

Breaking the Trust Dilemma in the Gig Economy: A Governance Pathway Study Based on Digital Credit Assets

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Abstract: As a core component of new employment forms, the gig economy has revitalized market dynamics and promoted flexible employment. However, its inherent and deep-seated tripartite trust dilemma—among businesses, workers, and platforms—has become a critical bottleneck hindering high-quality development. This study systematically examines the trust deficits intertwining these three parties, identifying root causes in information asymmetry, insufficient rights protection, and the failure of traditional credit evaluation mechanisms. We propose that constructing a "digital credit asset" system, grounded in workers' multimodal behavioral data, is a fundamental pathway to restructure the trust ecosystem of the gig economy. By capitalizing multidimensional information such as skills, performance, and evaluations into quantifiable, transferable trust credentials, digital credit assets can effectively reduce matching costs, safeguard the rights of all parties, and resolve profitability and governance challenges for platforms. Furthermore, this paper constructs a systematic governance framework for digital credit assets from three dimensions: technological architecture, institutional design, and multi-stakeholder co-governance, aiming to provide theoretical insights and practical guidance for standardizing, sustaining, and healthily developing the gig economy.

Keywords: Gig Economy; Data Trust; Digital Credit Assets; Platform Governance; New Employment Forms

I. Introduction

The report of the 20th National Congress of the Communist Party of China explicitly called to "support and standardize the development of new forms of employment." As the most dynamic component of these new forms, the gig economy is profoundly reshaping the global labor market landscape with unprecedented breadth and depth. From transportation and ride-hailing to food delivery, from professional services to content creation and knowledge payment, the gig model has permeated all sectors of the economy and society, becoming a reservoir for employment and a new growth driver for economic development. Statistics indicate that the scale of flexible employment in China has exceeded 200 million people, and platform-based gig work has become a crucial support for stabilizing employment and ensuring people's livelihoods.

Category	Representative Companies
Transportation & Ride-hailing	DiDi Chuxing
Shared Accommodation	Xiaozhu.com, Tujia.com
Food Delivery Services	Meituan Waimai, Ele.me
Live Streaming	Douyin, Huya, Douyu
Professional Services	58.com, Haodf.com
Content Creation	WeChat Official Accounts, Toutiao
Knowledge Payment	Zhishixingqiu, Xiaoe Tong

Table 1. Primary Categories of the New Gig Economy.

However, beneath the surface prosperity, inherent vulnerabilities within the gig economy are becoming increasingly apparent. Echoing the differences in stability and security implied by the traditional pyramidal job structure, the flip side of the gig economy's flexibility advantage is a systemic dilemma of trust deficiency. Platforms, workers, and client enterprises are trapped in

a vicious cycle of mutual suspicion and intensified game theory: enterprises worry about the skills reliability and service instability of gig workers; laborers anxiety over unfair pay and lack of rights protection; and platforms are caught between the high costs of building trust and unsustainable profit models. This deep-seated crisis of trust not only erodes gig workers' sense of gain and career security but also raises the labor risks and trial-and-error costs for enterprises, further trapping platforms in a development paradox where "non-investment leads to ecosystem degradation, while investment makes profitability difficult".

Position Tier	Skill Requirements	Example Occupations
High-End	High skill requirements, high barriers to entry, strong stability and benefits, good working conditions, high salary levels	Mobile Developer, Global Trademark/Certification Specialist
Mid-Level	Relatively high skill requirements, relatively high barriers to entry, moderate stability and benefits, average working conditions, acceptable salary levels	Environmental Impact Assessor, Photographer, Online Audio-Visual Content Creator
Low-End	Low skill requirements, low barriers to entry, low stability and benefits, poor working conditions, low salary levels	Manual Laborer, Warehouse Pickers/Packers

Table 2. Current Stratification of Gig Market Positions.

As one of the most representative employment forms in the digital era, the gig economy has activated immense market potential through its flexibility, becoming a significant force for stabilizing employment and fostering innovation. Yet, behind the impressive growth figures, a profound "trust crisis" is undermining the sustainable development of this model. Traditional trust mechanisms, based on interpersonal reputation or one-dimensional linear ratings, prove inadequate when faced with the massive scale, anonymity, and non-standardized transactions characterizing the gig economy. This failure of trust mechanisms manifests specifically in workers' fears of unfair treatment and job instability under "black box" algorithms, clients' difficulties in verifying the true quality and reliability of service providers, and platforms' struggles with high matching costs, frequent transaction disputes, and increasingly complex governance challenges.

