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Digital labour platforms and national employment policies in China: Studying the case of food delivery platforms

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► Digital labour platforms and national employment policies in China: Studying the case of food delivery platforms

Authors / Julie Yujie Chen, Ping Sun





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Preface

While labour markets around the world had experienced some improvements over the last decade, progress towards the goal of full, productive, and freely chosen employment for all was further compromised by the recent COVID-19 pandemic. At the same time, long-lasting labour market challenges persist in terms of both the quantity and quality of employment, insufficient decent work opportunities reflect slow progress in the transformation towards more inclusive and well-functioning labour markets for the benefits of all. To adapt to a rapidly evolving world of work, the 110th session of the International Labour Conference in June 2022 adopted the ILO Resolution concerning the third recurrent discussion on employment, which proposed a coherent, comprehensive and integrated framework for employment policies aiming to generate full, productive and freely chosen employment and decent work, and contribute to a human-centred recovery that is inclusive, sustainable and resilient.

The digital economy is one of the important drivers transforming the world of work, of which the platform economy is a distinctive part. In many countries, the platform economy is becoming a considerable job creator, thus providing more flexible organization of production processes, and the growth and impact have been further reinforced by the COVID-19 pandemic. However, as highlighted in an ILO report, “World Employment and Social Outlook (WESO) 2021: The role of digital labour platforms in transforming the world of work”, the platform economy also raises challenges in terms of working conditions, regularity of work and income, access to social protection, freedom of association and collective bargaining, along with working hours and pay, etc.

The implications of a growing digital platform economy have become one of the new concerns of national employment policies at country and global levels. To address these issues, evidence-based studies need to be conducted in countries with the purpose to analyze the impact of the platform economy on employment and labour markets, understand both the role of an evolving labour market and the digital structure in this process, and review and draw on experience and lessons of the development and implementation of employment policies in the platform economy, and recommend making or renewing the comprehensive employment policy framework.

China is one of the countries where the platform economy has been advanced rapidly and contributed to employment significantly. In 2018, the number of jobs in the digital economy was 191 millions, accounting for 24.6 per cent of the national employment. As an important constitutive part of the digital economy, digital labour platforms have become a strong and growing driving force for employment since 2015. According to the statistics published by the State Information Center (SIC), the number of platform-based workers has grown from 50 millions in 2015 to 84 millions in 2020, and the number of employees of the platform companies has increased from five millions to 6.3 millions during the same period. The total employment in China's platform economy constituted about 11.7 per cent of the national employment in 2020. On the policy side, since the first version of the national employment policy was launched in 2002, policies for new forms of employment¹ have been a key part including digital employment. Recently, a number of new policies on job creation in the digital economy have been issued at the national and provincial levels. Related policies on labour relations, social security, and wages have been discussed between stakeholders to regulate the new forms of employment, some policies have been formulated and implemented in pre- and post-COVID-19 pandemic. Nevertheless, challenges still exist.

¹ http://www.gov.cn/xinwen/2021-07/09/content_5623509.htm

In this context, country case studies including China could support the promotion of peer learning between countries and help implement the conclusion and resolution by means of the third recurrent discussion on employment addressing both the opportunities and challenges in the platform economy.

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Acronyms

ACFTU	All-China Federation of Trade Unions
CNY	Chinese Yuan Renminbi
CAICT	Chinese Academy of Information and Communication Technology
GDP	Gross domestic product
ICT	Information and Communication Technology
ILO	International Labour Organization
SIC	The State Information Center (of China)
SOEs	State-owned enterprises
TSAs	Temporary staffing agencies
UN	United Nations
WTO	World Trade Organization

▶ 1 Introduction

Digital labour platforms that facilitate online outsourcing and location-based service provision have become a significant force transforming the world of work. Digital labour platforms bring job opportunities, mostly to the previously disadvantaged and marginalized workers, such as women with caregiving responsibilities, people with disabilities, or educated youth living in impoverished countries or regions. Yet, these opportunities are accompanied by a risk of casualization of work, exacerbating inequalities of digital access, and changeable regulatory policies, including labour protection and social insurance, among others (ILO, 2021).

Over the last decade, China has witnessed an explosive growth of the digital economy, and numerous employment opportunities have been created in particular by the digital labour platforms. In 2020, there were over 84 million people working on digital labour platforms.¹ Against this background, this paper aims to address three questions: 1) What are the implications of the digital platform economy for employment and labour market in China?; 2) How have the regulatory policies of the digital platform economy impacted platform companies and workers?; and 3) In light of the impact on employment and workers, how should China's national employment policy framework respond to the regulatory challenges and protect the workers? Acknowledging the multiple manifestations of the platform economy, which is comprised of a complex, heterogeneous ecosystem of businesses and activities, this paper takes food-delivery platforms as a case study to examine the impact of digital labour platforms on employment and presents findings with respect to employment structure, employment relations, working conditions, wages, protection of workers and social insurance in the food-delivery sector.

As the COVID-19 further deteriorated the employment situation in China, it has resulted in an increasing proportion of people joining the digital platform economies such as ride-hailing, delivery, and domestic work: by March 2022, food delivery workers in China reached 13 million.² The disruptions caused by the COVID-19 pandemic in production, business operations (particularly in the accommodation and catering sectors), and labour mobility may have contributed to the influx of workers from other service jobs to food-delivery. Our fieldwork also found that workers with Beijing *hukou*³ joined food delivery platforms because they lost their jobs in sectors hit by the COVID-19 crisis. What happened to workers on food-delivery platforms reveals the changes in employment and many regulatory challenges in China's platform economy that can also be found in other sectors. Therefore, we further contextualize the key characteristics of platform employment in the food-delivery sector and identify the challenges in China's national employment policies and regulations of digital labour platforms.

With the United Nations Sustainable Development Goals (SDGs) and the ILO Centenary Declaration for the Future of Work (2019) and ILO Global Call to Action for a human-centred recovery from the COVID-19 crisis (2021) in mind, the experience and lessons of China stemming from digital labour platforms and national employment policies offer an insight into the barriers and possible pathways toward the future of inclusive and sustainable development "with full, productive and freely chosen employment and decent work for all".⁴

¹ State Information Center, "China's sharing economy development report 2021" (Beijing, China: State Information Center, 2021), <https://www.ndrc.gov.cn/xxgk/jd/wsdwhfz/202102/P020210222307942136007.pdf>.

² Sina Finance, "13 million riders, from gig workers to professionals", <http://finance.sina.com.cn/tech/csj/2022-02-16/doc-ikyamrna1036544.shtml>

³ Hukou is an official document issued by the Chinese government, certifying that the holder of Hukou is a legal resident of a particular area.

⁴ ILO Centenary Declaration for the Future of Work (2019), <https://www.ilo.org/global/about-the-ilo/mission-and-objectives/centenary-declaration/lang-en/index.htm>

The paper is organized as follows. The rest of the Introduction defines key terms, explains the methods and scope of the study, and offers important contextual information to help situate the digital labour platforms against China's transitional regulatory landscape. The second section analyses in general the impact of digital labour platforms on employment in China, which focuses on how digital labour platforms has contributed to job creation, and the key challenges that existed. Section three studies in-depth the case of food delivery platforms and presents findings about the impact of food-delivery platforms on the employment and labour market. Section four provides a review of national employment policies in China to help understand how the national employment policy frameworks have evolved from addressing the mass laid-off workers of state-owned enterprises to addressing the COVID-19 crisis, and how these policy frameworks are being used in response to the new forms of employment. Section five identifies the main opportunities and challenges posed by digital labour platforms for the national employment policy frameworks and charts out recent responses from the policymakers and other stakeholders at national and provincial levels. The paper concludes with suggestions on how to promote decent employment in the platform economy beyond the traditional national employment policy frameworks.

1.1 Definitions of digital labour platforms

Several key terms should be defined upfront to help clarify their meaning in this study. Among official institutions, including the ILO, no definition exists as to what the platform economy might be, as per the background report of the ILO meeting of experts on the platform economy in October 2022. The paper follows the broad definition of **digital economy**, which includes the information and communication technology (ICT) sectors and traditional sectors that have been integrated or mobilized with digital technology, such as e-commerce.⁵

Digital labour platforms are an important constitutive part of the digital economy, which can be defined as internet-based information infrastructures that facilitate and mediate the labour exchange and service provision between workers *and* businesses or clients or consumers.⁶ Although ICT has long been applied to change the work process to increase efficiency and productivity in sectors like business process outsourcing, digital labour platforms can be distinguished from the preceding wave of spatial and temporal reorganization of the work process in three important aspects. First, digital labour platforms assume the functionality of matchmaking between demand and workers in a presumably, relatively open market wherein the employment contractual relation between the workers and businesses or customers/clients is blurred and forgone. Second, digital labour platforms provide “a common set of tools and services that enable the delivery of work in exchange for compensation”.⁷ Third, the infrastructural and intermediary roles played by the digital labour platforms enable them to determine the underlying transaction rules to allocate work and assign workers through algorithmic systems, such as for price-setting and ratings-based selection.

A common categorization⁸ of digital labour platforms divides them into crowd work platforms and on-demand service platforms.⁹ While **crowd work platforms** facilitate the match between workers and clients and the delivery of work irrespective of the location, **on-demand service platforms** are defined as internet-based firms facilitating local services, which entails a physical or

⁵ Longmei Zhang and Sally Chen, “China's Digital Economy: Opportunities and Risks,” IMF Working Paper (IMF, 2019).

⁶ ILO, “The Role of Digital Labour Platforms in Transforming the World of Work,” Report (Genève, Switzerland: ILO, 2021).

⁷ ILO. Job quality in the platform economy. (Issue Brief, 2018).

⁸ Based on our observation, these platforms are all Chinese companies, though some of them may get investment from international venture capital.

⁹ Valerio De Stefano, “The Rise of the ‘Just-In-Time Workforce’: On-Demand Work, Crowdwork, and Labour Protection in the ‘Gig-Economy’” 37 (2016): 471–504. ILO (2021) report provides a broader definition and categorisation, and crowd work platforms are a sub-set of online platforms.

geographical proximity between workers and the customers or clients.¹⁰ Food-delivery, transportation, care-giving, and domestic service belong to the category of on-demand service platforms.

1.2 Scope and methodology of the study

This paper focuses on the historical trends and changes that occurred in employment, working conditions, and employment arrangements in platform-based food-delivery services in China. Data of surveys and interviews used in this research were collected by the two authors and other members in the research team. Since 2017, the research team have started their research with delivery workers. They frequented some of the places where food delivery workers gathered, built up relationships, so they were able to conduct in-depth interviews, surveys, and participant observations with them. From 2017 to 2022, the research team interviewed more than 200 delivery workers and maintained field notes of more than 50 thousand words. Surveys and interviews received funds from Beijing Municipal Trade Union and International Development Research Centre in 2018, ILO in 2019, Meituan in 2020, and ILO in 2021, respectively. Since there is no official data about the food-delivery work force, it is impossible to conduct random sampling or representation sampling. Survey data were collected through convenience sampling in five districts of Beijing—namely, Haidian, Chaoyang, Xicheng, Daxing and Fangshan.

The data analyzed in the paper come from two main sources: 1) data collected from a survey on food-delivery workers in Beijing in 2018 (N=1,339), 2019 (N=771),¹¹ 2020 (N=1,306),¹² and 2021 (N=1,209);¹³ and 2) data from the interviews and participation observations carried out since 2016. To make it a consistent research project, the research team used similar questionnaires and interview questions for data collection, with adaptations to specific circumstances for the year (e.g., the impact of Covid-19). Recruitment strategy of the survey and interview participants was also maintained from year to year – that is, through social media groups and on-site visits. The research team was part of ten WeChat¹⁴ groups of delivery workers, and for each group, there are 300-500 delivery workers. It is acknowledged that food delivery workers are highly mobile, and they join and leave the WeChat groups frequently. Nonetheless, the data collected each year included some previous participants. Each year's survey data is considered to be independent, and altogether they retained consistence across the years, which makes it possible to trace longitudinal changes over time. Convenience sampling and snowball sampling were used respectively for survey data collection and informant recruitment for the interviews. Respondents of surveys and interviews were first collected from social media groups and then developed as snowballing. Each interview lasted 15 minutes to one hour. The surveys and interviews included questions about worker's demographics, work history, work experience, concerns, and so on (see questionnaires in the Appendix). The paper also draws from the desk review of a variety of secondary sources of data, including academic articles, reports on digital labour platforms, and documents released by the governmental offices, research institutes, and platform companies. Unless otherwise stated, all figures and tables presented in Section 3 are based on surveys and interviews conducted by the authors, and all the voices presented in the boxes in the paper were from the interviews conducted.

Food-delivery platforms provide excellent opportunities to conduct a case study probing into the impact of digital platforms on China's labour market and the implications for national employment policies for two reasons.

¹⁰ Valerio De Stefano (2016).

¹¹ The 2019 data used for this paper was collected for the ILO flagship *report World Employment and Social Outlook 2021: The Role of Digital Labour Platforms in Transforming the World of Work*, which was published in February 2021.

¹² Meituan funded the research project, the company granted full liberty to the research team regarding the process of survey data collection. Except for updating questions about Covid-19, the structure and content of the survey for 2020 remained consistent with the surveys conducted in the previous years.

¹³ Yadong Wang, ILO (2020).

¹⁴ WeChat and Weixin are a Chinese instant messaging, social media, and mobile payment app developed by Tencent. First released in 2011, it became the world's largest standalone mobile app in 2018 with over 1 billion monthly active users.

