that prioritize income subsidies and social assistance, Positive Welfare emphasizes education, training, and job opportunities to enhance self-reliance.

Traditional social policies for persons with disabilities primarily function as welfare systems focused on livelihood security and emergency assistance. While these measures can alleviate their immediate hardships, they may foster dependency on social aid and hinder their ability to participate in society. In contrast, active welfare emphasizes employment as a pathway to social integration, recognizing it as a fundamental form of social welfare. Here, employment for persons with disabilities is not merely an economic issue but also a matter of social inclusion and participation.

The digital economy has created new institutional foundations for implementing positive welfare principles. Emerging employment models like platform-based work and remote work enable people with disabilities to participate in the labor market more flexibly, allowing them to earn income while gaining social engagement and recognition. Flexible employment not only enhances their economic independence but also strengthens their sense of social participation and self-worth. Therefore, from the perspective of positive welfare theory, facilitating people with disabilities to engage in flexible employment through the digital economy represents a crucial shift from 'welfare assistance' to 'capacity development.'

3. Inclusive Employment Theory

The concept of inclusive employment advocates that all groups should have equal opportunities to develop their careers in the job market. Employment inequality often stems not entirely from disparities in individual capabilities, but rather from institutional, environmental, and cultural barriers. For people with disabilities, social discrimination, employment exclusion, and systemic flaws are among the primary obstacles to their employment.

The theory of inclusive employment posits that structural barriers in the labor market can be addressed through institutional and social reforms, ensuring equal job opportunities for all groups. The digital economy has created new opportunities for inclusive employment through technological innovation. On one hand, online platforms break the time and geographical constraints of traditional employment, enabling the online allocation and completion of tasks while reducing the impact of physical conditions on job performance. On the other hand, advancements in digital technology have facilitated barrier-free and assistive technologies, supporting people with disabilities in accessing information, communication, and vocational training.

From this perspective, the theory of inclusive employment reveals that the digital economy has not only created new forms of employment but also transformed labor market structures, making them more open and inclusive. Flexible employment models, by removing barriers to employment and expanding job opportunities, have created new institutional frameworks for people with disabilities to participate in the labor market. However, achieving true inclusive employment requires comprehensive efforts—from institutional design to social security and employment

service systems—to dismantle the new barriers faced by individuals with disabilities.

Main Modes of Flexible Employment for Persons with Disabilities in the Context of Digital Economy

The digital economy has spurred the emergence of new employment models powered by internet platforms and digital technologies, transforming traditional labor structures into a more flexible and diverse employment landscape. This shift has reshaped how people with disabilities enter the workforce. Compared to conventional employment, flexible work in the digital economy offers greater flexibility in time, location, and format, thereby reducing the impact of physical limitations on labor participation. In the digital economy context, flexible employment for people with disabilities primarily manifests through platform-based employment, remote work, digital entrepreneurship, and digital skills services.

1. Platform-based employment model

Platform-based employment refers to a work model where workers complete tasks through online platforms that provide labor supply and demand information. With the rapid development of the digital platform economy, e-commerce platforms, content platforms, and service platforms have increasingly become key channels for employment. This type of employment is characterized by low entry barriers, flexible working hours, and diverse task types, creating new opportunities for people with disabilities to enter the labor market.

Specifically, some individuals with disabilities utilize e-commerce platforms to conduct online sales or operate online stores, combining employment with entrepreneurship through digital product distribution. Others leverage short-video platforms, live-streaming platforms, and content creation tools to produce and disseminate content, thereby generating platform revenue or advertising income. Additionally, certain digital platforms offer task-based jobs such as data annotation and online customer service, enabling workers to earn income by completing online tasks. This platform-dependent employment model partially breaks the traditional constraints of workspace and working hours, allowing individuals with disabilities to fulfill their tasks from home or within their communities, thereby expanding their opportunities for employment.

However, platform-based employment also has certain limitations, such as ambiguous labor relations, income instability, and lack of social security. Therefore, while encouraging platform-based employment and participation in labor for persons with disabilities, it is also necessary to improve the relevant institutional safeguard mechanisms.

