


RESEARCH ARTICLE

Global Financialization and Local Labour Acquisition in China's Platform Economy

Hao Zhang 

Renmin University of China, Beijing, China
Email: zhang-hao@ruc.edu.cn

Abstract

The emergence of digital platforms has been viewed in scholarly narratives as a “technological fix” of global capital, to use Beverly Silver’s classic term. That is, capital continues to devise innovative strategies to restructure the labour process and avoid employer legal liabilities. This study reveals an important but somewhat overlooked “financial fix” aspect of the platform economy. Through a case study of a Chinese food delivery platform, the author shows that global speculative capital and its cash-burning games have generated a form of market-value fetishism in this sector. In response, platform companies have devised innovative labour acquisition strategies to expand their market share that have profoundly shaped the work and employment dynamics within the sector. In particular, the platform companies engaged in a subsidy rivalry with their competitors in order to attract crowdsourcing/gig workers for their regular services and at the same time established a highly structured subcontracting system to secure a more reliable and committed workforce to target the relatively high-end consumer market. The author argues that the interaction between global financialization and local capital’s strategic choices accounts for the peculiar structure and employment dynamics in the Chinese platform economy.

摘要

数字平台的崛起在学术叙事中被视为全球资本的一种——以贝弗里·西尔弗的经典概念来概括——“技术调整”策略，即资本通过持续开发创新策略来重构劳动过程并逃避其雇主义务。本研究揭示了平台经济的一个重要但常被忽略的“金融调整”的侧面。通过对一家中国外卖平台的案例研究，作者发现全球投机资本以及它们的“烧钱”策略在这一行业创造了一种“市值崇拜”的价值观。平台企业因此设计出了创新的劳动力获取策略以扩大其市场份额，这又深刻地影响了行业中的工作和就业状况。特别是，平台企业同其竞争者通过补贴大战来吸引零工众包工人，同时又建立了一个高度结构化的承包系统来确保获得一支更加稳定和忠诚的劳动力队伍，以服务于相对高端的市场。作者认为：全球金融化和地方资本的策略选择的互动解释了中国平台经济所特有的组织结构和雇佣张力。

Keywords: platform economy; gig work; financialization; labour acquisition; China

关键词: 平台经济; 零工工作; 金融化; 劳动力获取; 中国

The Chinese platform economy has followed a distinctive development trajectory. The predominant feature of its business model is the establishment of a complicated sectoral structure for the organization of labour which involves multiple layers of organizational agencies. This is in comparison to the extensive, if not exclusive, use of gig workers, which dominates the Western model of platform-based sectors.¹ Scholars have documented platform companies’ massive use of labour agencies and subcontractors in the Chinese ride-hailing, food delivery, professional chauffeuring and other service businesses within this sector.² This phenomenon is astonishing given that the digital platform

¹ Katz and Krueger 2019.

² Lei 2021; Sun, Chen and Rani 2023.

economy has established its reputation as a novel business model based on its massive use of gig work instead of traditional employment relationships and organizational bureaucracies.³ Moreover, although scholars have reported this China-peculiar platform structure in ethnographic narratives, using it as an ideal setting for comparative research,⁴ or drawing on it to account for workers' experiences and resistance,⁵ no major study has attempted to delve into its emergence and clarify the underlying capitalistic rationale. The research question of why a sophisticated labour acquisition strategy, which consists of a remarkable component of traditional labour outsourcing tactics, has been formed and widely adopted by Chinese platform companies remains unanswered.

Scholars have viewed the emergence of platform-based gig work from the perspective of capital's technological fix.⁶ That is, capital continues to revolutionize the production process in order to upgrade the capitalist mode of accumulation.⁷ This restructuring process has gradually diminished internal labour markets and reduced employment security for workers.⁸ The platformization process continues those efforts, using platform-based gig work to break organizational boundaries and avoid employer legal liabilities.⁹ Sociological and management literature has, very often from the labour process theory perspective, vividly revealed how platform capital has developed new IT-empowered techniques to manage gig labour and control its labour process.¹⁰

This technological fix theme of scholarship provides great insights but fails to reveal the entire capitalistic architecture on which the platform economy hangs. This study uses the same analytical framework employed by Beverly Silver and deciphers the rationales underlying the above-noted Chinese idiosyncratic path.¹¹ Through ethnographic field research on the platform-based food-delivery industry, I argue that the global financialization of the IT sector has generated a market-value fetishism in the Chinese platform economy, which in turn has profoundly shaped the Chinese platform companies' labour acquisition strategies. In particular, global venture capital's investment in the IT sector has been made with the mixed motivations of both patience and impatience. On the one hand, its impatience is evident in its speculative nature and its aggressive, adversarial influences on investees' operational and managerial practices with the imposition of short-term value-creation targets, as suggested in literature.¹² On the other hand, it is patient enough that it allows platform companies to focus on market expansion in earlier development stages, which is very often achieved at the cost of short-term profitability. As a result of this market-value fetishism, platform companies have developed a complex workforce structure, which comprises both individualized gig work (crowdsourcing) and organization-based labour outsourcing, in order to expand their market share in a most cost-effective way. In particular, they use the received venture capital to heavily subsidize drivers, as well as consumers, in order to attract gig workers, and they rely on a relatively asset-heavy structure of labour outsourcing to secure a more stable and committed workforce to fulfil orders from high-end, demanding customers.

This study makes two important contributions. First, it reveals a financial-fix aspect of the platform economy. While most scholarship on the Chinese platform economy has focused on tactics and dynamics at the local level,¹³ I propose that the nature of global venture capital accounts for some of the strategic choices of platform companies. It is the interaction between global venture

3 Friedman 2014; Sundararajan 2016.

4 Lei 2021.

5 Liu and Friedman 2021; Sun, Chen and Rani 2023; Huang 2023.

6 Silver 2003.

7 Dyer-Witheford 2005.

8 Standing 2011.

9 Friedman 2014.

10 Gandini 2018; Kellogg, Valentine and Christin 2020; Rahman and Valentine 2021; Maffie 2022.

11 Silver 2003.

12 Hall and Soskice 2001; Appelbaum and Batt 2014.

13 Lei 2021; Sun, Chen and Rani 2023; Liu and Friedman 2021.

capital and the local platform capital that results in the peculiar structure of the Chinese platform economy and thus further shapes platform workers' experiences. Second, global venture capital in the platform economy demonstrates the possibilities that come with short-term patience, which goes beyond the traditional dualistic scheme that often categorizes global venture capital wholly as impatient capital.

Beyond the Technological Fix?

Beverly Silver defines four strategies that are often used to resolve the capitalist crisis of profitability: the technological fix, spatial fix, product fix and financial fix.¹⁴ For the technological fix, capital has continuously engaged in innovation to refine the way the capitalist production process is organized. The current trend of "Uberization" represents one of global capital's latest technological fixes. This conclusion is drawn from the examination of two interrelated themes in literature studies of the gig economy, a historical materialism theme and a labour-process theme.