First, job creation in urban areas has long been one of the top priorities in China's employment policy.¹⁵ The food-delivery sector absorbs most of the workers in the various digital platforms in China, which involve millions of young people and rural-urban migrant workers and have a profound impact on the labour market and urban employment. As of 2020, food-delivery apps have been adopted by 400 million Chinese netizens, with a penetration rate of 43.5 per cent.¹⁶ The number of couriers for food-delivery platforms is over seven millions.¹⁷ On Meituan alone, the largest food-delivery platform, the number of food-delivery workers increased by 16.4 per cent in the first half of 2020 while many other sectors in China were hit hard by the COVID-19 pandemic. Platform-based food-delivery services have attracted workers from the secondary sector, 35.2 per cent of Meituan couriers had been working in the manufacturing sector before.¹⁸

Second, the development trajectories of food-delivery platforms and their effect on employment are distinct from the manufacturing and traditional service sectors, which makes it possible to conduct an excellent case study to find the characteristics of emerging digital platform-based employment. In 2008, Ele.me, the first food-delivery platform was founded; until 2021, China's domestic food-delivery sector came under the duopoly control of Meituan (67.3%) and Ele.me (26.3%).¹⁹ During this period, the food-delivery market went through intense competition. The composition of the work force, employment structures, and working conditions changed, too. However, scholar explorations into the historical changes are scant. An important distinction between digital platforms and traditional companies is the business strategy of growth-before-profit, which is made possible and fuelled by large capital investment received by the platform companies.²⁰ The imperative to grow and dominate the market intensifies the competition between platform companies and affects the relations between the platform companies and business owners in the traditional sectors, which makes the labour market volatile. To trace the historical trends in the labour market, employment and working conditions on the food-delivery platforms will inform the understanding of how the new business model in the platform economy impacts the labour market. It will highlight the on-the-ground effect, or lack thereof, of China's national employment policy. Lessons drawn from the food-delivery platforms may support the formulation of more proactive employment policy interventions.

Before the paper proceeds to a discussion of China's employment policy, a caveat is in order, which relates to the transitional and changing policy landscape of the platform economy in China since 2020. The ICT sector has been pivotal in China's macro-economic policy and national development strategy for more than a decade.²¹ The digital platform companies in China therefore have benefited from institutional and policy support for technological innovations, liberating financial sectors to facilitate global and domestic capital flow, and a relatively enabling regulatory environment in the same period.²² However, since 2020, the enabling policy environment on digital economy has been shifted, while a series of laws and amendments, policies, and guiding opinions from the State Council of the Chinese Government were launched to regulate the technological sector. The government imposed a fine of CNY 2.75 billion on Alibaba for anti-monopoly violations, and subsequently amended the Anti-Monopoly Law, which signals a political shift from loose to tightened regulations of the digital economy. Some of the policies are exploratory by nature. The impact and effect of these new regulations and policies on the labour market and platform employment are too early to conclude or predict, and they are beyond the scope

¹⁵ Cuntao Xia, "Employment Policy Development in China" (Beijing, China: ILO Country Office for China and Mongolia, 2017).

¹⁶ State Information Center, "China's sharing economy development report 2021" (Beijing, China: State Information Center, 2021). "Penetration rate" corresponds to the percentage of the total internet population of a given country or region that uses the said type of platform.

¹⁷ China Internet Network Information Center, "47th Statistical Report on the Internet Development in China" (Beijing, China: CNNIC, 2021).

¹⁸ State Information Center, "China's sharing economy development report 2021," 8–9.

¹⁹ <https://finance.sina.com.cn/tech/2021-07-27/doc-ikqcfnc9241492.shtml>

²⁰ Lina M. Khan, "Amazon - An Infrastructure Service and Its Challenge to Current Antitrust Law," in *Digital Dominance: The Power of Google, Amazon, Facebook, and Apple*, ed. Martin Moore and Damian Tambini (New York, N.Y.: Oxford University Press, 2018), 98–129.

²¹ Yu Hong, *Networking China: The Digital Transformation of the Chinese Economy* (Urbana, Chicago: University of Illinois Press, 2017).

²² See Julie Yujie Chen and Jack Linchuan Qiu, "Digital Utility: Datafication, Regulation, Labour, and DiDi's Platformization of Urban Transport in China," *Chinese Journal of Communication* 12, no. 3 (2019): 274–89, <https://doi.org/10.1080/17544750.2019.1614964>.

of this paper. Nonetheless, it is important to keep the changing policy landscape in mind when reading this paper. Detailed discussions of the policy responses to digital labour platforms will be given in sections 4 and 5.

▶ 2 Impact of Digital Labour Platforms on Employment in China

2.1 A new source of employment

China's digital economy has become a significant area for employment. In 2018, the number of jobs in the digital economy was 191 million, accounting for 24.6 per cent of the national employment.²³ Against the backdrop of a 0.07 per cent decline in the national employment from the previous year, the employment in the digital economy achieved a year-on-year growth of 11.5 per cent.²⁴ As an important part of the digital economy, digital labour platforms have become a strong and growing driving force for employment since 2015. According to the statistics published by the State Information Center (SIC), the number of platform-based workers²⁵ has grown from 50 million in 2015 to 84 million in 2020, and the number of employees of the platform companies has increased from 5 million to 6.3 million during the same period of time.²⁶ The total employment in China's platform economy constituted about 11.7 per cent²⁷ of the national employment in 2020.²⁸ Compared to other countries, China has the largest number of platform-based workers "in absolute and relative terms".²⁹

²³ CAICT, "Digital Economy and Employment in China" (Beijing, China: China Academy of Information and Communications Technology, 2019).

²⁴ CAICT, "Digital Economy and Employment in China" (Beijing, China: China Academy of Information and Communications Technology, 2019).

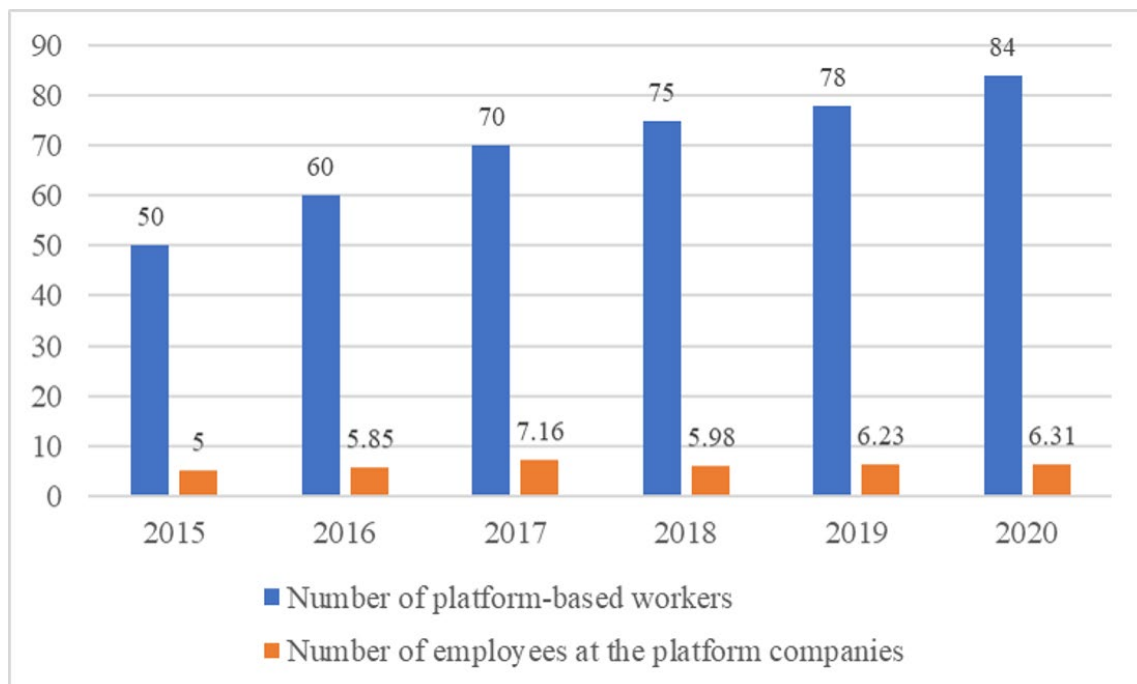
²⁵ Many of them won't be full-time, and the figures on the number who are primarily dependent on platform work are not available.

²⁶ State Information Center, "China's sharing economy development report 2021" (Beijing, China: State Information Center, 2021). "Platform-based workers" refers to workers who provide paid labour and services on matching platforms, usually the worker and platform do not form a labour relation, while "employees of the platform companies" refers to workers who maintain a labour relation with the company.

²⁷ The data on whether they are primarily involved in the platform economy or doesn't exist, since the concerning statistics department has not yet paid attention to collecting it. We have proposed more granular data collections in the part of policy suggestions.

²⁸ Author's calculation based on World Bank's data on China's labour force in 2020: <https://data.worldbank.org/indicator/SL.TLF.TOTL.IN?locations=CN>

²⁹ Irene Zhou, "Digital Labour Platforms and Labour Protection in China," Working paper (Genève, Switzerland: ILO, October 13, 2020), 13.

► **Figure 1. Platform-hired and platform-based work force in China (2015-2020, in millions)**

Source: State Information Center's Sharing Economy Report 2016, 2017, 2018, 2019, 2020, 2021.

2.2 Characteristics, opportunities and challenges for digital workers in the food sector

Low barriers to entry with minimum credential requirement³⁰ and high efficiency³¹ in the match-making between service providers and customers enabled by platform technologies have made the digital labour platforms an important area to promote employment. Digital platform companies also embrace the employment first rhetoric and position themselves as the major contributors to job creation and new forms of employment.³² Though digital labour platforms span across different sectors which require different levels of skills, several challenges of platform-based employment in China stand out.

First, while the labour composition on digital platforms is heterogenous with a mixture of full-time and part-time workers, income is the most common motivation for workers to engage in platform-based jobs. Workers do have other options in either construction, manufacturing or service industries, they come to food delivery mainly for the higher income. There are surely other reasons, including the possibility of combining with care work especially for female workers, but the proportion is quite small. Therefore, most workers go to digital labour platforms because the income is relatively higher than in other available jobs or because they need a supplementary income source to their current jobs.³³ The former may help the transition of workers from lower-paid jobs or sectors to higher-paid ones. The latter, however, may prove to be potential benefits for workers to diversify their income sources through digital labour platforms; it may also

³⁰ There are very few limits for restaurants or canteens to join the platforms. Based on our fieldwork, the few requirements include the food license and the agreement for platform commission.

³¹ High efficiency here refers to the technological efficiency that platforms have in ranking, dividing, matching, and moderating food providers and customers. Some of the couriers have high education degree, while in general, 80% of the food delivery workers get high school degree or below.

³² Chen, "The Mirage and Politics of Participation in China's Platform Economy".

³³ Zhou, "Digital Labour Platforms and Labour Protection in China" (October 13, 2020); Y. Xu and D. Liu, "Decent Work for the Digital Platform Workers. A Preliminary Survey in Beijing," *Digital Law Journal* 2, no. 1 (April 21, 2021): 48-63.

suggest an insufficient income level for current employed workers on digital labour platforms. This depends on the type of their job. It could be that their primary job is in “traditional” sector of the economy and therefore are looking for higher sources of income in the platform economy. It could be that they’re already working for a digital labour platform but only dedicate a small amount of their time on it; they are thus looking to increase the amount spent working for platforms.

A divergence in working hours between full-time and part-time workers is observed across digital labour platforms. Platform-dependent full-time workers are more likely to work longer hours. Since we are referring here to independent contractors working for platforms, the notion of “overtime” does not apply. There are no specified working hours as they are not under a labour contract. A survey on 25 location-based service platforms in Beijing showed that about 10 per cent of the full-time workers work more than 11 hours per day.³⁴ Other studies showed that 30 per cent of the full-time drivers on the ride-hailing platforms work more than 12 hours daily, while 70 per cent of part-time drivers worked less than EIGHT hours a day.³⁵ In the food-delivery sector, nearly half of the food-delivery riders worked more than ten hours a day in 2019. On crowd-work platforms, total working hours for full-time workers are about 70 per cent longer than for part-time workers.³⁶

Second, inadequate labour protection and social insurance systems are common on the digital labour platforms globally and China is no exception.³⁷ In China, the institutional labour protections, entitlement to employment benefits, participation in the employer-contributed social security are mainly administered through formal labour contracts under the *Labour Contract Law* (2008) and the *Social Insurance Law* (2010), among others.³⁸ China’s initiative to improve the employment quality and stability is reflected in the growing number of workers who sign labour contracts. In 2018, over 90 per cent of workers employed by urban enterprises signed labour contracts, which covered 155 million workers in China.³⁹

A very limited number of platform-based workers have access to institutional labour protections and social insurances, with the exceptions of personnel on platform companies which constituted less than seven per cent of the work force in the platform economy (Figure 1).⁴⁰ Over 75 per cent of the full-time workers on labour platforms reported to have no labour contracts with any platforms or employers, (although this cannot be considered as a flaw given that by definition, when platform workers are independent contractors, they are not engaged in a labour contract. Self-employed are in a commercial contract given their status.), 34.4 per cent have no access to social insurances, and only 11.2 per cent participated in social insurance programs that are contributed partly by platforms.⁴¹ Another study on platform-based workers in the cities of Beijing, Chengdu, and Hangzhou showed that only 20 per cent of the workers were covered by endowment insurance (state-supported pension), medical insurance, unemployment insurance, and work-related injury insurance. Over 41 per cent of them participated in the urban residents’ social insurance system which requires no contributions from the employers and offers a much smaller monthly retirement payment for workers.⁴² A similar pattern is also found on crowd work platforms as “41 per cent of [workers] did not participate in any social insurance programme”.⁴³

³⁴ Xu and Liu, “Decent Work for the Digital Platform Workers. A Preliminary Survey in Beijing”.