2. Remote Work Model

Remote work is a form of employment that utilizes network technology to shift tasks to remote locations. With the widespread adoption of information technology and online collaboration software, companies are increasingly adopting remote work arrangements, a model that gained further traction during the pandemic. For individuals with disabilities, remote work effectively reduces commuting costs and eliminates workplace barriers, thereby enhancing employment opportunities.

Remote work empowers people with disabilities to access diverse employment opportunities. For instance, many

companies have transitioned customer service centers online, enabling workers to serve clients through digital platforms. Design professions—including graphic designers, web designers, and visual designers—can now operate remotely. Similarly, roles involving data entry, file archiving, and data input are also suitable for remote work. These positions primarily involve computer-based intellectual tasks that require minimal physical exertion, making them highly compatible with individuals with disabilities.

Remote employment can both expand employment opportunities for individuals with disabilities and enhance job stability. Typically based on relatively stable employers, remote employment demonstrates a certain degree of sustainability compared to task-based platform employment; however, its development still depends on the recognition of inclusive employment by employers and the level of technical support provided.

3 Digital Entrepreneurship Model

Digital entrepreneurship refers to a new form of employment where individuals engage in self-employment through online platforms or digital tools. In the digital economy, the cost of entrepreneurship has been significantly reduced, enabling people to start businesses with low barriers to entry. For individuals with disabilities, digital entrepreneurship not only provides job opportunities but also enhances their self-reliance and social integration capabilities.

In practice, some disabled individuals engage in e-commerce by operating online stores to sell their specialty products or provide customized services. Others leverage social media platforms for live-streaming sales and content marketing as entrepreneurial ventures. Additionally, some pursue knowledge-based online entrepreneurship, such as conducting training sessions or consulting services through online schools. The digital entrepreneurship model offers high flexibility, allowing workers to organize their work according to their physical condition and available time, thereby demonstrating strong adaptability.

While online entrepreneurship has created new opportunities for people with disabilities, it often entails significant market risks. Challenges such as intense platform competition, volatile market demand, and insufficient entrepreneurial skills can all impact success rates. Therefore, to foster disability-related online entrepreneurship, emphasis should be placed on entrepreneurship training and policy support.

4. Digital Skills Service Model

This refers to a form of employment where workers utilize their professional skills to provide digital services to society online. Service-oriented employment typically requires specialized technical expertise, such as programmers, designers, translators, and data analysts. The growth of the digital economy has significantly increased demand for digitally skilled professionals, creating new job opportunities for individuals with disabilities who possess relevant competencies.

In this model, individuals with disabilities can take on project-based tasks through freelance platforms or specialized service providers, offering technical support online to companies or individuals. For instance, those with programming skills may undertake software development

projects, while those with design capabilities can handle brand or visual design projects. Those with language skills might engage in translation or copywriting work. This employment model typically operates on a project-based basis, allowing workers to select tasks according to their qualifications and enjoy flexible working arrangements. Compared with other employment models, the employment quality under the digital skills service model is relatively higher, with certain advantages in income. However, this model requires a higher level of skill proficiency from workers, necessitating the enhancement of digital skills for individuals with disabilities through education and training.

The Realistic Difficulties Faced by the Disabled in Flexible Employment

While the digital economy has created new employment opportunities for people with disabilities, they still face substantial challenges in securing stable jobs through flexible employment. Although digital economy-driven new employment models lower barriers to entry, they also introduce structural contradictions. Significant institutional and structural barriers persist in areas such as digital skills, labor protection, employment support, and societal awareness, which to some extent hinder the improvement of employment quality for people with disabilities.

(1) Digital skills gap: Digital divide constrains employment opportunities

Digital literacy is a fundamental prerequisite for engaging in the digital economy. However, due to limitations in educational access, training resources, and digital infrastructure, people with disabilities often lack essential digital skills, resulting in a significant 'digital divide' in technology application. This divide is particularly evident in advanced digital competencies, including data processing, online marketing, and digital content creation.

