

Unravelling Urban Transformation: Integrating Economic, Social, and Spatial Perspectives on the Gig Economy

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Abstract

This paper examines the transformative impact of the gig economy on urban labour markets through a cross-disciplinary lens that integrates economic, social, and spatial perspectives. By analyzing the role of digital platforms in fostering flexible work arrangements, the study highlights how gig work expands employment opportunities for marginalized groups while simultaneously introducing challenges such as income volatility, limited social protections, and exacerbated spatial inequalities in urban centres. Central to this analysis is the proposed Integrated Urban Gig Economy Dynamics Model, which offers a comprehensive framework for understanding the interconnected dynamics that shape urban labour outcomes. The proposed model synthesizes insights from economics, sociology, and urban geography and provides a critical tool for evaluating regulatory frameworks and informing sustainable policy interventions. The findings underscore the importance of adaptive strategies—such as public-private partnerships, digital literacy initiatives, and smart urban planning—in balancing innovation with robust worker protections, thereby contributing to a more equitable and resilient urban labour market.

Keywords: Gig Economy, Urban Labour Markets, Spatial Inequality, Digital Platform Governance, Worker Protections

Introduction

Background

The rise of digital platforms has revolutionized the nature of work, giving birth to the gig economy—a system in which temporary, flexible jobs are commonplace and companies hire independent contractors instead of full-time employees. Urban areas, with their dense populations and advanced infrastructure, serve as hotspots for gig economy activities, ranging from ride-sharing and food delivery to freelance digital services.

The gig economy is not a new phenomenon; however, its accelerated growth has been catalysed by technological advancements and shifting workforce dynamics. The proliferation of mobile apps and online platforms has enabled seamless connections between service providers and consumers, driving its adoption in urban centres. Cities with diverse economies and digital infrastructure have become laboratories for gig work innovations, presenting a unique intersection of challenges and opportunities.

Importance of the Study

Understanding the gig economy's multifaceted impact is essential for policymakers, urban planners, and stakeholders in the labour market. While it offers unparalleled flexibility and new income opportunities, it also raises concerns about job security, income inequality, and urban spatial dynamics. These challenges call for a nuanced exploration of how gig work shapes urban socio-economic systems and influences long-term urban sustainability.

Research Objectives

1. Analyze the economic opportunities and challenges posed by the gig economy in urban labour markets.
2. Investigate the social implications of gig work, including worker well-being and inequality.
3. Examine spatial dynamics, such as the geographic distribution of gig work within cities.
4. Evaluate existing regulatory frameworks and their effectiveness in addressing gig economy challenges.
5. Propose sustainable strategies for integrating the gig economy into urban labour and planning policies.

Review of Literature

1. Economic Dimensions

The economic impact of the gig economy has been widely studied, with scholars exploring its effects on labour markets, productivity, and income distribution.

1.1 Impact on Labor Market Dynamics

- **Job Creation and Employment Trends:** The gig economy is often seen as a source of employment for individuals who struggle to find traditional, full-time work. According to studies (Kuhn & Maleki, 2017), gig work contributes to higher labour force participation, especially among marginalized groups such as women, students, and retirees.
- **Income Volatility and Inequality:** While gig work provides income opportunities, it often comes with the risk of income instability (Harris & Krueger, 2015). Many gig workers face fluctuating earnings due to the demand-driven nature of the work, leading to economic insecurity (Rosenblat, 2018).
- **Job Quality and Welfare Concerns:** The quality of gig jobs is a significant concern. Studies suggest that gig workers experience lower job satisfaction, lack of job benefits (health insurance, retirement savings), and limited career development opportunities (Berg, 2016). Furthermore, the gig economy often leads to the segmentation of the labour market, with workers in the gig sector receiving fewer protections than those in traditional sectors (De Stefano, 2016).

1.2 Labor Productivity and Economic Efficiency

- The gig economy is praised for its potential to improve economic efficiency by matching supply and demand in real-time through digital platforms. Research indicates that these platforms often reduce transaction costs and inefficiencies in traditional labour markets (Zengler & Kolb, 2019). However, the overall effect on productivity remains mixed, with concerns over the lack of investment in skills development (Brynjolfsson & McAfee, 2014).

1.3 Technological Disruption and Automation

- The gig economy is intrinsically tied to technological advances, particularly automation and artificial intelligence (AI), which can further disrupt traditional jobs. While AI can increase efficiency, it can also lead to job displacement in sectors such as transportation and hospitality (Frey & Osborne, 2017). On the other hand, it can create new opportunities in digital and tech-based services.