³⁵ Julie Yujie Chen, Ping Sun, and Jack Linchuan Qiu, “Deliver on the Promise of Platform Economy: A Research Report” (IT for Change and IDRC, 2020). <https://itforchange.net/platformpolitics/wp-content/uploads/2020/04/China-Research-Report.pdf>

³⁶ Zhou, “Digital Labour Platforms and Labour Protection in China” (October 13, 2020).

³⁷ ILO, “The Role of Digital Labour Platforms in Transforming the World of Work”.

³⁸ China’s social security system as per a standard labour contract includes basic endowment insurance, medical insurance, unemployment insurance, work-related injury insurance, maternity insurance, and housing fund.

³⁹ National Bureau of Statistics, “Constantly Enlarged Employment Scale and Long-Standing Stable Job Situation,” August 20, 2019. http://www.stats.gov.cn/tjsj/zxfb/201908/t20190820_1692213.html

⁴⁰ Zhou, “Digital Labour Platforms and Labour Protection in China” (October 13, 2020).

⁴¹ Xu and Liu, “Decent Work for the Digital Platform Workers. A Preliminary Survey in Beijing”.

⁴² Yang Yang and Ying Hua, “Social Security of Platform Workers in China: Findings and Recommendations from Two Studies (2018-2019),” ILO Research Brief (Genève, Switzerland: International Labour Office, 2021).

⁴³ Zhou, “Digital Labour Platforms and Labour Protection in China”, (October 13, 2020).

Third, the absence of employment contractual relationships between the platform and the workers, *and* the worker's high mobility partially contribute to the low rate of institutional labour protections and participation in the social insurance system. Part-time platform-based workers are unlikely to have formal labour contracts with platforms. Workers who sign up for part time work are often classified as self-employed (or independent contractors) in China. However, a prominent trend occurring in digital labour platforms in China is the involvement of third-party intermediary staffing agencies which are responsible for a variety of managerial duties, from recruitment and training to management (detailed discussions are in Section 3.4).⁴⁴ More importantly, they facilitate the labour service agreement (*laowu xieyi*) with full-time workers,⁴⁵ if the latter ever engages in any form of contractual relations. It was reported that three million food-delivery workers on Fengniao and millions of drivers on the ride-hailing platform DiDi were all on labour service agreement.⁴⁶ A labour service agreement is an informal agreement which addresses the partnership instead of labour relations between staff agencies and workers. Under such conditions, the terms of labour protections and access to social insurance for workers depend on the labor staff agencies. Some workers indeed have access to certain social insurance as mentioned earlier. However, the adoption of a labour service agreement is intended to help platform companies responding to fluctuations in demand, thus increasing their profit margins and reducing the labour costs. Labour service agreements are not covered by the *Labour Contract Law* (2008) and the *Social Insurance Law* (2010).

Fourth, channels to solve worker grievances are limited on digital labour platforms, which leads to rising labour disputes in various forms ranging from protests and strikes to legal mediations and arbitrations. A study in 2019 found that 40 per cent of drivers had participated in strikes or protests.⁴⁷ According to the incomplete statistics obtained by China Labour Bulletin, from December 2019 to December 2021, 470 strikes took place in 27 provinces in the service sectors involving ride-hailing apps, couriers, and food-delivery platforms—that is, 19.5 times every month.⁴⁸ In the meantime, platform-based workers resorted to legal channels for labour arbitrations. A district court in Beijing alone heard 188 labour mediation and arbitration cases involving digital labour platforms from 2015 to the first quarter of 2018.⁴⁹ Among the 177 solved cases, 84 per cent of them were about disputes over the establishment of labour relations between workers and digital labour platforms.

To summarize, the platform economy has become a driving force for employment in China and the trend is likely to continue. However, for a rapidly growing platform-based work force, the lack of legal clarity in defining labour relations, which makes it difficult to determine whether workers' are self-employed or employees, and a subpar and contingent access to employment benefits and social insurance not only highlight the regulatory challenges unfolding with the rise of digital labour platforms, but also point to some overlooked consequences related to multi-channel or "new forms of employment" promoted in national employment policies. These constitute both opportunities and challenges to the labour market and employment policies, which will be discussed in more detail in section 3 taking the food delivery platform as the subject of a case study, and in section 5.

⁴⁴ Ping Sun, Julie Yujie Chen, and Uma Rani, "From Flexible Labour to 'Sticky Labour': A Tracking Study of Workers in the Food-Delivery Platform Economy of China," *Work, Employment and Society*, 2021, 1–20, <https://doi.org/10.1177/09500170211021570>.

⁴⁵ *Laowu xieyi* can also be translated into labour service contract. See Zhou, "Digital Labour Platforms and Labour Protection in China."

⁴⁶ Zhou, "Digital Labour Platforms and Labour Protection in China", (October 13, 2020).

⁴⁷ Chen, Sun, and Qiu, "Deliver on the Promise of Platform Economy: A Research Report."

⁴⁸ China Labour Bulletin - CLB https://maps.clb.org.hk/?i18n_language=en_US&map=1&startDate=2019-12&endDate=2021-12&eventId=&keyword=&addressId=&parentAddressId=&address=&parentAddress=&industry=10300,10307,10308&parentIndustry=&industryName=Taxi%20and%20Ride%20Apps,Courier,Food%20delivery

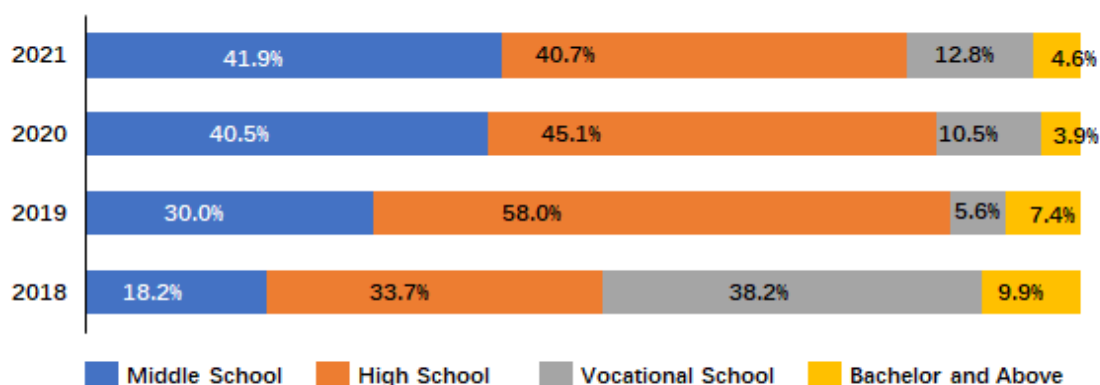
⁴⁹ <https://bjgy.chinacourt.gov.cn/article/detail/2018/04/id/3261190.shtml>

► 3 Studying the Case of Food-delivery Platforms⁵⁰

3.1 Demographics of delivery workers

Food delivery platforms are an important area of new job creation, attracting workers from all sectors. The biggest source of food-delivery workers is manufacturing, which witnessed a declining number of employments due to the structural transformation of China's economy toward the tertiary sector. Based on our survey data in 2021, more than 40 per cent of delivery workers in Beijing had previously worked in manufacturing. They were attracted to the food-delivery platforms because of relatively high income, flexibility, and low barriers to entry when compared to manufacturing. The remaining analysis is based on gender, education, age, marriage status and provincial mobility, etc.

► Figure 2. Education Level of Food Delivery Workers 2019-2021 (%)



Source: Survey 2019-2021.

3.1.1 Demographics and labour composition

Food-delivery workers are more likely to be male and migrant workers, predominantly with high school degrees, vocational school degrees or below (Figure 2).⁵¹ The average age of riders saw a steady growth from 23.6 in 2018 to 31.7 in 2021 in Beijing, but they are still younger than the average age of migrant workers in China (Table 1).⁵² The proportion of married workers also saw an increase over the years. Food-delivery riders come from rural areas across China, which include provinces such as Hebei, Henan, Gansu, Shanxi, and Jilin, most of them being northern provinces in China. Though workers without Beijing hukou consisted of over 90 per cent of the food-delivery workforce in Beijing from 2018 to 2020, in 2021, there were about 15 per cent of the workers who had Beijing household residence (*hukou*).

⁵⁰ Please see the methodology of the study and the data collection as that would help to understand to what extent one can make comparisons across time for some of the indicators.

⁵¹ Unless otherwise stated, all figures and tables presented in Section 3 are based on surveys and interviews conducted by the authors. For detailed account of the method, see section 1.2.

⁵² The average age of migrant workers in China was 40.2 in 2018, 40.8 in 2019, and 41.4 in 2020, according to the National Bureau of Statistics "2018 Migrant Workers Monitoring Survey Report," 2019; "2019 Migrant Workers Monitoring Survey Report," 2020; "2020 Migrant Workers Monitoring Survey Report, 2021.

► **Table 1. Demographics of Delivery Workers (2018-2021)**

	2018	2019	2020	2021
Average Age	23.6	27.2	31	31.7
Gender Ratio (Male to Female)	2.7	5.3	10	5.3
Percentage of married workers	30%	49.2%	57.4%	58.7%
Percentage of migrant workers	90.7%	93.8%	93.1%	85.1%
Place of origin of the workers Top 3	Shanxi Gansu Beijing	Hebei Shanxi Henan	Hebei Henan Shanxi	Hebei Henan Shanxi

Source: Survey 2018-2021.

We treat each year's survey as independent of each other for two reasons, which can be understood as different samples of workers to a certain extent. The primary reasons are two-fold. First, food-delivery workers are highly mobile, which means it is inevitable to have different samples over time. (Other factors such as the outbreak of the pandemic also affect the data collection.) That said, interviews and survey studies were conducted with some veteran delivery workers, allowing for some comparison over the years, as for the study of 2019. Considering the different sizes of the survey samples and mobility of workers, new workers took part in the survey in different years, so surveys from 2018 to 2021 are treated as independent from each other, which showed the demographics of the work force for the respective years. The way to circulate the survey is the same, through ten WeChat groups of food delivery workers, and also through at least ten key delivery workers. For each year, the surveys are independent as well as related to some degree.

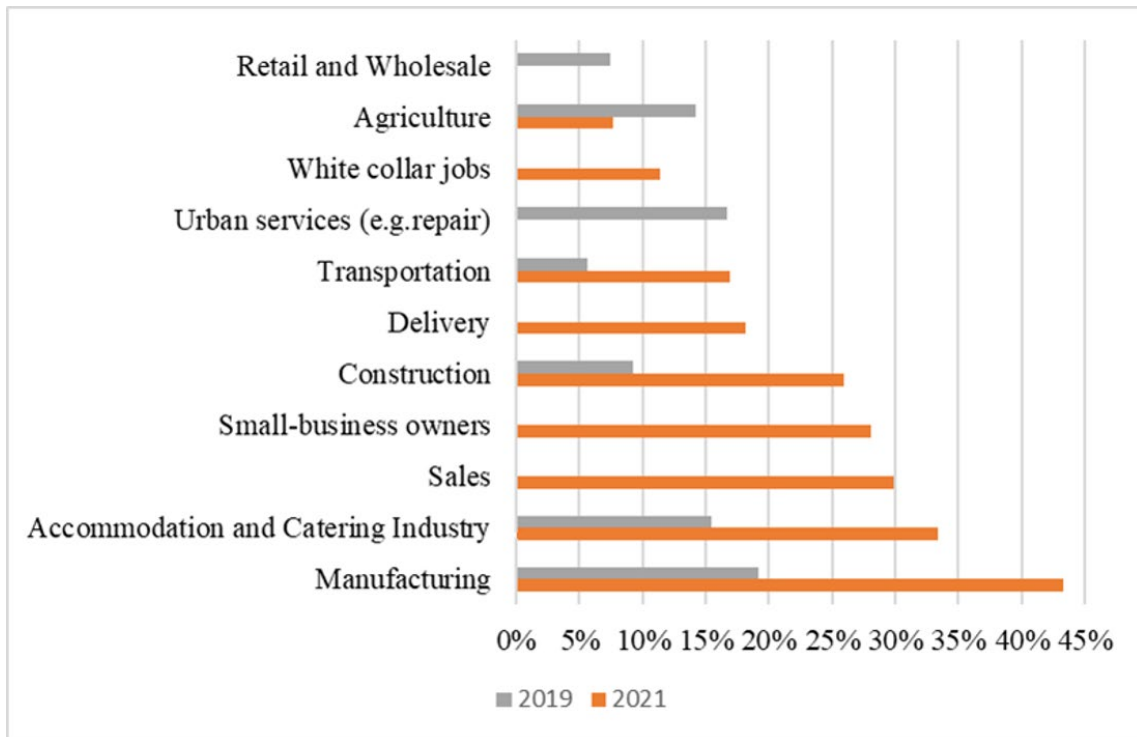
3.1.2 Source and recruitment of workers

Two trends emerged from a comparison between 2019 and 2021 survey data. First, while the proportion of workers who directly came from the agricultural sector declined in 2021 (7.6%) as compared to 2019 (14.1%), food-delivery workers increasingly came from a variety of urban service sectors, such as accommodation and the catering industry, parcel courier, sales, and transportation among others (Figure 3). Second, in 2021, 28 per cent of food-delivery workers reported to have been small business owners.⁵³ The influx of small business owners into the number of food-delivery workers on platforms is noteworthy, because it indicates the negative influence of COVID-19 on small business owners.

