



From Urban Strangers to Co-Producers of Grassroots Governance: A Theoretical Framework for the Civic Incorporation of Platform Workers in Urban China

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ABSTRACT

This article addresses a central paradox of platform-mediated urban life in contemporary China: place-based platform workers—especially food delivery riders and couriers—are deeply embedded in the physical fabric of cities through their daily labor, yet remain only partially incorporated into the social relations and institutional mechanisms of urban governance. Drawing on recognition theory, social embeddedness, co-production of public services, and platform labor process theory, the article constructs a six-stage theoretical framework that traces the trajectory from “urban stranger” to “governance co-producer.” The framework develops a recursive theoretical process linking recognition, embeddedness, co-production, and deepened urban incorporation, and argues that civic incorporation and governance participation are mutually constitutive rather than simply sequential. The article also identifies structural constraints that risk reducing incorporation to instrumental co-optation, including algorithmic time poverty, moralized reciprocity, and uncompensated governance labor. The analysis contributes to urban governance theory by reconceptualizing platform workers as public actors whose mobile local knowledge represents a distinctive civic resource, while insisting that legitimate co-production requires substantive recognition of workers’ rights, temporal autonomy, and voice in rule-making.

Keywords: platform workers; urban governance; co-production; recognition; social embeddedness; civic incorporation; China

1. Introduction

The rapid growth of China’s platform economy has produced a sizable workforce that occupies a unique and increasingly visible role in urban life. In Chinese policy discourse, these workers are described as “new employment groups” (xinjiuye qunti), a term encompassing food delivery riders, express couriers, ride-hailing drivers, and others whose work is orchestrated by digital platforms. While this label is laden with policy implications around social governance and party-building, this article uses the more precise term “place-based platform workers,” focusing on food delivery riders and couriers whose work depends on repeated, embodied engagement with city neighborhoods. Although ride-hailing drivers and other mobile platform workers fit within this broader category, they are not the primary focus here. Unlike remote freelancers, place-based platform workers continually traverse neighborhoods, enter residential compounds, navigate traffic intersections, and interact daily with local residents and merchants (Vallas & Schor, 2020). Their labor is inherently spatial: it requires constant physical movement through the city’s built environment, bringing them into regular—if often brief—contact with local communities.

This intense spatial presence is matched by a striking institutional absence. Sociologically, platform workers are urban strangers: they are physically proximate yet socially distant, present in city spaces but largely excluded from institutional incorporation (Simmel, 1950). Many face precarious or ambiguous employment

relationships and lack access to the participatory structures—residents’ committees, neighborhood party branches, homeowner associations—that traditionally facilitate community governance (Wang & Wu, 2025). Their schedules, dictated by algorithmic dispatch and fluctuating customer demand, allow little time for meaningful civic participation. This creates a paradox: workers who gain intimate, real-time knowledge of urban space through daily embodied movement are often only weakly recognized in the governance of that space. Although they possess valuable, ground-level insights for urban management, there are few institutional channels for this knowledge to be acknowledged or utilized.

This article asks: under what theoretical conditions can platform workers transition from urban strangers to co-producers of grassroots governance? The question is both analytically and normatively significant. Analytically, it pushes beyond the prevailing focus on platform labor as a site of exploitation and asks what role platform workers might play in the broader urban polity. Normatively, it raises whether existing governance frameworks can accommodate a population defined by mobility rather than residence, and by algorithmic time discipline rather than discretionary availability. Place-based platform workers have become a highly visible component of urban public space, yet occupational visibility has not automatically translated into civic voice.



How can governance frameworks built around residential stability, organizational membership, and discretionary time accommodate a population defined by mobility, algorithmic subordination, and temporal scarcity?

Rather than offering an empirical case study, the article constructs a theoretical framework through conceptual analysis, drawing on recognition theory, social embeddedness, co-production theory, and platform labor process theory. The resulting six-stage model traces a recursive trajectory from spatial access, through social recognition and relational embeddedness, to governance co-production—and argues that such co-production, when genuine, feeds back into deeper forms of urban belonging. The article foregrounds the structural constraints that may reduce incorporation to instrumental co-optation, and insists on distinguishing substantive civic inclusion from instrumental or merely nominal forms of inclusion. In doing so, it seeks to bring Chinese urban governance scholarship into dialogue with international theoretical debates, treating the Chinese case not as an isolated particularity but as an instance illuminating broader dynamics of platform-mediated urban life.

