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The Application of Internet Technology in Enhancing the Efficiency of the Gig Economy

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Abstract: As our country's overall strength continues to grow, internet technology has rapidly developed, giving rise to the gig economy as a new economic form. The gig economy is characterized by its strong flexibility and intelligence, becoming the choice of many, while providing businesses with a broader range of human resource options. Traditionally, the gig economy has been limited by geographical and informational constraints, making it difficult for supply and demand to match effectively. However, with the widespread adoption of internet technology, gig workers and demanders can easily post and search for information online, achieving precise matches. This efficient circulation of information not only reduces search costs but also improves matching efficiency, making the gig economy more flexible and efficient. Additionally, internet technology enhances the efficiency of the gig economy by optimizing organizational management and processes. With tools such as project management software, automation, and intelligent processes, teams within the gig economy can better coordinate work and improve work efficiency. These technologies reduce error rates, ensure the quality and effectiveness of work, and promote the sustainable development of the gig economy.

Keywords: Internet Technology, Gig Economy, Specific Applications

1. Introduction

With the rapid development of technology, especially the constant innovations in internet technology, a new economic form—the gig economy—is gradually emerging. This economic model, known for its unique flexibility, efficiency, and innovation, has attracted widespread attention. The gig economy consists of a large number of independent workers or freelancers who are not bound by traditional employment relationships [1-4]. Instead, through internet platforms, they flexibly choose work tasks based on their skills, interests, and timing. This emergence provides individuals with more employment choices and freedom, as well as offering businesses a wider range of human resources options, reducing labor costs. However, the development of the gig economy has not been without challenges. In its early stages, due to the lack of effective information exchange platforms and organizational management mechanisms, the efficiency of matching between gig workers and demanders was low, and transaction costs were high, which to some extent restricted the further development of the gig economy. As internet technology continues to advance and application scenarios expand, these issues have been effectively addressed. Internet technology, with its powerful information processing capabilities, high data transmission speeds, and wide coverage, provides strong support for the development of the gig economy.

2. Characteristics of the Gig Economy

2.1. Flexibility

The gig economy, as an emerging economic form, is profoundly changing the labor market landscape with its unique flexibility. It breaks the bonds of traditional employment models, providing workers with more employment opportunities and choices. Through internet platforms, gig workers are no longer limited to fixed positions and work hours, but can choose work that suits them anytime and anywhere based on their skills and interests. This flexibility is not only reflected in the arrangement of work hours but also in the choice of work content. Gig workers can freely choose their fields and projects, achieving a better balance between work and life. Additionally, internet platforms provide the gig economy with a wealth of resources and information support. Workers can access more job opportunities and project information through the platform, enhancing their competitiveness. Moreover, the platform can also provide skill training and career development guidance, helping them continuously improve their professional skills and comprehensive capabilities.

2.2. Intelligentization

The gig economy benefits from the intelligentization of its algorithms, bringing more convenience and benefits to workers and demanders. In the wave of information and digitization, internet platforms actively utilize advanced technologies such as big data and artificial intelligence, injecting intelligent genes into the gig economy. Internet platforms, through big data analysis, can deeply mine the needs and characteristics of gig workers and demanders. By processing and analyzing large amounts of data, platforms can accurately grasp both parties' preferences, skills, and needs, thereby achieving efficient matches. This intelligent algorithmic matching method not only significantly improves matching efficiency, reducing the time and effort required by both parties to find suitable matches, but also reduces transaction costs, making the gig economy more competitive. Additionally, algorithmic intelligentization also brings more convenience and benefits to both parties. For gig workers, they can quickly find suitable job opportunities through the platform, increasing their income levels; at the same time, the platform can also provide them with advice on skill enhancement and career development planning, helping them realize their personal value.

2.3. Emphasis on Labor Skills

Gig workers are able to stand out in the gig economy because they possess unique skills or professional knowledge. These skills may be acquired through long-term learning and practice, or they may be their expertise in a specific field. These skills enable gig workers to complete work tasks competently, giving them higher competitiveness in the market. Internet platforms provide gig workers with a stage to showcase their skills and talents. Through the platform, workers can display their portfolios, achievements, or customer reviews, allowing demanders to more directly understand their capabilities and levels. This transparent display method effectively increases the chances of workers being discovered by demanders and enhances the trust between the two parties. At the same time, internet platforms also use algorithms and data analysis to precisely match and recommend gig workers' skills, enabling demanders to more quickly find workers with the required skills, improving matching efficiency and the success rate of cooperation.

