The Rise of Platformed Governance in China: Migration, Technology, and Integration

PING SUN[1]
University of Chinese Academy of Social Sciences, China

Despite considerable scholarship on the platform economy and digital labor, studies that interrogate the intersectional relations among platforms, migration, and social integration remain scant. Utilizing food delivery platforms as its subject, this article demonstrates how platforms serve as key sites for recognizing and performing migrant workers' economic integration. It develops the concept of platformed integration to argue for the rise of a platformed governance model in China's digital economy, wherein the platform leverages its legacy among migrant laborers through multilayered intermediaries, digital management, and embedded infrastructure. This platformed integration, as demonstrated, addresses how migrant workers in China conceive and experience top-down digital infrastructures of labor platforms in terms of tactical negotiations, and how this ultimately shapes their livelihood opportunities in class-divided cities.

Keywords: platform economy, migration, integration, China

Over the last three decades, migrant workers' social integration has become a crucial issue in China, especially because the nation has experienced the most extensive internal migration worldwide (International Labor Organization, 2013). According to the National Bureau of Statistics (2020), at the end of 2019, there were 290 million migrant workers in China. Constant urbanization and the increasing number of migrant workers have presented a pressing challenge for population governance in China's local and central governments. Unlike Europe and the United States, migration in China is mostly internal. In other words, social integration in China is primarily defined within the framework of rural-urban relations (Zhang & Song, 2003).

In the last decade, platform rise and migrant workers' attraction to them have been the most prominent phenomena in China's digitalization. Based on the Report of China's Share Economy (National Information Center, 2020), platforms in China boast a workforce of approximately 78 million people, which comprises several migrant workers, some of whom have shifted from construction and manufacturing industries to platform-mediated service sectors, such as ride-hailing, parcel courier, and food delivery.

According to a research report released by Meituan, among the 4.72 million delivery workers who earned income from the platform in 2020, 77% come from rural areas (Meituan Research Institute, 2021). The platform thus becomes a critical place for migrant workers to encounter and make sense of urban life. Though migration (e.g., Wang & Fan, 2012; Yang, Zhou, & Jin, 2020) and platforms (e.g., Lee, Kusbit, Metsky, & Dabbish, 2015; Vallas, 2019) have been researched considerably, studies that explicate the intersection between platforms and migration are scarce. As hundreds of thousands of migrant workers arrive and join platform work with the prospect of starting a new life, it becomes crucial to examine how digital platforms become key and contentious sites for migrant workers' social integration.

Based on these questions, this article explores how platformization is emblematic of a rising governance structure that tackles the complex and changing circumstances of migration in China. Based on data from an ongoing project on a Chinese food delivery platform, this article demonstrates how the "platformed integration" of migrant workers has been mobilized through a series of structural, institutional, and socioeconomic strategies against the process of platformization. It shows how food delivery platforms have employed both offline intermediaries and online management to expand, legitimize, and consolidate their governance structures for migrant workers. To permeate rural migrant workers' lives, platforms not only manage to provide large numbers of job opportunities but also launch massive business expansions in lower-tier cities and towns in the name of poverty alleviation and community service. As this article will show, with a combination of labor intermediaries, algorithmic managing systems, and market expansion in rural areas, food delivery platforms have constructed a governing model that enhances migrant workers' economic integration in China. Instead of telling bottom-up stories of integration, this article focuses more on the institutional and structural factors that condition and promote migrant workers' embeddedness in urban life. Platformed integration here is a heuristic device to show, on the one hand, how migrant workers make sense of their labor practices and identify their positions among the precarious structure of the platform, and on the other hand, the increasing ambition of food delivery platforms to become the digital infrastructure of China's urbanization.

Although considerable research has been conducted on migrant workers' social integration and inclusive participation (e.g., Qiu & Zhao, 2019; Yang, Zhou, & Jin, 2020), inadequate attention has been paid to how migrant workers are integrated into China's expansively platform-mediated society, which is what this article aims to address. As this article will show, migrant workers in China are experiencing integration driven by the continued platformization of the digital economy. For this purpose, this article seeks to understand social integration critically by providing an explanatory framework for platform integration. It first reviews the literature on migration and integration in the context of China's urbanization. Second, this article moves to a three-part empirical discussion that analyzes how a food delivery platform has employed various strategies to become an ad hoc governing structure that manages migrating populations. It involves increasing multilayered intermediaries, digital management, and embedded infrastructure.

Literature Review and Research Questions

Platformed Integration

Previous literature has addressed a broad range of integration dimensions that shift from "social work, self-organization to labor market participation and to the social obligations of citizenship" (Engbersen, 2003, p. 5). Theories of social integration range from a classical framework that highlights the cultural, structural, and marital assimilation of migrants (Gordon, 1964) to alternative frameworks, such as multiculturalism (Lambert & Taylor, 1990) and segmented integration (Portes & Zhou, 1993). However, it is worth noting that integration is a relational and contextual process wherein the different spheres mentioned above differ in terms of scope and extent. For many refugees or immigrants, economic integration, which is usually achieved through labor market participation, remains the first step toward integrating into new societies (Ager & Strang, 2008). According to Engbersen (2003), labor and employment act as important functional integrations for immigrants. Only by being integrated into the labor market will immigrants build the initial foundation for further social integration. As migrants from rural areas flood into platform work in China, it is imperative to address how migrant workers encounter and become cognizant of the platform economy.

Research concerning rural migrant integration in China has mainly focused on the demographic factors that affect the urban assimilation of migrant workers, such as gender, age, education, and income (Zhu & Chen, 2010), while ignoring the structural and institutional restrictions that confront migrant workers in their urban experience. It must be acknowledged that China's migrant workers share similar disadvantages with Western immigrants in terms of the structural constraints associated with citizenship and sociocultural equality (Chen & Wang, 2015; Wang & Fan, 2012). From a top-down perspective, the possibilities of platform intervention are found mainly in labor recruitment and management and less in sociocultural and political participation. However, as the platform economy expands, China and the global urban policy framework have yet to embrace a context-sensitive understanding of migrant workers' integration. Thus, this article seeks to critically understand migrant workers' integration by focusing on their platformed work practice and labor process. Instead of employing a broad framework of social integration, this article narrows its analysis to the role digital platforms have played in integrating migrant workers against China's urbanization. It questions how and why migrant workers from rural areas in China integrate into urban life through platformed work and how they make sense of their platform labor.