The article proceeds as follows. Section 2 establishes the conceptual baseline by theorizing platform workers as urban strangers, drawing on Simmel's sociology and specifying five axes of marginality. Section 3 identifies limitations in existing literature across platform labor studies, urban incorporation research, and co-production theory. Section 4 develops the theoretical foundations by synthesizing four bodies of theory. Section 5 presents the six-stage framework. Section 6 analyzes structural constraints and normative tensions. Section 7 discusses theoretical contributions. Section 8 concludes with implications and directions for future research.

2. Platform Workers as Urban Strangers

Georg Simmel's (1950) figure of "the stranger" describes an individual who arrives and stays but is never fully absorbed into the group—defined not by transience but by a structural combination of nearness and remoteness. This concept illuminates the condition of place-based platform workers in Chinese cities with considerable precision. Unlike conventional models of migrant incorporation that emphasize residential settlement and neighborhood attachment, platform workers often encounter the city through labor-driven mobility across multiple localities. Their relationship to any given locality is mediated less by residence than by the allocation of delivery tasks. They pass through communities without necessarily joining them and accumulate spatial familiarity without automatically acquiring social membership. In Simmel's terms, their stranger hood can become a structural condition produced by the organization of their labor rather than merely a transitional phase on the way to settlement. The stranger's position, Simmel observed, involves a distinctive form of objectivity that derives precisely from not being bound to the group's particular components and interests. For platform workers, this position may enable observation across multiple neighborhoods without the same place-bound attachments as settled residents, making them potentially valuable governance contributors while simultaneously marking them as outsiders.

This condition can be captured by the concept of spatial presence without social membership. Platform workers occupy urban space extensively, but this presence does not necessarily translate into recognized belonging. Residential communities in urban China

remain strongly organized around residence, property, formal tenancy, and administratively legible populations. Platform workers, many of whom are internal migrants, may therefore have limited access to residents' meetings, public consultations, and other participation mechanisms that presume a stable territorial relationship (Cai & Chen, 2026). Community residents' committees and grid management systems (wangge hua guanli) likewise operate through defined territorial units. Workers who move across multiple grids each day may not fit easily within this residence-based administrative architecture. Their urban presence can thus be highly visible in everyday space while remaining only partially legible within institutions that determine who counts as a community participant.

Yet this spatial presence is far from cognitively empty. Building on studies of the spatial and algorithmic organization of delivery work, this article introduces the concept of mobile local knowledge to describe the practical intelligence generated through repeated labor-driven movement across urban neighborhoods. It includes knowledge of traffic patterns, building access points, safety hazards, infrastructure deficiencies, and commercial activity rhythms (Sun, 2019). This knowledge is spatially extensive rather than concentrated, temporally current rather than periodic, and embodied in daily practice rather than derived from deliberate information-gathering. It constitutes a potentially valuable civic resource for identifying infrastructure problems, monitoring safety conditions, and providing ground-level feedback on urban service delivery. The concept also highlights an asymmetry in the urban knowledge economy: professional planners rely heavily on formal data and periodic inspections, while platform workers acquire experiential knowledge through continuous embodied practice. Converting mobile local knowledge into governance capacity is therefore not only an institutional question but also an epistemic one: it requires governance systems to treat practice-based knowledge as a legitimate complement to expert and data-driven knowledge.

The marginality of platform workers operates across at least five axes. First, labor marginality: many platform workers operate under contractual arrangements that provide less security and fewer organizational protections than standard employment (Chen, 2020). Such arrangements can affect access to social insurance, labor dispute mechanisms, and collective representation. Second, organizational marginality: many lack stable membership in unions, professional associations, or neighborhood organizations. Third, community marginality: their transient spatial relationship to any given neighborhood complicates the residence-based logic of community inclusion. Fourth, identity marginality: public discourse can oscillate between sympathetic portrayals and instrumental framings of them as "mobile grid workers" or "urban sensors," neither of which necessarily acknowledges their subjectivity as urban public actors with independent interests (Luo, 2026). Fifth, temporal marginality: algorithmic management can impose tight delivery windows and intensive time discipline, creating forms of time poverty that constrain participation in activities requiring discretionary time (Chen, 2020; Sun, 2024). These dimensions interact and compound one another, producing exclusion that cannot be addressed on any single axis alone.

