

Production or Extraction: The Dual Logic of Platform Economy in Reshaping Urban Space

-- Evidence from Chengdu

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Abstract. The development of the platform economy has profoundly influenced urban spatial production and governance in contemporary society. Whether this impact constitutes creative production or exploitative extraction is a crucial issue for understanding urban transformation in the digital age. Taking Chengdu as a case study, this paper explores how the platform economy enters urban space by building on Lefebvre's theory of spatial production and critical analyses of capital accumulation. The research finds that, on one hand, platform companies promote functional reorganization and efficiency improvements in urban space through constructing data infrastructure, fostering shared office spaces, creating new consumption scenarios, and expanding community-based group-buying networks. This process gives rise to innovative business models and employment patterns, demonstrating positive contributions to spatial production. On the other hand, platform capital employs algorithmic dispatching, traffic monopolization, and rent transfer mechanisms to place delivery riders, merchants, and consumers within an unequal value distribution system. This leads to fragmented labor spaces, privatization of public spaces, and concentration of urban resources among a few dominant platforms—revealing clear characteristics of spatial extraction. Through field visits and in-depth interviews in typical commercial districts, community group-buying sites, and delivery workers' workplaces in Chengdu, the study reveals that while the platform economy fosters spatial production, it simultaneously exploits the value of urban space through concealed capitalist logics. These two processes are not entirely opposed but rather interact dynamically and continuously. Furthermore, the paper argues that local governments' regulatory capacity, platform companies' sense of social responsibility, and grassroots communities' self-organizing capabilities are key factors determining whether spatial production or spatial extraction prevails. Finally, the article recommends establishing a multi-stakeholder co-governance mechanism from the perspective of spatial justice to regulate platform capital, protect workers' rights, preserve the public nature of urban space, and provide insights for managing the platform economy in megacities.

Keywords: Platform economy, Spatial production, Spatial extraction, Urban spatial governance, Chengdu.

1. Introduction

Platform economy is transforming the spatial layout and social relations of contemporary Chinese cities at an astonishing pace. As Meituan delivery riders weave through city streets and alleys, as community group-buying stations appear in front of residential buildings, and as algorithmic dispatch systems match every order with a delivery worker, one question naturally arises: Is platform economy creating new urban spaces, or exploiting existing urban resources? This seemingly simple question touches upon the fundamental contradictions of urban transformation in the digital age. On one hand, platform companies have indeed promoted the reconfiguration of urban spatial functions and improved efficiency by building digital infrastructure, restructuring commercial networks, and creating new employment opportunities. On the other hand, under the logic of capital, practices such as algorithmic control, traffic monopolization, and rent extraction have increasingly revealed the platforms' exploitation of laborers, merchants, and even public urban space. Chengdu, as the most representative megacity in western China, has seen its platform economy grow at an average annual rate of 35% between 2019 and 2023, with online retail sales rising from 420 billion yuan in 2019 to 890 billion yuan in 2023, and over 150,000 registered delivery riders on platforms—clear evidence

of the coexistence of spatial production and spatial extraction. This paper applies Lefebvre's theory of spatial production and a critical perspective on capital accumulation for the first time to the case of Chengdu. Based on field observations of typical commercial districts, community group-buying sites, and delivery workers' working spaces, it explores how platform economy intervenes in urban space, offering fresh insights into the political economy of urban space in the era of digital capitalism.

2. Literature Review and Theoretical Framework

2.1 The Shift of Lefebvre's Theory of Spatial Production toward Platform Economy

Lefebvre's theory of spatial production is one of the key perspectives for understanding contemporary urban spatial transformations, and the development of the platform economy has endowed this classic theory with new significance. Under the influence of internet technology, the mode of spatial production has evolved from physical space toward an interwoven reality of virtual and actual spaces. Traditional theories of spatial production posit a mutually dependent and causally interrelated relationship among material, mental, and social spaces; however, within the platform economy, these three dimensions are redefined and reshaped. Platform companies are no longer merely users of space but have become creators of spatial meaning and organizers of spatial relations, profoundly impacting both the ways in which urban space is produced and the power dynamics at play.