Historically, capital has embarked on continuous efforts to upgrade the mode of capitalist accumulation through restructuring the labour process,¹⁵ leading to various cycles of workplace reorganization.¹⁶ While modern bureaucratized corporations are believed to exist for the sake of reducing transaction costs in classic economic theory,¹⁷ technological advancements have continued to provide alternative solutions for minimizing transaction costs and uncertainty. For example, in the 1970s the development of information and transportation technologies enabled extensive inter-firm coordination on a global scale.¹⁸ Increased international competition prompted corporations to pursue flexibilization and the vertical disintegration of their businesses in a post-Fordist model.¹⁹ This new system replaced large bureaucratic organizations with firm networks, allowing corporations to maintain a relatively small inhouse space for their core businesses and employees only and outsource other products to external, specialized suppliers.²⁰ Changes in managerial tactics have followed the same flexibilization process and have included the use of temp agencies and independent contractors as well as labour outsourcing, leading to de-standardized employment relationships and reduced job security within organizations.²¹

Many would consider the current trend of work platformization as a continuation of this process. In his historical materialist analysis, Nick Srnicek views platform companies as economic agencies that, under market competition pressures, capitalize on digital technologies (particularly data) to expand market shares, generate profits and meanwhile restructure the relationships among capital and various groups (including producers, service providers, consumers and other types of platform users).²² With regard to labour-capital relations, market transactions are now fulfilled without traditional massive corporations, leading to a new accumulation system of "crowd-based capitalism."²³ This move has neutralized capital's need for internalized employment to organize the labour process. Platforms function as "shadow corporations" with a minimal group of core employees and a massive gig workforce.²⁴ Platformization obviously represents a technological fix geared towards further de-standardizing and upgrading the capitalist mode of accumulation to the next level.

14 Silver 2003.

15 Ibid.

16 Dyer-Witheford 2005.

17 Coase 1937.

18 Harvey 2001.

19 Jacobides 2005.

20 Piore and Sabel 1984.

21 Cappelli and Keller 2013.

22 Srnicek 2017.

23 Sundararajan 2016.

24 Friedman 2014.

Yet, without modern employment organizations and their human-resource management functions, what are the alternative strategies for retaining and motivating platform-based workers? Other researchers have sought to answer that question from a labour-process perspective. Scholars have described platform companies' innovative labour-control tactics, including economic incentives, the use of algorithms and customer/client monitor and evaluation.²⁵ The specific tactics that are employed vary across different platform types, but one thing remains consistent: capital has never loosened its control over workers but rather has just changed the format of its control. New tactics represent what is called "techno-normative" or "rational" control,²⁶ which is said to fulfil a wide scope of managerial functions in direction, evaluation and discipline in traditional organizations, but at the same time also inevitably triggers workers' resistance,²⁷ in either individual²⁸ or collective formats.²⁹

This scholarly narrative on the technological fix of platform capital focuses on the interaction and tension between platform companies and workers. My research, however, reveals important dynamics between global venture capital and local platform capital, which constitute a financial fix of global capital that has been largely absent in the literature addressing the platform economy.

Financial fix

Silver made a powerful argument to define capital's financial fix: "in periods of widespread, intense competition, capital has tended to shift out of trade and production entirely and into finance and speculation."³⁰ This strategy frees financial capital from dealing directly with labour conflict and eases the crisis of overaccumulation that capital once encountered in the Global North by capitalizing on the relatively underexploited resources in the Global South. In her book, Silver focuses on international loaning activities through private banks, investment funds and international agencies, which have developed rapidly on a global scale since the 1970s.

Financial capital has different faces, however. The capitalism literature distinguishes patient capital from impatient capital. Banks are relatively patient and offer long-term debts to firms, allowing them to build up capacity while calculating the return on investment within a longer timeframe.³¹ Entering the 21st century, financial capital shifted its point of reproduction gradually from the banking sector to the stock market and investment funds. These impatient capital examples feature "short-termism" and encourage corporate governance to prioritize shareholder value.³²

This growing impatience of financial capital has triggered adverse effects for modern workplaces. Firms' employment relations practices have also become short-term oriented.³³ Eileen Appelbaum and Rosemary Batt's study of private equities found that the typically excessive use of debt in deal structures has forced portfolio companies, which are ultimately responsible for debt repayment, to devise strategies that quickly increase cash flow in the short run.³⁴ For example, firms cut wages and benefits and reduce labour costs through layoffs, labour outsourcing or strategic bankruptcy; as a result, both jobs and incomes have become extremely unstable for workers.

25 Veen, Barratt and Goods 2020; Wu et al. 2019; Chan 2021; Rahman and Valentine 2021; Sun, Chen and Rani 2023; Maffie 2022.

26 Gandini 2018.

27 Kellogg, Valentine and Christin 2020.

28 Cameron and Rahman 2021.

29 Maffie 2020; Lei 2021; Liu and Friedman 2021.

30 Silver 2003, 40.

31 Hall and Soskice 2001.

32 Goyer 2011.

33 Gospel and Pendleton 2003.

34 Appelbaum and Batt 2014.

This study finds that venture capital is at the epicentre of the global financialization of the high-tech industry. Venture capital is a type of private equity that pays special attention to entrepreneurs – that is, investments that are extremely risky but highly profitable if successful.³⁵ The high-tech sector, and digital platforms with innovative business models in particular, has become one of the most lucrative sectors with remarkable inflows of hot money. In 2021, the entire “sharing economy” sector in China attracted over 213.7 billion yuan, which is equivalent to over US \$30 billion.³⁶ This study demonstrates that this type of speculative capital has peculiar preferences that differ from the stereotyped “impatient capital” in the literature and has exerted a profound impact on workers’ experiences on digital platforms.

Studying the Platform Economy in the Chinese Context

This study analyses the recently platformized food-delivery industry in China. The traditional individual store-based delivery service has been centralized and is run online through two major national platforms, Thirsty and Hungry.³⁷ Hungry possessed slightly more of the market share than Thirsty after acquiring Sleepy, which was once the third-biggest market player, in August 2017. But Thirsty soon surpassed the new Hungry, winning almost 46.2 per cent of the market at the end of 2017; Hungry controlled 45.95 per cent of the market by the time of my field research.³⁸ Although in competition with one another, the two platforms have adopted very similar business models that use both individual contractors and subcontractor firms that hire out their own delivery workers to work on their platforms. Either Thirsty or Hungry could serve as a representative case for the platform-based food-delivery industry in China and provide an important example in understanding the Chinese platform economy.

I engaged in a major research project on food-delivery workers in collaboration with Thirsty starting in 2017. Thirsty offered me complete autonomy and indispensable assistance, including access to an inside view of the industry and the opportunity to conduct field research with important stakeholders in its business. Fieldwork was first carried out at Thirsty’s Beijing headquarters, where I conducted interviews with 14 managers from various departments of the company. This step helped me to clarify the platform’s business model and create a sampling strategy. With access granted by Thirsty’s headquarters, I next visited Beijing, Suzhou 苏州市, Xiamen 厦门市 and Danyang 丹阳市 to assess the situation in different cities across China. I interviewed 45 delivery workers who were working under both crowdsourcing and labour outsourcing models and observed their work routines. I also interviewed 26 subcontractor managers and site leaders, 12 restaurant owners/managers and 15 consumers. In total, 112 people were interviewed; the interviews clarified the experiences of delivery workers from multiple perspectives. A major survey was then undertaken. With the help of Thirsty’s headquarters, questionnaires were sent to workers, matching questionnaire recipients with internal data provided by Thirsty. An innovative dataset with 37,817 valid respondents was ultimately constructed. Of these respondents, 39.1 per cent were outsourced labour and 60.9 per cent were crowdsourcing workers. Some descriptive analysis of this dataset is presented in this paper. Although the study focuses on Thirsty, I also conducted several interviews with Hungry in order to compare the business models of the two companies. I have continued observing the development of Thirsty and the food delivery industry in general and conducted a number of supplementary interviews and informal conversations with managers for updated information while compiling and revising this paper from 2020 to 2023. As supplementary information, some of my

35 Gompers and Lerner 2001.

36 State Information Centre 2022.

37 Pseudonyms are used throughout the paper.

38 See “Trustdata: 2017 nian Zhongguo yidong hulianwanghangye fazhan fenxi baogao” (China mobile internet industry development analysis report, 2017). *Sohu.com*, 26 January 2018, https://www.sohu.com/a/219143802_483389. Accessed 10 December 2022.

findings are supported by my earlier research on the ride-hailing industry in which I studied Uber (China) and Didi.

