Research Progress on the Impact of the Gig Economy on the Urban-Rural Gap

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Abstract: In the context of the rapid development of the digital economy, the gig economy, as a novel form of employment, is profoundly influencing the structure and operational mechanisms of urban-rural labor markets. This paper, by reviewing relevant domestic and international studies and employing methods of literature review and comparative analysis, explores the relationship between the gig economy and the urban-rural gap. The study first reviews the evolutionary process of the gig economy concept and its primary features. Subsequently, from an empirical perspective, it summarizes the multifaceted impacts of the gig economy on urban-rural income disparities, employment structures, and regional coordinated development. Overall, most scholars regard the gig economy as a "springboard" for regional development and narrowing income gaps, while another group warns of the potential skill solidification trap it may bring. Existing research still shows discrepancies in explaining the impact mechanisms. Future studies can expand the dimensions of urban-rural gap analysis, improve the precision of causal identification, and strengthen comparative research across regions and internationally, thereby providing more robust support for refining the theoretical framework and policy system of the gig economy.

Keywords: Gig economy; Urban-rural gap; Income distribution; Employment structure; Regional coordinated development

1. Introduction

In the context of the digital wave and the continuously evolving labor market, the gig economy is rapidly emerging on a global scale. The gig economy injects greater fluidity into urban-rural labor mobility and income distribution. It opens income channel entrances to surplus rural labor and low-skilled workers; however, the spatial gradient disparities in digital infrastructure, educational stock, and platform penetration rates direct the same force toward income fissures between urban and rural areas. Literature that combines theoretical deconstruction and policy calibration mostly revolves around topics such as employment absorption, labor relations, platform governance, and social security gaps, offering only scattered tangential references to urban-rural income disparities, while leaving substantial blanks in systematic reviews.

This paper first identifies gaps in domestic and international literature, thereby laying the foundation for subsequent empirical studies and theoretical modeling. As a key component of the digital economy, the dual effects of the gig economy urgently require elucidation. Clarifying this critical juncture will provide precise entry points for digital employment policies, aligning the social security net for flexible workers with the macro coordinates of common prosperity.

This paper employs a combined approach of literature review and comparative analysis to systematically synthesize theoretical and empirical research findings, summarize differences in domestic and international perspectives and conclusions, identify research shortcomings, and propose policy recommendations tailored to China's realities. It aims to offer valuable academic references for understanding income distribution patterns in the digital era and advancing urban-rural integrated development.

2. Theoretical connections and developmental trajectory of the gig economy

Within the theoretical spectrum of development economics, the gig economy, as a flexible economic form, exhibits varying interpretations of its theoretical connotations depending on the observational perspective. Some scholars propose the concept of "independent work," viewing the gig economy primarily as an economic trend where workers enter into short-term project-based contracts with enterprises, broadly describing the changes in employment models brought about by the gig economy [1]. This definition emphasizes employment relationships based on "short-term contracts" and "deliverable fulfillment," without highlighting the intermediary role of internet platforms, and is thus typically delineated as the "traditional gig economy."

In contrast, other studies confine the "gig economy" to a novel employment model reliant on the internet and digital technologies, centered on platforms and characterized by "immediacy," known as the "new gig economy." From this perspective, scholars further suggest that the gig economy can be expressed as "on-demand hiring," "contingent work," "sharing economy," "agile talent," "non-traditional labor relations," or "alternative employment forms," among others [2].

Whether the new gig economy or the traditional gig economy, both can be regarded as informal employment forms. The core of the traditional employment model lies in the organization's "procedural authority" over the individual's labor process, manifested as the capital side dominating the labor organization, with workers in a structurally dependent position, required to complete tasks within preset positions and hours following established directive structures. In the gig economy, however, this "manager-managed" directive structure is deconstructed, transforming into a task-oriented matching relationship between "contractors (employers in traditional models or platforms in the new economy), independent contractors (gig workers)."

There is no traditional sense of employer-employee, control-controlled relationships between the two in the labor process. Instead, gig workers enter the market as independent laborers, able to autonomously decide on work content, time, location, and methods, exhibiting a feature of "self-employment." Furthermore, platforms in the new gig economy also function as resource allocation mechanisms, achieving instantaneous matching between labor supply and demand through efficient point-to-point connections [3].