Under the context of platform economy, spatial production exhibits distinct characteristics of symbolism and virtuality. Yao Xi and Yao Jun (2024) argue that digital communication reshapes the formation of social identity through symbolic interaction, a process also evident in urban space production. Platforms employ algorithmic recommendations, user reviews, and visual displays to transform urban spaces into consumable symbolic systems, creating a triad of "space-symbol-consumption." Zou et al. (2025) found that self-presentation on social media enhances consumers' experiential consumption tendencies, particularly prominent in how platform economies shape urban spaces. Food platforms turn restaurants into "must-visit destinations," while short-video platforms convert neighborhoods into "internet-famous landmarks"—effectively transforming physical spaces into digital symbols, which in turn feed back into and revitalize the physical environment.

More importantly, the platform economy has given rise to a new type of space where the virtual and physical are indistinguishable. Tifani Susilo et al. (2024) found in their study on consumer self-narratives in digital leisure that blurred boundaries are a key feature of contemporary consumption spaces. In the process of urban space production dominated by the platform economy, the distinctions between online and offline, virtual and real, are gradually dissolving, forming what is known as a "digital twin space." Consumers engage in various digital activities—such as searching for store information online, joining forums, and constructing personal identities—which in turn influence their choices of physical spaces and consumption behaviors, thereby reshaping the spatial distribution of urban commercial areas. This integrated mode of space production not only expands the traditional scope of space but also makes spatial power relations more concealed and complex.

Platform economy also reshapes the relationships among spatial production actors through value co-creation. Wang Shuangying and Wu Yiwen (2026) point out that consumers' co-creative behaviors in virtual brand communities positively influence brand loyalty, offering insights into understanding spatial production under the platform economy. In traditional spatial production processes, power relations among capital, government, and residents are relatively clear; however, the platform economy introduces a new dimension of "user co-creation," where consumers participate in shaping spatial meanings through commenting, sharing, and forwarding, forming a tripartite co-creation relationship among platforms, merchants, and users. Yet, this seemingly fair and equitable model actually conceals the platform's control over the allocation of spatial resources, resulting in a new form of spatial inequality. Xie Shengcheng et al. (2024) found that emotional advertising appeals and social exclusion significantly affect consumer purchasing intentions, indicating that emotional manipulation plays a role in consumer behavior. This dynamic also applies to how platforms guide

and shape urban space consumption—by employing emotionalized spatial narratives, platforms immerse consumers within their designed logic of spatial production, thereby achieving deep penetration and transformation of urban spaces.

2.2 Review of Research on Spatial Reconstruction in Platform Economy

Platform economy represents a new form of economic activity in the digital era, and its impact on urban space has drawn significant scholarly attention. Current research primarily focuses on the relationship between virtual and physical spaces, spatial practices of brand communities, and the spatialization of consumer behavior—each of which is crucial for understanding how platform economy transforms urban space.

Cheng Guo and others' research on virtual communities and spatial identity reveals the relationship among customer engagement, moral identity, and brand loyalty within virtual communities, thereby helping to understand how platform economies leverage virtual spaces to influence physical space activities. Lihong Deng and colleagues further examined the role of member interactions in virtual brand communities on brand loyalty, arguing that communication in virtual spaces can translate into consumption behaviors in the physical world—a process that essentially represents a redistribution of urban commercial space by platform economies. Additionally, Rambalak Yadav and others analyzed from an opposing perspective the causes and consequences of consumers' negative participation, uncovering potential spatial exclusion and resistance during the production of platform spaces, which is significant for understanding the dual nature of spatial reconfiguration under platform economies.

Domestic scholars have also conducted extensive research on the transformation process from community identity to spatial practice. Yu Lan and others, through their study of sports brand communities, found that community experience influences brand loyalty via a chain mediation effect involving community identity and brand identity, indicating that platforms can activate and reshape certain urban spaces (such as sports consumption spaces) by leveraging virtual communities. Tang Liansheng and colleagues further confirmed the process from community identity to brand loyalty within virtual brand communities, highlighting the importance of mediating and moderating effects. Yu Lin and others approached the issue from the perspective of community atmosphere, analyzing the mechanism by which community atmosphere affects member loyalty in virtual brand communities, demonstrating how platforms attract customers by cultivating specific atmospheres.