II. Literature Review

(A) The Multidimensional Characteristics of the Gig Economy

Academic consensus recognizes distinct multidimensional features of the gig economy. Keith et al. (2019) identified flexibility as its core advantage, enhancing the spatiotemporal efficiency of labour allocation. Fu Fulong et al. (2021) and Mo Yiqing et al. (2022) further emphasized that this flexibility grants workers greater autonomy, catering to diversified employment needs. Structurally, its operational foundation is characterized by task orientation, short-term engagements, and platformization (Manyika et al., 2016), where platforms act as intermediaries, deconstructing traditional long-term employment relationships. From a labour composition perspective, job distribution exhibits a significant hierarchical spectrum, ranging from high-skill, high-security premium positions to low-barrier, low-security elementary jobs, forming a continuum rather than a monolithic form. Digitalization serves as the underlying support, enabling real-time task distribution, process monitoring, and payment.

(B) Research on the Trust Dilemma in the Gig Economy

Trust is the cornerstone of transactions in the gig economy, yet its fragility constitutes a major challenge. Existing research primarily examines this dilemma from three stakeholder perspectives:

1. **Worker Rights Protection and Trust Deficit:** Numerous studies focus on the "rights vacuum" faced by gig workers. Difficulties in determining employment relationships lead to a lack of protection regarding social security, occupational safety, and income stability (De Stefano, 2015). This absence of institutional safeguards prevents workers from developing long-term trust and belonging towards platforms, resulting in high turnover rates.

2. **Client Enterprises' Quality Anxiety and Trust Barriers:** For enterprises, the gig model makes it difficult to assess workers' skills, professionalism, and delivery quality through multi-stage processes like interviews and probation periods typical of traditional employment. High information asymmetry fosters scepticism about these aspects (Kuhn & Maleki, 2017), which constitutes a significant psychological barrier and decision-making cost for enterprises adopting the gig model .

3. **Platforms' Governance Dilemma and Trust-Building Challenges:** As market organizers, platforms bear the core responsibility of constructing trust mechanisms. Existing research largely focuses on tools like ratings, reviews, and certifications used by platforms (Möhlmann et al., 2021). However, these tools often face issues like "rating inflation" and "malicious reviews," and single-dimensional scores cannot comprehensively and dynamically reflect complex capabilities and credibility. Platforms are caught in a dilemma: excessive intervention raises costs, while laissez-faire policies lead to market failures .

(C) Research Critique and the Entry Point of This Paper

While existing research effectively outlines the various facets of the trust dilemma in the gig economy, it suffers from two main limitations. First, most studies analyse the predicaments of platforms, workers, and client enterprises in isolation, lacking a systemic deconstruction of the vicious cycle of mutual constraint and the complex game theory involving all three parties . Second, discussions on trust solutions predominantly remain at the level of optimizing existing rating systems or advocating for policy safeguards, lacking innovative thinking about a techno-economic paradigm that could fundamentally reshape the logic of trust generation . The entry point of this paper is to treat "trust" itself as a key factor of production that can be reshaped by digital technology. We propose the concept of "Digital Credit Assets," aiming to transcend simple "evaluation" or "certification." It involves structurally packaging and valorising workers' multi-dimensional digital footprints into a new type of asset that is accumulatable, verifiable, and transferable. This is not merely a technological upgrade but a profound restructuring of the production relations of trust within the gig economy, offering a new theoretical approach to solving the systemic dilemma .

III. Analysis of the Dilemma: A Tripartite Trust Crisis

The trust crisis in the gig economy is not a failure of a single link but rather a systemic failure where platforms, workers, and client enterprises are trapped in a vicious cycle due to the lack of effective institutional and technological mediation. The core contradiction lies in the irreconcilable tension between the highly flexible, fragmented nature of transactional demands and the high-cost, long-term investment required to establish deep trust.

(A) Enterprise Perspective: The Dilemma of Trust in Person-Job Matching

Enterprises seek a balance between "flexibility" and "efficiency" in the gig economy. However, the cognitive trust built through long-term observation in traditional employment is severely compressed in gig scenarios. Enterprises face a dual trust hinder: first, the "fog of capability" during the pre-selection screening stage, where it is difficult to accurately assess a gig worker's true skill level, professional experience, and work habits based on simplified online profiles and limited historical evaluations; second, "delivery anxiety" during the execution stage, where difficulties in process supervision lead to concerns about work quality, progress communication, and professional ethics. This results in enterprises often treating gig workers as a low-cost, low-risk auxiliary labor supplement rather than core business partners, thereby inhibiting the expansion of the gig model into higher value-added fields.