It is worth noting that Thirsty's willingness to facilitate this study's research was the result of a collaborative project between the author's research team and the company, the aim of which was to learn about its workers' experience with the platform and thus improve its business model and service quality. It was mutually agreed that the author would be permitted to use the data from the project to carry out wholly independent research without any censorship or interference on the part of Thirsty.

The setting

In the past, the food-delivery sector in China was decentralized and underdeveloped. Only a small proportion of restaurants offered a delivery service, which was usually carried out by their own delivery workers. It was not until 2013 that the sector began to centralize. The emergence of three major platforms, Hungry, Thirsty and Sleepy, fundamentally restructured this sector in China. Wherever the platforms expanded, restaurants stopped offering their own delivery services and moved to an online platform. Restaurants that previously did not offer a delivery service could now expand into that market without hiring a delivery crew of their own. Even more radically, many restaurants moved to function solely as platform-based businesses without offering any in-store service.

This significant development generated an entirely new workforce of approximately a million workers who specialized in food delivery through online platforms. The industry's transaction totals increased from 21.7 billion yuan in 2011 to 241.4 billion yuan in 2018, as the number of total consumers increased from 63 million to 356 million people.³⁹ By the end of 2017, Thirsty had expanded its business to more than 2,800 cities and counties in China, fulfilling orders for 24.9 million monthly-active customers via the labour of more than 531,000 daily-active delivery workers. This volume and success have made Thirsty the world's largest food-delivery service provider.

Financial Fix of Global Venture Capital

Typically categorized as "impatient capital," venture capital focuses on high-risk and high-return start-ups and invests in emergent businesses that show strong promise in fast expansion. Venture capital can be broadly defined as a type of private equity, although it is different from what is described in the literature.⁴⁰ Venture capital in the platform economy typically does not seek to buy out a portfolio company nor does it seek to take over the operation of a company, although it may provide different kinds of support for a company's development when necessary. Venture capital expects to benefit from the growth of a company in a reasonably short period, with the ultimate goal being an IPO (initial public offering) or M&A (merger and acquisition). In 2017, a total annual global venture funding of US\$164 billion, almost 50 per cent growth from the previous year, was invested across 11,042 deals.⁴¹ Digital platforms with innovative and promising business models have become an appealing arena for this money.

Figure 1 illustrates a typical venture capital financing process within the high-tech sector. As shown, venture capital becomes involved in a business cycle relatively early. Once there is an

39 See "2017–2018 Zhongguo zaixian canyin waimai shichang yanjiu baogao" (2017–2018 Report on the online food delivery market in China), 4 April 2018, <https://www.163.com/dy/article/DF7BVQ2P0511A1Q1.html>; "2018–2019 Zhongguo zaixian waimai hangye yanjiu baogao" (2018–2019 Report on the online food delivery industry in China), 15 May 2019, <https://www.163.com/dy/article/EF89RFO00511A1Q1.html>. Accessed 1 December 2023.

40 Appelbaum and Batt 2014.

41 See "Venture capital funding report, 2017." *CBInsights*, 10 January 2018, <https://www.cbinsights.com/research/report/venture-capital-q4-2017/>. Accessed 10 December 2022.

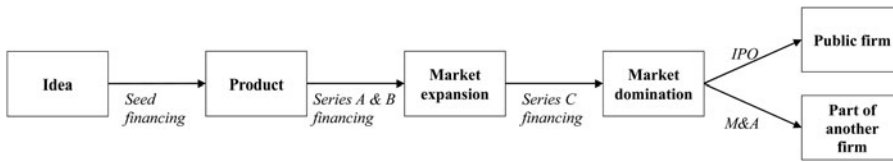


Figure 1. An Illustration of the Financing Process of a Platform Company

idea, seed funding (sometimes called angel funding) is sought to launch an entrepreneurship, crystallize the idea and transform the idea into products. A promising product can secure several rounds of funding from different investors as the entrepreneurship grows and engages in product refinement. In an ideal scenario, the developed idea helps a firm to overshadow its competitors and dominate the market, resulting in financial market privileges that may include an IPO to become a public firm, or acquisition by another firm.

Figure 1 is only illustrative; the actual financing processes of high-tech firms can be much more complicated. Table 1 summarizes Thirsty's financing history and the key restructuring events and corresponding labour acquisition strategies during this period as its business model developed in response to the financing needs of different stages. In total, Thirsty received eight rounds of financing from 2010. The company merged with a major competitor, Weary, in 2016. The market value of the old Thirsty and the new Thirsty–Weary (Thirsty hereafter) has expanded rapidly ever since, representing a miracle of financialization. Venture capital received a large return in this case; the earlier a financier entered the picture, the larger the reward received relative to the size of the investment. On 20 September 2018, Thirsty debuted on the Hong Kong Stock Exchange and raised US \$48.3 billion by the end of the day.

It was only at this moment that the public were able to see a relatively comprehensive picture of Thirsty's shareholding structure. Its top investors, except for two founders, by then included Tencent, TMF (Cayman) and Sequoia Capital (US), all of which operated on a global scale. However, tracing the places of origin of venture capital in more detail can be extremely complicated. Tencent, as Thirsty's top one shareholder, appeared to be a Chinese high-tech company, but indeed, at the time of writing, has Prosus V.V. (South Africa), the Vanguard Group (US) and Norges Bank Investment Management as its top shareholders.⁴² When capitals with different places of origin expand their businesses on a global scale, they tend to follow similar speculative rules and therefore can be broadly categorized as global capital.

Venture capital investments are not always as lucky. Only two major platform companies have survived in the food-delivery market. The second company, Hungry, purchased Sleepy in August 2017 for US\$500 million and then was itself acquired by Alibaba for US\$9.5 billion in February 2018. Many more competitors of Thirsty and Hungry were eliminated from the market during this process. Approximately 90 per cent of technology start-ups fail eventually.⁴³ Investors lose money in most portfolio companies that they fund, but when they succeed with a company such as Hungry or Thirsty, the return on investment is considerable.

Market-value fetishism

Although venture capital does not seek direct control over the firms in which it invests, this does not mean that venture capital preferences are not considered in a portfolio company's daily operations.

42 See "Tencent Holdings Limited." *Market Screener*, <https://www.marketscreener.com/quote/stock/TENCENT-HOLDINGS-LIMITED-3045861/company/>. Accessed 20 July 2023.

43 See "Why 90% of start-ups fail: INFOGRAPHIC." *Mashable*, 4 February 2013, <https://mashable.com/2013/02/04/why-startups-fail/>. Accessed 10 December 2022.