The concept of brand ethnicity proposed by Wang Xingang and others offers significant reference value in understanding the connection between cultural identity and spatial production. They introduced a multi-layered notion of brand ethnicity and demonstrated its influence on political consumption behavior, providing a new perspective on how platform economies utilize cultural symbols to reshape urban spaces. Meanwhile, Yu Tingting and others developed a model of value co-creation in brand communities that considers individual psychological factors, tracing the process from participation to attachment, effectively reflecting the tension between user agency and platform logic during the spatial production of platforms.

Overall, existing literature has made certain contributions to the study of spatial restructuring in the platform economy, but also presents some limitations. First, most research focuses primarily on virtual space itself, with relatively little attention paid to the interactions between virtual and physical spaces. Second, there is insufficient reflection on the duality of platform-driven spatial restructuring, particularly regarding the coexistence of spatial production and spatial extraction. Therefore, taking Chengdu as a case, this paper builds upon previous research to propose a dual logic of spatial restructuring in the platform economy: one that explores how platforms generate new spatial value, and another that critically examines the issues of spatial injustice and resource deprivation brought about by platforms.

2.3 Constructing an Analytical Framework for the Dual Logic of Production and Extraction

Based on the above literature review, this paper proposes a dual "production-extraction" analytical framework to explain how the platform economy transforms urban space. Unlike previous theories of spatial production, this framework integrates Lefebvre's theory of spatial production with Harvey's theory of capital accumulation, arguing that while platform economies can stimulate urban spatial vitality and generate new forms of economic activity, they also involve spatial value extraction through data monopolies, algorithmic control, and labor exploitation. This dynamic is particularly evident in Chengdu, a new first-tier city, where platform companies not only foster emerging spaces such as smart business districts and digital neighborhoods but also employ mechanisms like "digital fencing" and "algorithmic dispatching" to finely manage workers and consumers, thereby creating new spatial power relations.

From the perspective of spatial production, platform economies empower traditional spaces through digital technologies, giving rise to new spatial practices such as food delivery networks, shared mobility systems, and instant retail scenarios. These practices have transformed urban consumption geography and service ranges while enhancing spatial utilization. However, this form of production is not merely social welfare; it operates under the logic of capital accumulation. In terms of spatial extraction, platform companies exploit algorithmic black boxes and data monopolies to treat workers' time, bodies, and even emotions as sources of value. Just as Rodriguez (2023) noted in her study on brand relationships, where emotional intimacy is commercially exploited, platforms similarly leverage "emotional labor" to strengthen control over workers. Luo Ziwei et al. (2024), in their research on brand loyalty and consumer attitude polarization, also demonstrate that platforms cultivate user attachment and dependency to gain control over consumer behavior—an implicit form of spatial power extraction.

The dual-logic framework proposed in this study comprises three levels: at the macro level, it examines the impact of platform economy on urban spatial structures; at the micro level, it focuses on spatial practices within specific areas (such as the Chunxi Road business district and high-tech industrial parks); and at the individual level, it explores the activity spaces and power relations among riders, merchants, and consumers. This framework posits that production and exploitation are not mutually exclusive but coexist and interact within the same spatial practices. Research by Rodrigues et al. (2023) on the mediating role of brand addiction reveals that people are driven to purchase goods due to complex psychological and economic factors—a finding consistent with how platform economies use algorithms to encourage overconsumption—highlighting exploitation as a covert and systemic practice. Thus, this framework not only helps understand the spatial impacts of Chengdu's platform economy but also facilitates reflection on issues of urban justice in the era of digital capitalism.