Previous studies have found that platform work enhances the economic inclusion of marginalized populations. Easton-Calabria (2019) states that digital works provide new opportunities and networks for displaced people. Graham, Hjorth, and Lehdonvirta (2017) found that platform work allowed workers to access both distant and local markets with a veil of digital anonymity. However, Graham et al., (2017) also concluded that this kind of economic inclusion occasions risks that "unduly affect the livelihood of digital workers" (p. 135). As demonstrated, integration is a relational and interactive process that necessitates both personal tactics and structural strategies (Udwan, Leurs, & Alencar, 2020). Udwan et al. (2020) found that refugees in the Netherlands exhibited "a resilience based on dedication, digital market-readiness, and compliance" (p. 2) to be accepted.

This article does not celebrate platforms as appropriately positive ways for migrant workers' social integration; on the contrary, it critically investigates migrant workers' integration into urban lives through platformization. It develops the concept of platformed integration to discuss how migrant workers' integration into urban cities is established through digitized monitoring and platformed management in the labor market. In China, platform labor participation has become one of the most common ways that migrant workers integrate into urban life, so migrant workers must be resilient in the digital organization and labor practices platforms have laid out. Platformed integration here addresses how migrant workers from rural areas in China conceive and experience the top-down digital infrastructures of labor platforms in terms of tactical negotiations, and how this ultimately shapes livelihood opportunities for these populations in class-divided cities.

Platforms and the New Digital Order

In the last decade, China has witnessed the burgeoning of the gig economy, in which sectors like e-commerce (Ding, Chong, Chuen, & Cheng, 2018), ride-hailing (Chen, 2018), and food delivery (Sun, 2019) have gained incredible momentum through the consistent support offered by venture capitals and a large migrant workforce. Owing to the proliferation of smartphones and mobile applications, China has become home to 940 million netizens as of June 2020, 80% of whom have shopped online, and 85.6% of whom have used online payment services (CNNIC, 2021). In the last decade, a considerable number of workers have uprooted themselves from factory and manufacturing jobs and have flocked to the platform industry. A survey (n = 10,810) conducted by the Meituan Research Institute (2020) indicated that 35.2% of the delivery workers in Meituan Delivery moved from manufacturing jobs. This massive work transition was largely because of the "price war" and competition for higher piece rates among the various delivery platforms launched in 2016. With hundreds of thousands of workers swarming into the sharing economy industry, platforms have become key sites for migrant workers' accommodation, social participation, and assimilation in urban China. There is no doubt that platforms have emerged to lead and control the digital economy, having prominence "over manufacturing, logistics, and design, by providing the basic landscape upon which the rest of the industry operates" (Srnicek, 2017, p. 47). Through this process, platforms not only reconfigure the way the digital economy operates (Rahman & Thelen, 2019), but also recondition the laboring experience and practices of platform workers by rebuilding an assemblage of digital order that tackles mobility and migration in Chinese society (Georgiou, 2019; van Doorn, Ferrari, & Graham, 2020).

In recent years, platforms in China have developed at a breakneck pace. Meituan, one of the leading food delivery platforms in China, is a particularly representative example. In 2015, the platform had 14,000 active couriers, but by the end of 2020, the number had exceeded one million.[1] Throughout the COVID-19 lockdown period, delivery platforms played an essential role by mobilizing their workforce to maintain the normal logistical operation of urban cities. Through its powerful mobilization, Meituan reconnected supermarkets, shops, pharmacies, and convenience stores with citizens who were confined indoors and made inroads into the city's digital infrastructure. However, built into these digital systems are features that need further investigation. First, China's platform economy mainly consists of an "invisible" migrant workforce from underdeveloped rural areas, but how this workforce was formed, managed, and mobilized into the city's digital infrastructure remains unknown. As argued by van Doorn (2017), the development logic of the platform economy tends to ignore the "gendered, racialized, and classed distribution of opportunities and

vulnerabilities" (p. 899) related to platform labor. In China, platform work is mostly performed by the vulnerable class and is a factor in asymmetrical rural-urban development. This constitutes a research gap that this article seeks to address.

Second, with the rise of the digital economy, platformization in China has largely overlapped with the wider process of urbanization. In China, urbanization is measured by the total number of permanent resident populations in urban areas, and throughout the census, most of the migrating populations are considered urban residents. China's Seventh National Population Census in 2021 claimed a 63.89% urbanization rate, with a 14.21% increase compared with 2019 (National Bureau of Statistics, 2021). As indicated by van Dijck, Poell, and De Waal (2018), platforms cannot be studied alone as they "are all (inter)dependent on a global infrastructure that has been built steadily from the early 2000s onward" (p. 8). In China, we need a recalibrated perspective that addresses how digital platforms, their connectivity, and management infrastructures interact with migrant workers' labor conditions and affect their social integration. Existing research has provided pertinent insights into platformization's economic, social, and cultural consequences worldwide (e.g., Srnicek, 2017; van Dijck et al., 2018; Wood & Lehdonvirta, 2019). According to Vallas and Schor (2020), the platform becomes "the digital cage" (p. 7) of digital workers, as technology (and algorithms in particular) controls workers' labor conditions through calculative mechanisms, gamified regulation, and symbolic rewards. In his analysis of the online video platform YouTube, Gillespie (2010) addressed how platforms carefully position themselves in conjunction with social participants through their strategic claims and multifaceted functionality. His analysis of the politics of platforms echoes Valls and Schor's （2020） opinion, which posits platforms as institutional chameleons. Valls and Schor （2020） believe that platforms are not only "a form of work organization" (p. 7), but also institutions that interact closely with their surrounding landscape. Following this logic, this article explores how Chinese platforms have transitioned from work organizations to ad hoc governing structures that reconfigure and reconstruct the rules and regulations of rural migration. Specifically, we seek to identify the digital order they have reproduced and whether this order supports or hinders the integration of migrant workers.