These compounding forms of marginality also expose the limits of incorporation strategies designed around fixed residences, stable workplaces, or durable organizational memberships.



Place-based platform workers are simultaneously mobile across urban space and individualized by digitally mediated task allocation. Their relationship to particular neighborhoods may be repeated but intermittent, while their connection to fellow workers is often fragmented by dispersed schedules and work locations. This combination of mobility and organizational atomization complicates conventional strategies for social incorporation based on neighborhood outreach, workplace organization, or association-based representation. Understanding why requires examining how existing scholarship has conceptualized these challenges—and where it falls short.

3. Limitations of Existing Literature

The existing scholarship on platform workers, urban incorporation, and grassroots governance exhibits four characteristic limitations that this article seeks to address.

The first is labor-centrism in platform work studies. Research on platform labor has focused, with considerable analytical power, on the labor process: algorithmic control, digital surveillance, piece-rate compensation, and workers' resistance tactics (Chen, 2020; Vallas & Schor, 2020). This has generated critical knowledge but produced a narrow framing in which platform workers appear primarily as subjects of algorithmic domination. What is obscured is their existence as urban actors who inhabit cities, interact with communities, and hold potential stakes in collective governance. Even the literature on algorithmic solidarity (Yu et al., 2022) tends to examine collective action as a response to labor exploitation rather than as a basis for broader civic engagement. The labor-centric framing captures what platforms do to workers, but not what workers do in and for cities. This analytical blind spot has significant consequences for governance theory: if platform workers are understood only as labor subjects, the question of their civic role in urban life never arises, and the governance implications of their spatial presence remain unexplored.

The second is residence-centrism in urban incorporation research. Studies of migrant integration in China have often emphasized settlement patterns, housing, social adaptation, self-identity, and the institutional consequences of hukou-based exclusion (Wang & Fan, 2012). These approaches frequently treat residential anchoring and neighborhood attachment as important pathways to incorporation. For platform workers, however, urban space is also structured by labor mobility: they may live in one district, work across several others, and form meaningful urban interactions in places they never inhabit residentially. A delivery rider may develop greater familiarity with neighborhoods served during daily work than with the peripheral area where they sleep. A theoretical framework adequate to their situation must therefore move beyond residence as the primary vector of incorporation and develop tools for understanding how belonging may also be constituted through labor-driven movement across space.

The third is a functionalist tendency in emerging Chinese scholarship. Policy-oriented research has explored the incorporation of "new employment groups" into community governance under the rubric of party-building (Wang, 2025; Kuang & Wang, 2026). While documenting emerging arrangements—rider-friendly stations, mobile grid worker programs, rider councils—this literature sometimes treats platform workers primarily as governance resources whose mobility can improve administrative efficiency.

When workers are described as "mobile grid workers" (liudong wangge yuan) or "community sentinels," the framing positions them as extensions of the administrative apparatus rather than autonomous participants with their own interests. The implicit logic is one of resource extraction: the governance system identifies a useful capacity and seeks to harness it, without considering what workers themselves might want from governance participation—protection, recognition, a voice in the rules that shape their working conditions.

The fourth concerns co-production theory itself. As developed by Ostrom (1996), Bovaird (2007), and Nabatchi et al. (2017), co-production describes arrangements in which citizens actively contribute to public service production. A limitation lies not in what this literature explicitly assumes, but in what it has examined less systematically: how participation operates among actors whose territorial attachments are mobile, whose civic membership is ambiguous, and whose discretionary time is constrained by digitally managed work. The psychological costs of co-production have received increasing attention (Thomsen et al., 2020), but the temporal and economic preconditions of participation remain less fully theorized for workers whose time has direct income consequences. For platform workers, these conditions cannot be treated as background assumptions. They become central to determining when civic contribution remains voluntary and when it risks becoming another form of uncompensated labor.