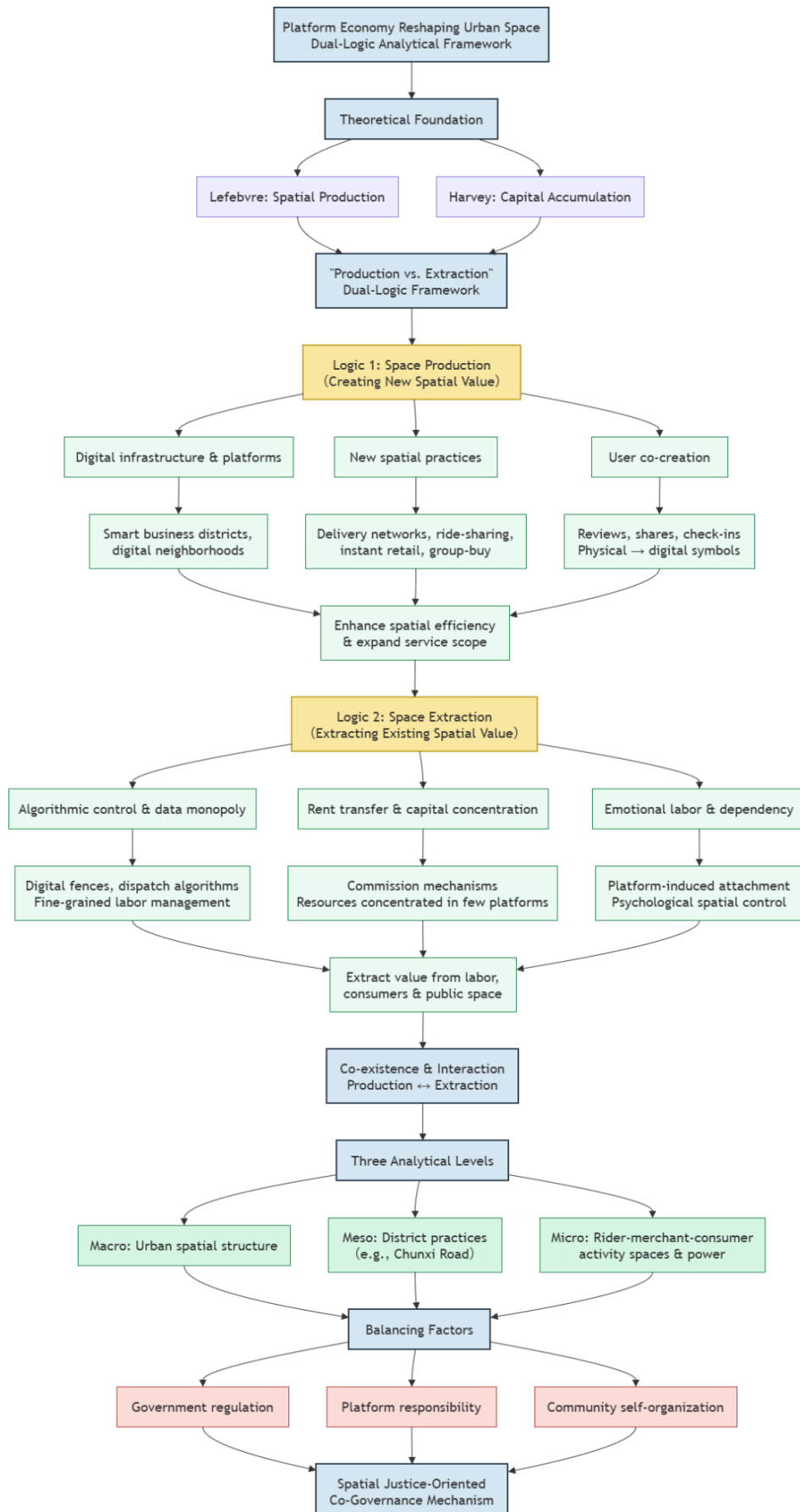


Figure 1. Framework for Analyzing the Dual Logic of Production and Extraction

3. Spatial Production Practices of Platform Economy in Chengdu

3.1 Micro-Fulfillment Center Network: The Production Mechanism of a New Logistics Space

The most representative form of production activity in Chengdu's urban space within the platform economy is the development of micro-fulfillment centers, primarily driven by fresh food e-commerce and instant retail. This represents a new type of logistics space—distinct from the centralized supply chains of traditional supermarkets and unlike the scattered distribution of conventional convenience stores. Instead, it leverages information technology and algorithms to embed a novel spatial organization model into the fabric of the city. Since 2019, when platforms such as Hema Fresh, Daily Fresh, and Meituan Grocery began establishing micro-fulfillment centers in Chengdu, the number of such facilities across the city had surpassed 450 by 2023, covering over 80% of communities in the urban core and forming a dense network with delivery radii ranging from 500 meters to 1.5 kilometers. These centers are typically located in low-rent industrial buildings, vacant warehouses, or shops in older residential neighborhoods at the urban-rural fringe. Empowered by digital platforms, these previously overlooked "surplus spaces" have been reactivated and integrated into the commodity circulation system.