This article explores the following questions: How does the platform assemblage become a new ad hoc governance structure amidst China's urbanization? How do migrant workers conceive and make sense of their "platformed integration," and how does it shed light on the analysis of platformization in urban China?

Method

Data were collected through ethnographic fieldwork, in-depth interviews, and secondary materials. To understand how delivery platforms attempt to legitimize themselves as a governing structure in Chinese society, the author employed both top-down and bottom-up methods in fieldwork studies. In the first wave, the author conducted 15 interviews with the staff of platforms and platform intermediaries, such as the chief strategy officer of a leading food delivery platform, its vice president of human relations, its chief R&D engineer, the managers of its delivery intermediaries, and some heads of its delivery stations (also called *zhandian* [站点] in Chinese). Questions about the organizational structure of the delivery platform, established rules of labor management, and approaches to recruiting delivery workers were asked. In the second wave, the author conducted 30 interviews with delivery workers from other platforms, including Meituan, Ele.me,

and Baidu Deliveries,[2] Shansong, and Shunfeng. All the interviewees were migrants from rural areas in provinces, such as Shanxi, Henan, Hebei, Jilin, and Shaanxi. Among them, six were group leaders in their delivery teams, one was a coordinator responsible for background system management, and the others were regular delivery workers. Questions such as how they came to be delivery workers and how they made sense of their work practices and urban life were asked. Informed consent was obtained for all interviews, which were recorded by the author. The data were translated into English for analysis when needed.

The interviews and fieldwork were conducted from March 2017 to December 2020. During that time, the author frequented certain delivery stations in Beijing and familiarized herself with migrant delivery workers. She followed some delivery workers to observe how they accepted orders and delivered orders. She examined their use of smartphones and social media and their interactions with restaurant staff, customers, and each other. She also collected secondhand data, such as official reports on the food delivery industry, public data, news reports, official policies, and regulatory documents, as supplementary materials for data analysis. In the initial data analysis, the author selected 10–15% of the observational and interview data to develop a coding scheme that focused on workers' narratives and perceptions of platform work, migration, and integration. She subsequently followed the most prominent elements in the ethnographic data, such as third-party intermediaries, digital management, and embedded infrastructure, to develop a theoretical framework of "platformed governance."

Analysis

Intermediaries in Expansion

With the rise of the gig economy, delivery platforms in China now serve as key sites for managing the ever-increasing floating population. In the last decade, the number of food delivery platform workers has increased tenfold, and most of them are migrant workers (Meituan Research Institute, 2021). Previous studies have attributed workers' precarious conditions to the labor commodification and obfuscation strategies that platforms have employed in their market practices (e.g., Sun, 2019; Wood, Graham, Lehdonvirta, & Hjorth, 2019). Following this research stream, it has been found that mechanisms for subcontracting and outsourcing platforms have played significant roles in managing gig workers. As market competition increases, platforms have actively engaged in aggressive outsourcing and other cost-cutting strategies. Collaborating with intermediaries has become an essential means for platforms to maintain their humongous workforce while trimming down obligations at the same time.

Multilayered intermediaries coexist in China's delivery industry. Based on their size and mode of operation, they can be divided into service companies, labor agencies, and brokers (see Figure 1). Service companies, also called human resource service companies or labor dispatching companies (*laowu paiqian*, 劳务派遣), are formal market institutions that conduct their businesses by working with large companies that require constant labor input. Because of the pressure of labor laws, service companies usually sign contracts with their workers. Compared to service companies, labor agencies are smaller, more flexible,

---

[2] Baidu Deliveries were sold to Ele.me in August 2017 for a price of US$ 500 million. After that, it continued its delivery business under the name "Star. Ele" (Xuehua, 2018).

more informal, and more manageable. They are usually small physical stores on the street that people can visit to aid in their job searches. Labor brokers are also called *huangniu* (黄牛) in Chinese. They are people who serve as information transmitters between job seekers and labor agencies. Often, these brokers work with individuals who do not have any proof of their qualifications or certificates. They also maintain close relations with labor agencies, service companies, and platforms that manage labor recruitment. As the platform economy expands, these three kinds of labor intermediaries become import channels for migrant workers to integrate with the service industry.
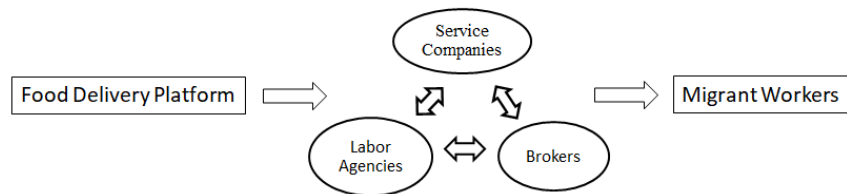
Figure 1. Multilayered intermediaries in the food delivery industry.

The rise of the food delivery industry in recent years has intensified the rapid expansion of labor intermediaries. In 2018, food delivery platforms, such as Meituan, Ele.me, and Baidu started massive labor stripping movements by outsourcing workers who had previously been contracted. Food delivery platforms have collaborated with dozens of service companies and labor agencies, signed contracts, and outsourced the recruitment and management of delivery workers. Though there are no official records of the specific number of intermediaries that food delivery platforms work with, our fieldwork found that more than 100 intermediary companies had been working with Meituan after the 2018 transformation. Quhuo Technology was among the largest service companies that provided food delivery labor for big platforms like Ele.me and Meituan, and by December 31, 2019, Quhuo Technology had more than 40,000 laborers, of whom 39,900 were delivery workers. Established in 2012, the company has completed six rounds of financing, with influential companies like Baidu and Softbank China, investing in its business. In July 2020, Quhuo was successfully listed on the New York Stock Exchange and raised $33 million.