Taken together, these four limitations point toward a common gap: the absence of a theoretical framework that simultaneously addresses the urban-spatial, relational, governance, and labor dimensions of platform workers' civic condition. The framework developed in this article attempts to fill this gap by synthesizing insights from all four bodies of literature while critically revising their assumptions.

4. Theoretical Foundations

The theoretical framework draws on four distinct but complementary bodies of theory. Rather than surveying each in isolation, this section specifies what each contributes and how they jointly constitute the article's conceptual architecture.

Recognition theory, as formulated by Honneth (1996), addresses why institutional access alone does not suffice for genuine incorporation. Honneth's tripartite schema—recognition through care, rights, and social esteem—provides a normative grammar for distinguishing superficial inclusion from substantive belonging. For platform workers, the relevant forms are primarily juridical (recognition as rights-bearing subjects entitled to labor protections and civic participation) and social (recognition of their practical knowledge and contribution to urban life as worthy of public esteem). Recognition theory explains why spatial access remains hollow if workers are regarded merely as functional utilities rather than valued members of the urban polity. It supplies the normative dimension of the framework: incorporation without recognition is not incorporation at all. Importantly, Honneth argues that experiences of misrecognition generate moral injuries that motivate struggles for recognition—directly relevant to platform workers whose governance incorporation may be experienced as misrecognition if it takes the form of instrumental mobilization rather than genuine civic acknowledgment.



Social embeddedness theory, originating in Granovetter's (1985) critique of atomistic accounts of economic action, explains the relational mechanisms through which initially isolated individuals become woven into social structures. Granovetter demonstrated that economic behavior is embedded in networks of interpersonal relations that generate trust, transmit information, and enforce norms. Building on this relational understanding, this article analytically distinguishes between relational embeddedness (interpersonal ties) and organizational embeddedness (integration into more durable institutional structures such as community organizations, residents' committees, or labor associations). Applied to platform workers, embeddedness theory directs attention to the processes through which transient, algorithmically mediated encounters with residents, merchants, and community institutions may—under certain conditions—develop into more durable ties. It specifies the micro-level processes—repeated interaction, trust accumulation, and organizational affiliation—that constitute the relational infrastructure of civic incorporation. Without such embeddedness, governance participation is likely to remain episodic and structurally fragile. The concept also provides a counterpoint to the disembedding tendencies of platform algorithms, which can fragment social relations by individualizing workers and optimizing for speed rather than relational continuity (Cai & Chen, 2026).

Co-production theory, as articulated by Ostrom (1996), Bovaird (2007), and Nabatchi et al. (2017), provides the governance-facing component. Co-production varies in depth and form, ranging from citizens' contributions to service delivery to their involvement in problem definition, design, implementation, and evaluation. (Branden & Honingh, 2016; Nabatchi et al., 2017). Bovaird (2007) distinguishes between user co-production and community co-production—a distinction consequential for platform workers whose governance engagement may benefit communities in which they do not reside. Nabatchi et al. (2017) further differentiate co-commissioning, co-designing, co-delivering, and co-assessing, offering a vocabulary for analyzing where and how citizens participate in the public service cycle. This theory therefore establishes the analytical language for the stage at which recognized, embedded platform workers become meaningful governance participants. For this article, the crucial distinction is between participation limited to implementing predefined tasks and participation that gives workers meaningful influence over problem definition, design, and evaluation. This distinction is especially pertinent for platform workers, who risk having their mobility and local knowledge used instrumentally without corresponding voice in governance decisions.

Platform labor process theory (Vallas & Schor, 2020; Chen, 2020; Sun, 2024) supplies contextual specificity, identifying the structural features of platform work—algorithmic management, temporal fragmentation, nonstandard or contested employment classification, spatial dispersion—that constitute distinctive constraints on civic incorporation. Chen (2020) documents the granular mechanisms of algorithmic control in Chinese food delivery: dynamic order allocation, real-time tracking, customer rating systems, and punitive time-out penalties. Sun (2024) theorizes the “transitional” character of platform labor—suspended between formal and informal employment, between urban settlement and rural origin. Without this component, the framework would risk an

idealized trajectory that ignores the material conditions of platform labor.