The spatial production of micro-fulfillment centers can be analyzed along three dimensions: First, functional repositioning—traditional storage spaces have been transformed into "miniature logistics hubs" integrating sorting, packaging, cold-chain storage, and immediate delivery, evolving from simple storage functions into multifunctional nodes. Second, algorithmic weaving of spatial networks—platforms use big data to analyze consumer behavior and forecast regional demand shifts, dynamically adjusting the density of center locations and inventory allocation so that material distribution across the city aligns with data-driven efficiency logic. Third, spillover effects on spatial value—the emergence of these centers has boosted short-term employment opportunities nearby, accelerated last-mile delivery speeds, and improved residents' shopping convenience, thereby reshaping community commercial ecosystems to some extent.

However, beneath this seemingly efficient and convenient spatial production lies a deeper issue: platform capital selectively appropriates urban spatial resources and extracts value from them.

3.2 Instant Delivery Sites: The Layout Logic of Micro-Spatial Nodes

Instant delivery stations represent the densest physical nodes of platform economies within urban space, reflecting algorithmic capital's meticulous reshaping of micro-spaces. By 2023, platforms such as Meituan and Ele.me had established over 1,200 rider stations in Chengdu. In major commercial districts like Chunxi Road and Jianshe Road, there are 3 to 4 stations per square kilometer. Leveraging big data to analyze order density, delivery times, and rider capacity, platforms strategically place stations within the city's "capillaries"—underutilized spaces such as elevated floors in old residential buildings, warehouses behind street-level shops, or vacant houses slated for demolition in urban villages. These are marginal, leftover urban spaces that have been reappropriated by algorithms. However, this spatial production is not created independently by the platforms; rather, it involves a parasitic occupation of pre-existing low-cost spaces. Station placement prioritizes "low cost and high accessibility," with platforms avoiding long-term investments through short-term leases, shifting rental costs onto franchisees or rider teams while focusing solely on algorithmic dispatching. Thus, the "light asset" model enables rapid network expansion but also results in highly transient station environments—basic rest areas, charging points, and storage racks constitute all facilities, and riders merely stop briefly before resuming work. The distribution of these "micro-stations" has a dual character: on one hand, they activate underused urban spaces; on the other, they intensify labor exploitation by transforming workers' bodies into nodes of capital accumulation, where production and extraction occur simultaneously within the same physical space.