The gig economy has introduced new economic models, enabling individuals to earn income through flexible arrangements. It has expanded income opportunities for marginalized groups, including immigrants, women, and those without formal education. Platforms like Uber, TaskRabbit, and Fiverr allow workers to monetize their skills and assets, promoting entrepreneurship.

However, these benefits are tempered by significant challenges. Gig workers often face income volatility, limited career progression, and an absence of traditional employment benefits such as health insurance, paid leave, and retirement plans. The lack of financial stability undermines the potential for long-term economic security.

2. Social Dynamics

The gig economy has significant implications for social structures, relations, and individual well-being in urban contexts.

2.1 Work-Life Balance and Social Mobility

- Gig work offers flexibility, allowing workers to balance personal commitments and pursue multiple income streams. However, this flexibility often comes at the cost of job security and benefits (Kalleberg, 2018). For instance, while gig work may empower some workers to improve their financial position, others face precarious working conditions that hinder social mobility (Scholz, 2017).
- Studies by Turkle (2015) highlight that gig workers often struggle to separate their work and personal lives due to the constant availability demanded by gig platforms.

2.2 Gender and Demographic Implications

- Gender dynamics in the gig economy are crucial in understanding how the sector impacts different demographic groups. Research shows that women often turn to gig work for its flexibility, especially in urban areas with limited access to traditional, flexible jobs (Woodcock, 2017). However, gendered wage gaps and access to high-paying gigs are prevalent (Shaw & Ainsworth, 2019).
- The gig economy also impacts different age groups. For example, younger generations may be attracted to the gig economy's tech-savvy nature, while older workers may use it as a supplementary income source.

2.3 Social Networks and Worker Solidarity

- The gig economy's disaggregated nature undermines traditional forms of worker solidarity. Studies such as those by McDonald et al. (2019) suggest that gig workers, often working in isolation, lack the collective bargaining power found in traditional labour unions. This has implications for how gig workers can negotiate wages, working conditions, and access to benefits.

Gig workers often operate in precarious conditions characterized by job insecurity and a lack of social protections. Sociological studies highlight a power imbalance between platforms and workers, where algorithms dictate wages and work availability, limiting worker agency. Social stratification is evident, with women and minorities frequently engaging in lower-paying, physically demanding roles.

The social impact extends beyond workers to urban communities. Increased reliance on gig work can exacerbate inequality, as platform economies thrive in affluent areas while neglecting marginalized neighbourhoods. The lack of community engagement by platforms raises concerns about social cohesion and collective welfare.

3. Spatial Patterns

Urban environments play a key role in shaping the structure and spread of the gig economy. Several studies

explore the spatial patterns and geographic concentration of gig work.

3.1 Urbanization and the Concentration of Gig Work

- Gig work tends to be concentrated in urban centres due to the demand for flexible, on-demand services. Cities such as New York, London, and San Francisco have become hubs for gig work, with platforms like Uber and Deliveroo capitalizing on dense urban populations (Srnicek, 2017).
- Urban areas with high population densities create more opportunities for gig workers, particularly in transportation and food delivery services (Zwick, 2019). In such environments, workers have higher earnings potential due to constant demand and competition.

3.2 Mobility and Spatial Inequality

- Gig work also introduces new patterns of mobility in cities. Gig workers are often mobile, moving from one location to another based on demand, which can have both positive and negative impacts on urban areas (Foster et al., 2019).
- On the other hand, the spatial concentration of gig work in certain urban districts can exacerbate spatial inequalities. For instance, marginalized communities may not have access to gig work due to infrastructure limitations or lower demand in their neighbourhoods (Harrison et al., 2020).

3.3 Impact on Urban Infrastructure and Housing

- The gig economy can have a direct impact on urban housing markets. For example, platforms like Airbnb have changed the dynamics of the short-term rental market, driving up rents and contributing to gentrification in certain urban districts (Gurran & Phibbs, 2017). This raises concerns about housing affordability for long-term residents in cities with high gig activity.

Urban areas exhibit distinct spatial patterns of gig work. Economic hubs and affluent neighbourhoods often experience a high concentration of gig activities due to better infrastructure and consumer demand. Conversely, peripheral urban areas and economically disadvantaged neighbourhoods face limited access to gig work, reinforcing existing spatial inequities.