Table 1. Thirsty's Financing History and Key Business Events

Year	Thirsty			Weary			Key Events and Business Targets	Labour Acquisition Strategies
	<i>Financing rounds</i>	<i>Newly added investment</i>	<i>Market value estimated</i>	<i>Financing rounds</i>	<i>Newly added investment</i>	<i>Market value estimated</i>		
2006				A	1 million			
2007				B	4 million			
2010	Angel							
	A	12 million						
2011	B	50 million		C	100 million			
2012				D	60 million			
2013							Thirsty food delivery service launched	Stage I: self-operated sites and subcontractors as the dominant strategies for labour acquisition
2014	C	300 million		E	400 million		Market cultivation	
	D	700 million	7 billion			4 billion		
2015				F	850 million			
2016	E (merger)	3.3 billion	18 billion				Market segmentation	Stage II: expansion of crowdsourcing while maintaining the other two models as a market segmentation strategy
	Strategic							
2017	F	4.4 billion	30 billion					
2018	IPO		48.3 billion					
Post- 2018							Cost reduction	Stage III: gradually reducing self-operated sites and eventually selling all of them to subcontractors

Note: The table is compiled by the author based on data collected in field research; missing values are either unavailable or not applicable; numbers are calculated in US\$.

In order to attract more investment, a start-up must make a compelling case to potential investors about why its business represents a promising model. This imperative has generated what I call here “market-value fetishism.” In Marx’s terminology, fetishism is used to depict market economies’ crazes for, and one-sided attention to, the value of commodities, money and capital. These material properties have concealed the complex, human-to-human relationships underlying the capitalist production systems and, in particular, the process in which value is actually created by labour.⁴⁴ Here, I borrow the term “fetishism” to describe the capital markets’ worship of investees’ market value in platform capitalism. Investors use it as the sole indicator of the materialist value of a platform company, regardless of how this value is generated, if any additional value of a firm deserves equal attention, or the legitimacy of the distribution of wealth yielded in this process.

Start-ups must demonstrate to investors that the company’s market value will continue to grow rapidly, because market value will be reflected in the capital market eventually, where investors can finally cash out. Open market valuation of private firms, especially technology start-ups and service platforms, is difficult because these companies tend to assume a lean platform business model that is operated on minimal physical assets.⁴⁵

Profitability and market share are two important measures of a platform company’s market value in this context. However, these foci often conflict with one another in an emergent sector where the consumption habit is still under cultivation and consumers are not loyal enough to any service provider. As dominating the market will significantly inflate the market value of a platform, expanding market share has become the paramount goal, to the extent that short-term profitability and immediate returns can be sacrificed. Typically, venture investors have the patience to wait until the market is transformed from a competitive oligopoly to a duopoly (or, ideally, a monopoly) and platforms are ready to be sold or launch an IPO.

On the demand side, in order to increase market share and defeat competitors, a platform company very often chooses to subsidize consumers heavily in order to buy their loyalty. This is often a cash-burning strategy because retaining users is a particularly difficult task in the platform economy. Major competitors often provide undifferentiated services, and consumers’ transaction costs for comparison shopping are extremely low. Therefore, platform companies are well aware that “all numbers are just numbers on paper, until the war is over,” in the words of an interviewed manager, “until the war is over” translating to until only one player dominates the market.⁴⁶ According to another interviewee:

Investors are not directly involved in the daily operation and management of ours. The founding team has full control over our firm. But we all know what investors want. The round-after-round fundraising pushes you to keep expanding the market, and you cannot make a mistake.⁴⁷

Labour Acquisition Strategies of Local Platform Capital

On the supply side, an integrative employment scheme has been developed and geared to acquiring a stable and reliable workforce in order to cater to the needs of rapid business expansion. In particular, crowdsourcing and labour outsourcing are strategically combined as parallel approaches to labour acquisition. In this section, I first track the development trajectory of Thirsty’s business model and then use qualitative and quantitative data to show how labour is acquired in each model.

⁴⁴ Marx 1990[1867].

⁴⁵ Srnicek 2017.

⁴⁶ Interview with a manager, Thirsty headquarters, Beijing, November 2017.

⁴⁷ Interview with a manager, Thirsty headquarters, Beijing, December 2017.

Evolution of the labour acquisition strategies

As shown in Table 1, Thirsty's strategies of integrating different labour acquisition models vary across its three development stages, divided by two milestone financing events, namely the merger with Weary as the market competition with Hungry went drastic in 2016, and the new company's IPO in 2018. Thirsty was tasked with distinctive business expansion missions in each of the three stages as it continued to collect money from global capital, and the platform company kept refining the way it combined different labour acquisition strategies in order to meet those targets.

The first stage (2013–2016) focused on market cultivation. As the online food-delivery market was highly immature, a priority shared by many digital platforms was to cultivate consumers' habits of ordering food online and delivery workers' habits of using platform-provided services. Most platforms, including Thirsty, adopted a similar strategy to quickly expand into different tiers of cities. By using a combination of platform- and subcontractor-employed workers, the platforms ensured that their businesses grew in an organized manner and that their service quality was under control.⁴⁸ By 2016, Thirsty had established more than a hundred self-operated sites in core business areas of first- and second-tier cities to organize self-employed workers to work full-time on its platform. Meanwhile, it allowed subcontractors to operate many more sites in other urban areas. Most platforms chose not to rely heavily on crowdsourcing workers at this initial stage because this new employment model was "subject to market fluctuation" and was "difficult to control." Therefore, it was "unable to serve the expansion strategy at this stage."⁴⁹ Platforms often failed to guarantee a minimum number of delivery orders that a crowdsourcing worker could receive and thus found it difficult to retain these workers as they were easily enticed away by competing platforms. Furthermore, most platforms were not able to monitor crowdsourcing workers' behaviour effectively because of a lack of experience in managing the platform economy.

The second stage (2016–2018) was characterized by market segmentation. As the online food-delivery market became saturated, digital platforms were subject to more intense competition. To attract and retain consumers, who maintained very little loyalty to any single service provider, platforms were under pressure to differentiate. Thirsty adopted a strategy of market segmentation – that is, it offered a premium service to those who were willing to pay more and charged less for a lower-quality service and longer waiting time. Thirsty strategically combined three employment models to accommodate these different customer demands. It targeted the high-end segment using self- and subcontractor-employed workers who were able to provide high-quality and reliable services. Meanwhile, Thirsty sought to extend its businesses into smaller restaurants and lower-end customers, which was the last untapped market at that time. To achieve this last goal in the most cost-effective way, Thirsty invested enormous resources in expanding its crowdsourcing model. Since 2016, the crowdsourcing model has grown rapidly, becoming comparable to the other two models in the total number of orders fulfilled. This segmentation strategy was very successful and Thirsty outperformed its major competitors and became the industry leader. The food-delivery sector has since transferred from a competitive market with hundreds of national and local platforms to a duopoly between Thirsty and Hungry.

The third stage started with Thirsty's initial public offering in the Hong Kong Stock Exchange in 2018. After going public, Thirsty was under more pressure to create value for its shareholders rather than just for the venture capital, prompting it to adopt a business strategy aimed at cost reduction. "The high costs and problems with managing self-employed workers became salient by then, which

48 Workers in the platform company's (once-existing) self-operated sites are called self-employed workers in this research to differentiate them from subcontractor employees. Self-employed workers were under a triangular, labour-dispatch arrangement in which the temp agencies were their contractual employers, while platform companies were the actual labour users. Different from subcontractor workers, who are employed and managed by the subcontractor firms, dispatched workers are under the direct control and management of the platform's own sites and, legally speaking, the platform company assumes joint liabilities with the temp agencies for workers' labour rights.