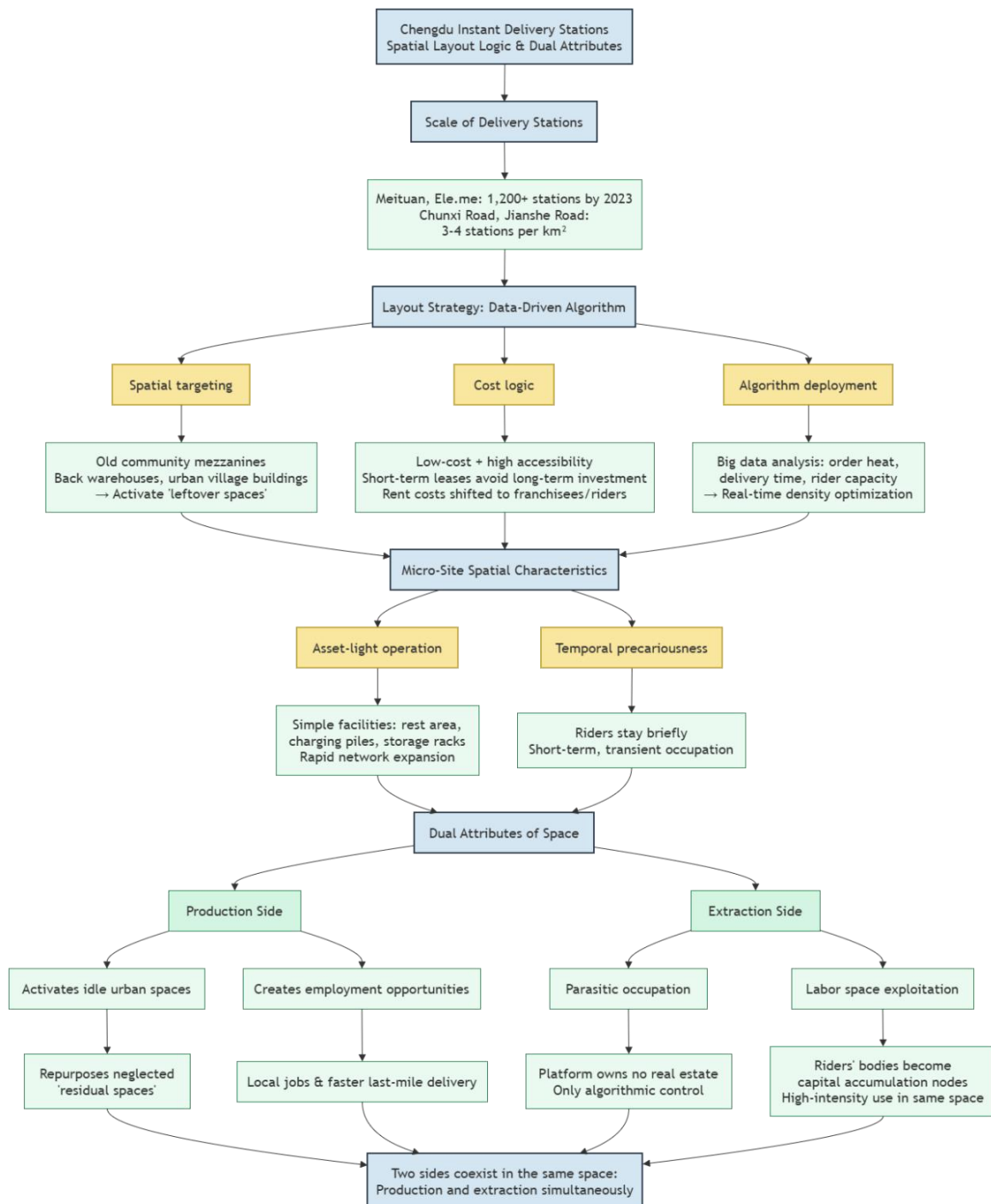


Figure 2. Spatial Layout Logic and Dual Attributes of Chengdu's Instant Delivery Stations

3.3 Digitalizing Commercial Spaces: Reconfiguring and Reimagining Consumption Scenarios

The most evident impact of the platform economy on Chengdu's commercial spaces is the reorganization and reconstruction of consumption scenarios. This is not merely about layering technology onto existing structures, but rather about redefining traditional commercial spaces through data flow and algorithmic coordination. For instance, in central areas such as Chunxi Road and Taikoo Li, lifestyle service platforms like Meituan and Ele.me channel online traffic into offline consumption settings, transforming physical stores—once reliant on natural foot traffic—into integrated digital consumption hubs that operate seamlessly across online and offline channels. Businesses no longer depend solely on location to attract customers; instead, they are recommended by platforms, and their performance hinges entirely on the amount of traffic the platform allocates. While this appears to benefit consumers by offering convenience and improve business efficiency, it effectively shifts the traditional "location-based rent" model into a "traffic-based rent" controlled by platforms. Retailers

must continuously pay commissions and advertising fees to remain visible online. Additionally, new retail enterprises such as Hema Fresh and Yonghui Life have transformed marginalized spaces—including community storefronts and old industrial warehouses—into smart mini-warehouses using a "micro-fulfillment center + instant delivery" model. These micro-fulfillment centers, each serving a three-kilometer radius, form a citywide grid-like supply network for consumption, fundamentally altering Chengdu residents' traditional habit of "going to stores to shop." Consumer behavior has shifted from public spaces to private residences, weakening the public and social nature of commercial spaces.

3.4 Analysis of Typical Characteristics in the Spatial Production of Chengdu Platform

The spatial production of Chengdu's platform economy exhibits a distinct "duality." On one hand, platform enterprises optimize and enhance the value of traditional urban spaces through data infrastructure development, creation of new spatial nodes, and reshaping of consumption scenarios. Positive impacts—such as activating idle resources, improving spatial efficiency, and generating employment—are evident across various spatial practices, including the Chunxi Road business district, high-tech industrial parks, and community group-buying stations. On the other hand, this spatial production remains fundamentally driven by capital appreciation: platforms use algorithms to strictly manage delivery workers' working environments, leverage traffic advantages to charge merchants high fees that are ultimately passed on, and penetrate into the city's micro-level networks via community group buying, thereby squeezing out the living space of traditional small vendors. In Chengdu, spatial production and spatial extraction are not two entirely separate processes but rather two sides of the same coin. While platforms create new spaces such as micro-fulfillment centers and shared office spaces, they simultaneously deprive existing community spaces, public areas, and workers' living environments through rent pass-through, labor control, and data monopolization. This coexistence of dual logics offers a crucial perspective for understanding how the platform economy transforms the spatial dynamics of megacities.