With increasing specifications in the platform's business management, intermediary companies are being assigned various requirements about labor recruitment and management. To meet the needs of the platform, various intermediaries within the platform economy have worked closely with each other to reconfigure a more flexible and delicate cooperation model to capture potential workers. They have gradually built interweaving and overlapping work relations with each other. Multilayered outsourcing prevails among these networked institutions and individuals. On receiving labor projects from platforms, service companies may outsource part of their responsibility to labor agencies, which, in turn, may outsource it to individual brokers. This interlocking business model has formed a powerful network of "body shops" (Xiang, 2007) that recruit migrants who come to urban cities hoping to make a living. Migrant interviewees in our study reported these intermediaries to be their first encounter with urban life:

> [I] came here alone. I knew nobody. I had no money to feed myself and I needed to find a job. I posted my information on 58.com,[3] and someone called me and asked if I wanted to do delivery. I decided to give it a try. They sent me a location on WeChat and I went there. It was a station and many delivery workers were there. Some of my friends said that intermediaries cheated migrant workers, but this one seemed formal. The head seemed nice. The next day, I started my work as a courier. (Xian, August 14, 2018)

Migrant workers find intermediaries useful for integrating themselves into the service industry. On becoming a divorcee, Xian relocated to Beijing to start a new life. With the help of a labor agency, Xian had become an outsourced delivery worker at Ele.me. She could then afford to rent a small apartment and cease borrowing money from her parents. Fully utilizing both offline and online channels, intermediaries advertise delivery jobs and, consequently, recruit migrant workers. Driven by commercial incentives, intermediaries build recruitment areas, chat communities, and information pages on certain employment websites that migrant workers frequently visit. Additionally, they attach recruitment ads to their delivery workers' food storage boxes, electronics, and uniforms to diffuse their recruitment messages offline. The offline approach is particularly effective for recruiting migrant workers who are not technologically savvy. With a combination of online and offline strategies, intermediaries open up a transitional channel for migrant workers' economic integration.

When platforms face a severe shortage of human resources, both intermediaries and the platforms' staff offer incentives and bonuses to delivery workers and encourage them to recruit people from their social networks. Dong was the head of a delivery station in Haidian District, Beijing. When the delivery workforce was severely understaffed in winter, he emphasized recruitment to his team almost every morning. In particular, he highlighted the RMB 2,000 (approximately US$300) bonus that an intermediary company offered per successful recommendation. For most migrant workers, that amount was a big incentive, as it accounted for about 20–30% of their average monthly income. However, the incentive also had many conditions. For example, the person who provided the recommendation would only receive the bonus once the recruit had worked at the delivery station for more than three months. If the recruit left within the first three months, the incentive would be nullified. The "capturing mechanism" that platforms and intermediaries have built relies on a combination of migrant workers' traditional rural relations and their mobile networks. This mechanism, in some sense, connects migrant workers' personal needs to structural integration, providing them with an expedient place to first encounter urban life. To attract more human resources, some labor intermediaries provide migrant workers with package services, such as accommodations, e-bikes, battery renting, and charging stations. During the COVID-19 lockdown, some labor agencies also provided migrant workers with places where they could quarantine for 14 days.

To be accepted, migrant workers also have to obey strict regulations that intermediaries maintain. Outsourced delivery workers are required to participate in morning meetings every day before they commence delivery. The meetings addressed disciplinary issues, such as safety, traffic rules, service

---

[3] 58.com is a portal website that provides information regarding life service and employment. It can be accessed through https://bj.58.com/

attitude, and work hours. Those who break rules are fined according to their infraction. Feng was a group leader at one Ele.me station. He complained about the inconsistency of the punishment rules, stating, "The head of my station fines us differently. When there is an order overtime, sometimes he fines us 100 (RMB), but sometimes he changes it to 200. There is no clear rule."

The collaboration between the delivery platforms and intermediaries helps to enhance migrant workers' economic integration. It also configures an ad hoc governing structure wherein migrant workers have to obey and subordinate themselves. Unlike state governance, which relies mostly on state policies and multilayered admin departments, the platform assemblage imposes a more indirect and effective access mechanism to integrate the rural workforce. By collaborating with various intermediaries, platforms undergo the process of "Nikefication" (Davis, 2013), in which they radically trim down their labor costs and construct a large pool of labor forces. This integration through intermediaries indicates an interactive conversation between unprivileged migrants and capitalist platforms. As de Certeau (1984) indicated, we cannot fully understand the city unless we take both top-down urban planners and bottom-up city dwellers into consideration. Taking food delivery workers as a case study, migrant workers and platforms have mutually used each other through multilayered labor intermediaries. In that process, not only formal labor service companies but also less structured labor agencies, such as brokers and even individual couriers, participate in migrant workers' recruitment. These multiple actors assist the platform assemblage in capturing more migrant workers, making the platform mechanism self-perpetuating and self-expanding.

From Digital Management to Sticky Labor

Parallel to the multilayered intermediary system, the platform also employs a powerful algorithmic system that facilitates the effective mobilization of hundreds of millions of migrant workers within bustling cities. This online system coexists with intermediaries and underlines the digital management of food delivery workers' labor processes. Through delicate design and constant upgrades, the algorithmic system has leveraged its function from labor management to the cultural cultivation of sticky labor (Sun, Chen, & Rani, 2021). Relying on the penetration of mobile apps and ad push, food delivery platforms have both taken on and taken over the state's task of migration management. These mechanisms range from online recruitment systems and algorithmic surveillance to digitally gamified management. Because each migrant worker needs to register on platforms before they become a courier, the platform has become an essential data-tracking center for migrant workers' labor and living conditions in urban cities. Consequently, platforms have a larger amount of stored data on migrating populations than even the state has access to. As shown below, platforms, with the help of digital management, have transformed themselves into ad hoc decision makers that dictate the rules of social interactions among multiple participants and a persistent governance structure that enables a segmented integration of migrant workers.