49 Interview with a manager, Thirsty headquarters, Beijing, December 2017.

led to difficulties expanding the market.”⁵⁰ To mitigate operational costs and reduce its span of control, Thirsty gradually sold its self-operated sites to its subcontractors. By 2022, there were no platform self-operated sites left. Today, Thirsty primarily relies on subcontractor employees (labour outsourcing) and crowdsourcing workers to complete its delivery tasks. These two labour acquisition strategies have different rationales in attracting workers and securing their time commitment to the platform, to which I now turn.

Crowdsourcing and economic incentives

Approximately half of Thirsty’s active food delivery workers came under the crowdsourcing system by 2018.⁵¹ Like Uber drivers and MTurk freelancers, these delivery workers work individually on the platform, receive orders through the worker app, follow the recommended routes and additional instructions from the app, and deliver the food within a short and specified time limit.

Platform companies use a variety of algorithmic tactics to manage and motivate crowdsourcing workers, as is well documented in the literature.⁵² With regard to attracting workers, however, there is a limited toolkit aside from economic incentives offered through a cash-burning subsidy rivalry (*butie dazhan* 补贴大战) among competitors. The subsidies are issued in the form of “red envelopes” (*hongbao* 红包) and various bonuses to both workers and consumers. The rivalry in subsidies has generated inflation for both the demand and supply sides of the labour market. In a typical case, consumers pay only 4–6 yuan for the delivery of a food order yet receive a random red envelope containing 1–8 yuan or sometimes a “free delivery” offer. Artificially reducing the price (through subsidizing customers) creates a bubble on the demand side of the market. To fulfil that demand, platforms also subsidize workers in order to increase the labour supply. A delivery worker receives 7–9 yuan per order during peak hours, which is supplemented by various additional bonuses for good performance, extreme weather or some other reason. This huge gap is not covered entirely by the platform though. Restaurants are required to share that cost, with their contribution ranging from 15 to 20 per cent of each transaction; the platform companies, however, cover a great proportion of the subsidies.

The result is a major labour market distortion. In classic economic theory, firms’ pursuit of profit maximization should lead to equilibrium in a competitive labour market: $MPV = W$ (the marginal product value of labour is equal to the wage). Through subsidies, however, the result is that $W > MPV$. In other words, workers earn more than they would otherwise in a non-subsidized sector. Investors foot the bill for this inflation. In fact, the rise of the food-delivery industry may have temporarily averted a potential unemployment crisis in the Chinese labour market following the overall economic downturn in China in recent years: 19.9 per cent of our survey respondents reported transferring from the manufacturing and construction industries to food delivery.

However, eventually companies must profit in order to continue. When the market regains its economic rationality after major competitors are knocked out, the monopoly very soon ceases to offer any subsidies. The platform is then re-gearred to enhancing profitability. Thus, market inflation is at best a short-run carnival, and workers must be prepared for three adverse effects in the long run. First, mass unemployment in the sector would be expected to occur. Second, and relatedly, the wage premium that workers in this sector enjoy will disappear. Here, a classic economic prediction stands: wage premiums attract huge numbers of workers into the sector. After the market returns to equilibrium, however, many workers will lose their jobs or voluntarily quit. Those that choose to stay will have to accept lower pay. The third adverse effect is that almost all remaining workers must expect this income decline in the long run.

50 Interview with a manager, Thirsty headquarters, Beijing, November 2022.

51 Crowdsourcing workers now account for about 70% of the total workforce in Thirsty. A manager ascribed this to the job autonomy and higher income that crowdsourcing offers workers. Interview with manager, Beijing, July 2023.

52 Wu et al. 2019.

As Thirsty and Hungry are still “at war,” the food-delivery sector is still being heavily subsidized. But these adverse effects have already become salient in the ride-hailing industry. In the years 2015 and 2016, when the ride-hailing industry was fiercely competitive in China, Uber and Didi engaged in an intense rivalry over the subsidies they offered. During that period, subsidies accounted for up to 90 per cent of a driver’s total weekly income. Many migrant workers quit their jobs in factories and bought a car to drive for Didi or Uber. Some earned back what they paid for the car within a few months. But after acquiring Uber (China) in August 2017, Didi soon ceased subsidizing the sector. Many drivers quit, and those who stayed found their income significantly reduced. Today, both the prices charged to passengers and the wages paid to drivers are comparable to those for traditional cabs. It is noteworthy that in the food delivery industry, the subsidy tactic has been less frequently used since major competitors started to suffer more financial pressures – roughly around 2018, when Thirsty launched its IPO and Hungry was purchased by Alibaba, another public firm.

In addition to economic incentives, a proportion of workers are also attracted by the autonomy and work flexibility offered by the crowdsourcing model. People who have household responsibilities or other formal employment can earn supplementary income through the platform. According to our survey, 60.8 per cent of crowdsourcing workers work part-time, i.e. they have at least one other source of income. By working an average 3.2 “with-order” hours (plus considerable waiting time) per day and fulfilling 226 deliveries a month, the delivery job pays 2,203.4 yuan a month on average.⁵³ Time flexibility was reported as the primary motivation for 43.7 per cent of the group who worked under the crowdsourcing model.

Yet, for those who work full-time on the platform, delivering food as their sole source of income, no flexibility should be expected in order to earn a decent monthly pay. Full-time workers received 4,670.7 yuan a month on average according to our 2018 survey. This was a substantial income compared with the minimum wages offered across Chinese cities, very few of which exceeded 2,000 yuan a month in 2017. Full-time is based on more than 5.1 with-order hours of non-stop work (plus waiting time) every day, however. Online hours are from 10.00 am to 9.00 pm for a typical full-time worker or even earlier, with a 6.00 am start for breakfast hours and/or later, to 3.00 am the next day to extend into the midnight snack hours.

Labour outsourcing and organizational discipline

Labour outsourcing is the second model used by food delivery platform companies to secure their labour supply. Thirsty works with business subcontractors who hire delivery workers as their own employees but fulfil orders from the platform. The rationale is that the relatively high-end market is more demanding in terms of service quality, but platform companies often find that their crowdsourcing workers are unable to guarantee timely and skilful delivery. Formal employees are more committed and reliable than crowdsourced workers to both their organization and the platform. The platform only assigns them orders that fall within a particular area (at a maximum distance of approximately 3.5 kilometres as the crow flies), which is entirely subcontracted by their company. This system makes it easier for the platform to control workers and thus ensure a better-quality service. Subcontractors recruit workers through agencies as well as via peer introduction, with a commission from 500 to 800 yuan/person, which is up to ten times as much as the bonus for a peer-introduction of a crowdsourcing worker.

The commitment of these workers is gained through the organizational discipline of the subcontractors. The first disciplinary tactic is to use organizational rules to secure workers’ time commitment. Workers are required to be online at least eight hours every working day and, within those hours, they must accept whatever orders are assigned to them by the system. In addition, the eight

⁵³ With-order hours are defined as the time period when workers are fetching or delivering an order; total online-hours consist of with-order hours plus the waiting (without-order) time.

hours must cover the two-hour lunch time (11.00 am–1.00 pm) and another two hours at dinner time (5.00 pm–7.00 pm) to ensure a sufficient labour supply during these peak hours. A typical work schedule is from 9.30 am to 2.00 pm, resuming again at 4.00 pm until 9.00 pm. Many workers also choose to work during the breakfast hours (6.00 am–9.00 am) and/or the midnight snack hours (10.00 pm–2.00 am); in reality, workers' actual online hours can add up to more than 8, including 6.5 with-order hours.