Together, these four perspectives perform complementary analytical functions: recognition theory provides the normative foundation; embeddedness theory specifies relational mechanisms; co-production theory defines forms and depths of governance participation; and labor process theory identifies structural constraints. No single theory suffices. Recognition without embeddedness may remain largely symbolic; embeddedness without participatory channels may strengthen social ties without producing meaningful influence over governance; and co-production without attention to labor constraints may slide toward uncompensated or instrumental participation. The framework is therefore simultaneously normative and contextual, specifying what substantive incorporation requires while remaining attentive to the material conditions that make it difficult to achieve. Although the four perspectives can be analytically separated, their practical operation is interdependent, while the labor process dimension cuts across the entire trajectory by conditioning workers' time, mobility, and organizational capacity.

5. From Urban Strangers to Co-Producers of Grassroots Governance

This section proposes a six-stage process framework tracing the trajectory from urban stranger hood to governance co-production. The six stages should be understood as analytically distinguishable moments in an iterative process rather than as a universal or irreversible developmental sequence. Recursive loops, partial reversals, uneven progression, and simultaneous operation are all theoretically possible. The framework is therefore a heuristic for analyzing conditions, mechanisms, and obstacles, not a predictive model of inevitable progression.

Stage 1: Achieving basic spatial accessibility. The first precondition is physical access to the spaces in which governance is conducted. Residential compounds in Chinese cities are frequently gated, and delivery workers are often prohibited from entering beyond designated drop-off points. Community service facilities—meeting rooms, activity centers, rest areas—are designed for residents and may be closed to non-residents. The emergence of rider-friendly rest stations (qishou yizhan) represents a modest infrastructure of spatial welcome, providing drinking water, phone charging, and temporary shelter. However, access to space is only a threshold condition; without subsequent stages, it produces co-presence without participation. The question of spatial access also has a symbolic dimension: whether workers are permitted to enter community spaces, sit in common areas, or use restrooms communicates powerful messages about who belongs and who is merely passing through.

Stage 2: From service recipients to recognized urban members. The transition from spatial access to social recognition involves a qualitative shift in how platform workers are perceived by community institutions and residents. At baseline, workers are seen purely in functional terms—as delivery mechanisms rather than persons. Recognition, in Honneth's (1996) sense, means being acknowledged as a person with rights, needs, and dignity beyond the service transaction. Concretely, this involves acknowledging workers' entitlement to rest and sanitation during working hours; recognizing their labor as socially

valuable rather than merely privately convenient; and extending civic courtesies—information about community affairs, invitations to public events—that signal membership rather than mere tolerance. This stage involves a shift in collective perception: from viewing workers as external service providers to acknowledging them as individuals who contribute to urban life and hold a legitimate claim on community membership. Without this normative shift, workers who feel unrecognized are unlikely to invest the time and emotional energy that governance engagement demands.

Stage 3: From episodic encounters to relational and organizational embeddedness. Recognition creates normative conditions for embeddedness, but embeddedness requires repeated and sustained interaction through which trust and reciprocity may develop. Relational embeddedness grows through recurring face-to-face encounters between workers and residents, shopkeepers, property managers, and community staff. Repeated interactions of this kind can gradually generate bridging social ties and interpersonal trust (Granovetter, 1985). A delivery rider who regularly serves the same neighborhood may begin to be recognized by name, greeted, and informally consulted about local conditions. Organizational embeddedness involves workers' affiliation with more durable collective structures: occupational associations, community working groups, rider councils, or other mechanisms providing institutional anchoring (Wang & Wu, 2025). The challenge is that algorithmic management individualizes workers and fragments schedules, working against the temporal regularity that sustained relational investment requires (Sun, 2024). Organizational innovations may partially address this problem, but the tension between algorithmic time discipline and relational time investment remains fundamental.

Stage 4: Converting mobile local knowledge into governance capacity. Once embeddedness is established, workers' mobile local knowledge can become available for governance use. Converting it requires institutionalized channels—problem-reporting mechanisms, consultation meetings, and feedback systems—through which workers' observations are acknowledged and acted upon. Recent Chinese governance scholarship has documented initiatives that invite delivery workers to report community problems and contribute observations generated during everyday mobility (Wang & Wu, 2025; Kuang & Wang, 2026). Such arrangements illustrate how mobile local knowledge may be institutionalized, but information contribution alone does not constitute substantive co-production. Conversion must remain voluntary and reciprocal: if workers' knowledge is collected without meaningful feedback, consent, or influence, the process risks becoming data extraction rather than participation. The governance value of mobile local knowledge therefore depends on institutional receptivity and on whether worker-generated information is treated as credible, actionable, and connected to channels through which workers can also express their own concerns.