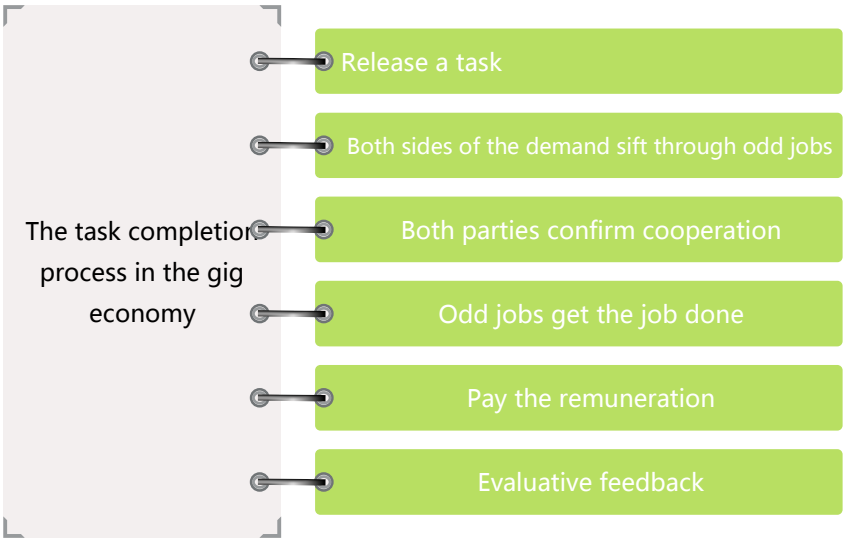

Figure 1. Task Completion Process in the Gig Economy

3. The Impact of Internet Technology on the Gig Economy

3.1. Enhancing Supply and Demand Matching Efficiency

Internet technology has injected dynamic vitality into the gig economy, establishing an efficient and convenient platform for information exchange. On this platform, gig workers and demanders can quickly and accurately find each other, achieving optimal resource allocation and efficient utilization. Through online platforms, gig workers can easily post their skills, experience, and availability, making it clear at a glance for demanders. Demanders can also detail their needs and expectations on the platform, enabling them to quickly find suitable workers. This transparency and sharing of information significantly reduce search costs and enhance matching efficiency. More importantly, internet technology allows for more precise matching [5-6]. The platform uses algorithms and data analysis to deeply mine the needs and characteristics of both parties, achieving precise matches, significantly improving work efficiency and quality, and making the gig economy more competitive and sustainable. In addition, features like online chat and video calls enable real-time communication and idea exchange, ensuring smooth work progress.

3.2. Promoting Flatter Organizational Management

Internet technology has brought revolutionary changes to organizational management in the gig economy, making it more flattened. The traditional hierarchical structure is gradually breaking down in the gig economy, replaced by more flexible and efficient work teams. This flat management structure greatly reduces redundant processes, allowing for quicker and more accurate information flow. Multi-layer approvals and cumbersome processes in traditional organizations are simplified, making decision-making and execution faster and more flexible. This efficient workflow not only increases work efficiency but also reduces management costs, giving the gig economy a competitive edge in the market. Moreover, a flat management structure also helps to foster the initiative and creativity of gig workers. In such an organization, each member can more directly participate in decision-making and execution processes, and their voices and opinions are more likely to be valued and adopted. This sense of participation and belonging can stimulate gig workers' enthusiasm and innovative spirit, promoting their ability to better utilize their professional skills and talents, and making the gig economy more adaptable to the rapidly changing market environment.

3.3. Optimizing Payment and Settlement Methods

Internet technology has brought revolutionary changes to the gig economy, especially in terms of payment and settlement. Traditional payment methods often involve cumbersome processes and high costs, causing inconvenience to both parties. However, the rise of online payment and settlement methods has completely changed this situation. Through online platforms, gig workers and demanders can easily complete payments and settlements without worrying about cumbersome procedures, as illustrated in Figure 2. According to statistical data, gig transactions using online

payment methods have approximately 30% higher efficiency than traditional methods, while transaction costs are reduced by nearly 20%. The advantages of online payment are not only reflected in efficiency and cost but more importantly, in transaction safety. By using advanced encryption technologies and risk control measures, online platforms can ensure the financial security of both parties, reducing transaction disputes and fraud risks. Compared to traditional cash transactions or bank transfers, online payment risks are reduced by about 40%. As technology continues to advance and applications deepen, online payment will play an increasingly important role in the gig economy [7-8].