3. Mechanisms through which the gig economy influences the urban-rural gap

The impact of the gig economy on the urban-rural dual structure exhibits significant differentiated effects, with its nature and extent varying depending on specific dimensions, stages of development, and regional conditions.

Mulcahy points out that the internet and emerging technologies have given rise to a "digitalized flexible employment form," gradually replacing traditional full-time employment with elastic work models [4]. At the level of income distribution, Dong *et al.* based on independent survey data, found that gender income inequality in gig employment has been somewhat alleviated compared to traditional employment forms [5]. Nevertheless, Xie *et al.* approaching from the perspectives of labor informality and income volatility, argue that the gender wage gap may instead be exacerbated under this economic form [6]. These studies collectively reveal that the gig economy's influence on urban-rural income disparities is multifaceted and context-dependent.

3.1. Impact on urban-rural income disparities

From the perspective of impact mechanisms, the gig economy's role in urban-rural income disparities is mainly reflected in two aspects as follows:

(1) The income return rate on education levels is significantly reduced in the gig economy. The "composition effect" of years of education on wage disparities is notably weakened in gig employment, meaning that education level's explanatory power for income gaps declines [7];

(2) The gig economy weakens the urban-rural segmentation in the labor market to a certain extent. Since gig labor relies on digital platforms' task-matching mechanisms, rural workers can access more employment opportunities through online channels, thereby partially breaking through the entry barriers imposed by household registration in traditional employment systems.

Research reveals evident internal differences within the gig economy. Dong *et al.* believe that platform-based gig economy improves gender income disparities to some extent. In contrast, Xie *et al.* from the angles of income instability and informal employment, point out that the gig economy may instead widen gender wage gaps in certain situations [5,6]. These studies indicate that while the gig economy alleviates urban-rural income disparities to a certain degree, it does not completely eliminate structural inequalities. Complex stratification and differentiation persist within it.

Research also reveals evident internal differences within the gig economy. Dong's team, through a breakdown of platform-based gig remuneration, shows signs of convergence in gender income differences in recent years; on the same topic. However, Xie's framework presents the opposite result, when income volatility is amplified and employment relationships are detached from formal tracks, gender wage gaps may expand again in specific contexts [5,6]. These two conclusions appear contradictory but actually point to the same fact: while the gig economy narrows urban-rural income gaps, it does not dismantle deeply embedded structural inequalities; instead, it generates stratified orders in more covert ways.

Overall, the academic community has reached a certain consensus on this issue. Urban-rural income disparities are embedded within a rigid framework composed of three variables: household registration barriers, industrial mismatches, and educational endowments, which short-term policies struggle to disrupt. As an elastic employment form spawned by platform capital, the gig economy dissolves the hard screening of traditional positions based on diplomas, files, and connections, allowing farmers to directly connect with urban demand curves, thereby producing a one-time "leveling effect" on urban-rural income distribution. However, this effect faces continuous uncertain marginal returns. Future research can further focus on the sustainable appreciation of short-term income into human capital.

3.2. Impact on urban-rural employment opportunities

The gig economy plays a significant role in transforming the urban-rural employment landscape: it both creates substantial opportunities and introduces new challenges. On one hand, platforms lower entry barriers, whether urban graduates or rural migrant workers returning home, they can flexibly earn income through taking orders, ride-hailing, food delivery, or domestic services, arranging work according to their own time and skills, which helps alleviate structural and frictional unemployment [8]. On the other hand, the gig economy tends to polarize employment toward the extremes.

Digital technologies and platform mechanisms favor high-skilled, high-value-added work, where individuals gain greater bargaining power and higher income; meanwhile, a large number of low-skilled positions (such as delivery and simple domestic services) face fierce competition, low remuneration, poor stability, and are more susceptible to automation replacement. Given the existing skill gaps between urban and rural areas, this polarization may solidify or even widen disparities in employment quality [9].

Collectively, the so-called "flexibility" is both an advantage and a hidden concern, it grants workers freedom but may also bring income volatility, limited career development, and vulnerability to market shocks, which is particularly evident among rural groups reliant on single livelihoods.

3.3. Impact of the gig economy on regional development

As the digital economy and flexible employment converge, the gig economy has become a key force in driving regional growth and structural adjustments. The academic community generally believes that the gig economy not only broadens employment channels and boosts resident incomes but also mitigates regional development imbalances to a certain extent [10].