A relative high income (74.8%), flexible working hours (52.1%), and low entry barriers (33.5%) are the top motivations for workers to join food-delivery platforms.

⁵³ Here we reported the findings from survey data (not from interviews), that were collected through convenience sampling in five districts of Beijing. See section 1.2.

► **Figure 3. Top Sources of Workers for Food-delivery Platforms (2019, 2021)**



Source: Survey 2019 & 2021.

It is also found that traditional interpersonal relations or *guanxi* play important roles in their work transition (Box 1).⁵⁴ For example, 74 per cent of riders reported that they became food-delivery riders with the help of friends or fellow villagers in their social networks. Interviews with food delivery workers found that their work trajectories can be intermittent and many of them found their jobs with the help of labor agencies or intermediaries, few have used public employment services.

► **Box 1. Food-delivery Courier's Work Trajectory**

A snapshot of a food-delivery courier's work trajectory:

"I used to work on a construction site in Tianjin...from 2010 to 2015. Then there was not enough work, so I initially worked as a waiter in a hot pot restaurant in Tianjin and then as a cashier. I worked there for almost a year. I came to Beijing in November 2016. I met Lao Qi (one of his colleagues in Baidu Deliveries). He took a few of our bros to Baidu (Delivery). Ele.me purchased Baidu (Delivery) in 2017. Then I became a rider in Ele.me for a period, but I didn't like it, so I switched to SF Express for a month. There were few orders, and then I went to Meituan becoming a full-time rider." (Zhang, subcontracted full-time rider, October 21, 2020, online interview)

Source: Interview 2020.

⁵⁴ All voices presented in the boxes in the paper were from the interviews we conducted.

3.2 Employment forms and work arrangements

The employment on food-delivery platforms is subject to frequent changes. There are different types of workers based on their contractual relations, which correspond to different arrangements of work schedule, pay schemes, and labour rights (Table 2).

► **Table 2. Work Types, Pay Systems, and Labour Rights**

	Subcontracted (zhuansong 专送)	Crowdsourced (zhongbao 众包)	
		Regular	Special groups (lepao 乐跑 on Meituan or youxuan 优选 on Ele.me)
Employer	Temp staffing agencies	Self-employed	Self-employed
Base salary	Yes	No	No
Social insurance	Mostly no	No	No
Pay system	Piece rates (task-based) and incentives	Dynamic rates and incentives	Dynamic rates and incentives
Time arrangements	Fixed	Flexible	Strict requirements of on-duty time

Source: Modified from Chapter 3 of Andrijasevic et al. (2021), *Media and Management*, 77.

3.2.1 Diversifying and shifting categories and labour rights

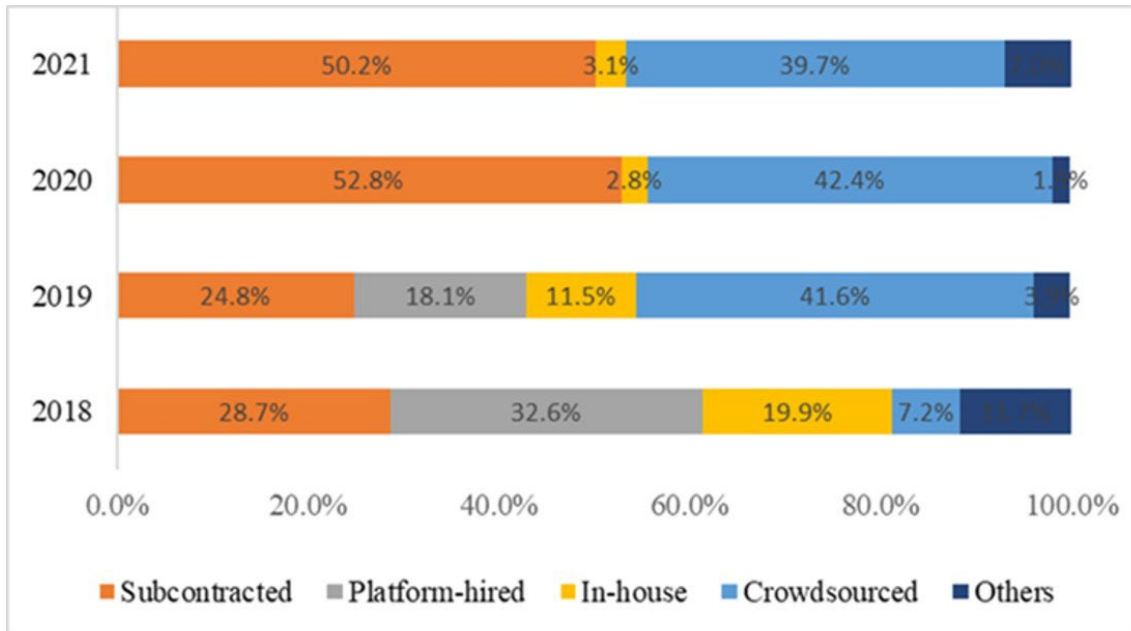
Currently there are two main categories of riders working on food-delivery platforms: subcontracted riders (known as zhuansong 专送)⁵⁵ and crowdsourced riders (known as zhongbao 众包). Within the category of the crowdsourced riders, there emerged a further subcategory known as lepao (乐跑) on Meituan and youxuan (优选) on Ele.me. Riders in these two subcategories sign up for a week-long schedule with various requirements of on-duty time and volume of deliveries. Subcontracted workers tend to be full-time workers managed by labour stations (known as zhandian, 站点). The labour station is usually operated through third-party agencies or franchisees which have signed civil cooperation agreements⁵⁶ with the platform companies, such as Ele.me or Meituan, to cover a region or a city (see section 3.4). Subcontracted workers are responsible for orders in a 3km radius; they are paid based on a scale of fixed piece-rate with bonuses based on individual performance. Crowdsourced riders have more flexibility in work time and service area in the city. Their wage is more dynamic, determined by a number of factors in the algorithmic system, such as distance, difficulty, weather, amongst other factors.⁵⁷

⁵⁵ In 2018 and 2019, they were also called tuandui (meaning teams) and waibao (meaning outsourced). To keep it consistent, we call those who were hired to work on full-time basis subcontracted riders.

⁵⁶ Civil cooperation agreement here refers to a contract between the platform and the labour agency who want to enter into a working relationship together.

⁵⁷ Niels van Doorn and Julie Yujie Chen, "Odds Stacked against Workers: Datafied Gamification on Chinese and American Food Delivery Platforms," *Socio-Economic Review* 19, no. 4 (July 5, 2021): 1345–67, <https://doi.org/10.1093/ser/mwab028>.

► Figure 4. Distribution of Different Types of Riders, 2018- 2021 (%)



Source: Survey 2018-2021.

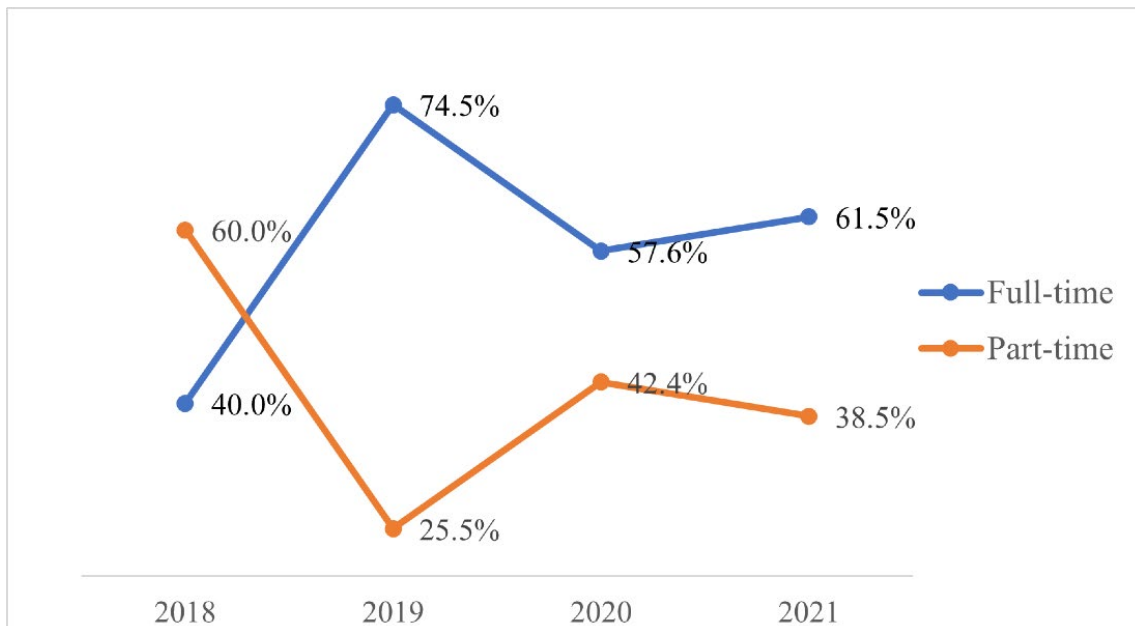
The categories created to classify the workers kept evolving over the years. The proportion of workers in each category has also changed. For example, platform-employed workers, who appeared in the early stage of the platform development, usually were offered labour contracts, and entitled employment-related benefits. But the number of platform-hired riders declined quickly in 2018 and has disappeared since 2020 due to the reconfiguration of platform business (Figure 4). They were replaced by full-time subcontracted riders because platform companies have begun to outsource the delivery business to the intermediary temporary staffing agencies or franchisees since 2017. When transitioning from platform-hired to subcontractor, workers often lost their labour contracts to enter into signing service agreements or sometimes there was no agreement signed at all, which meant they lost their entitlements to institutional labour protection and social insurance.

3.2.2 Job security and informality

Although flexibility is not a measurement of the total of hours worked but is rather the possibility for workers to manage their working hours, according to their specific needs, it is a prominent characteristic of workers on platforms. On food-delivery platforms in China, the proportion of full-time workers has grown and outweighed that of part-time workers, a trend that scholars described as “de-flexibilization”.⁵⁸ De-flexibilization refers to the trend that food-delivery workers spend longer time and develop more attachment on the platform. Our survey showed that in 2018, the work force on food-delivery platforms consisted of about 40 percent full-time riders and 60 percent part-time riders. Their respective share was reversed in 2021 (Figure 5). A growing proportion of full-time workers means that more and more workers rely on the platforms for secured and full-time jobs and are a main income source.

⁵⁸ Sun, Chen, and Rani, “From Flexible Labour to ‘Sticky Labour’”.

► Figure 5. Percentage of Full-time and Part-time Workers on Food-delivery Platforms (2018-2021) (%)



Source: Survey 2018-2021.

Several factors contributed to the trends of increase full-time workers and diversification of work categories. First, fierce competition driven by the imperative of growth-before-profit to achieve market dominance has led platform companies to adopt flexible contractual relations. The platforms had initially used relatively high wage, employment benefits, and social insurance to attract workers since 2013.⁵⁹ Starting from 2015 they used the model of crowdsourcing to quickly expand the labour supply. Around 2016, the platform companies started to outsource the delivery business to reduce the costs associated with employment through labour contracts. For details on the shifting structure of labour management, see 3.4.1.

Second, the platforms considered a reliable work force capable of meeting real-time demands to be the core competitive strength in offering satisfactory customer service. However, given that the demand fluctuates during the day and over the year, it seemed that the best way to manage the workers was to devise a scheme that could achieve a balance between full-time and part-time workers, between those on fixed schedules and those on flexible schedules (see Figure 5 and Section 3.4).⁶⁰ To achieve this balance, platforms introduced measures to control part-time or crowdsourced workers by encouraging them into working longer hours so that they would be prioritized in the dispatch system.⁶¹ The introduction of a subcategory called *lepao* riders in 2019 on Meituan and *youxuan* riders on Ele.me was a case in point. (Table 2). Take *lepao* as an example, though technically self-employed and crowdsourced workers, *lepao* riders accept requirements of on-duty time—including six days a week, a daily minimum number of working hours, and working hours during the chosen peak time, a minimum number of completed orders, and a high rate of on-time delivery (97%). They also have no right to reject dispatched orders. The appearance of *lepao* showcases the platforms' efforts and ambition to encourage full-time work by increasing the control over the workers' schedule and stimulating workers to extend working hours through various economic incentives.

⁵⁹ Doorn and Chen, "Odds Stacked against Workers" (2021).

⁶⁰ Details about the shifting model are in Section 3.1. We order our findings by presenting the demographics of the workforce and the characteristics of the jobs first and then moving onto the evolution of the platform as well as the involved intermediaries.

⁶¹ Sun, Chen, and Rani, "From Flexible Labour to 'Sticky Labour'" (2021).

Third, the expansion of labour intermediaries (laowuzhongjie, 劳务中介) in the platform economy made it possible for food-delivery platforms to have a large number of full-time workers falling outside the scope of the labour laws (see section 3.4).

Despite the rising proportion of full-time workers, informal work has grown even faster, as will be shown in 3.3.1. However, it is worth mentioning that the perceived lack of job security cannot be considered as informality, which is a very well-defined concept at the ILO, based on [Recommendation No. 204 concerning the Transition from the Informal to the Formal Economy](#). The informal economy refers to all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements. Instead of creating informality, platforms have the potential to provide formal infrastructures and systems for the vast number of self-employed workers to engage with businesses and consumers in a more formalized manner. The written agreements, digitisation of transactions and centralized infrastructure, secure payment systems and traceability allow for protections of self-employed workers in environments formerly devoid of these safeguards. Further, there are additional opportunities for financial inclusion and digital literacy by moving traditional services to platforms.