To expand the workforce and reduce human resources, food delivery platforms have adopted an online recruitment process. For most crowdsourced positions, it only takes three steps for one to become a courier: downloading the app, registering, and participating in online job training. After clearing the exam, workers can commence deliveries. Compared to recruitment in the manufacturing field, which usually requires several rounds of face-to-face interviews and several months of probation, this

"onboarding-centric" recruitment strategy trims down the recruitment process by giving algorithms the management power previously held by managers (Lee et al., 2015). Meanwhile, the digital recruiting system also expands the radius of intermediaries, making it possible for more migrant workers to join the delivery army. Owing to the wide proliferation of smartphones, workers can now access platform work easily. Unlike intermediary recruitment, where most recruits are full-time workers, those who join the platform through their apps are mostly part-time workers who maintain a relatively flexible work schedule. Our fieldwork discovered that this app-based recruitment acts as a buffer zone for many unemployed migrant workers who require cash to sustain themselves. According to a report by Meituan Research Institute (2020), 2.95 million riders were on the platform as of the first half of 2020, indicating an increase of 415,000 compared to the first half of 2019 and an annual increase of 16.4%. Because of the huge impact of the COVID-19 pandemic on the employment of migrant workers in 2020, food delivery platforms became important sites for migrant workers during this transitional period.

The algorithmic system has also played an essential role in matching, connecting, and enabling point-to-point communication between various platform actors, such as restaurants, customers, and delivery workers. In the last decade, the order dispatching system of food delivery platforms has evolved from pure artificiality to AI machine learning systems that enable real-time order dispatching and precise door-to-door delivery. According to the chief engineers from the R&D department of Baidu Deliveries[4]:

> We implemented a fully automated dispatching system in 2015. Based on the collected data, the algorithm can automatically allocate the order to the most suitable couriers. Simultaneously, there are some systems in place to support it, so that in addition to automatic order dispatching, we can also carry out real-time visual monitoring. For example, we have a system called Time Machine, which enables the scheduling system to return to any historical time and analyze the dispatch situation at that time. Our system has an artificially intelligent automatic learning function. Like AlphaGo, it can automatically learn based on the data generated by delivery workers, consequently making this system more intelligent and precise. (R&D in Baidu, December 4, 2017)

Unlike the Fordist style of corporate management, which is manifested by direct ownership and control, today's platforms have achieved hegemonic status by reconnecting and reconfiguring their business models. As Rahman and Thelen (2019) have argued, platforms have exercised deeper control and regulation by structuring "the rules and parameters of actions' that are available to participants on the platform"' (p. 179). By labeling themselves as information service providers, Chinese food delivery platforms have constituted a regulatory structure (Kenney & Zysman, 2016) that not only dictates the rules of interaction between workers and customers, but also cultivates the sticky labor that immensely affects the daily lives of migrant workers (Sun et al., 2021).

Gamification is one of the digital management strategies for platforms to cultivate "sticky labor." By incorporating a game-like upgrading mechanism into their daily work management, platforms legitimize their delicate management techniques of categorization and calculation. Leading platforms, such

---

[4] Baidu Deliveries was sold to Ele.me in August 2017, whereas the interview was conducted in May 2017.

as Ele.me and Meituan, divide couriers into several levels that correspond with different unit prices and order priorities based on work time, orders delivered, customer ratings, and overtime ratings. Each month, delivery stations rank their couriers based on the number of orders they delivered during the month and bestow the honorary title of "King Courier" on the worker who tops the list. In addition to the daily evaluation mechanism, platforms also provide workers with bonuses and rewards from time to time, which motivates them to finish the required number of orders and achieve rewards. To be allotted enough orders, workers need to wait for significant periods. Our fieldwork indicated that a courier who works 10 hours a day only spends 3–4 hours delivering orders, whereas 6–7 hours are spent awaiting the order. During off-peak times, between 2:00 and 4:00 pm, workers cluster on the street or near the rear entrances of shopping malls and check their phones to see if there are any orders to grab.

This on-demand service that food delivery platforms provide necessitates a 24/7 stay-on-call delivery army. Owing to the gamified rewards system, migrant workers on the platform spend long periods of time awaiting and conducting deliveries, thereby participating in a self-exploitative process (Gabriel, 1990). This is what we call "sticky labor" (Sun et al., 2021). Workers display a strong willingness to sell more of their labor time to increase their daily income, even if it involves risking their health. Assisted by technologically mediated rules and regulations, the platform occupies a structural position that enables the control of migrants' production and social production time. The interviewed migrants reported that they suffered from stomach trouble, traffic injuries, arthritis, and other health-related issues. As large numbers of workers relocate from first- and second-tier industries to the platformized service industry, the algorithmic governance of platforms helps both local and central governments manage the urban governance of migrant workers, particularly with respect to issues such as employment and social mobility. Based on the logic of serving others and getting a higher income, platforms' digital management makes delivery workers take on a class distinction and integrate into the underclass (Portes & Zhou, 1993). Migrant workers' adaptation to the algorithmic system can hardly be regarded as social integration, as it merely demonstrates their improvised efforts to display digital resilience against a platform capitalism that prioritizes timeliness, efficiency, and good service (Udwan et al., 2020). This digital management of the platform, however, risks placing migrants in a more precarious position.

Becoming an Embedded Infrastructure

In addition to labor integration and management, platforms in China also leverage their influence on migrant workers' daily lives in a broader sense. Food delivery platforms have employed multiple strategies to consolidate their logistical chains and business models. The fieldwork revealed that the platform expands its governing power through expansion (also called *xiachen* [下沉] in Chinese), poverty alleviation, and alliance consolidation with migrant workers and customers. Through their increasingly intensive involvement in social demand and institutional operations, food delivery platforms have carefully built a self-benefiting network among different social actors, such as governments, customers, and migrant workers.