This development benefits from the deployment of digital infrastructure and supportive policy environments. Gao *et al.* used multidimensional indicators including supporting conditions, gig scale, and economic impacts to measure gig economy levels in 285 prefecture-level cities from 2013 to 2020, with results showing an overall upward trend, indicating that digitalization and industrial adjustments have indeed injected new momentum into local economies [10]. The gig economy absorbs laborers at various levels through flexible employment methods, especially mid- and low-skilled groups, thereby enhancing labor market efficiency and promoting more inclusive regional development.

In terms of spatial distribution characteristics, China's gig economy development levels exhibit significant positive spatial correlations. Calculations based on Moran's I index show that the gig economy demonstrates evident spatial agglomeration effects across regions, meaning high-level regions exert positive spillover effects on surrounding areas [10]. This phenomenon suggests that regions with advanced digital infrastructure and concentrated innovation resources can promote gig economy development in neighboring areas through knowledge diffusion and employment spillover effects. That said, regional differences remain prominent. Research indicates that eastern coastal regions (such as the Greater Bay Area and Yangtze River Delta) have significantly higher gig economy development levels than central and western regions, with inconsistent development paces between east and west, and regional disparity contribution rates averaging as high as 80.14%. This disparity reflects a "strong east, weak west" spatial pattern in China's gig economy development, closely tied to the regional distribution of digital resources, infrastructure, and policy support.

In terms of dynamic evolution, the gig economy shows an overall trend of leapfrogging from low to high levels. Markov chain analysis results indicate that the gig economy levels in most Chinese cities exhibit a steady

"upward from low to high" characteristic in the long term, suggesting that the development of digital platforms and improvements in policy environments are driving the gig economy toward a high-quality stage [10]. However, from the perspective of convergence, neither the national level nor most strategic regions show significant σ convergence. β convergence tests reveal that, except for the middle reaches of the Yangtze River and the Greater Bay Area, while the national and most regional gig economy development levels exhibit a long-term trend toward steady-state convergence, differences in development speeds lead to rising overall variation coefficients, particularly prominent in the Chengdu-Chongqing and Yangtze River Delta regions. This implies that the diffusion effects of the gig economy are more pronounced in economically developed areas, while catch-up effects in underdeveloped regions remain limited, with structural differentiation across regions persisting.

From a mechanistic perspective, the pathways through which the gig economy influences regional development mainly include following several:

(1) Hardware factors: The more advanced digital infrastructure and transportation networks, the smoother the connections between platforms and labor, and the stronger the economic linkages across regions;

(2) Human capital: Investments in technological innovation and education enhance workers' digital skills, providing a talent reserve for the gig economy [10];

(3) Institutions and public services: When social security is more comprehensive and employment rights protections are in place, the sustainability of the gig economy increases, enhancing its potential to diffuse to more regions.

Overall, the literature holds that the gig economy can drive regional growth, increase employment flexibility, and help narrow urban-rural income gaps, but its development is uneven. It has a "dual effect": on one hand, relying on flexible employment and digital connections to enhance inclusivity and vitality; on the other, spatial development imbalances and resource distribution differences may amplify regional gaps in the short term, creating new structural issues.

Therefore, future efforts should strengthen digital infrastructure construction, improve gig employment safeguards, optimize regional policy coordination, and leverage high-level cities' spillover and leading roles to promote joint development in central and western regions, thereby balancing regional coordination and common prosperity goals [10].

4. Brief review and future prospects

4.1. Brief review

Surveying the existing literature, research on the relationship between the gig economy and the urban-rural gap has preliminarily formed a multidimensional discussion framework. From a theoretical perspective, researchers primarily approach the issue from angles such as labor market segmentation theory, human capital theory, and regional development theory, exploring the mechanisms through which the gig economy operates within urban-rural disparities; from an empirical perspective, studies often rely on micro-level survey data or regional panel data, employing methods like regression analysis, spatial econometrics, and Oaxaca-Blinder decomposition to reveal the gig economy's roles in income, employment, welfare, and regional coordinated development; from a policy perspective, some outcomes have placed the gig economy within the contexts of common prosperity and social security system reforms, proposing practical pathways for improving institutional supply and safeguard systems. These studies undoubtedly enrich the interpretive dimensions of urban-rural gaps, positioning the gig

economy as a key entry point for understanding contemporary urban-rural relations.