(B) Gig Worker Perspective: The Erosion of Trust in Rights and Future

Workers choose gig work for autonomy and flexibility, but at the cost of losing certainty. Their trust deficit manifests in three ways: first, the institutional suspension of labor rights protection, where the lack of social security, unrecognized occupational injuries, and significant income fluctuations deprive them of basic security; second, algorithmic injustice in labor value recognition, as dispatch, pricing, and rating rules often operate as a "black box," making workers feel their earnings and reputation are controlled by opaque algorithms, preventing stable career expectations; third, the structural lack of career development channels, where fragmented work makes it difficult to accumulate visible professional capital, trapping them in a cycle of "having work but no development" and undermining long-term identification with platforms.

(C) Platform Perspective: The Paradox of Trust Building Between Input and Return

Platforms, intended as builders of trust bridges, are caught in the "tragedy of the commons" and a "profitability paradox." To establish trust, platforms must invest heavily in identity verification, transaction security, dispute resolution, and rights protection, which constitute high "trust infrastructure" costs. However, their core profit model—transaction commissions—has limited upward flexibility due to market acceptance. Any attempt to increase commissions to cover costs risks exacerbating dissatisfaction among workers and clients, triggering user churn^{4^10}. This forces many platforms into a vicious cycle of "low-cost operation—low-level trust—low-quality ecosystems" or leads them to sacrifice long-term trust for short-term data goals. An inherent conflict exists between platforms' commercial interests and their role as neutral, fair intermediaries, making it difficult for them to become fully trusted third parties.

IV. The Path Forward: Digital Credit Assets as a Systemic Solution

The pervasive trust dilemma in the gig economy—stemming from information asymmetry, inadequate rights protection, and platform governance failures—cannot be resolved through marginal improvements to existing credit tools. Instead, it necessitates the construction of a new infrastructure that embeds trust endogenously into the entire transaction process, enabling the quantification, accumulation, and value circulation of credibility. Digital Credit Assets emerge as a systematic solution designed for this purpose. Their essence lies in the digital and algorithmic encapsulation of workers' intangible "human capital" and "reputational capital" into portable, verifiable, and tradable credit equity instruments. This fundamentally reshapes how trust is generated and value is distributed within the gig economy.

The construction of DCAs relies on the integration of multi-dimensional data and assessment by credible algorithms. Its framework encompasses four core dimensions: First, Skill Credential Assets, which utilize technologies like blockchain to enable tamper-evident notarization and verification of educational certificates, professional qualifications, skill assessment results, and portfolios. Second, Performance Behavior Assets, which systematically record and quantify process data such as response speed, on-time delivery rate, and communication quality. Third, Outcome Evaluation Assets, which integrate traditional star ratings with in-depth feedback like textual reviews, client repeat rates, and project quality assessments. Fourth, Social Capital Assets, reflecting a worker's influence within professional networks, such as referral indices and collaborative evaluations. Together, these elements form a dynamic, multi-dimensional credit profile. The effectiveness of a similar multi-dimensional assessment model is evidenced by the practical application of systems like Sesame Credit, which accurately applies credit scores across scenarios like leasing, mobility, and finance .

DCAs systematically reshape trust relationships in the gig economy through three core mechanisms:

1. Penetrating Information Asymmetry to Solve the Enterprise's "Candidate Selection" Dilemma: A multi-dimensional digital credit profile provides a more holistic and dynamic reflection of a worker's capability and reliability than a traditional resume or a single score. This allows enterprises to make decisions based on richer data, reducing screening costs and hiring risks, thereby increasing their willingness to assign high-value tasks to holders of high DCAs.
2. Empowering "Rights Capitalization" to Alleviate Workers' "Development" Concerns: DCAs transform each instance of quality performance by a worker into an accumulatable and portable "credit capital." High credit assets translate into income premiums, better job opportunities, and stronger bargaining power for workers. This offers a market-based compensation path for the lack of social security and opens a reputation-based career development channel, enhancing their sense of belonging and encouraging a long-term perspective.
3. Optimizing Platform Governance to Break the "Profitability Curse": For platforms, a DCA system codifies and automates governance rules. A high-quality credit ecosystem automatically attracts high-caliber enterprises and workers, creating a virtuous cycle that reduces marketing and dispute resolution costs. This allows platforms to evolve from mere "transaction fee takers" into "credit ecosystem operators," developing new, sustainable profit models through value-added services based on credit data—such as precision matching, credit insurance, and skills training—thus reducing dependence on commission fees alone.