In China's digital economy, over the past few years, platform companies have widely employed the *xiachen* strategy to capture broader markets in lower-tier cities. *Xiachen* means "to submerge/sink," and refers to the phenomenon where platforms expand their business models into lower-tier cities and

towns, reaching more consumers and practitioners. In the second half of 2019, Meituan launched the *xiachen* strategy in third-tier and lower-tier Chinese cities. The platform simultaneously employed self-built teams and franchisees to reach diverse participants, such as farmers, retailers, restaurants, and delivery workers in the logistical chain, and to expand its market by inviting them to join the platform. The *xiachen* strategy delivered quick results. According to a report by Aurora Mobile (2019), one of the leading data analysis companies in China, 73.7% of people in third- or lower-tier cities use Meituan Delivery, and approximately 30% of them are migrant workers.

For migrant populations in lower-tier cities, the underlying logic of *xiachen* indicates a work-life balance, as it provides access to low-threshold employment and convenient service. Jimei was a housewife and mother to two kids. She, her husband, and her kids had moved from a rural county called Lidatun (李大屯村) in Shanxi Province to a suburban village near Beijing called Siping in 2015. Her husband was a full-time delivery worker for Ele.me. Jimei mentioned her changing experience with the food delivery industry:

> Previously, we did not place orders online. It was for those urban people, [who are] busy and do not have time to cook. My children complained that I did not buy them KFC [online]. We lived too far away from downtown [Beijing] for deliveries to occur. Nowadays, however, I found that they [delivery workers] do come! I started to order KFC for my children! (Jimei, July 26, 2020)

On-demand delivery platforms, such as Meituan and Ele.me, have constantly strived to embed their logistical business into the everyday lives of migrating populations. Throughout the *xiachen* movement, many food delivery platforms launched the community group buying movement (*shequ tuangou,* 社区团购 in Chinese), making it an online grocery business model that focused on the basic needs of the local community. It gained popularity during the COVID-19 lockdown, when people were forced to stay home and order food online. Usually, a self-designated community leader called *tuanzhang* (团长) creates and manages a WeChat group, where he or she posts a selection of products on the group daily. Those in the group then browse through the selections and click to place orders. If the collective order exceeds a designated value, the residents receive significant discounts or bonuses (see Figure 2). Community group buying ensures the provision of groceries and other essentials, such as paper towels, cooking utensils, and cleaning supplies. Relying on a community-based commercial model, group buying is characterized by its low price and convenience and has gained great popularity among migrant workers. During the interview, Jimei noted that the group buying "helped save money" as "the food is cheaper." She also stated, "If you place orders often, you can receive bonuses that make it even cheaper!"

Figure 2. Staff in community group buying checking the food (taken by the author).

Parallel to the submergence strategy, food delivery platforms also engage actively in poverty-alleviation projects, which are listed by the Chinese government as the core task of its 13th Five-Year Plan. By collaborating with multilayered governments and departments of public affairs, food delivery platforms have built connections and relations with migrants who are, by national standards, considered poor (Chinese State Council, 2011),[5] and have enabled the recruitment of these migrants as registered delivery workers. According to a report by Meituan on the employment and poverty alleviation of delivery workers in 2019 (Meituan Academy, 2019), 257,000 impoverished workers registered with Meituan have migrated to more developed eastern Chinese provinces, such as Guangdong, Zhejiang, and Jiangsu, to obtain a higher income. More than 60% of them earn a monthly income of more than RMB 3000 (approximately US$460). Furthermore, the corporate social responsibility (CSR) departments of platforms have performed various charitable activities, such as launching training classes for workers' career development, establishing riders' festivals for social advertising, and raising funds for treating poor migrant workers suffering from diseases. Food delivery platforms have also established projects such as Help-through-Consumption on the consumers' end. The platforms have ruled that every time an order is placed, a small proportion of the fee will be used for the poverty-alleviation project.

"Network effects" (Rahman & Thelen, 2019) are critical to the success of platforms. Instead of limiting migrant workers to platform labor, food delivery platforms have employed a networking strategy that integrates not only migrant workers' labor but also their consumption into their business models. In this way, platforms have achieved migrant workers' social integrations through the two relations they

---

[5] According to the Chinese State Council (2011), people whose yearly income is below RMB 2300 (about US$ 350) are regarded as poor.

have built: the first is the intermediary-mediated platform labor and the second is the direct and unmediated platform consumption. Through frequent rewards and lower consumption costs, food delivery platforms have successfully allied with migrants and leveraged their alliances to generate a favorable public narrative, which facilitates the legitimization of their business model. The group buying strategy and the poverty-alleviation project have, in some sense, enhanced migrant workers' integration into urban life, helping to build a social relations network that further integrates different social participants, such as residents, community leaders, platform staff, and consumers. "It was good to see we have a (WeChat) group here. I got to know many people live nearby. We talked a lot about jobs and lives. We (he and his wife) were not alone any longer." After migrating from Xinyang, Henan, Zhang found a job at *tuanzhang* (团长) in the group buying WeChat community. As an embedded infrastructure, platforms have become important sites for migrant workers to seek job resources and form new social relations. However, attempts by food delivery platforms to become digital infrastructure are fraught with impediments. The recent rapid expansion of platforms has aroused governmental vigilance. On November 10, 2020, China's State Administration for Market Regulation (SAMR) released antimonopoly guidelines that clearly targeted the internet platform giants that had gained momentum during the COVID-19 crisis. According to the SAMR, the draft law aims to protect fair competition within the market and safeguard consumers' interests (State Administration Market Regulation, 2020).

Conclusion and Discussion

The role that platforms have played in managing internal migrant workers in China is at the core of this current investigation. Some argue that platforms have become a new ad hoc governance structure in the context of China's constant urbanization and digitalization. The current article showcases how platforms construct and consolidate their governance structures through a set of structural, institutional, and socioeconomic strategies, such as the adoption of multiple intermediaries and online management, the cultivation of migrants' sticky labor, and its embedment into the country's digital infrastructure. Unlike research that essentializes platforms as the commercialization of digital labor, China-based fieldwork data indicate that platforms have broader ambitions to become a new digital infrastructure within China's urbanization. In less than 10 years, food delivery platforms have changed the eating habits of millions of Chinese people and have reconfigured labor conditions in multilayered cities and towns. Platform-mediated food delivery service provision has become one of the fastest-growing sectors for various types of employment. The platform assemblage is important not only because platforms are ubiquitous but also because they represent a broader shift to a new socio-political governance structure, and, as such, increasingly govern people's (especially migrant workers') work and life practices.