The spatial distribution of gig work also influences urban mobility patterns. Ride-sharing services contribute to traffic congestion in city centres, while food delivery platforms optimize routes in affluent districts, neglecting underserved areas. These dynamics reveal a need for spatially equitable distribution of gig opportunities.

4. Regulatory Landscape

The regulatory environment surrounding the gig economy is a critical aspect influencing its development and impacts on urban labour markets.

4.1 Legal Recognition and Worker Classification

- One of the most contentious issues in the gig economy is the classification of workers as independent contractors rather than employees. Scholars such as De Stefano (2016) and Cherry (2016) argue that this distinction often deprives gig workers of the rights and protections afforded to full-time employees, including minimum wage laws, healthcare, and unemployment benefits.
- Legal battles over worker classification have intensified, with some countries and cities attempting to introduce legislation that would guarantee gig workers a minimum wage and access to benefits (Tuckett, 2020). The California "AB5" law and similar legislation in Europe aim to address these issues, but the regulatory landscape remains fluid and contentious.

4.2 Taxation and Social Protection

- The gig economy raises significant challenges for tax systems. As workers operate outside traditional

employment contracts, they may not pay the same taxes as full-time employees (Baker, 2019). Some cities have explored taxing gig platforms directly to fund social protection for workers, but such policies are still in the experimental stage.

- Many gig workers also lack access to social protection, including healthcare, pensions, and paid leave, due to the independent contractor model. Scholars suggest that regulatory frameworks must evolve to provide portable benefits and greater security for workers in the gig economy (Berg, 2016).

4.3 Platform Governance and Fairness

- The role of platform companies in regulating gig work has also received attention. These platforms often operate as intermediaries, establishing their own rules for gig work, which can be opaque and exploitative (Rosenblat & Stark, 2016). The question of how to ensure fairness and transparency in platform governance is an ongoing area of study, with calls for better oversight and regulation to protect workers' rights.

Policies governing the gig economy vary widely across jurisdictions. Progressive measures in some regions, such as California's Assembly Bill 5, seek to reclassify gig workers as employees to ensure minimum wage and benefits. However, such reforms often face resistance from platforms and raise concerns about stifling innovation.

In contrast, many countries maintain a laissez-faire approach, allowing platforms to operate with minimal regulation. This lack of oversight often results in exploitative practices and leaves gig workers vulnerable. Effective regulation requires balancing worker protection with fostering an innovative gig economy.

Final Insights

The gig economy represents a transformative shift in urban labor markets, impacting economic, social, spatial, and regulatory landscapes. While it provides new opportunities for income generation and workforce participation, it also raises significant concerns about labor market precarity, income inequality, and worker protections. The concentration of gig work in urban centres contributes to spatial patterns of inequality, while the regulatory environment remains a central area of debate. A cross-disciplinary approach is essential for understanding and addressing the complexities of the gig economy, ensuring that its benefits are maximized while mitigating its negative effects.

Research Gap

Existing literature often addresses the gig economy from a single-disciplinary perspective, focusing either on economic impacts or social issues. Most studies lack an integrated analysis that captures the interconnected nature of economic, social, and spatial factors. This study bridges these gaps by adopting a cross-disciplinary approach, drawing insights from economics, sociology, and urban geography, to offer a comprehensive understanding of the gig economy's impact on urban labour markets.