The digital economy has spawned various employment roles that rely on digital technologies and online platforms, such as e-commerce specialists, digital marketers, and data analysts—all of which require a certain level of digital literacy. For most people with disabilities, limited access to higher education and a lack of vocational training place them at a disadvantage in the digital workforce market. Additionally, some individuals with disabilities face even greater challenges in acquiring digital skills due to physical limitations that prevent them from operating computers or online software.

The existence of the digital divide not only limits the opportunities of the disabled to enter the digital employment market, but also affects the quality of their employment and the development of their career to some extent.

2. Insufficient Employment Security of the Platform: Unstable Labor Relations

With the development of the online platform economy, platform-based employment has become a primary flexible employment option for people with disabilities. However, as most platform-based jobs lack formal labor contracts, they pose significant uncertainties and risks regarding workers' social security and labor protection. Since these positions are typically carried out through task assignments or partnerships rather than formal employment agreements, workers often fail to access adequate social security and labor protections.

The situation is particularly severe for people with disabilities, who are already at a disadvantage in the job

market. Without institutional safeguards for employment, they are highly vulnerable to income instability and job insecurity. For instance, in platform-based employment, workers' earnings are directly tied to task completion. When demand declines or physical limitations impair their ability to work, their income can plummet. Moreover, most platform jobs lack basic protections like pension, medical, or work injury insurance, leaving people with disabilities without safeguards in case of illness or accidents.

It can be seen that although the platform employment provides new employment channels for the disabled, the problem of unstable labor relations weakens the sustainability of their employment to some extent.

3. Inadequate employment support system: Lack of systematic training and employment services

A robust employment support system is essential for people with disabilities to achieve employment. However, China's current support framework remains inadequate, particularly in digital employment, where systematic training and career services are lacking. Although some regions have initiated vocational skills training programs for people with disabilities, these initiatives predominantly focus on traditional vocational skills, with insufficient emphasis on digital economy knowledge training courses.

Furthermore, the employment service system for persons with disabilities still faces challenges such as inadequate information coordination and imprecise job matching. Firstly, the limited information sources for disability employment prevent timely awareness of dynamic demands in the digital job market. Secondly, employment service agencies lack a digital employment service system for job recommendations and career guidance, resulting in ineffective job-person mismatch. Additionally, insufficient corporate awareness of disability employment leads to mismatches between job positions and the actual capabilities of persons with disabilities during recruitment. The underdeveloped employment support system further hinders their integration into the online job market due to the absence of corresponding support mechanisms.

4. Social Cognition and Institutional Barriers: Employment Discrimination Against Persons with Disabilities

Beyond technical and institutional factors, social perceptions and institutional environments also significantly influence employment opportunities for people with disabilities. For decades, society has held misconceptions about their capabilities, with some employers still viewing them as inefficient labor or even a cost burden, resulting in both overt and covert forms of employment discrimination. These societal biases further hinder their access to the labor market.

In the digital economy era, while internet platforms have lowered certain employment barriers, employment discrimination persists. For instance, remote job postings may still exclude disabled candidates due to employers' lack of confidence in their capabilities. Institutional barriers like inadequate employment support measures and underdeveloped accessible digital environments also exist. These factors collectively undermine the competitiveness of people with disabilities in the online job market. Furthermore, societal perceptions and institutional

constraints continue to hinder the development of flexible employment opportunities for this group.

Optimization Path of Flexible Employment Mode for Persons with Disabilities under the Background of Digital Economy

In summary, under the overarching trend of digital transformation, flexible employment has expanded employment channels and development opportunities for persons with disabilities. However, it also faces challenges such as low digital literacy, lack of relevant safeguard policies, and inadequate employment services. Future efforts should focus on improving the flexible employment service system for persons with disabilities to promote more comprehensive and high-quality employment for this population.

1. Strengthening Digital Skills Training to Build a System for Enhancing Digital Competence of Persons with Disabilities

Digital literacy is a crucial prerequisite for people with disabilities to access digital employment. In today's digital economy, the labor market increasingly prioritizes information processing skills. Without adequate digital competencies, individuals cannot enter the digital workforce. To bridge this gap, it is essential to enhance digital skills training for people with disabilities, effectively addressing the digital divide they face.