Stage 5: From auxiliary participation to co-production and co-decision. This stage marks the transition from contributing information to participating more substantively in the definition, design, implementation, or evaluation of governance responses (Ostrom, 1996; Bovaird, 2007). Workers may move from being consulted about local conditions to discussing community safety arrangements, delivery infrastructure, access rules, or disputes

involving platform services. Nabatchi et al. (2017) distinguish co-commissioning, co-designing, co-delivering, and co-assessing, demonstrating that co-production can occur at different points in the governance process. For the present framework, the critical distinction is between participation limited to carrying out predefined tasks and participation that gives workers meaningful influence over problem definition, design, and evaluation. Deeper forms of co-production are institutionally demanding because they require governance actors to share some agenda-setting and rule-shaping capacity with participants who may not be conventional residents.

Stage 6: Governance participation reinforcing urban belonging. The final stage closes the loop: governance participation may strengthen urban belonging, civic identity, and social recognition, thereby deepening incorporation. This is consistent with Honneth's (1996) account of recognition as an ongoing relational process sustained through participation in collective life. When workers perceive that their contributions are valued, participation may reinforce community attachment and willingness to remain engaged; when contributions are ignored or treated instrumentally, the integrative effects of participation are likely to weaken. This recursive dynamic means that incorporation and participation are mutually constitutive rather than strictly unidirectional. Governance institutions therefore play an important role in sustaining the conditions of participation over time.

The overall mechanism can be summarized as: recognition → embeddedness → co-production → deepened urban incorporation, where the final term feeds back into the first. This circularity is a substantive theoretical claim: civic incorporation and governance participation are mutually constitutive. Disruption at any point—through weakened recognition, erosion of organizational ties, or intensified time pressure—may interrupt the cycle. Its sustainability therefore depends on institutional continuity, meaningful voice, and sufficient temporal space for worker participation. The cycle may also remain fragile when governance arrangements become primarily extractive or when representative structures fail to reflect the diversity of the broader worker population.

6. Structural Constraints and Normative Tensions

The framework describes a possible trajectory, not an inevitable one. Its realization is constrained by structural forces and normative ambiguities that must be explicitly addressed. Each constraint represents not merely a practical difficulty but a potential mechanism through which the trajectory from urban stranger to governance co-producer can be arrested, reversed, or distorted into forms that reproduce rather than challenge workers' marginality.

The most fundamental constraint is algorithmic time poverty. Platform labor is organized around tight delivery windows, real-time evaluation, and penalty systems that can minimize discretionary time (Chen, 2020; Sun, 2024). Governance participation requires precisely the temporal flexibility that digitally managed work can make scarce. The opportunity costs of participation may be particularly acute for platform workers because time spent in governance activities can directly reduce time available for income-generating work. Co-production research has examined important psychological costs of citizen participation (Thomsen et al., 2020), but platform workers' situation highlights a further issue: temporal autonomy is not simply a background resource but

a condition shaping whether voluntary public contribution is practically feasible. Without mechanisms such as compensated participation time, flexible scheduling, or other protections against income loss, co-production may remain difficult to sustain.

A second tension involves the moralization of community reciprocity. A risk arises when access to community services—such as rest stations, drinking water, or charging facilities—is framed as a favor that should be repaid through governance contributions. Such a framing can blur the distinction between voluntary civic engagement and moralized obligation. The provision of basic amenities is better understood as recognition of workers' presence and needs, not as a gift that creates a debt to participate. Genuine co-production requires voluntariness; it should not depend on moral pressure that makes refusal appear ungrateful (Bovaird, 2007). This distinction matters because the language of community belonging can otherwise turn inclusion into an implicit exchange relationship.