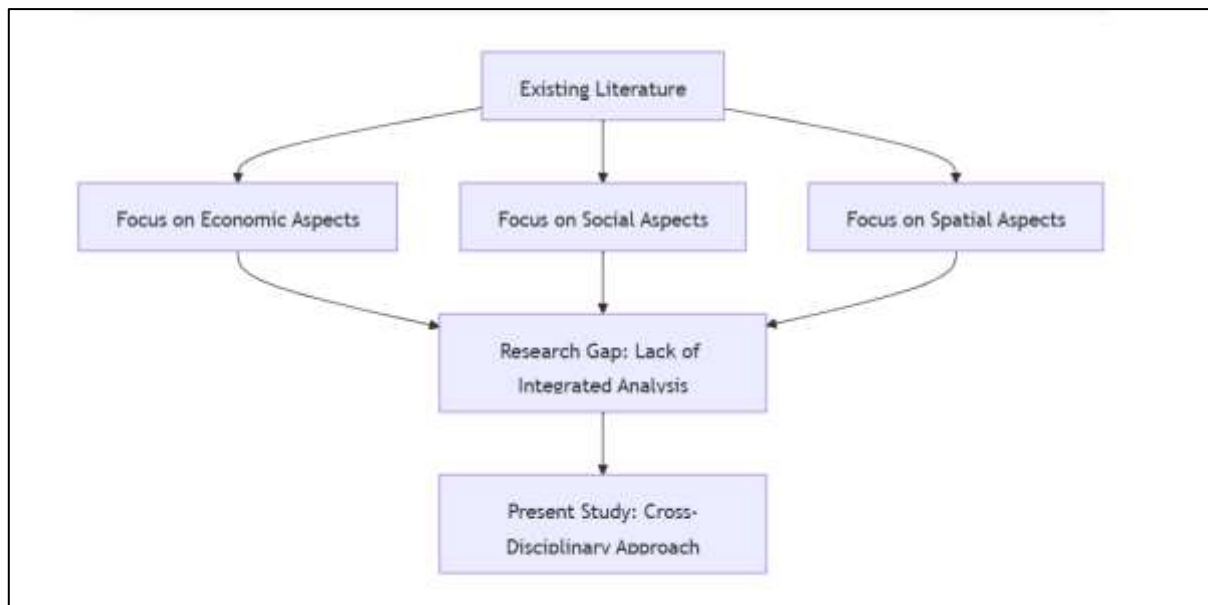


Fig 1: Research Gap
Source: Author's compilation

Results and Discussion

Objective 1: Economic Opportunities and Challenges

Results:

- The gig economy contributes to urban employment, particularly for individuals excluded from traditional labour markets.
- Income volatility and lack of social benefits remain critical challenges.

Discussion:

The gig economy is a double-edged sword for urban labour markets. On one side, it fosters job creation and provides income-generating opportunities for underemployed or unemployed individuals. Urban centres, with their diverse consumer base and robust infrastructure, allow platforms to flourish, supporting a dynamic, on-demand labour force. However, the lack of financial stability and traditional benefits, such as pensions or healthcare, creates systemic vulnerabilities for gig workers. Addressing these challenges demands an evaluation of potential mechanisms, like portable benefits, which could be funded through platform-user contributions or government subsidies. Economic resilience in this model is essential for long-term sustainability.

Objective 2: Social Implications

Results:

- Gig workers report high stress levels due to job insecurity.
- Inequalities persist, with women and minorities often earning less.

Discussion:

Socially, the gig economy exacerbates existing inequalities. While platforms claim to democratize work opportunities, marginalized groups often engage in low-paying, precarious roles with limited upward mobility. Algorithmic management by platforms introduces another layer of disparity, as ratings and task availability heavily influence worker success. Empirical research indicates that a lack of institutional support heightens worker vulnerability. Policies advocating for unionized gig platforms, transparent algorithmic practices, and equitable task distribution could address social inequities. Empowering gig

workers via accessible grievance mechanisms and community-led cooperatives also serves as a critical avenue for reform.

Objective 3: Spatial Dynamics

Results:

- Gig activities are concentrated in urban centres and affluent areas.
- Peripheries face limited access to gig opportunities.

Discussion:

The spatial distribution of gig economy activities is uneven, reflecting broader urban inequalities. Central business districts and affluent neighbourhoods benefit disproportionately due to higher consumer demand and better connectivity. In contrast, urban peripheries, often home to economically disadvantaged populations, face limited gig work opportunities. This spatial imbalance underscores the need for equitable infrastructural investment. Policymakers can incentivize platforms to extend services to underserved regions, leveraging tax breaks or grants. Urban planners should integrate gig economy nodes, like delivery hubs, into public transport systems to enhance spatial inclusivity and reduce service gaps.

Objective 4: Regulatory Frameworks

Results:

- Regulatory approaches range from worker classification reforms to tax incentives for gig platforms.
- Enforcement gaps limit effectiveness in many jurisdictions.

Discussion:

Regulatory frameworks governing the gig economy vary from proactive legislation, as seen in some U.S. states, to unregulated environments in developing economies. Worker classification remains a contentious issue, with platforms lobbying for independent contractor status to avoid labour law obligations. Comprehensive frameworks must strike a balance between innovation and worker protection. Governments can implement tiered regulatory models, allowing platforms to comply with labour standards incrementally. Enhanced cross-border collaboration is also necessary to standardize policies, addressing the globalized nature of platforms while respecting local labour norms.