3.3 Working conditions

3.3.1 Coverage of labour contracts and social insurance

Food-delivery workers' contractual relations and access to social insurance have both shifted toward less benefits and protections over the years (Table 3), due to the changes in the labour legislation (see section 3.4). Despite the growing proportion of full-time couriers showed in Figure 5, who, according to the law should have signed labour contracts, the downward trend was evident for the general rate of any employment contractual relation, which includes labour contract, labour service agreement, and other agreements.⁶² The percentage of workers who have signed either a labour contract or a labour service agreement dropped from 43.5 per cent in 2018 to 34.9 per cent in 2021 (Table 3). More and more workers do not have labour contracts or agreements.

► **Table 3. Percentage of Food-delivery Workers Signing Labour Contracts⁶³**

Employment contractual relations	2018	2020	2021
Labour contract	43.3	23.4	20.7
Labour service or other agreement		20.2	14.2
No contract or agreement	36.7	33.8	41.6
I don't know	19.9	22.7	23.5

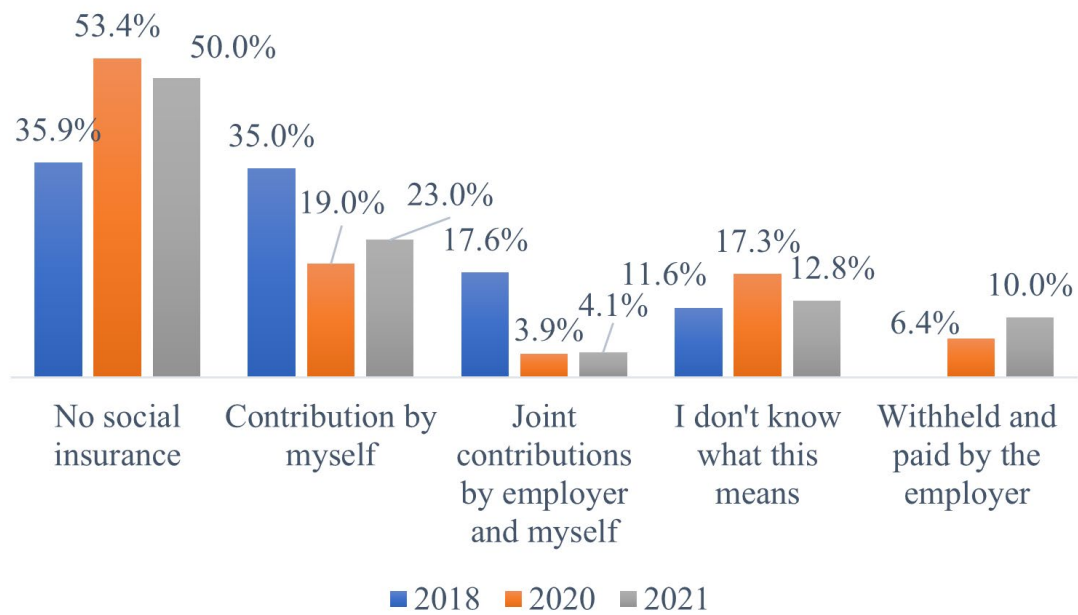
Source: Survey 2018, 2020, 2021.

⁶² In the study, we use riders, couriers, food-delivery workers interchangeably. For legal differences of these three types of agreements, see previous footnote 49. Also see, Zhou, "Digital Labour Platforms and Labour Protection in China".

⁶³ The survey in 2018 collected data on whether there was an employment contractual relation or not. The 2019 survey data was not included because the question about the contractual relations did not make any distinction between labour contract, labour service agreement, and cooperation agreement.

Correlated to the decline in the signing rate of labour contracts or labour service agreements there was a deterioration of food-delivery workers' social insurance (Figure 6). While slightly over one third of the workers were not covered by any social insurance in 2018, more than half of the workers had no access to social insurance in 2020. About 17.6 per cent of the couriers in 2018 participated in social insurance programs jointly contributed by employers, but the number plummeted to around four per cent in 2020 and 2021. Changes in legislation applying to labour staffing intermediaries and crowdsourcing have contributed to the reduction of labour protection

► **Figure 6. Workers' Participation in Social Insurance and Contributor(s) (%)⁶⁴**



Source: Survey 2018, 2020, 2021.

3.3.2 Income, working hour, and gender disparity

Platforms need rules that govern access and, because those working with independent service providers do not control those service providers, platforms offer incentives to encourage behavior that improves marketplace reliability and safety. Platforms facilitate important, valuable services for consumers, and these consumers should also be able to expect reasonable protection. Platforms must responsibly balance these interests.

Food-delivery riders are on a piece rate basis pay. Food-delivery platforms in China implement gamified systems to stratify the piece rate for the completed delivery, rewards, and bonuses, based on the rider's performance.⁶⁵ The gamified systems are different for subcontracted and crowdsourced riders as they are more dynamic and complex for the latter.⁶⁶ The rules can be complicated and are constantly changing. One of the goals of an algorithm-based gamified labour management system is to enhance the competition between riders so that the output

⁶⁴ The data of workers enrolling in private insurance schemes was not included in our survey from 2018-2021.
⁶⁵ Ping Sun, "Your Order, Their Labour: An Exploration of Algorithms and Labouring on Food Delivery Platforms in China", *Chinese Journal of Communication* 12, no. 3 (2019): 308-23.
⁶⁶ Doorn and Chen, "Odds Stacked against Workers".

grows for the platforms but the increased labour intensity on the part of workers is compensated through a pay hike.⁶⁷

Food-delivery workers' monthly take-home pay grew steadily from 2018 to 2020 but headed downward in 2021. Specifically, about 46.2 per cent of the riders earned less than CNY3,000 per month and about one third made between CNY3,000 to CNY5,000 in 2018. About half of the riders in 2019 took home CNY5,000 to CNY7,000 per month, and 26.6 per cent made between CNY3,000 to CNY5,000. In 2020, 26.8 per cent of riders earned less than CNY5,000 per month whereas riders, who made CNY5,000 to CNY7,000 and CNY7,000 to CNY9,000 per month accounted for 29.0 and 26.8 per cent, respectively. In 2021, however, the percentage of workers who earned less than CNY5,000 per month climbed to 37.5 per cent and about another 30 per cent of the workers made CNY5,000 to CNY7,000 every month (Figure 7).

The income trend could be caused by multiple factors. First, the rapid market expansion of food-delivery platforms contributed to the early gains in workers' income. However, a massive influx of workers to the food-delivery platforms in 2020 because of the unemployment or under-employment caused by COVID-19 may have resulted in labour oversupply. In 2020, 41.1 per cent of the riders reported to see an increase in the number of riders in their service area, and the number grew to 45.7 per cent in 2021. At the same time, an influx of workers to the food-delivery service may have driven down the delivery rate and incentives in 2020, in which, more than half (54.8%) of the riders reported a reduction in the piece rate and nearly two thirds (64.6%) reported a decrease in the incentives provided by the platforms.⁶⁸

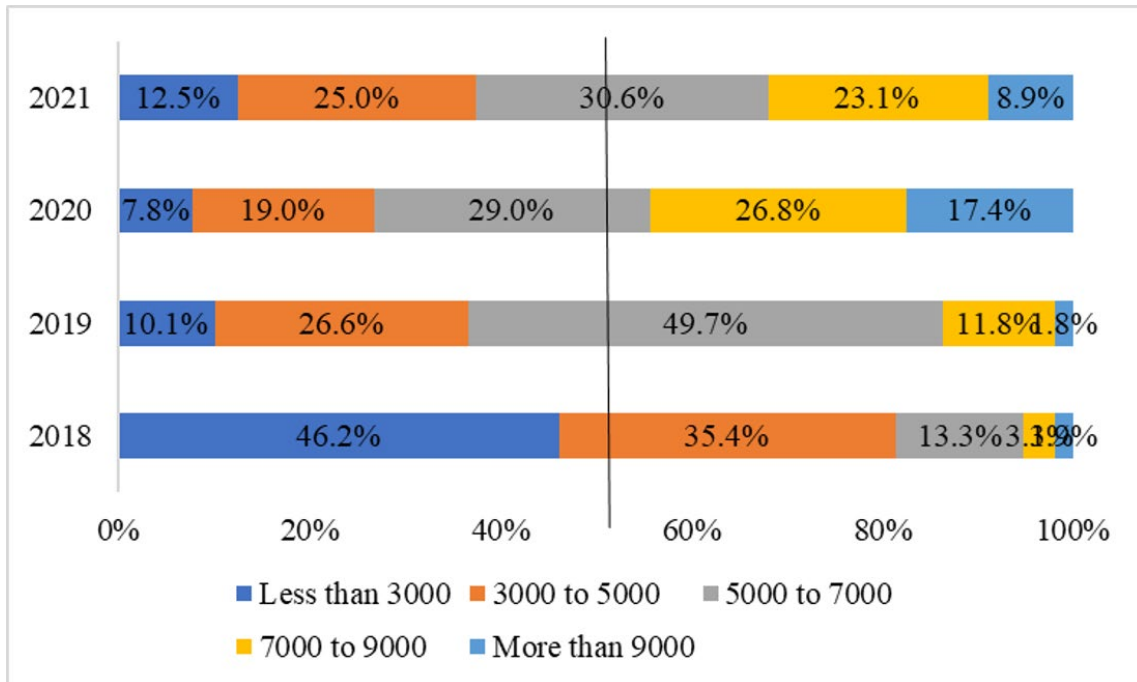
Second, the increased income could partially be explained through extended working hours and/or increasing labour intensity. The median daily hours for a rider in 2018 was between 8 to 10 hours, whereas it was close to 12 in 2020 and a little more than 10 in 2021. Longer working hours for full-time workers was more common in 2020 and 2021 than in 2018. For example, in 2021, about 6 per cent of full-time riders reported to work less than 8 hours a day, and 57 per cent reported to work more than 10 hours per day. More than 80 per cent of riders took less than three days off per month, and 36.6 per cent of riders did not take any break in a whole month. As for daily completed orders, labour intensity was evidently increased, too. The median daily completed volume in 2018 fell between 16 to 20 orders, but it shot up to nearly 40 orders in the peak season and between 20 to 30 orders in the off-season in 2020.⁶⁹ Facing a downward trend in the piece rate and incentives, about half of the riders in 2021 reported to have extended work hours, and as they are workers based on piece-rates, most of them choose to work during weekends.

⁶⁷ Michael Burawoy, *Manufacturing Consent: Changes in the Labour Process under Monopoly Capitalism* (Chicago, IL: University of Chicago Press, 1979); Doorn and Chen, "Odds Stacked against Workers".

⁶⁸ Without more comprehensive data on the piece rate remuneration system, we collected worker self-reported data about the number of riders in their area, the order volumes, the delivery fees, and incentives in 2020 and 2021. Data collected over two years were not substantial in our opinion, particularly considering the outbreak of covid-19 pandemic, to establish an argument about the company's strategy to decrease delivery fees. Nonetheless, this is a good point to track this data for a longer period.

⁶⁹ The earlier point on oversupply of workers is that the workers contributed to a decline in piece rate and incentives, but the market has expanded during the same period and hence the demand increased. That is why we argued the increase in worker's income was caused by labour intensification and prolonged work hours.

► **Figure 7. Monthly Income of the Riders (2018 to 2021) (after tax, in CNY)**

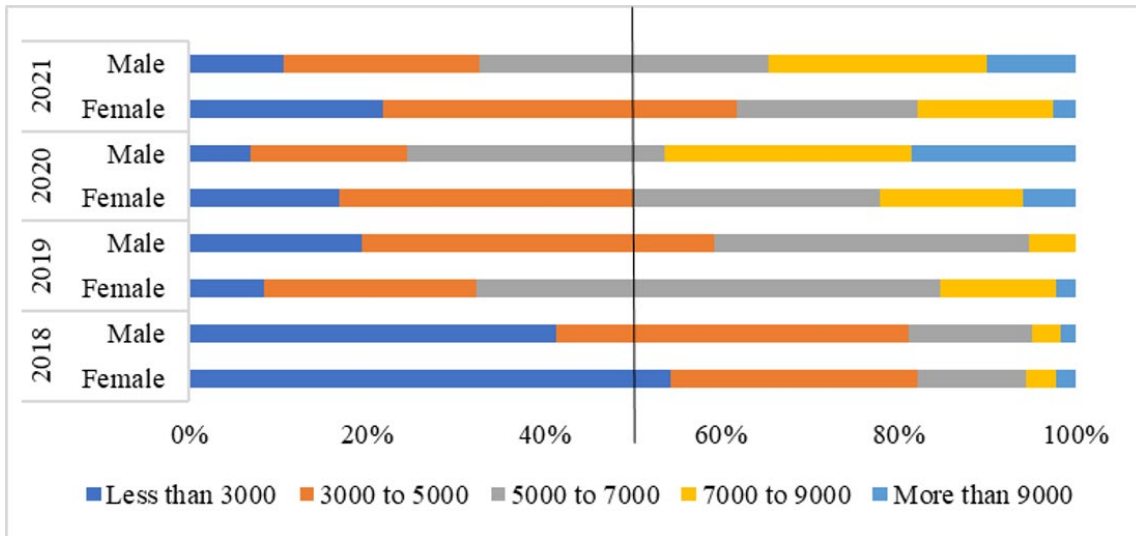


Source: Survey 2018-2021.