Third, uncompensated governance labor poses a fundamental problem. When platform workers report infrastructure problems, participate in community patrols, or attend meetings, they contribute time and knowledge of public value. If such activities are neither compensated nor accommodated within working arrangements, civic participation may become an additional form of uncompensated labor for workers already operating under precarious conditions (Luo, 2026). The issue is particularly salient where earnings are closely tied to the volume and timing of completed platform tasks, making non-delivery activity economically costly. The risk is not that all governance participation is exploitative, but that voluntary contribution can become difficult to distinguish from labor extraction when workers bear the full economic cost of participation.

Fourth, the distinction between inclusive incorporation and selective or instrumental co-optation requires careful maintenance. Selective incorporation may recruit a relatively small number of workers as “representatives” while leaving the broader population weakly connected to governance institutions (Luo, 2026; Wang & Wu, 2025). Selection processes may privilege workers who are more available, organizationally connected, or institutionally cooperative, raising questions about representativeness. Instrumental co-optation, meanwhile, occurs when workers are valued primarily as mobile data collectors or service auxiliaries without receiving meaningful voice in decisions affecting their own conditions. Substantive co-production therefore requires participation not only in delivering governance outcomes but also, where relevant, in shaping priorities and rules. Participatory mechanisms should accordingly include attention to representation, accountability, and the ability of workers to articulate interests that may not align with administrative preferences.

Fifth, unequal representation among workers themselves must be addressed. The population is differentiated by occupation, employment status, migration background, gender, and platform affiliation. Incorporation mechanisms may favor workers with more flexible schedules or closer ties to community organizations, leaving others voiceless (Cai & Chen, 2026). A framework for civic incorporation must guard against the formation of a worker elite that speaks for but does not represent the broader population. Female platform workers, workers from ethnic minorities, and those under the most precarious subcontracting arrangements face compounded

barriers that generic incorporation mechanisms are unlikely to address.

Finally, digitalization of governance participation introduces surveillance risks. If workers' contributions are channeled through digital platforms or smart-city systems, the data generated—location trails, problem reports, behavioral patterns—may be repurposed for monitoring rather than empowerment. Workers must retain knowledge of and control over the data they contribute, and its use must be governed by principles of transparency and purpose limitation. The distinction between being a civic participant who voluntarily shares observations and being an unwitting node in a surveillance network is the distinction between co-production and co-optation at the level of information governance.

7. Discussion and Theoretical Contributions

This article makes four principal contributions to the theoretical understanding of platform workers, urban governance, and civic incorporation. These contributions are interrelated: each addresses a gap that the others help to contextualize, and together they constitute an integrated theoretical intervention.

First, the article introduces the concept of mobile local knowledge and uses it to reconceptualize platform workers as urban public actors rather than solely as algorithmically managed laborers or objects of labor rights protection. Residence produces one form of local familiarity; repeated labor-driven mobility can produce another, consisting of current, practice-based knowledge distributed across multiple neighborhoods. By foregrounding this knowledge, the framework opens conceptual space for understanding platform workers as agents with civic capacities that extend beyond their economic function. This does not diminish labor rights but argues that labor rights and civic incorporation are complementary dimensions of a broader struggle for recognition. The contribution is therefore not simply to claim that platform workers can participate in governance, but to specify a distinctive knowledge resource through which their everyday mobility may acquire public value.

Second, it proposes a distinctive form of urban incorporation mediated by labor activity and grounded in spatial mobility rather than residential settlement. Platform workers do not fit conventional settlement-centered trajectories. The concept of work-mediated, mobility-based incorporation describes a pathway in which civic belonging may emerge through work-related interactions dispersed across urban space rather than concentrated in a single residential locality. This conceptual move has significance beyond the immediate Chinese context: as platform-mediated work expands globally, more workers may become deeply present in urban space through labor while remaining weakly connected to governance institutions designed around residential stability. The concept therefore offers an analytical tool for studying emerging forms of urban membership across different governance settings.

Third, it conceptualizes temporal autonomy as a constitutive resource of co-production rather than a neutral background condition. The co-production literature has given limited attention to the temporal preconditions of participation, especially where citizens' working time is externally monitored and economically consequential. Platform workers' situation reveals that the costs of participation can be psychological (Thomsen et al., 2020), economic, and organizational.