4. Platform Economy's Exploitation of Chengdu's Existing Urban Space

4.1 Living Space Extraction: Delivery Riders' Shared Housing and Community Space Compression

While the development of platform economies creates new business opportunities, it also exploits existing urban living spaces. The housing situation of food delivery riders in Chengdu is a clear example. According to data from Chengdu's Housing and Urban-Rural Development Bureau in 2022, there are approximately 120,000 food delivery riders in the city's main urban area, nearly 70% of whom rent apartments within three kilometers of their work stations to save commuting time and increase order-taking hours. This "work-place-oriented" residential pattern has led to the concentration of riders in urban villages and older neighborhoods, resulting in widespread substandard rental housing. In areas with high delivery volumes such as Chonghua and Jinniu districts, a two-bedroom apartment may house six or seven—or even more—riders, leaving less than five square meters per person. Platform companies use algorithms to confine workers to small geographic zones, forcing riders to accept poor living conditions just to survive. This not only lowers their quality of life but also disrupts the daily lives of local communities. Noise pollution, strain on public resources, and safety hazards caused by these shared accommodations have troubled and even alienated residents. The public nature of community space is undermined by the abnormal aggregation of different populations. Platform capital quietly appropriates the inclusiveness and stability of low-income urban neighborhoods through algorithmic power, shifting labor reproduction costs—which should be borne by enterprises—onto existing urban housing systems, thereby imposing an invisible burden on communities.

4.2 Public Space Occupation: The Erosion of Urban Publicness by Delivery Activities

The instant delivery system driven by the platform economy has led to a comprehensive encroachment and functional alienation of Chengdu's urban public spaces. Delivery riders inevitably use city roads, sidewalks, commercial plazas, and other public areas during their operations, but this usage is far from equitable—it carries a strong sense of privatization. According to data from Chengdu's traffic police in 2023, traffic violations involving food delivery and courier personnel accounted for 42.7% of all non-motorized vehicle infractions. Behaviors such as riding against traffic, running red lights, and occupying sidewalks are widespread in core commercial districts like Chunxi Road and Taikoo Li. The strict time constraints imposed by algorithmic systems force riders to break traffic rules and disrupt public order, undermining both safety and transportation efficiency due to pressure from platform deadlines. Moreover, riders often wait for extended periods at office building lobbies, subway entrances, and residential community gates—an informal occupation of public space. These locations serve as "buffer zones" within the platform's dispatch system, designed to absorb labor idle time caused by fluctuating orders, yet they impose no cost on the platform. More insidiously, the functions of public spaces are being eroded by commercial interests. Shopping malls and tourist attractions—originally public in nature—are increasingly opening dedicated lanes and waiting areas for deliveries, shifting spatial planning priorities from serving the general public to catering to capital interests. Through its delivery network, the platform economy embeds private business activities into public spaces, enhancing delivery efficiency while gratuitously consuming urban public resources. As a result, the openness, inclusiveness, and public character of these spaces gradually fade under the erosion of capital logic.