Objective 5: Sustainable Strategies

Results:

- Public-private partnerships enhance gig worker protections.
- Urban planning integrates gig infrastructure into smart city initiatives.

Discussion:

Sustainability in the gig economy is not solely environmental but also socio-economic. Public-private partnerships play a pivotal role in fostering sustainable practices. For example, governments can partner with platforms to create worker training programs or establish micro-finance schemes that aid in upskilling and asset acquisition for gig workers. Urban sustainability can also benefit from integrating gig platforms into smart city frameworks, enabling data-sharing for optimized logistics and reducing urban congestion. A participatory policy model, where stakeholders—including gig workers—actively contribute to decision-making processes, ensures that strategies are inclusive and effective.

Integrated Urban Gig Economy Dynamics Model.

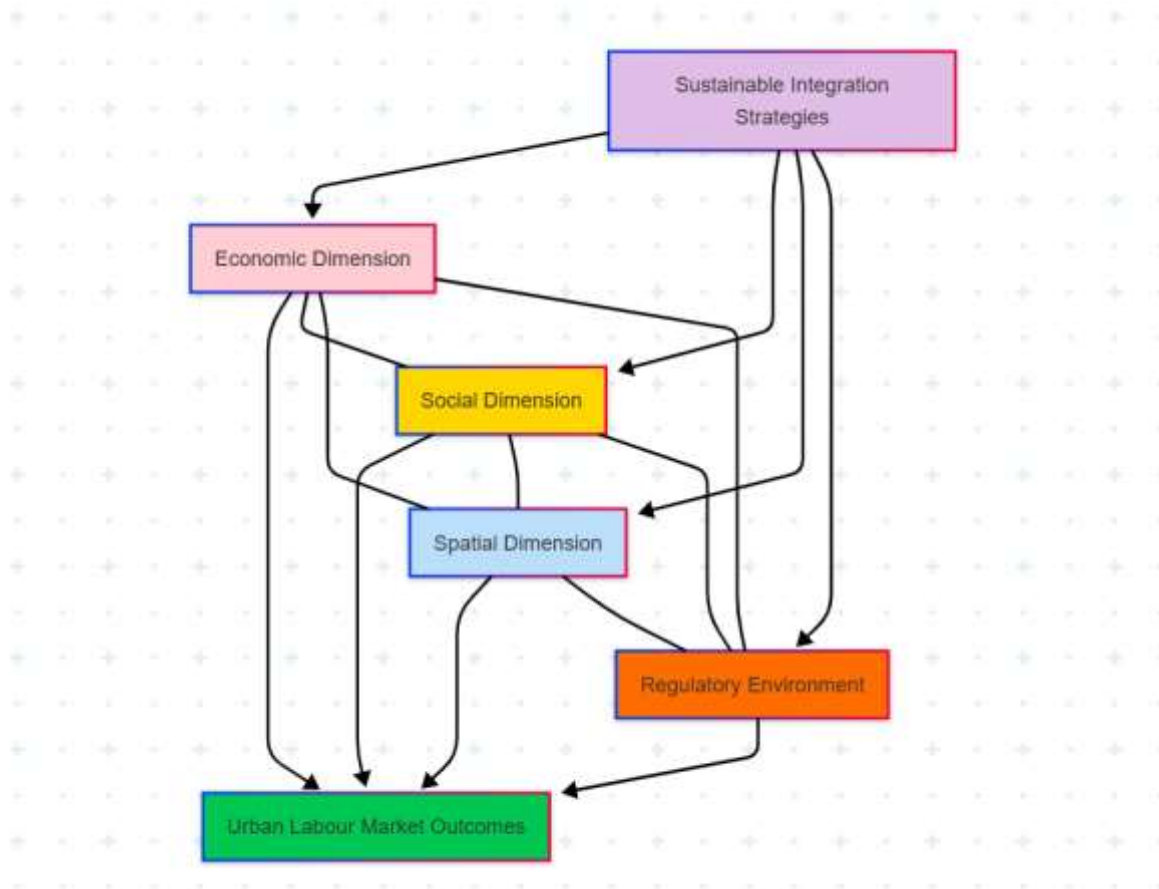


Fig 2: Integrated Urban Gig Economy Dynamics Model.