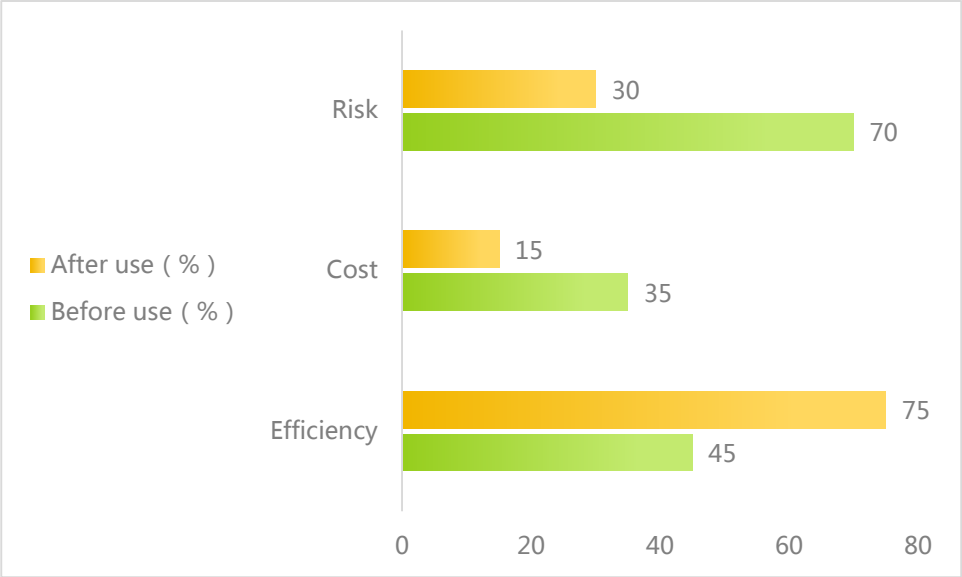

Figure 2. Comparison before and after technology use

4. Specific Applications of Internet Technology in Enhancing the Efficiency of the Gig Economy

4.1. Information Exchange and Supply-Demand Matching

Traditional recruitment and job-seeking methods are often time-consuming and laborious, requiring parties to find suitable partners among a vast crowd. However, the emergence of online platforms and mobile apps has completely changed this scenario. Gig workers and demanders only need to post their requirements and conditions on the platform, which then uses advanced algorithmic technology to perform precise matching based on the information from both parties. The intelligent matching method significantly shortens the time to find suitable partners and improves the accuracy and success rate of matches. In addition to matching functions, online platforms and mobile apps also provide real-time communication tools, such as chat software or online meeting systems. This allows parties to communicate anywhere and anytime, quickly resolving issues encountered in cooperation. Whether it's discussing project details or following up on work progress, these tools can easily facilitate such interactions. This method of real-time communication significantly enhances work efficiency and strengthens the trust and willingness to cooperate between the parties.

4.2. Organizational Management and Process Optimization

In the gig economy, the application of project management tools and automated and intelligent processes is becoming increasingly widespread, greatly promoting the collaborative efficiency and work quality of gig teams. Project management software provides gig economy teams with a centralized and efficient collaboration platform. Through this tool, team members can clearly see the specific content, deadlines, and responsible persons for each task, avoiding misunderstandings and omissions in information transmission. Project management software also offers real-time project progress tracking, allowing managers to stay updated on project developments, promptly identify and solve problems. More importantly, these tools can also monitor work quality and outcomes. Through data analysis, managers can understand each member's work performance, identify potential issues, and make targeted improvements. This precise management enables gig teams to maintain a leading position in the fierce market competition. The application of automated and intelligent processes brings more convenience to the gig economy. Through automation tools, repetitive, low-value tasks can be automatically handled, thus freeing up a significant amount of time and energy for gig workers, who can then spend this time on higher-level tasks, optimizing work processes, reducing error rates, improving work quality, and enhancing their self-worth.

Table 1. Application Scenarios

Categories	Project Management Tools	Automated and intelligent processes
Application scenarios	Project management	Data processing
	Task allocation	Report generation
	Progress tracking	Customer Service
	Quality control	Marketing Promotion

4.3. Skill Training and Knowledge Sharing

With the widespread application of internet technology, gig economy workers can more conveniently access various online courses and training resources, continuously enhancing their skills and knowledge levels. This transformation provides workers with a more flexible learning path, allowing them to better adapt to the constantly changing market demands, thus standing out in fierce competition. In the past, gig workers might have been limited by time and location, unable to access high-quality training resources [9-12]. Now, with just a smartphone or computer, they can access a variety of online courses anytime, anywhere. These courses cover everything from basic skills to advanced professional knowledge, offering workers a wealth of learning options. Moreover, internet technology also provides gig workers with an important communication platform—communities and forums. Here, they can join related industry groups, exchange experiences, and share insights with peers. This mechanism of knowledge sharing and mutual assistance not only helps workers solve problems encountered in their work but also allows them to draw wisdom from others' experiences, continually progressing [13-14].

5. Conclusion

In the context of globalization and informatization, the gig economy, as a new economic form, is gradually rising and becoming an important part of the social economy. The rise of the gig economy highlights people's pursuit of work flexibility and freedom, as well as the market's urgent need for efficient and precise resource allocation. At the same time, the robust development of internet technology provides strong technical support for the rapid rise of the gig economy. The widespread application of internet technology breaks the spatial and temporal limitations of traditional economic models, allowing gig workers and demanders to transcend geographical boundaries, achieve efficient information exchange, and resource matching. Through online platforms, parties can quickly find each other, reduce search costs, and improve matching efficiency. The intelligent and automated features of internet technology also greatly optimize the organizational management and processes of the gig economy, making work more efficient and orderly. In the future, as technology continues to innovate and application scenarios expand, the gig economy will embrace a broader development space, becoming a significant force in driving social progress.

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