Female riders earned less than male riders in all four years except 2019.⁷⁰ In 2018, more than half of female riders earned less than CNY3,000 while the median income for male riders fell between CNY3,000 to CNY5,000. In 2019, female riders earned more than male riders, with more than 68 per cent making more than CNY5,000 while about 60 per cent of male riders earned less than CNY5,000. In 2020 and 2021, the gender income gap resurfaced, whereby half of the female riders earned less than CNY5,000 but the median income for male riders fell between CNY5,000 to CNY7,000 in both years (Figure 8).

⁷⁰ For female/male ratio, see in table 1. There were indeed challenges to get a clear sense of the representativeness of female and male riders against their respective population. The gender income disparity is noteworthy not the least because it existed. More importantly, as we explained the contributing factors below, the income increase driven by extension of work hour and labour intensity are likely to make gender income disparity persist.

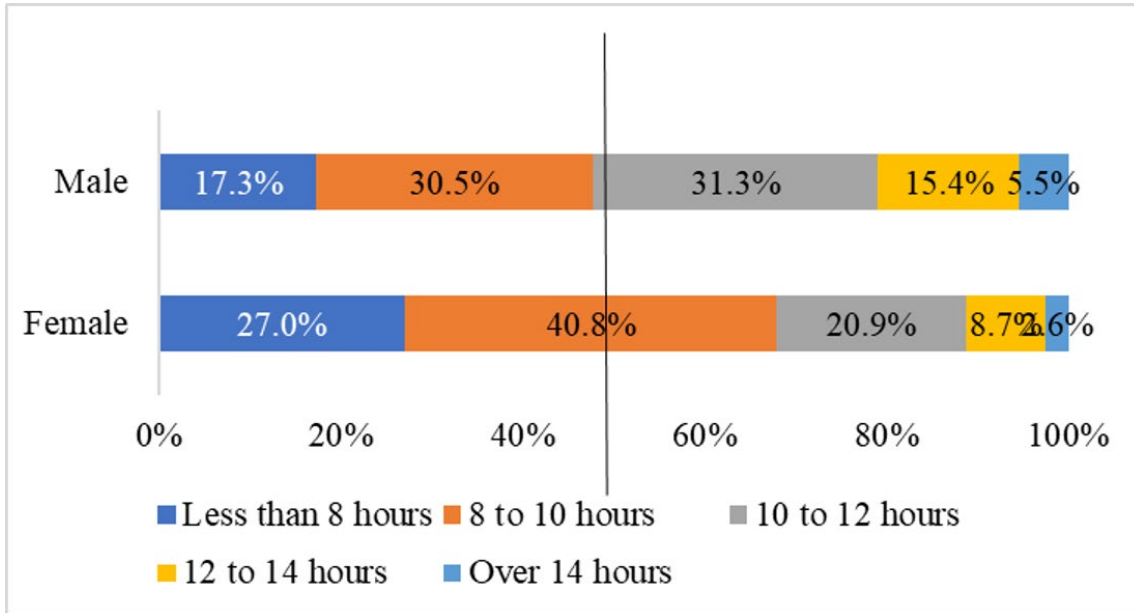
► Figure 8. Monthly Income Difference between Female and Male Riders (2018 to 2021) (after-tax, in CNY)



Source: Survey 2018-2021.

There are broader barriers for women to access the labour market, the gender pay gap in platform work can also be attributed to increased labour intensity on the job and the disproportionate family care-giving responsibilities of women which are likely to be intensified during the pandemic. As demonstrated earlier on, the extension of working hours has been normalized among riders to maintain or increase their income since 2020. However, female riders face a lot more constraints to extend hours than male riders. Their care-giving responsibilities may have contributed to female riders' shorter working hours than those of male riders. For example, in 2021, more than half of male riders worked over 10 hours per day. In comparison, nearly 70 per cent of female riders worked less than 10 hours per day.

► **Figure 9. Working Hour Difference between Female and Male Riders in 2021 (%)**



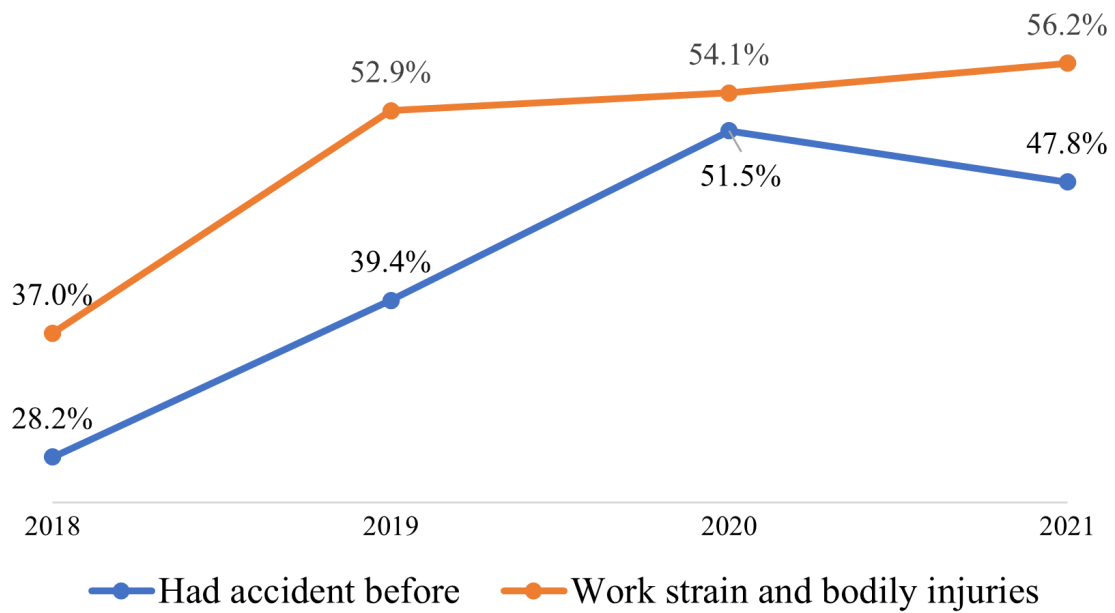
Source: Survey 2021.

3.3.3 Occupational safety and health⁷¹

In comparison with other high-risk sector, such as construction, mining or agriculture, food-delivery is not considered as a highly hazardous occupation. However, as for platform workers, food-delivery is among the most dangerous jobs and labour intensification over the years that contributes to exacerbating the situation. Riders who were involved in accidents and suffered from work strain and bodily injuries both increased sharply from 2018 to 2021 (Figure 10).

⁷¹ In our 2022 survey, it is found that 90% of the delivery workers report that COVID 19 has affected their daily delivery work. But we do not include the 2022 data in this report as it is newly done.

► Figure 10. Accidents and Bodily Injuries Among Riders (2018-2021) (%)



Source: Survey 2018-2021.

In 2021, over 56 per cent of the riders reported to have muscle strain and close to half (48%) of the riders had accidents at least once since they started to work on food-delivery platforms. The only exception was a decline in the involvement in accidents from 2020 to 2021, mostly because the city lockdown and other travel restrictions during the COVID-19 pandemic reduced the traffic. The physical toll of the delivery job is widely acknowledged by workers (Box 2), and yet, there is little access to social protection or access to health coverage.

The average delivery time per order was shortened from about one hour in 2016 to 30 minutes by 2019, which is a key element to be considered when referring to the piece-rate remuneration system. The shortening delivery time and requirement to deliver on-time – usually it is 90 or 95 per cent of all completed orders, coupled with incentives for on-time delivery, resulted in an increased focus for faster deliveries.⁷² This can affect workers’ mental health with more than half of the riders experiencing fatigue after work and had reduced morale, and one in three reported to be stressed out to the degree of nervous breakdown in 2021.

⁷² Julie Yujie Chen and Ping Sun, “Temporal Arbitrage, the Fragmented Rush, and Opportunistic Behaviors: The Labour Politics of Time in the Platform Economy”, *New Media & Society* 22, no. 9 (2020): 1561–79.

▶ **Box 2. Food-delivery Workers on Occupational Hazard**

Voice from riders:

“You can’t earn a living [as a food-delivery worker] without physical strength. [Orders] to schools and office buildings are fine. But if your deliveries were to the old-fashioned residential quarter, [which has no elevator], you have to climb five or six floors in one breath. Occasionally, that’s okay, but in the long run the body will crack up.” (Mi, male, 35 years old, crowdsourced rider, online interview, 2021)

“It’s impossible to do the job for a long period. Just for now. When you get old, you are unable to endure it, to carry on. You’d earn less than the younger people.” (Mei, female, 31 years old, crowdsourced rider, online interview 2021)

Source: Interview 2021.

3.3.4 Workers’ concerns

Food-delivery workers are most concerned with issues related to safety, income, and social insurance (Table 4). Based on the proportion of the total numbers of respondents in the surveys over the four years, riders’ top 5 concerns include traffic accidents, bad ratings or complaints, low income, food or e-bike battery theft, and no social insurance. They were worried about bad rating or customer complaint because they would be penalized with a heavy fine, which could cost them up to CNY500, which is equivalent to one to two days’ work (the piece rate for a full-time rider is between CNY4 to CNY10). Riders are concerned about theft of food and/or e-bike battery because theft of this kind is rampant, and the loss incurred rests on their shoulders. Moreover, and related to the policy against bad rating or customer complaint, food and/or e-bike battery theft is likely to cause disruptions in the work pace, which will affect their on-time delivery.⁷³ In addition, workers have to absorb the cost of production tools by themselves, such as e-bikes, batteries, work costumes, helmets as well as their cost by depreciation and replacement.

As for the social insurance, the longer one works as a food-delivery worker the more concerned she/he is about the lack of social insurance. In 2021, 44.3 per cent of the veteran riders who had worked more than three years indicated that “social insurance cost partially shouldered by the platform” would make them more likely to continue on the job, whereas less than one third of riders who had worked less than six months indicated the same. Veteran riders were also more likely (59.5%) than newcomers (46.7%) not to be covered by social insurance. This means that an increasing proportion of full-time riders who reported an unsatisfactory level of social protection results in an increasing demand for social insurance.

⁷³ Chen, Julie Yujie, Ping Sun, and Jack Linchuan Qiu. “Deliver on the Promise of Platform Economy: A Research Report.” IT for Change and IDRC, 2020.

► **Table 4. Top Concerns about Work Conditions (2018-2021)⁷⁴ (%)**

Concerned issues	Percentage of total respondents (N=4508)
Traffic accidents	53.4
Bad rating or customer complaint	42.1
Low income	38.6
Food or e-bike battery theft	27.7
No social insurance	23.6

Source: Survey 2018-2021.

Food-delivery workers expressed a strong need for social respect and recognition (Box 3). Over 80 per cent of the riders “strongly agreed” that “food-delivery riders deserve respect”. Only about 30 per cent of riders agreed that “food-delivery was a decent job”. Some indicated during the interviews that they did not even want their families and friends to know that they were food-delivery workers, as delivery work is usually regarded as unsafe and precarious.

► **Box 3. Interaction with Customers**

Voice from riders:

“I got a [customer] complaint on the day of Dragon Boat Festival as the restaurant could not cook the meal for a reserved order in a timely manner. It ran overtime by more than 20 minutes. The customer lost patience and swore at me. I swore back. I was pissed off. Food-delivery workers are human beings, too. What is human in me as a rider? It wasn't my fault. Why on earth was I given a hard time?” (Bing, male, 25 years old, full-time rider, online interview, 2021)

Source: Interview 2021.

3.4 Labour intermediaries⁷⁵

The use of algorithms to assign orders to workers, calculate pay and estimate delivery time is common on digital labour platforms and food-delivery platforms in China. Algorithms that automate the work process and many aspects of human resource management.⁷⁶ In China there remains the prominent presence of human supervision in addition to the algorithms.⁷⁷ From daily management to recruitment, their presence represents the expansion of labour intermediaries or agencies that are common in the construction and manufacturing sectors, as well as in the platform-facilitated food-delivery services. A growing involvement of labour intermediaries facilitates the structural shift to the management of workers by and through food-delivery platforms, making the latter extremely flexible (Figure 11, also see section 3.2). The shifting labour management structure and involvement of various external labour intermediaries in the management of platform workers have a profound impact on workers and their labour relations. This may result in difficulties in determining who is the contracting party and could raise barriers for workers to access labour dispute mechanisms in case of complaints.