The second tactic for securing workers' organizational commitment is teamwork. Subcontractors divide workers into sites, with 20–30 workers in each. Workers work independently but teamwork allows for mutual assistance as needed. Subcontractor workers cannot decline any order that the system assigns. If a worker is assigned too many orders to fulfil concurrently or is in a traffic accident, that worker can request to transfer some orders to other team members. Usually one worker posts an order-transfer request in the team workgroup chat and a teammate who is conveniently in the same area may choose to take it. If, in very rare cases, no one within the team takes that order, the site manager can assign it through a monitoring system. This system is provided by the platform and allows site managers to monitor the real-time location, status and travel routes of all workers.

The third strategy is the site members' morning meeting, which serves as a quality control mechanism. Platforms have standardized the format of morning meetings so that they are very similar across subcontractors. A morning meeting is usually scheduled between 9.30 am and 10.30 am, just between the breakfast peak and the lunch peak. The meetings cover supervision and discipline matters. Workers must attend in platform-issued uniforms and clean and sterilize their warm boxes following standardized procedures during the meeting. This seemingly simple one-hour meeting is indispensable for imposing discipline, standardizing and improving services, and reinforcing workers' commitment.

Finally, economic incentives are also used by subcontractors – mostly as a disciplinary rather than reward mechanism. The platform makes deductions from the commissions of subcontractors who have received customer complaints and/or have been responsible for severely late deliveries. Subcontractors typically pass on the consequences of a complaint to the relevant employee(s) – a customer grievance can result in as much as a 500-yuan penalty. By 2018, the overall monthly income for a subcontractor worker was 4,380 yuan on average, compared to a full-time crowdsourcing worker's average monthly income of 4,670.7 yuan.⁵⁴ However, as employees of subcontractors, subcontractor workers have better, albeit limited, job and income security compared to their crowdsourcing counterparts.

Indeed, many of Thirsty's workers began their careers with a subcontractor firm, which offered them relatively favourable conditions in which to accumulate skills and experience, including on-the-job training and mutual assistance opportunities during the first few months. But afterwards they quit to become crowdsourcing workers for the higher income and greater work autonomy. One interviewee explained:

I worked there [in a subcontractor firm] for a while, and then transferred here to work independently. I had never done this [work], so I [was able to] familiarize myself. But it is not free there. Here, it is just more pay for more work; no matter how much I earn, it is down to me. Many of us came from subcontractors, mainly because of the time flexibility of the crowdsourcing model here, and the daily payment. Subcontractors have a lot of management and constraints, and you get paid monthly.⁵⁵

Many interviewed subcontractor managers shared similar observations and were concerned that their firms are considered as *de facto* "training institutes" for the industry.

54 Chan 2021; Huang 2023.

55 Interview with a crowdsourcing worker, December 2017.

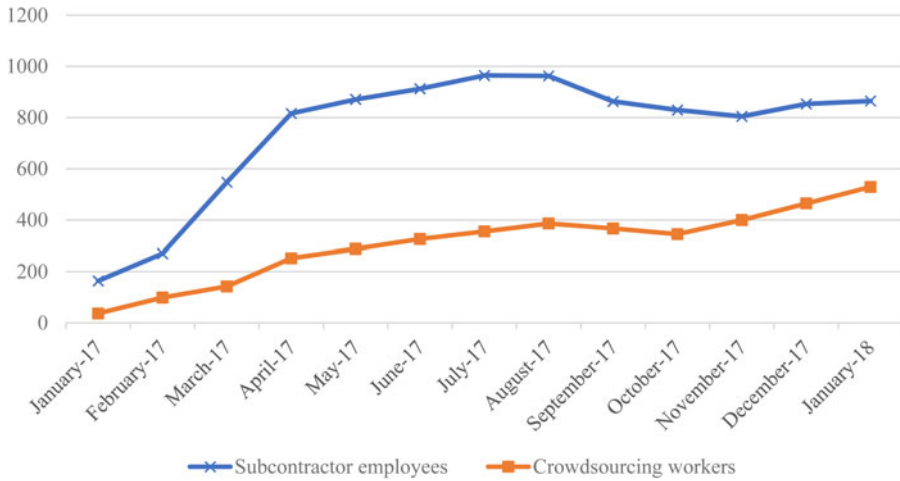


Figure 2. Number of Monthly Deliveries over a Year of Work

Obviously neither model has been successful in stabilizing the workforce in this sector. Our surveyed subcontractor employees worked for the platform on average for only 162.9 days; the crowdsourcing workers' average tenure was only 55.4 days longer.

Why is labour outsourcing indispensable?

Subcontractor employees demonstrated higher work efficiency than crowdsourcing workers. Figure 2 illustrates how average monthly orders increased over time within a 13-month period for the two groups of workers. As shown, subcontractor employees fulfilled more orders than their crowdsourcing equivalents. Moreover, the subcontractor employees, with the help of their teammates and site managers, rapidly improved their order-fulfilling capacity as their work experience accumulated. Within approximately three months, they achieved the average level of skilled workers. In contrast, crowdsourcing workers appear to have spent a much longer cycle building up their capacity. Note that both groups experienced a certain level of order boosts during July–August and January, the typical peak seasons of the food-delivery industry.

More importantly, subcontractor employees provide a more reliable service that the platform can count on. Economic measures (for example, increasing delivery fees and subsidies) often fail to incentivize enough crowdsourcing workers, especially during holidays, extreme-weather days and meal hours — all of which are peak times for the food delivery industry. In contrast, subcontractors can use organizational rules and discipline to compel their full-time delivery workers to fulfil orders during peak seasons and hours. A local manager revealed:

On a typhoon day, or say around the Spring Festival, no matter how much we increase our subsidies, they [crowdsourcing workers] do not come to work. So, in these cases, we rely on the subcontractors' services to supplement that labour shortage.⁵⁶

According to our survey, 61.2 per cent of subcontractor workers' daily orders were fulfilled during peak hours; the figure was only 52.9 per cent for crowdsourcing workers.

With regard to service quality, Figure 3 uses the on-time delivery (OTD) rate as a key indicator. For the same groups of workers, subcontractor employees achieved a very high OTD rate after two months

56 Interview with a local manager, Thirsty, December 2017.

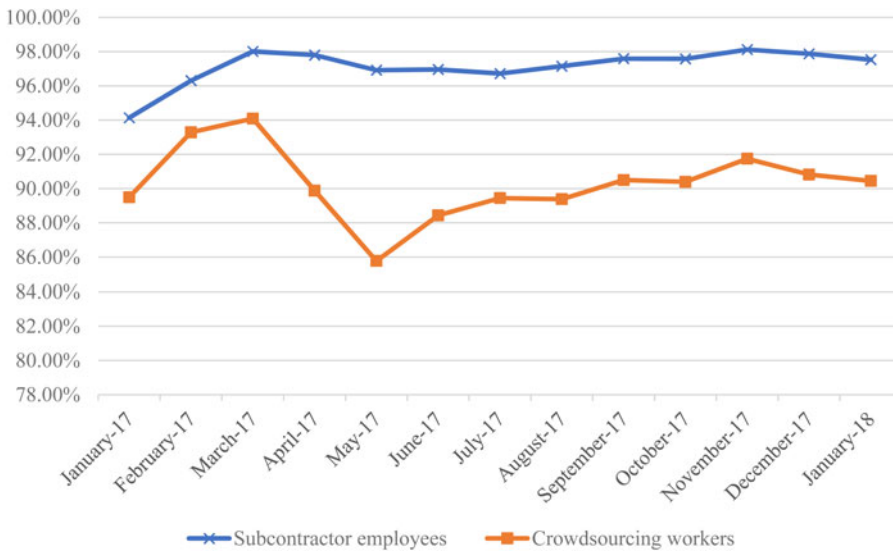


Figure 3. On-time Delivery (OTD) Rate over a Year of Work

and continued to maintain that standard in a consistent manner. Crowdsourcing workers, in contrast, generated a relatively low and very unstable OTD rate throughout the surveyed time period. The outstanding performance of subcontractor employees, along with the more standardized services they provide, creates higher levels of customer satisfaction than is the case with crowdsourcing workers. The survey revealed that at the beginning of 2018, subcontractor employees received “five-stars” for 97.2 per cent of deliveries and “one-or-two stars” for 1.6 per cent of deliveries; the corresponding numbers for crowdsourcing workers were 94.4 per cent and 3.8 percent respectively.