First, establish a tiered digital skills training mechanism for people with disabilities. Government departments and relevant institutions can design training programs at different levels based on their varying abilities, such as basic computer skills, e-commerce training, and online video production courses, to meet the needs of various employment positions. Second, leverage internet platforms to deliver online training, enabling people with disabilities to receive remote education or online courses from home or their communities, thereby reducing the cost of training participation.

In addition, the vocational skill certification system should be strengthened to provide a standardized skill evaluation system for the disabled, so as to improve their competitiveness in the job market.

2. Improve the flexible employment social security system and promote the reform of social security system

Although flexible employment is a new employment mode for the disabled population, issues such as unstable labor relations and lack of social security also affect their employment sustainability to some extent. Therefore, it is necessary to advance social security reform to ensure that flexible workers can benefit from a more comprehensive social security system.

First, develop social security systems tailored to the needs of flexible employment. For instance, establish a social insurance contribution mechanism for flexible workers, enabling people with disabilities to access basic pension and medical insurance even when employed through platforms or as freelancers. Second, encourage platform companies to participate in social security development by defining their labor protection responsibilities through institutional arrangements, thereby expanding coverage for flexible workers. Additionally, government subsidies could be implemented to reduce social insurance costs for people with disabilities, encouraging their participation.

By perfecting the social security system, the stability and security of the flexible employment of the disabled can be enhanced to a certain extent.

3. Develop digital employment platforms for persons with disabilities to expand employment opportunities

First, leverage the role of digital platforms to establish a digital employment platform for persons with disabilities, thereby enhancing the efficiency of job matching between persons with disabilities and positions. Currently, some online platforms have attempted to facilitate employment for persons with disabilities, but digital employment platforms directly serving persons with disabilities remain relatively rare.

Therefore, efforts should be made to enhance the development of online employment platforms for people with disabilities. On one hand, government-led initiatives or social organizations could establish dedicated employment service platforms to provide job postings, vocational training, and career guidance. On the other hand, existing internet platforms should be encouraged to create more accessible positions for people with disabilities, such as data annotation, online customer service, and digital content production. Additionally, these platforms should improve accessibility features to better serve the needs of individuals with disabilities in digital employment environments.

4. Promote enterprise participation in inclusive employment and job creation

As a major employment entity, enterprises play a significant role in the employment of persons with disabilities. In the era of the digital economy, it is essential to encourage enterprises to adopt inclusive employment concepts, thereby creating more job opportunities suitable for persons with disabilities and expanding their employment prospects.

First, intensify public awareness campaigns on inclusive employment for businesses, with policy guidance to enhance corporate understanding of disability employment. Second, incentivize enterprises to create more job opportunities for people with disabilities through preferential policies, such as remote positions and online work arrangements. Third, guide businesses to provide tailored employment opportunities based on the unique needs of individuals with disabilities. By optimizing work processes and providing technical support, more job positions can be adapted for their employment. Through corporate participation in inclusive employment initiatives, employment opportunities and quality for people with disabilities can be significantly improved.

5. Strengthening Policy Support and Social Coordination to Build a Multi-participatory Employment Promotion Mechanism

The employment of persons with disabilities is a social issue, which can not be solved by government policies alone, but also needs the support of enterprises and the cooperation of social organizations to promote the development of flexible employment of persons with disabilities.

First, institutional improvements should be made to the employment policy framework for persons with disabilities. This includes implementing digital employment support policies and vocational training initiatives to provide institutional safeguards for their digital employment.

Second, the role of social organizations in employment services should be fully leveraged. For instance, organizations such as the Disabled Persons' Federation and non-profit groups can enhance employment capabilities by conducting vocational training programs, career guidance sessions, and entrepreneurship support activities. Additionally, collaboration among enterprises, social organizations, and internet platforms should be encouraged to achieve resource sharing, thereby establishing a more comprehensive employment support system for persons with disabilities. Through the joint efforts of multiple stakeholders, a synergistic force for flexible employment development can be formed.

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