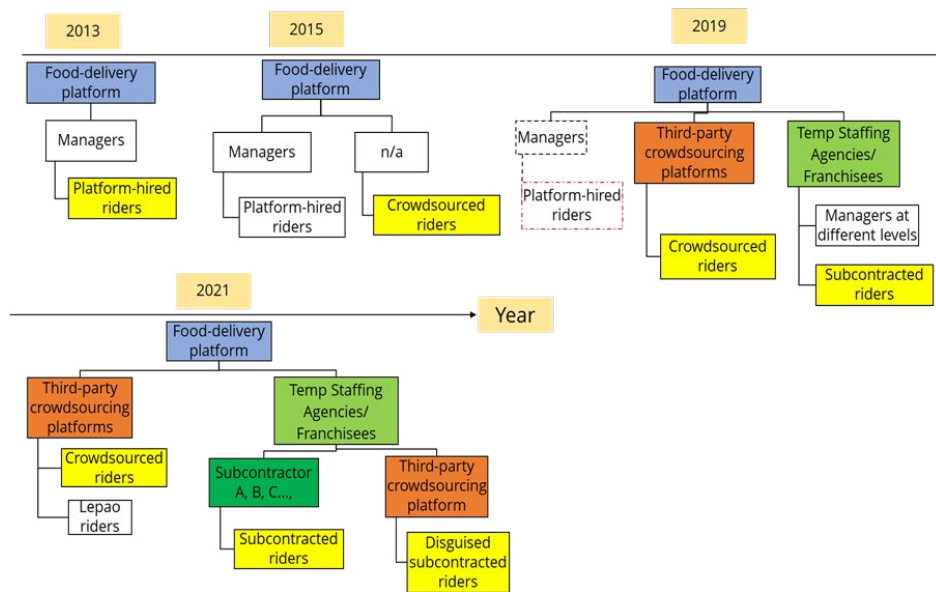
⁷⁴ On the survey, this is a multiple-choice question asking workers to choose their top three concerns in the year.

⁷⁵ Public employment services played no role to our knowledge. The labour intermediaries belong to the category of private employment service agency, which, as we have shown so far, played roles of recruitment and daily management.

⁷⁶ Alex Rosenblat and Luke Stark, “Algorithmic Labour and Information Asymmetries: A Case Study of Uber’s Drivers”, *International Journal of Communication* 10 (July 27, 2016): 3758–84; ILO, “The Role of Digital Labour Platforms in Transforming the World of Work.”

⁷⁷ The existence of labour intermediaries and agencies are special in China, and their functions here are : (1)to help platform recruit workers according to fluctuation in demand, (2) do the offline labour management and make sure workers have places to go when they have problems. But they are neither new nor unique to the digital labour platforms.

► Figure 11. Expansion of Intermediaries in Food-delivery Services (2013 – 2021)⁷⁸



Source: Modified from Andrijasevic et al., 2021, p.77.

3.4.1 Multi-layered webs of subcontractors

Platform-based food-delivery services in China involve a range of intermediary agencies, which played roles in labour recruitment, management and training, payroll and tax services and so on. These intermediaries can be roughly divided into the following two categories.

The first category is franchisees (*jiamengshang*, 加盟商) and agencies (*dailishang*, 代理商). They are service enterprises that sign cooperation or service agreements with the platform companies to be contracted for the service delivery in designated areas.⁷⁹ Franchisees and agencies are usually human resource companies or temp staffing agencies. The size and covered business area in the city vary from one franchisee to another, and there can be multiple franchisees in the same business district in one city. They are regulated by platform companies through ranking systems, which tend to intensify competition among franchisees and agencies and further fragmentation of the labour force because different franchisees and agencies may develop their own management policies. These methods make the jobs provided by these agents more precarious, which have additional impacts of labour platform on working conditions and casualization of jobs.

Meituan has contracted about 1,000 franchisees and agencies, which employed 250,000 to 270,000 riders nationwide.⁸⁰ In Beijing, there are 13 outsourcing companies working with Ele.me. Nationwide, there are more than 70.⁸¹ Franchisees typically hire full-time subcontracted riders who are organized and managed by labour stations which are responsible for the delivery

⁷⁸ (1) Since we order our findings along the lines of demographics of the workforce in the food-delivery service, characteristics of the employment, work conditions, and labour management, we decide to place the shifting structure of management and its related expansion of intermediaries here. However, we placed cross-reference earlier in the report. (2) The classification of “disguised subcontractors riders” belongs to a court decision, on a case-by-case basis.

⁷⁹ There is no standard in terms of agreements between the service enterprises and the platform companies. Sometimes it is a cooperation agreement; at other times it is a service agreement.

⁸⁰ Zhou, “Digital Labour Platforms and Labour Protection in China”.

⁸¹ From the interview with a station manager at Ele.me (2020).

service to the local business districts (<3km or 5km). The franchisees and agencies operate according to a hierarchical management structure based on geographical regions. For instance, in a given city, the subcontracted riders are under the supervision of the labour station manager. One labour station may manage 20 to 200 subcontracted riders. Twenty or so labour station managers from the same or neighboring districts are grouped into a team which is under the supervision of a team leader or regional manager at the franchisee company. The bargaining power of the franchisees and agencies is circumscribed by the market dominance of food-delivery platforms. Though franchisees and agencies are required to sign labour contracts or labour service agreements with riders, a great majority do not in practice.

The second type of intermediary includes various temporary staffing agencies (TSAs), including both traditional TSAs and third-party crowdsourcing platforms specialized in delivery or logistics service solutions (Figure 11). TSAs are responsible for recruiting both the subcontracted riders for franchisee enterprises and the crowdsourced (self-employed) riders for platform companies. For example, Meituan is reported to work with “more than a dozen” of third-party labour service agencies nationwide.⁸² Third-party crowdsourcing platforms are mostly involved in recruiting crowdsourced or part-time riders. One of the largest such crowdsourcing platforms is called Quhuo which went public on the New York Stock Exchange in 2020. There were over 41,000 riders working for food-delivery platforms through Quhuo.⁸³

Traditional TSAs and the crowdsourcing platforms play an important role in recruiting workers for food-delivery platforms who are classified as “self-employed” or, in the Chinese legal term, “individual industrial and commercial households” (*geti gongshang hu*). Under this category, food-delivery workers are classified as business partners which is mutually exclusive to the classification of workers and, hence, are not covered by labour law or labour contract law, because they are classified as business partners, which is mutually exclusive to the classification of worker. Both traditional TSAs and emerging internet-based third-party crowdsourcing platforms and food-delivery platforms have no legal responsibility to contribute to the social insurance for their riders.

However, a trend emerged from the layered webs of third-party agencies to turn the subcontracted riders into registered “individual industrial and commercial households”.⁸⁴ It was estimated that over 1.9 million subcontracted riders became “self-employed”, and the number rose by 10,000 every day in 2020.⁸⁵

3.4.2 Impact of the proliferation of labour intermediaries on workers and employment

Having discussed the findings focusing on worker's demographics and work conditions, this section focuses on more structural issues to discuss the implications of the increase of intermediaries, a phenomenon that needs elaboration on what has been covered in section 3.4.1. The increase of labour intermediaries in food-delivery services in China has had a significant impact on workers and employment, where the intermediaries have their key role in matching workers with platforms, the discussion in this section will mainly focus on the negative impact so as for the latter parts of this paper to make policy proposals.

First, the quasi-monopolistic position grants food-delivery platforms power to dictate the rules for pricing, governance, and performance evaluations, squeezing the profits made by intermediaries and workers alike (Box 4). Through monthly ranking, platforms hold assessment standards

⁸² Zhou, “Digital Labour Platforms and Labour Protection in China”, 11. third party labour service agencies are traditional TSAs while crowdsourcing platforms are internet-based companies.

⁸³ Quhuo IPO prospectus: <https://www.sec.gov/Archives/edgar/data/1781193/000119312520160828/d769009df1.htm>

⁸⁴ Some subcontracted riders are coerced into signing up a third-party crowdsourcing platform to register as “self employed” because it helps them avoid taxes.

⁸⁵ Zhicheng Workers, “Mystery for Couriers: How Can Laws Crack Open the Labour Management Situation in Food-Delivery Sector?”.

to regulate agencies and franchisees and by extension, the work force. If they fail to meet the delivery requirements, agencies and franchisees would receive warnings from the platform companies. Some of the franchisees with unfavorable ratings were even requested to transfer the affiliated workers to their competitors with better performance.

► **Box 4. Manager's Perspective⁸⁶**

Voice from managers:

"Ele.me ranks all suppliers [labour contracting agencies] in Beijing. The better the performance shown in the data about one agency, the higher cuts it can take from Ele.me...The ranking is based on performance metrics about the number of cancellations, total time of the delivery, and customer satisfactory rate [among others] ... Not the performance of [one] labour station, but the overall statistics of the intermediary agency. (Wu, the manager of one labour station for an agency company of Ele.me, 2020, online interview).

We [agencies and franchisees] have zero bargaining power. We do whatever it (the platform) stipulates. ...I'm seriously considering perhaps quitting this business next year. This problem is..., big fish swallowing small fish on the market; and there will always be this kind of big platform that can build an ecosystem. When you join the platform's ecosystem, you must obey its rules. The higher the market share of this platform is, the more its bargaining power will increase. There is no alternative." (Dai, the manager of Meituan franchisees, 2021, offline interview).

Source: Interview 2021.

The requirements imposed by the platforms upon the intermediary agencies and franchisees translate into the daily supervision of food-delivery workers. Subcontracted riders are supervised by the local labour stations (They are the stations within a 3-5km radius directly supervising food-delivery riders). Every day, subcontracted riders are mandated to attend the daily morning meeting, where the head of the labour station informs riders about their work performance regarding work, ratings, complaints, and traffic safety. They also face spot checks during the day via social media.⁸⁷ In 2021, this type of management of the labour station managers led 30.1 per cent of the riders appealed for labour disputes, but nearly two thirds of them failed because of the lack of institutional rights for the workers. Another consequence of strict management oriented toward delivery performance is the lack of employers' investment in skill training. In 2021, insufficient educational certificate/degree was identified as the most significant barrier by riders (67%) for their career development, but riders showed lukewarm participation in "the training sessions that led to certificates".⁸⁸ Part of the reason is the lack of time and energy after work.

Second, the expansion of intermediaries accelerates the formation of a fragmented and under-regulated labour market, shifting the risks and burden of social insurance mostly to food-delivery riders. Through crowdsourcing and outsourcing the delivery service to TSAs and franchisees, food-delivery platforms use their monopolistic position to minimize the possibility of establishing employment relations with riders in the form of labour contracts. Through subcontracting and crowdsourcing, the intermediary TSAs, franchisees, and participant crowdsourcing platforms are also able to avoid signing labour contracts or labour service agreements, paying taxes or contributing to social insurance as much as possible, which is a strong reason for governments to intervene. This partially contributes to the declining rate of labour contracts signed and social

⁸⁶ It should be noted that the statements of such nature represent the view of some but do not represent the view of the industry or give objective information on it.

⁸⁷ Sun, Chen, and Rani, "From Flexible Labour to 'Sticky Labour'".

⁸⁸ Sometimes the platform and the government collaborate on training. In other cases, the platforms such as Meituan, also have their own online university for skills training.

insurance participation in the upward trend of overall employment number and proportion of full-time workers on food-delivery platforms (Figures 5 and 6).

Third, the imbricated webs of subcontractors create barriers for workers to defend their labour rights. It is not uncommon nowadays for full-time subcontracted riders to have several subcontracting TSAs and/or crowdsourcing companies involved in their management (Figure 11). For example, in a known labour arbitration case, the worker defendant found he was subjected to daily management by the food-delivery platform and a labour agency, but his income was paid by a second company, and a third and fourth subcontracting company were responsible for withholding his social insurance payment and income taxes. This generates a distributed employment relation, making it extremely difficult to identify which company is the employer in the labour arbitration case.⁸⁹ Without a legally substantiated employer, a food-delivery rider has little chance to claim compensations for bodily injuries and/or seek remedies for lost pay (e.g., social insurance and wages), and based on our observation, most of them are not members of the union. This leads to one of our suggestions in the conclusions of the report that the legal framework needs adapting, as well as existing mechanisms for filling complaints, investigating abuses and modernization of labour arbitration.

⁸⁹ Zhicheng Workers: <https://mp.weixin.qq.com/s/7V0HviXa6qYMkRvKEWQ5Hg>

▶ 4 Review of National Employment Policies in China

Employment had been a marginal issue in China's Reform and Open-up Initiatives since the late 1970s, but became a prominent issue in the late 1990s because of the reform of state-owned enterprises (SOEs), and a priority since 2002 when China entered WTO. China had been experiencing several employment crises from 1980 to 2000 before the COVID-19 hit hard the labour market in the country (Figure 12).

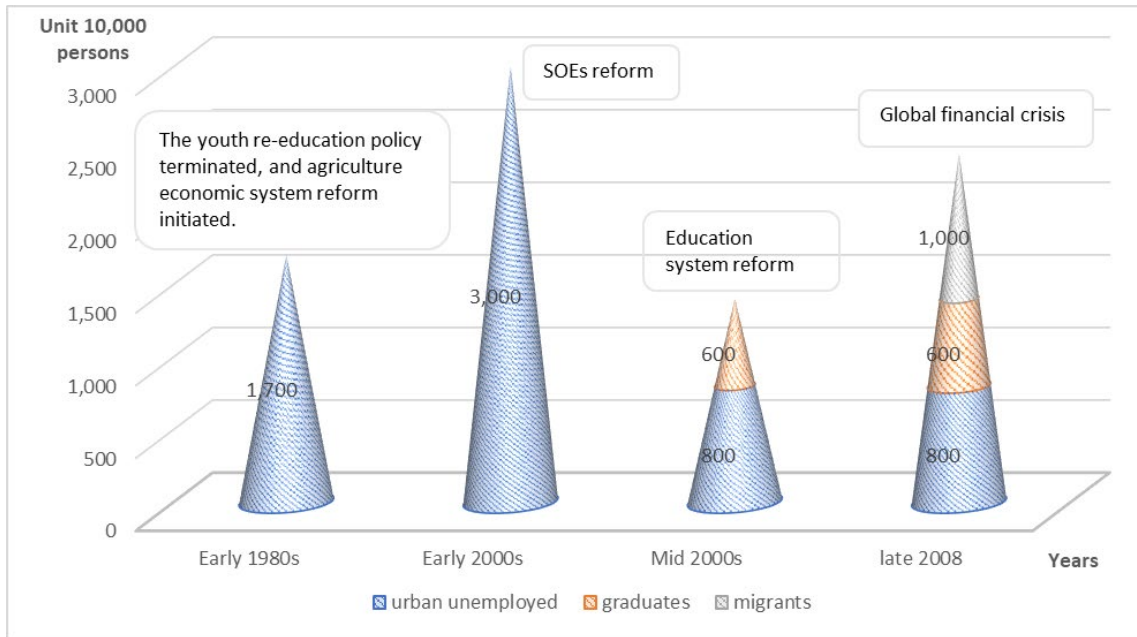
China's employment policy is characterized by its adaptability and responsiveness, whose goals and principles are shaped by the existing and anticipated challenges in the labour market, macro economy, national development plans, social stability, and most recently, geopolitics. Scholars pointed out that China's employment policy aims to balance efficiency and fairness, the former concerns the transfer of labour from low-skilled and low productivity sectors and regions to high-skilled and high productivity ones, and the latter concerns the labour market inclusiveness and fairness.⁹⁰

The national employment policies in China present two approaches. The first approach is to address the employment challenges in the traditional or formal sector—that is, stable employment with institutional protections. The second approach is to tackle the employment challenges in the non-traditional sector, which has dealt with, for instance, migrant workers, and more recently, flexible employment and platform-based employment.⁹¹ As will be demonstrated below, to address the employment challenges on digital labour platforms, the employment policies should be more adaptable and responsive.