All in all, the combined approach to labour acquisition functions to help the platform companies to expand their market to all levels of consumers, with the aim of meeting global capital’s demand for market value maximization.

Discussion

This study of the platform-based food delivery sector reveals an important but often overlooked financial-fix aspect of the platform economy. I find that global financialization represents a new form of capitalistic financial fix and at the epicentre of this process is venture capital. Typically characterized as short-term oriented, impatient capital in the literature, venture capital is unique.⁵⁷ It has an obsession with the market value of its investment, for which profitability can be sacrificed temporarily. Venture capital bets on a portfolio company’s feasible future success, ultimately expecting to cash out its investment through an IPO or a merger and acquisition. It is tolerant of a certain level of money loss in the short run as long as the estimated market value of the portfolio company keeps expanding, thereby generating market value fetishism in the relevant industry. The cash-burning games of global capital appear wherever a traditional sector is platformized. The food delivery industry has followed a similar path to one that occurred a few years earlier, when venture capital heavily subsidized the ride-hailing industry to maximize market share and eliminate rivals regardless of cost.⁵⁸

This financialization process has profoundly shaped the labour acquisition strategies of local platform capital. In particular, platform companies have adopted an integrative approach to acquiring

57 Appelbaum and Batt 2014.

58 Wu et al. 2019.

labour, i.e. organizing individualized crowdsourcing workers and using relatively organized subcontractor employees simultaneously. The ways in which they attract these workers and engage their commitment are different. First of all, the companies enter into a subsidy rivalry with competitors in order to attract crowdsourcing workers. Although workers are attracted by wage premiums offered at the initial and fiercely competitive stage of an emergent sector, the heavily subsidized business model is simply unsustainable. Eventually, platforms must demonstrate profitability to investors. The reckoning typically occurs when one or two platforms start to dominate the market. Thus, the financialization process results in an unstable (and borderline unlawful) employment system for crowdsourcing workers. Workers inevitably suffer reductions in their income or job losses once competitors are eliminated and the remaining player(s) cease(s) the cash-burning game.

Second, the platform company relies on subcontractors to organize a more reliable and committed workforce to serve the relatively high-end market. The organizational bureaucracies of subcontractors provide a more discipline-centred approach to acquiring and managing labour. Compared with crowdsourcing workers, subcontractor employees constitute a relatively reliable workforce in that a subcontractor worker fulfils more orders per day and provides a more timely service, leading to better customer satisfaction on average.

These findings contribute to theory and policymaking in two significant ways. First, I draw scholarly attention in China labour studies from the idiosyncratic political economic context within the nation to important forces existing and shared globally. With some remarkable exceptions,⁵⁹ prior literature has by and large focused on domestic actors including the central and the local states, the official Chinese trade unions, labour NGOs and grassroots workers. On gig work, scholars have provided important insights into the power relationships between platform companies and workers – examining platform companies’ strategies for controlling workers,⁶⁰ and workers’ resistance to this control.⁶¹ This study ties these local dynamics to a global-level phenomenon, namely the financialization process. Global speculative capital is an integral part of the platform-based business model. The market-value fetishism it created in the platform economy has prompted local actors to engage in innovative strategies in response to drastic market competition, which holds profound implications for workers’ daily experiences on the platforms. Therefore, holding venture capital accountable over the platform economy and the various stakeholders embedded in it may be a reasonable policy goal to be addressed in global and local industrial governance.

That being said, global financialization has been working the platform economy around the world, but it has not necessarily resulted in a similar dualistic approach to labour acquisition elsewhere. I contend that it is the interaction between global venture capital and local platform companies in China, which are under drastic market pressures, that has led to the unique trajectory of development and sectoral structure of the Chinese platform economy. I agree with Srnicek’s economic-centric approach, which deems platform companies to be the key driving forces that devise innovative business strategies to generate profits.⁶² In this research, I additionally highlight the invisible global capital that sits behind the platform capital and the goals and constraints it imposes on local platform companies. The uniqueness of the Chinese case complements Srnicek’s contextless approach that by and large sees platform capitalism as a replicable business model across national boundaries.

Relatedly, an open question may be raised as to the state’s role in reshaping this process. As the Chinese state has become increasingly proactive in regulating the private sector of high technologies,⁶³ it may have the potential to serve as a counterforce against the negative impacts of global

59 Hui and Chan 2016.

60 Chan 2021; Sun, Chen and Rani 2023; Huang 2023.

61 Lei 2021; Liu and Friedman 2021.

62 Srnicek 2017.

63 Pearson, Rithmire and Tsai 2021.

financialization as well as the growing precarity of platform-based workers that concerns researchers.⁶⁴ While it is not the central focus of this research, I have closely followed the state reactions to the fast development of the Chinese platform economy in the past decade. Prior to 2021, a largely laissez-faire approach was adopted by the state. Ever since 2021, several active responses of the central government have marked a period of conservative intervention, including a series of admonitions from the state on the high commission rates of platform companies and the lack of transparency in the formation of these rates, and a regulation in 2022 that requires platform companies to demonstrate algorithmic transparency to the public. A milestone regulation directly related to labour protection was issued by eight central ministries in 2021. This regulation is aimed at protecting the rights and interests of platform workers, but it also legitimizes the dualistic employment structure that is prevalent in the Chinese platform economy by using a classified governance approach (*fenlei zhili* 分类治理) to labour protection. In this governance model, crowdsourcing workers are deemed to be non-employees of platform companies. It has become apparent that the state refuses to contemplate possibilities to regulate the gig economy in a progressive manner, i.e. within the traditional, standard employment relationship framework. This relative conservativeness is generally owing to the combined influence of the economic recession during the pandemic and the national strategy to prioritize job creation (*jiuye youxian* 就业优先) in light of post-pandemic economic recovery needs. All in all, the state's strong intervention in the private high-tech sector is unlikely to become a countervailing force for addressing platform workers' precarity.

Finally, this study presents a more sophisticated understanding of speculative capital. Different from the dualistic analysis of capital as either patient or impatient that is often seen in the literature,⁶⁵ the case here represents a possibility where venture capital demonstrates a certain level of short-term patience. This is a unique feature of the platform economy, where customer commitment is very low and switching across competing platforms has relatively low costs, leading to an unstable market share for any platform company. Therefore, a primary goal at the initial stage of a platform's development is to dominate the market, which often is achieved at the expense of short-term profitability and the stability of the labour market.