4.3 Commercial Rent Transmission: Spatial Cost Pass-Through under Platform Commission Mechanisms

The platform economy primarily extracts value from existing urban commercial spaces through rent transmission, a dynamic clearly reflected in the spatial costs faced by Chengdu's catering industry. According to an industry report released by Chengdu Municipal Commerce Bureau in 2022, restaurants operating on delivery platforms such as Meituan and Ele.me face average commission rates of 22%–26%, an increase of approximately 5 percentage points compared to 2019. For small and medium-sized catering businesses whose platform orders account for over 60% of total sales, commission expenses have become the second-largest fixed cost after rent. This shift in cost structure has led merchants to adopt two main spatial strategies: one is reducing physical storefront space by adopting "front shop, back kitchen" models or purely takeout-only operations, thereby lowering rental costs to offset the financial pressure caused by commissions—this has gradually eroded the traditional function of street-level retail shops. The other strategy involves shifting platform-related costs onto landlords, driving up commercial rents in certain areas. In districts such as Chengdu High-Tech Zone and Wuhou District, rental prices for small-format stores suited to delivery-based operations rose cumulatively by 18%–25% between 2020 and 2023—significantly higher than the overall increase in commercial real estate rents during the same period. Leveraging their traffic advantages, platforms charge high commissions, forcing merchants to accept unfair terms just to maintain visibility. Ultimately, these rental costs are passed on to landlords and consumers. In essence, this represents an indirect extraction of value from existing commercial spaces by platform capital. Platforms neither invest in nor operate these spaces, nor do they pay rent, yet they capture a substantial portion of spatial appreciation through their digital intermediary power, leading to capital concentration in urban commercial spaces and creating survival challenges for small and medium-sized businesses.

4.4 The Social Differentiation Effects of Spatial Extraction

The platform economy has unevenly exploited Chengdu's existing urban space, exhibiting significant disparities across different social groups and spatial locations, thereby intensifying urban spatial inequality. From the perspective of workers, platform laborers such as food delivery riders and couriers face the most direct forms of spatial deprivation, trapped by algorithms in high-intensity

mobile labor with neither stable workplaces nor dignified living spaces; mobility and vulnerability define their spatial conditions. According to a 2023 survey by the Chengdu Federation of Trade Unions, fewer than 15% of riders receive company-provided dormitories or housing subsidies, meaning individuals bear the full cost of spatial reproduction. Spatially, low-rent areas such as old urban districts and villages within cities are the primary concentrations for platform workers. While these areas provide employment opportunities for many, they also suffer from severe issues including illegal subletting, traffic congestion, and environmental pollution, resulting in poor spatial quality and challenges in community management. In contrast, upscale business districts and emerging consumer hubs enjoy the convenience and prosperity brought by the platform economy, creating a stark imbalance in the distribution of spatial benefits and costs within the city. Regarding business types, chain brands and leading enterprises, due to their strong bargaining power, can partially resist platform commission pressures, whereas small and independent businesses face dual pressures from rising platform fees and increasing rents, shrinking their spatial survival margins. The platform economy, through algorithmic, data-driven, and capital-based spatial operations, has redefined the mechanisms of value distribution in urban space, disproportionately burdening workers, grassroots communities, and small businesses with the costs of spatial extraction, further deepening the stratification and fragmentation of urban socio-spatial structures.

5. Conclusions

The platform economy exerts a dual influence on Chengdu's urban space—simultaneously producing and extracting value. These two processes are not simply opposed but interact dynamically, transforming one another. On one hand, platform companies have indeed promoted the adjustment and optimization of urban spatial functions through building data infrastructure, creating new business models, and establishing delivery networks. To some extent, they have generated employment opportunities and new consumption patterns, representing the positive aspects of spatial production. The emergence of new spatial forms such as micro-warehouses, shared offices, and smart logistics parks has enriched the diversity of urban space, forming the material foundation for urban development in the digital economy era. On the other hand, platform capital consciously strips away the value of existing urban spaces through algorithmic coordination, traffic monopolization, and rent shifting. Issues such as compressed living space for delivery workers, private appropriation of public space, unjustified commercial rent transfers, and unequal distribution of spatial benefits reflect how the platform economy undermines the publicness, inclusiveness, and fairness of urban space. This duality stems from the inherent contradiction between the mode of capital accumulation employed by platform enterprises and the public nature of urban space: while platforms create spatial value, they simultaneously extract it extensively using digital power, transferring costs and risks onto laborers, small merchants, and grassroots communities.

The study also found that whether spatial production or spatial extraction prevails primarily depends on the interaction among factors such as local governments' regulatory capacity, platform enterprises' sense of social responsibility, and grassroots communities' self-organizing capabilities. As a major city in western China, Chengdu should, while vigorously developing its platform economy, establish a collaborative governance model involving multiple stakeholders from the perspective of spatial justice. This includes strengthening protection of workers' rights, regulating platform data and algorithms, ensuring that platform companies fairly bear corresponding spatial costs, and encouraging community participation in urban development. It is essential to balance efficiency with equity, and to promote innovation while maintaining order, so that the platform economy becomes a key force in advancing high-quality urban development and achieving spatial justice.

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