However, existing research on the gig economy's impact on urban-rural gaps shows controversies. One side argues that the lowering of platform entry thresholds and the expansion of job accessibility compress urban-rural income differentials, while the other emphasizes that income volatility, social security gaps, and digital access disparities are pushing rural workers toward more vulnerable positions. This divergence suggests that the gig economy's distributive effects are not a monotonic curve but rather a phased and heterogeneous polyline. Furthermore, there is a bias in research subjects, with income disparities being the most discussed dimension, while comprehensive examinations of employment quality, social welfare, regional public services, and other aspects remain relatively insufficient.

In addition, methodological improvements are still needed; many studies remain at the level of correlation analysis, with limited identification of causal relationships, and the timeliness and coverage of data also struggle to fully match the rapid development of the gig economy. Overall, research on the gig economy's impact on urban-rural gaps is still in a "controversial exploratory stage," where existing findings provide important insights but have not yet formed unified conclusions, further highlighting the necessity for deeper investigations.

4.2. Future prospects

To address the shortcomings of existing research, future studies can advance in the following directions:

(1) Broaden research dimensions and conduct multidimensional gap analyses. Rather than focusing solely on income disparities, the gig economy's influence on urban-rural gaps also manifests in employment stability, social security coverage, training opportunities, and other areas. For instance, systematic measurements can be made of the actual coverage rates for gig workers in pension, medical, and work injury insurance, comparing urban-rural differences to reveal potential structural inequalities in the welfare system under new employment forms;

(2) Conduct robust regional comparative studies to focus on heterogeneous mechanisms. Developmental backgrounds vary greatly across regions, the gig economy performs differently in eastern coastal areas compared to central and western regions. Future research should compare differences in digital infrastructure, labor protections, and other aspects between the Yangtze River Delta, Greater Bay Area, and central-western regions to clarify how institutions and policies lead to varying impacts of the gig economy on urban-rural gaps;

(3) Strengthen policy orientation to translate research outcomes into practice. Connecting research with policy is crucial. For example, explore mechanisms like "portable social security tied to jobs" to ensure welfare for rural migrant workers in urban gig positions; pilot diversified social security schemes in cities jointly borne by platforms, governments, and workers to balance flexibility and security. Additionally, promote public service points such as "gig stations" that provide skills training, rights consultation, and risk safeguards, enhancing gig employment quality at the micro level.

Future research should retain the pluralistic perspectives inherent in controversies while pursuing more precise empirical identification and more feasible policy recommendations. Only through positive interactions between academic discourse and institutional practice can the gig economy truly become a genuine driver for narrowing urban-rural gaps and advancing common prosperity.

5. Conclusion

Most domestic and international literature acknowledges the positive roles of the gig economy in increasing flexible employment, broadening income sources, and optimizing labor allocation, while also warning of the risks it brings, primarily insufficient social security, income volatility, and the digital divide. Overall, the gig economy's impacts exhibit "duality" and "phased nature": in the short term, it can absorb surplus rural labor, expand non-agricultural income, and narrow income gaps to a certain extent; however, long-term effects depend on regional differences in development levels, platform penetration rates, and institutional safeguards. If these conditions are uneven, it may instead exacerbate structural inequalities.

Methodologically, existing research has employed panel data models, spatial econometrics, mediation effect models, and difference-in-differences (DID) methods. Among them, spatial econometrics emphasizes regional spillover effects, while mediation effects and DID aid in identifying mechanisms and causal relationships. However, issues such as limited sample scopes, insufficient causal identification, and imperfect multidimensional indicator systems persist overall. The next step should integrate micro-level individual data with macro-level spatial data to construct dynamic, multi-layered analytical frameworks, thereby better revealing the complex pathways through which the gig economy influences urban-rural gaps.

From a policy implications perspective, efforts can be made in three aspects:

(1) Improve digital infrastructure and information services to enhance digital access capabilities in rural areas;
(2) Strengthen social security mechanisms for flexible employment groups, exploring feasible pathways for insurance connectivity and rights protection;
(3) Enhance regional policy coordination, leveraging the spillover and leading roles of eastern digital economies to support the formation of more inclusive employment structures in central and western regions.

Only by simultaneously advancing institutional supply, technological upgrades, and regional coordination can the gig economy truly become a genuine driver for promoting urban-rural integration and achieving common prosperity.

Disclosure statement

The author declares no conflict of interest.

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