Conclusions

This study advocates the financial fix of capital as an important theme in the scholarly narrative on platform capitalism. Although not directly involved in managing platform companies, global speculative capital and its cash-burning games are responsible for an extremely unstable employment system within the platform economy. From a policymaking viewpoint, venture capital should accept more responsibility for ensuring decent working conditions for platform-based workers. In addition, crowdsourcing is not the only approach to organizing platform-based work. During very competitive market expansion, platforms may rely heavily on labour outsourcing to secure a relatively stable supply of labour and high-quality service.

That being said, this business model is never ideal and sustainable and is indeed being challenged by workers striking, as widely reported on social media. In particular, the labour outsourcing model provides a base for the formation of worker solidarity and potential unionization efforts. Future research is encouraged to reveal that side of platform capitalism, and its Chinese uniqueness. In addition, future studies should engage in a more systematic comparison between crowdsourcing and labour outsourcing workers with regard to how they are managed on a daily basis and their employment outcomes. Scholars could also address the question of how the global and local labour

64 Sun, Chen and Rani 2023; Huang 2023.

65 Hall and Soskice 2001; Gospel and Pendleton 2003; Goyer 2011; Appelbaum and Batt 2014.

governance system should be rebuilt to achieve decent work for all, against the inevitable trend of financialization and work platformization.

Acknowledgements. This research was supported by a grant from the National Social Science Foundation of China (19CSH037).

References

- Appelbaum, Eileen, and Rosemary Batt.** 2014. *Private Equity at Work: When Wall Street Manages Main Street*. New York: Russell Sage Foundation.
- Cameron, Lindsey D., and Hatim Rahman.** 2021. "Expanding the locus of resistance: understanding the co-constitution of control and resistance in the gig economy." *Organization Science* 33(1), 38–58.
- Cappelli, Peter, and J.R. Keller.** 2013. "Classifying work in the new economy." *Academy of Management Review* 38(4), 575–596.
- Chan, Jenny.** 2021. "Hunger for profit: how food delivery platforms manage couriers in China." *Sociologia* 23(57), 58–82.
- Coase, Ronald Harry.** 1937. "The nature of the firm." *Economica* 4(16), 86–405.
- Dyer-Witheford, Nick.** 2005. "Cyber-Negri: general intellect and immaterial labor." In Timothy S. Murphy and Abdul-Karim Mustapha (eds.), *The Philosophy of Antonio Negri (Vol I): Resistance in Practice*. London: Pluto Press, 136–162.
- Friedman, Gerald.** 2014. "Workers without employers: shadow corporations and the rise of the gig economy." *Review of Keynesian Economics* 2(2), 171–188.
- Gandini, Alessandro.** 2018. "Labour process theory and the gig economy." *Human Relations* 72, 1039–56.
- Gompers, Paul, and Josh Lerner.** 2001. "The venture capital revolution." *Journal of Economic Perspectives* 15(2), 145–168.
- Gospel, Howard, and Andrew Pendleton.** 2003. "Finance, corporate governance and the management of labour: a conceptual and comparative analysis." *British Journal of Industrial Relations* 41(3), 557–582.
- Goyer, Michel.** 2011. *Contingent Capital: Short-term Investors and the Evolution of Corporate Governance in France and Germany*. Oxford: Oxford University Press.
- Hall, Peter A., and David W. Soskice.** 2001. "An introduction to varieties of capitalism." In Peter A. Hall and David W. Soskice (eds.), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press, 1–68.
- Harvey, David.** 2001. "Globalization and the 'spatial fix'." *Geographische Revue* 2, 23–30.
- Huang, Hui.** 2023. "'The food delivered is more valuable than my life': understanding the platform precarity of online food-delivery work in China." *Journal of Contemporary Asia* 53(5), 852–868.
- Hui, Elaine Sio-ying, and Chris King-chi Chan.** 2016. "The influence of overseas business associations on law-making in China: a case study." *The China Quarterly* 225, 145–168.
- Jacobides, Michael G.** 2005. "Industry change through vertical disintegration: how and why markets emerged in mortgage banking." *Academy of Management Journal* 48(3), 465–498.
- Katz, Lawrence F., and Alan B. Krueger.** 2019. "The rise and nature of alternative work arrangements in the United States, 1995–2015." *Industrial and Labor Relations Review* 72(2), 382–416.
- Kellogg, Katherine C., Melissa A. Valentine, and Angele Christin.** 2020. "Algorithms at work: the new contested terrain of control." *Academy of Management Annals* 14(1), 366–410.
- Lei, Ya-Wen.** 2021. "Delivering solidarity: platform architecture and collective contention in China's platform economy." *American Sociological Review* 86(2), 279–309.
- Liu, Chuxuan, and Eli Friedman.** 2021. "Resistance under the radar: organization of work and collective action in China's food delivery industry." *The China Journal* 86(1), 68–89.
- Maffie, Michael D.** 2020. "The role of digital communities in organizing gig workers." *Industrial Relations: A Journal of Economy and Society* 59(1), 123–149.
- Maffie, Michael D.** 2022. "The perils of laundering control through customers: a study of control and resistance in the ride-hail industry." *Industrial and Labor Relations Review* 75(2), 348–372.
- Marx Karl.** 1990[1867]. *Capital, Volume I* (B. Fowkes (trans.)). London: Penguin Books.
- Pearson, Margaret, Meg Rithmire and Kellee S. Tsai.** 2021. "Party-state capitalism in China." *Current History* 120(827), 207–213.
- Piore, Michael J., and Charles F. Sabel.** 1984. *The Second Industrial Divide*. Cambridge, MA: MIT Press.
- Rahman, Hatim A., and Melissa A. Valentine.** 2021. "How managers maintain control through collaborative repair: evidence from platform-mediated 'gigs'." *Organization Science* 32(5), 1300–26.
- Silver, Beverly J.** 2003. *Forces of Labor: Workers' Movements and Globalization since 1870*. Cambridge: Cambridge University Press.
- Srnicek, Nick.** 2017. *Platform Capitalism*. Cambridge: Polity.
- Standing, Guy.** 2011. *The Precariat: The New Dangerous Class*. London: Bloomsbury Academic.

- State Information Centre.** 2022. “Zhongguo gongxian jingji fazhan baogao (2021)” (China sharing economy development report, 2021), 19 February, http://www.sic.gov.cn/sic/93/552/557/0219/10775_pc.html. Accessed 30 November 2023.
- Sun, Ping, Julie Yujie Chen, and Uma Rani.** 2023. “From flexible labour to ‘sticky labour’: a tracking study of workers in the food-delivery platform economy of China.” *Work, Employment and Society* 37(2), 412–431.
- Sundararajan, Arun.** 2016. *The Sharing Economy: The End of Employment and the Rise of Crowd-based Capitalism*. Cambridge, MA: MIT Press.
- Veen, Alex, Tom Barratt, and Caleb Goods.** 2020. “Platform-capital’s ‘app-etite’ for control: a labour process analysis of food-delivery work in Australia.” *Work, Employment and Society* 34(3), 388–406.
- Wu, Qingjun, Hao Zhang, Zhen Li, and Kai Liu.** 2019. “Labor control in the gig economy: evidence from Uber in China.” *Journal of Industrial Relations* 61(4), 574–596.

Hao ZHANG is associate professor of labour relations at Renmin University of China’s School of Labour and Human Resources. His research interests focus on employment relations, work informalization in the digital economy and skills development, with special attention to China.