Source: Author's compilation

Interactions and Relationships

Economic–Social Link: Economic flexibility (e.g., on-demand work) creates income opportunities but may increase social vulnerability if income volatility is high and worker benefits are lacking. These dynamics affect overall worker well-being and social equity.

Economic–Spatial Link: The concentration of gig activities in urban centres tends to generate higher employment opportunities in these areas but can also lead to spatial inequalities—marginalized urban peripheries may face limited gig work access, exacerbating existing disparities.

Regulatory Influence: A robust regulatory framework can moderate the negative impacts of gig work by enforcing labour standards, ensuring fair classification of workers, and fostering transparency in platform practices. This framework is crucial to balance the innovative potential of the gig economy with necessary social protections.

Sustainable Strategies as Moderators: Public-private partnerships, digital literacy programs, and smart city initiatives can enhance the positive impacts across economic, social, and spatial dimensions. These strategies work as moderating factors that mitigate adverse outcomes (like income instability or spatial inequity) and promote inclusive growth.

Proposed Interconnections and Pathways in the Gig Economy

Economic Opportunities vs. Income Instability: Greater access to flexible gig work increases employment participation but may also lead to higher income volatility without adequate worker protections.

Spatial Concentration and Inequality: Urban centres with dense gig activity benefit from increased opportunities, while peripheral areas suffer, leading to spatial and socio-economic disparities.

Regulatory Framework as a Moderator: Effective regulation (worker classification, taxation, and transparent platform practices) can reduce job precarity and enhance social protections, thereby moderating the adverse impacts on both economic and social dimensions.

Sustainable Strategies Enhancing Equity: Integration of digital literacy programs, public-private partnerships, and smart urban planning can bridge the gap between high-demand urban areas and underserved regions, promoting equitable growth.

Policy Implications and Suggestions

Policy Implications

1. **Universal Social Protections:** Governments must establish a baseline of social protections for gig workers, including health insurance, retirement plans, and sick leave. These protections should be portable and funded through a combination of platform-user fees and government subsidies.
2. **Equitable Zoning Policies:** Urban zoning regulations should ensure gig services are accessible to underserved areas. Governments can use financial incentives or mandates to encourage platforms to extend services to marginalized regions.
3. **Digital Literacy Programs:** To empower marginalized workers, investments in digital literacy programs are essential. Such initiatives can enhance worker skills, increase access to higher-paying gig opportunities, and bridge the digital divide.
4. **Platform Accountability:** Transparent algorithms and compensation structures are critical to ensure fair treatment of gig workers. Governments should mandate disclosures on algorithmic practices and establish grievance mechanisms to address worker concerns.
5. **Adaptive Policy Research:** Ongoing research into gig economy trends is necessary to inform adaptive policies. Governments and academic institutions should collaborate to gather data on worker demographics, income patterns, and spatial dynamics.

Suggestions

1. **Public-Private Partnerships:** Collaborations between governments and platforms can create worker training programs and financial assistance schemes. For instance, micro-loans could help workers acquire tools or vehicles essential for their jobs.
2. **Tax Incentives for Equity:** Offer tax incentives to platforms that demonstrate equitable practices, such as prioritizing underserved areas or ensuring fair pay.
3. **Smart City Integration:** Urban planners should integrate gig platforms into smart city frameworks, leveraging real-time data to optimize logistics, reduce congestion, and enhance service delivery in underserved areas.
4. **Worker Representation:** Establish formal mechanisms for gig worker representation in policy discussions, ensuring their voices influence decisions that affect their livelihoods.

5. **Universal Data Standards:** Develop international standards for platform data collection and sharing to facilitate cross-border regulation and ensure transparency in worker treatment and consumer protection.

Conclusion

The gig economy presents a paradox of opportunity and challenge within urban labour markets. While it offers flexible work and economic innovation, it exacerbates inequalities and spatial imbalances. A cross-disciplinary approach is vital for understanding and addressing these complexities. Policymakers and urban planners must adopt inclusive, adaptive strategies to harness the gig economy's potential while mitigating its drawbacks, ensuring a balanced and equitable urban future. The theoretical model proposed in the study provides an integrated framework to analyze the complex interplay between economic, social, spatial, and regulatory dimensions in the urban gig economy. It underlines the importance of a multi-disciplinary approach and the role of sustainable strategies in mitigating disparities and enhancing the positive potential of gig work. Such a model can guide future empirical research and inform policy-making aimed at achieving a balanced and inclusive urban labour market.

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