The role that platforms play in terms of migration and integration can be complex. While platforms are used to generate informal economy jobs around the world, studies have shown that they also facilitate the formalization and standardization of previously informal service sectors (Ticona & Mateescu, 2018). In China, platforms act as a buffer that assists migrant workers in either getting a temporary footing or a relatively high-income job. Instead of confining migrants in the circle of digital labor, platforms have turned migrants into potential allies who facilitate their submergence into lower-tier cities. In this sense, the platform assemblage enables migrant workers to obtain a greater number of urban choices and potential possibilities in Chinese society. In this way, migrant workers use platforms to

develop bottom-up tactics that "make do" with urban structures laid out for them (de Certeau, 1984). However, it should also be recognized that the platformed integration conceived by migrant delivery workers is fragmented and mostly practical. Integration through participation is a contemporary way of tackling migrant workers' urban placement. However, it does not solve essential incorporation issues, such as citizenship, social insurance, and sociocultural inequalities (Chen & Wang, 2015; Wang & Fan, 2012).

The platformed integration of migrant workers indicates the rising power of the platform as a type of governing structure. Compared to state governance, which is usually enforced through laws and regulations, the advancement of platformized governance is achieved through a set of intermediary and technological social assemblages that are highly mobile and flexible. Rahman and Thelen (2019) argued that the platform-based business model has shifted from a "nexus of reciprocal relationship" to a "network of contracts" (p. 178). Unlike the Fordism era, which adopted permanent employment and stable welfare, the platform business model revolves around shareholder value, with stock prices being "the core metric of success" (Rahman & Thelen, 2019, p. 178). This is why we have seen two contradictory processes within platforms' social expansion. On the one hand, platforms engage in "aggressive outsourcing, asset stripping, and labor-reducing strategies" (Rahman & Thelen, 2019, p. 178) to retain their advantage in a fiercely competitive market. On the other hand, platforms embrace and incorporate migrant workers into the construction of their digital infrastructure, allying with them to fend off unfavorable governmental regulations.

Platformized governance, as indicated, does not displace all other existing governance structures. Instead, it coexists alongside other types of governing structures in society and is rapidly gaining momentum. As platforms become ubiquitous social infrastructures, their relationships with the government become tricky and subtle. On the one hand, they maintain cooperative and compliant relations with the government. On the other hand, they ally with workers and customers to defend against any unwelcome governmental regulations. Previous studies have noted that consumers in the United States are enlisted as potential allies against the government through the platform (Rahman & Thelen, 2019). However, the study of China's platform environment reveals that platforms have configured a wider "network effect" not only by striving for the support of consumers but also by seeking the consent of workers through projecting a list of preferred measures, such as increasing their short-term income. Through this dual relational strategy, the platform consolidates its embeddedness in China's digital infrastructure. Thorough examinations of the interweaving relations between the two governing structures––the state and the platform––are needed in future studies.

References

Ager, A., & Strang, A. (2008). Understanding integration: A conceptual framework. *Journal of Refugee Studies, 21*(2), 166–191. doi:10.1093/jrs/fen016

Aurora Mobile. (2019). *Report on the sinking market of the food delivery industry*. Retrieved from https://www.100ec.cn/detail--6525980.html

Chen, J. Y. (2018). Thrown under the bus and outrunning it! The logic of Didi and taxi drivers' labor and activism in the on-demand economy. *New Media and Society, 20*(8), 2691–2711. doi:10.1177/1461444817729149

Chen, Y., & Wang, J. (2015). Social integration of new-generation migrants in Shanghai China. *Habitat International, 49*, 419–425. doi:10.1016/j.habitatint.2015.06.014

China Internet Network Information Center. (2021). *The 47th China statistical report on Internet development*. Retrieved from https://www.cnnic.com.cn/IDR/ReportDownloads/202104/P020210420557302172744.pdf

Chinese State Council. (2011). *Outline of China's rural poverty alleviation and development (2011–2020)*. Retrieved from http://www.gov.cn/gongbao/content/2011/content_2020905.htm

Davis, G. F. (2013). After the corporation. *Politics and Society, 41*(2), 283–308. doi:10.1177/0032329213483110

de Certeau, M. (1984). *The practice of everyday life* (S. Rendall, Trans.). Berkeley: University of California Press. (Original work published 1980)

Ding, D., Chong, G., Chuen, D. L. K., & Cheng, T. L. (2018). From ant financial to Ali Baba's rural Taobao strategy–how Fintech is transforming social inclusion. In D. L. K. Chuen & R. H. Deng (Eds.), *Handbook of blockchain, digital finance and inclusion* (pp. 19–35). Cambridge, UK: Academic Press.

Easton-Calabria, E. (2019). Digital livelihoods for people on the move. *United Nation Development Programme*. Retrieved from https://www.undp.org/publications/digital-livelihoods-people-move

Engbersen, G. (2003). Spheres of integration: Toward a differentiated and reflexive ethnic minority policy. In R. Sackmann, B. Peters, & T. Faist (Eds.), *Identity and integration: Migrants in Western Europe* (pp. 59–76). London, UK: Routledge.

Gabriel, S. (1990). Ancients: A Marxian theory of self-exploitation. *Rethinking Marxism, 3*(1), 85–106. doi:10.1080/08935699008657903

Georgiou, M. (2019). City of refuge or digital order? Refugee recognition and the digital governmentality of migration in the city. *Television and New Media, 20*(6), 600–616. doi:10.1177/1527476419857683

Gillespie, T. (2010). The politics of "platforms." *New Media and Society, 12*(3), 347–364. doi:10.1177/1461444809342738

Gordon, M. (1964). *Assimilation in American life*. New York, NY: Oxford University Press.