V. Governance Pathways

The construction and operation of digital credit assets involve complex interest balancing among multiple stakeholders and profound ethical challenges, necessitating a sound governance framework to prevent new risks such as algorithmic discrimination, data monopoly, or platform power abuse. The establishment of this governance framework should adhere to the core principle of a trinity of "institutional innovation, technological empowerment, and collaborative governance," forming a systematic solution.

At the technological level, building a credible, transparent, and auditable algorithm and data architecture is the cornerstone of digital credit assets. Algorithmic fairness and explainability are paramount. Credit assessment models must undergo rigorous fairness reviews to avoid systemic discrimination against specific groups. Simultaneously, assessment results should be explainable, clearly communicating the main components of the credit score to workers to safeguard their right to know¹⁰. Data sovereignty and privacy protection are equally critical. It is essential to explore advanced technologies such as federated learning and privacy-preserving computation to achieve secure circulation of data value without leaking or aggregating raw data, and to clarify workers' basic rights to their personal data and derived digital credit assets. Furthermore, cross-platform mutual recognition and data portability must be actively promoted. By establishing industry-wide standards, workers should be allowed to migrate their digital credit assets to other platforms under compliant conditions. This helps break down platform data silos, promotes the rational flow of labor factors, and activates the value of credit assets.

At the institutional level, well-defined legal rules and responsibility demarcation are crucial guarantees for the healthy development of digital credit assets. Firstly, exploring the legal definition of digital credit assets as a new form of digital property right is necessary, clarifying the rules related to their generation, use, benefit, and disposal, thereby laying a legal foundation for the assetization of credit. Secondly, the primary responsibility of platforms and their transparency obligations should be strengthened. Platforms should be required to disclose the core principles, main indicators, and weights of their credit assessment models and accept independent third-party algorithm audits to address new types of misconduct like the "algorithmic black box" and "big data-enabled price discrimination". Finally, innovative dovetailing of digital credit assets with the social security system should be actively explored. For instance, stable gig work records with high credit could serve as a reference for workers to access specific commercial insurance preferences, or even certain social security benefits, thereby building a market-based safety net for flexible workers.

At the governance level, a collaborative co-governance pattern involving the government, platforms, workers, and society is ultimately required. The government's role should shift from passive regulation to active empowerment, establishing regulatory red lines to prevent major risks while encouraging innovation through mechanisms like "regulatory sandboxes." It should also lead the development of industry standards and data interoperability frameworks¹⁰. Platform enterprises need to enhance self-discipline, establish internal algorithm ethics committees, actively participate in industry conventions, and explore forming industry credit information sharing platforms to jointly constrain serious dishonest practices. For the vast number of gig workers, support should be provided for them to form or join industry unions or associations, enabling collective participation in the evaluation and consultation of platform rules, thereby ensuring their voice within the credit ecosystem. Additionally, academic institutions, media, and third-party professional organizations should be actively introduced to conduct independent evaluations and oversight, forming broad social constraints and collectively advancing the improvement of the digital credit governance system.

VI. Conclusion and Prospects

The healthy development of the gig economy is vital to the livelihoods of hundreds of millions of workers, the operational flexibility of enterprises, and the overall dynamism and stability of the economy and society. This study has systematically demonstrated that the core impediment to its high-quality development lies in a systemic trust dilemma—a tripartite deadlock mutually reinforcing distrust among platforms, workers, and client enterprises. Incremental improvements to existing mechanisms are insufficient; a fundamental paradigm shift in the trust infrastructure is imperative.

Constructing a novel trust system centered on "Digital Credit Assets" represents the pivotal path forward. By digitally capitalizing workers' skills, behaviors, and reputations into quantifiable, portable, and verifiable assets, DCAs offer an integrated solution to pervasive challenges: information asymmetry, lack of rights protection, and platform profitability concerns. This transcends mere technological application; it signifies a profound restructuring of production relations and governance models. The ultimate aim is to transition the gig economy from a fragmented market characterized by "low trust, high friction, and short-term game" to an organic ecological community founded on "high trust, low friction, and long-term development."

Nevertheless, this transformative journey is fraught with challenges. The virtuous operation of Digital Credit Assets is highly dependent on a robust support framework encompassing trustworthy technology, sound institutions, and multi-stakeholder governance. Future efforts require collaborative exploration by policymakers, platform enterprises, worker representatives, and research institutions to find the optimal balance between fostering innovation and mitigating risks, enhancing efficiency and

ensuring equity, releasing vitality and maintaining stability. Ultimately, the gig economy can truly unleash its potential to facilitate high-quality full employment and achieve sustainable and stable development only under these conditions.

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