Governance time may displace income-generating work, while intensive algorithmic scheduling can narrow the temporal space in which voluntary participation is possible. Treating temporal autonomy as part of the infrastructure of co-production therefore extends the theory beyond questions of motivation and willingness to the material conditions under which civic contribution can remain genuinely voluntary.

Fourth, it establishes a recursive “recognition–embeddedness–co-production” theoretical framework in which civic incorporation and governance participation are mutually constitutive rather than simply sequential. Unlike linear accounts, the framework emphasizes feedback effects: participation can generate recognition, recognition can sustain embeddedness, and embeddedness can enable further participation. Civic incorporation is therefore not a destination but an ongoing process requiring continued institutional support. The framework also has diagnostic value: when recognition weakens, organizational ties erode, or temporal resources are depleted, incorporation may become fragile or reverse. This recursive perspective helps identify not only the conditions under which incorporation develops but also the points at which it can stall.

This has implications not only for understanding Chinese cities but for comparative urban governance research more broadly. The “recognition–embeddedness–co-production” framework is offered as one way of holding labor, governance, and incorporation perspectives together in a single analytical architecture. Labor scholars need to follow workers beyond the labor process into the urban polity; governance scholars need to reckon with algorithmically managed populations whose temporal and spatial conditions differ from those of settled residents; and incorporation scholars need models of belonging that do not presuppose residential settlement or discretionary time.

8. Conclusion

The civic incorporation of place-based platform workers into urban governance represents one of the significant unresolved challenges facing contemporary cities, in China and beyond. This article has argued that meeting this challenge requires moving beyond both the labor-centric framing that sees platform workers primarily through the lens of algorithmic exploitation, and the functionalist framing that treats them primarily as governance resources to be mobilized. Instead, it has proposed a theoretical framework tracing a recursive trajectory from urban stranger hood to governance co-production, mediated by recognition, social embeddedness, and the conversion of mobile local knowledge into civic capacity. The challenge is distinctive because it arises at the intersection of platform-mediated labor organization, urban spatial governance, and migration-driven social stratification. No single disciplinary lens captures its full complexity, which is precisely why the multi-theoretical framework developed here is necessary.

The central argument is that platform workers can become legitimate urban public actors and governance co-producers when

their rights, knowledge, public voice, temporal resources, and capacity to shape relevant community rules are substantively recognized. Without recognition, spatial access remains limited in its integrative effects; without embeddedness, participation is likely to remain episodic; without temporal autonomy, co-production risks becoming economically burdensome; and without meaningful voice, incorporation can slide toward co-optation. Together, these conditions provide a basis for distinguishing substantive civic incorporation from more limited or instrumental forms of participation. The framework’s recursive structure further underscores that incorporation is not a settled state but a process requiring ongoing institutional support.

This recursive framing also provides analytical leverage for understanding why existing incorporation initiatives may remain partial. If rider-friendly rest stations provide spatial access without broader recognition, if rider councils create organizational ties without meaningful influence, or if mobile reporting systems collect local knowledge without reciprocal benefit, the recursive cycle may be interrupted, and incorporation may stall at an early stage. The framework therefore suggests that partial forms of incorporation can remain fragile when recognition, voice, reciprocity, or temporal autonomy are absent. Rather than treating any single initiative as sufficient evidence of inclusion, the framework directs attention to how different dimensions of incorporation reinforce—or fail to reinforce—one another.

Several limitations should be acknowledged. The framework has not been tested against systematic empirical evidence, and its six analytical moments inevitably simplify processes that may be more fluid and uneven in practice. The focus on the Chinese context, while providing rich institutional specificity, also raises questions about transferability. However, the underlying tensions between algorithmic time discipline and civic participation, between recognition and instrumental incorporation, and between mobile knowledge and residence-based governance institutions may also arise in other platform-mediated urban settings. Future research could examine these propositions through comparative case studies, longitudinal process tracing, or participatory research with platform workers themselves.

The normative core of the argument is that the civic incorporation of platform workers should be grounded in substantive recognition of their personhood, rights, knowledge, and public agency rather than in the administrative convenience of their mobility. The central issue, therefore, is not simply how platform workers can contribute to urban governance, but whether the institutional conditions of participation recognize them as legitimate urban actors with rights, knowledge, voice, and meaningful influence over the rules that shape their everyday lives and the communities through which they move.

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