Graham, M., Hjorth, I., & Lehdonvirta, V. (2017). Digital labor and development: Impacts of global digital labor platforms and the gig economy on worker livelihoods. *Transfer: European Review of Labor and Research, 23*(2), 135–162. doi:10.1177/1024258916687250

International Labor Organization. (2013). *Labor migration*. Retrieved from https://en.wikipedia.org/wiki/Migration_in_China#cite_note-Labor_migration-1

Kenney, M., & Zysman, J. (2016). The rise of the platform economy. *Issues in Science and Technology, 32*(3), 61–69.

Lambert, W. E., & Taylor, D. M. (Eds.). (1990). *Coping with cultural and racial diversity in urban America*. New York, NY: Praeger.

Lee, M. K., Kusbit, D., Metsky, E., & Dabbish, L. (2015, April). Working with machines: The impact of algorithmic and data-driven management on human workers. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems* (pp. 1603–1612). New York, NY: Association for Computing Machinery. doi:10.1145/2702123.2702548

Meituan Research Institute. (2020). *Report of employment and poverty alleviation of delivery workers in 2019* (Unpublished manuscript).

Meituan Research Institute. (2021). *Analysis on the influencing factors of rider's professional characteristics and job satisfaction*. Retrieved from http://www.199it.com/archives/1274888.html

National Bureau of Statistics. (2020). *An annual report of migrant workers in China*. Retrieved from http://www.stats.gov.cn/tjsj/zxfb/202004/t20200430_1742724.html

National Bureau of Statistics. (2021). *Report of the seventh national census*. Retrieved from http://www.gov.cn/guoqing/2021-05/13/content_5606149.htm

National Information Center. (2020). *Report of China's share economy*. Retrieved from http://www.sic.gov.cn/Column/568/0.htm

Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *Annals of the American Academy of Political and Social Science, 530*(1), 74–96. doi:10.1177/0002716293530001006

Qiu, L., & Zhao, D. (2019). Urban inclusiveness and income inequality in China. *Regional Science and Urban Economics, 74*, 57–64. doi:10.1016/j.regsciurbeco.2018.11.006

Rahman, K. S., & Thelen, K. (2019). The rise of the platform business model and the transformation of twenty-first-century capitalism. *Politics and Society, 47*(2), 177–204. doi:10.1177/0032329219838932

State Administration of Market Regulation. (2020). *Annual report on China's anti-monopoly enforcement*. Retrieved from http://www.gov.cn/xinwen/2021-09-24/content_5639102.htm

Srnicek, N. (2017). *Platform capitalism*. Cambridge, UK: Polity.

Sun, P. (2019). Your order, their labor: An exploration of algorithms and laboring on food delivery platforms in China. *Chinese Journal of Communication, 12*(3), 308–323. doi:10.1080/17544750.2019.1583676

Sun, P., Chen, Y., & Rani, U. (2021). From flexible labor to 'sticky labor': A tracking study of workers in the food-delivery platform economy of China. *Work, Employment and Society*. Retrieved from https://journals.sagepub.com/doi/abs/10.1177/09500170211021570

Ticona, J., & Mateescu, A. (2018). Trusted strangers: Carework platforms' cultural entrepreneurship in the on-demand economy. *New Media & Society, 20*(11), 4384–4404. doi:10.1177/1461444818773727

Udwan, G., Leurs, K., & Alencar, A. (2020). Digital resilience tactics of Syrian refugees in the Netherlands: Social media for social support, health, and identity. *Social Media + Society, 6*(2), 1–11. doi:10.1177/2056305120915587

Vallas, S. P. (2019). Platform capitalism: What's at stake for workers? *New Labor Forum*, *28*(1), 48–59. doi:10.1177/1095796018817059

Vallas, S., & Schor, J. B. (2020). What do platforms do? Understanding the gig economy. *Annual Review of Sociology, 46*(1), 273–294. doi:10.1146/annurev-soc-121919-054857

Van Dijck, J., Poell, T., & de Waal, M. (2018). *The platform society: Public values in a connective world*. Oxford, UK: Oxford University Press.

Van Doorn, N. (2017). Platform labor: On the gendered and racialized exploitation of low-income service work in the 'on-demand' economy. *Information, Communication & Society, 20*(6), 898–914. doi:10.1080/1369118X.2017.1294194

Van Doorn, N., Ferrari, F., & Graham, M. (2020). *Migration and migrant labor in the gig economy: An intervention*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3622589

Wang, W. W., & Fan, C. C. (2012). Migrant workers' integration in urban China: Experiences in employment, social adaptation, and self-identity. *Eurasian Geography and Economics, 53*(6), 731–749. doi:10.2747/1539-7216.53.6.731

Wood, A. J., Graham, M., Lehdonvirta, V., & Hjorth, I. (2019). Networked but commodified: The (dis)embeddedness of digital labor in the gig economy. *Sociology, 53*(5), 931–950. doi:10.1177/0038038519828906

Wood, A., & Lehdonvirta, V. (2019, March 5). Platform labor and structured antagonism: Understanding the origins of protest in the gig economy. Paper presented at the Oxford Internet Institute Platform Economy Seminar Series. doi:10.2139/ssrn.3357804

Xiang, B. (2007). *Global body shopping: An Indian labor system in the information technology industry*. Princeton, NJ: Princeton University Press.

Xuehua. (2018, October 15). *Baidu Deliveries officially changed its name after being acquired by Ele.me: Positioning high-end market*. Retrieved from https://news.mydrivers.com/1/598/598452.htm

Yang, G., Zhou, C., & Jin, W. (2020). Integration of migrant workers: Differentiation among three rural migrant enclaves in Shenzhen. *Cities, 96*, 1–13. doi:10.1016/j.cities.2019.102453

Zhang, K. H., & Song, S. (2003). Rural–urban migration and urbanization in China: Evidence from time-series and cross-section analyses. *China Economic Review, 14*(4), 386–400. doi:10.1016/j.chieco.2003.09.018

Zhu, Y., & Chen, W. (2010). The settlement intention of China's floating population in the cities: Recent changes and multifaceted individual-level determinants. *Population, Space and Place, 16*(4), 253–267. doi:10.1002/psp.544