⁹⁰ Fang Cai, Richard Freeman, and Adrian Wood, "China's Employment Policies in International Perspective," *Studies in Labour Economics* 2, no. 05 (2014): 3–33.

⁹¹ There is no clear or official definition of flexible employment in China. Sometimes it is used interchangeably with "new forms of employment" (see section 2.2 for a discussion on the term). At other times it is used to refer to people with unstable employment status who can be freelancers or those who have to juggle multiple jobs.

► Figure 12. Significant employment challenges from 1980-2010 in China



Source: Yadong Wang, workshop on Job Creation and Inclusive Growth: China’s Experience and International Evidence, organized by International Labour Organization and Centre for Finance and Development of Geneva Graduate Institute of International and Development Studies. 7 July 2017.

4.1 Development of national employment policies⁹²

When China launched economic reform in the late 1970s, the top priority was given to economic growth, productivity, and market efficiency. In the 1980s, employment policies focused on four pillars: job creation by collectively-owned enterprises, public employment services, vocational training, and unemployment insurance.⁹³ The objective of employment policies in this period was to find jobs in cities for the young people who had been sent to rural areas for the purpose of *Re-Education* in the 1960s and then returned to their hometowns since 1978. However, the first wave of comprehensive employment policy response and intervention centered on the reemployment of tens of millions of SOEs workers who had been laid off since the mid-1990s because of downsizing and privatization of the SOEs. Mitigating the employment pressure caused by the laid-off SOE workers and maintaining social stability prompted the Chinese government to confront the employment issue from the top-level. In this context, the first national employment policy was designed in the late 1990s and launched in the early 2000s.

In the first five years of the new millennium, while the reemployment of laid-off SOE workers continued to be the priority, China’s national employment policy became more “active” to cover an expanding list of different groups of workers who became vulnerable and/or critical in macro-economic situations. For example, the employment of the rural-to-urban migrant workers started to become a policy concern since 2002 because of rapid urbanization and the flow of hundreds of millions of workers from the rural areas seeking jobs to the urban areas where the export-oriented manufacturing facilities concentrated. Since 2008, college graduates were added to the list of workers identified as the most concerned group in the national employment policy. The enactment of the *Labour Contract Law* (2008) and *Employment Promotion Law* (2007) suggested a shift in China’s employment policy framework from the primary objective of reemployment of

⁹² This section benefited greatly from Xia, “Employment Policy Development in China”, (2017).

⁹³ Zhang Xiaojian, “The reform and development of China’s employment”, (2008). <https://baike.baidu.com/item/%E4%B8%AD%E5%9B%BD%E5%B0%B1%E4%B8%9A%E7%9A%84%E6%94%B9%E9%9D%A9%E5%8F%91%E5%B1%95/7886985>

laid-off workers toward a more comprehensive and integrated approach with the aim to achieve “full employment for the wider public”.⁹⁴

The overarching objective to achieve full employment continued to guide the subsequent employment policies in the wake of the 2008 global financial crisis which hit the export-led manufacturing sector. New challenges emerged from a shrinking demand overseas and continued pressures on urban employment because of an increasing number of college graduates and a large agricultural surplus labour. These challenges prompted the Chinese government to adjust macro-economic policies toward industrial capacity reduction, stimulation of domestic consumption, and prioritizing innovations in 2015. Since then, the employment policy framework has shifted its emphasis towards employment driven by entrepreneurship and innovation (particularly micro-, small-, and medium-sized businesses and those with a high capacity for job creation), improving employment services and vocational training, and more inclusive support to socially vulnerable groups such as migrant workers, youth, women, veterans, and people with disabilities. Table 5 provides a summary of the national employment policies in China since 2002.⁹⁵

⁹⁴ Xia, 8

⁹⁵ Details on the national employment policies in response to the COVID-19 crisis can be found at: https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_752056.pdf

► Table 5. Key elements of the undated national employment policies in China since 2002

Policy and Period	SOEs reform (Sept. 2002)	Youth employment (May 2008)	Financial crisis (Dec. 2008)	Entrepreneurship development (May 2015)	Comprehensive employment policy framework (April 2017)
Economic policies to create jobs	Labour intensive, traditional services	Service industry, new industry	4 trillion CNY investment	<ul style="list-style-type: none"> Employment policy impact evaluation of macro-economic and investment policy Link GDP with employment; Quality employment 	The security and growth of employment is set a bottom line of macro control. Link macro and sectoral policies to employment. Develop small and micro enterprises
Entrepreneurship	Tax deduction and exemption; micro credit; financial support			<ul style="list-style-type: none"> 100, 000CNY Micro credit Minimize administrative intervention, Improve entrepreneurship zone Tax deduction and exemption 	<ul style="list-style-type: none"> Provide employment assistance to disadvantaged regions; Develop new forms of employment by supporting new industries and enterprises Provide entrepreneurship allowance to new businesses and create Entrepreneurship Fund Create jobs for laid off workers in industries with excess production Equal employment system
Recruitment	Tax deduction; subsidy of social security				
Disadvantaged groups	Tax deduction; subsidy of social security and wage		Postpone insurance payment; reduce insurance rate; wage subsidies, etc		
Job security	No				
Public employment services	Free services; job guarantee; targeted activities				<ul style="list-style-type: none"> Professional and computerized PES with focus on women and disabled persons Develop internet plus PES
Skills development	Training allowance; technician project	Special Training Scheme		Education and training of business development; new apprenticeship scheme	Quality training; provide skills upgrading subsidy to qualified enterprises
Unemployment prevention	Unemployment prediction and pre-warning system				Establish monitoring system, in particular indicators of new form of employment and entrepreneurship development
Social security	Expand coverage of social security; employment conducive				Improve social security system to adapt the new form of employment and entrepreneurship development

Source: Yadong Wang, workshop on Job Creation and Inclusive Growth: China's Experience and International Evidence, organized by International Labour Organization and Centre for Finance and Development of Geneva Graduate Institute of International and Development Studies. 7 July 2017.

4.2 National employment policies to address new forms of employment

The objectives of the employment policy in China have adapted responsively since 2016 to address the ongoing employment challenges in both traditional and emerging sectors (see Table 6). Two new developments to China's "active employment policy" are noteworthy since 2017 and particularly during and after the COVID-19 outbreak.

► **Table 6. Selective Employment Policies in China (2016-2021)⁹⁶**

Year	Employment Policy	Objective and Orientation
2016	Promoting the Innovation of New Business Forms of "Internet +"	To promote mass entrepreneurship and mass innovation, and internet-driven employment
2017	Plan for Employment Promotion during the "13th Five-Year Plan" Period	To promote quality employment and skill improvement
2018	Opinions on Developing the Real Economy, Stabilizing and Promoting Employment	To focus on industrial upgrading and promote quality employment and digital skills training
2019	Opinions on Promoting the Standardized and Healthy Development of the Platform Economy	To introduce the idea of inclusive regulation of platform economy with a promotion of platform employment
2020	Supporting Flexible Employment through Multiple Channels	To advocate for diversifying employment and in support of flexible and gig economies
2021	Employment Promotion 14th Five-Year Plan	To advocate for improvement in social insurance system, labour rights protection, and equal employment
2021	Opinions on Labour Rights Protection and New Forms of Employment	To announce a tightened regulation of platform economy and aim to improve the protection of workers' labour rights, minimum wage, paid leave, and social insurance

Source: Chinese Ministry of Human Resources and Social Security.

The first adaptation of the employment policy framework is from large-scale job creation to employment quality. In 2017, the State Council issued the *Plan for Employment Promotion during the "13th Five-Year Plan" Period* (hereafter *Employment Promotion 13th Five-Year Plan*).⁹⁷ It continued sticking to the employment-first approach, but also recognized that "the inherent requirement of cultivating new engines for the economic growth and promoting the economic upgrade and transformation entails a comprehensive improvement in the employment and entrepreneurial skills among workers and the achievement of a relatively sufficient and high-quality employment." In addition to strengthening the existing programs for employment and entrepreneurship development services and vocational training, a systemic program was laid out to help improve the quality of employment and skills of the work force, which covered higher education reforms, a lifelong learning service system, incentive systems, online training, and special training targeting high-skilled but short-supplied workers, migrant workers, veterans, laid-off workers from over-capacity reduction sectors, as well as people with disabilities.

The second adaptation is from total government regulation to employment promotion with multiple channels, some of which are generated by the new sectors and others have been transformed by the applications of ICT (e.g., internet-enabled e-commerce for produces from rural regions). The policy goal is to expand and foster new areas for job creation. It would be important to emphasise that most of the jobs that platforms claim to create have actually been part of the traditional or offline economy and platforms are actually trying to mediate. ILO (2021), as well

⁹⁶ Employment policies listed above can be found on the website of Central People's Government of the PRC, <http://www.gov.cn/>

⁹⁷ The policy contents quoted in this paper were the author's translations unless indicated otherwise. http://www.gov.cn/zhengce/content/2017-02/06/content_5165797.htm

as a number of other publications, have made this point, but where there might be an increase in employment opportunities is in the delivery sector due to the changing consumer behaviour. “New forms of employment” (xinjiuye xingtai) is a lexicon circulated in the Chinese official documents since 2015 and used and elaborated by some scholars to describe the characteristics of flexible and open employment arrangements associated with the proliferation of digital economy, in particular digital platforms.⁹⁸ “New forms of employment” in the Chinese context can be understood as an umbrella term for all forms of non-standard employment in the digital economy.⁹⁹ A scholar defines it as activities “to acquire income by a worker that is mobilized by technological innovation such as e-commerce or online platforms.”¹⁰⁰ *The Employment Promotion 13th Five-Year Plan* offered explicit policy support for the new forms of employment in the platform economy. Although there is no official definition, the appearance and frequent use of the term “new forms of employment” in China’s employment policy since 2017 have suggested a policy orientation toward various forms of employment, particularly non-standard employment. The term is frequently used by employer enterprises, such as digital platform companies, to emphasize their contributions to job creation.¹⁰¹

The shifts toward new forms of employment and quality employment shaped China’s employment policy during the pandemic and in the post-COVID-19 era. In response to the economic and social disruptions caused by COVID-19 in 2020, China implemented a targeted and integrated approach to help resume production and “stabilize” employment.¹⁰² The *Opinions of the General Office of the State Council on Supporting Flexible Employment through Multiple Channels* (2020) opened with a statement that “[s]elf-employment, part-time jobs, new forms of employment, and other types of flexible employment provide important means for workers to increase income and get employed. They also play a significant role in opening new channels for employment and fostering new economic drivers for development”.¹⁰³ The *Opinions on Supporting Flexible Employment 2020* emphasized the importance to establish social insurance and protection systems to safeguard workers’ rights and support income generated through diverse channels and flexible employment. The latest *Plan for Employment Promotion during the “14th Five-Year Plan” Period* (hereafter *Employment Promotion 14th Five-Year Plan*) in 2021 set the improvement of employment quality as one of the five goals by 2025, together with a general stable employment, alleviation of the contradictions of structural unemployment, continuity in entrepreneurship-driven employment, and significantly enhanced responsiveness to risks. Accordingly, the *Employment Promotion 14th Five-Year Plan* listed plans to improve social insurance systems, better protect workers’ labour rights and equal employment, improve the public employment service system, and develop comprehensive, multi-level, and diverse programs to improve a wide range of workers’ skills. However, it must be noted that the promotion of “new forms of employment” and a series of policies oriented toward quality employment have not yet excluded informal employment with few social insurance and labour protections. On the contrary, “the new forms of employment” emerging from the digital economy are likely to involve informal workers more than otherwise, which we proceed to discuss below.

⁹⁸ For a detailed account of the term and its implications, see Chapter 3 in Rutvica Andrijasevic et al., *Media and Management* (Minneapolis, MN: University of Minnesota Press, 2021).

⁹⁹ According to ILO, “non-standard forms of employment – including temporary work, part-time work, temporary agency work and other multi-party employment arrangements, disguised employment relationships and dependent self-employment – have become a contemporary feature of labour markets the world over”. https://www.ilo.org/global/publications/books/WCMS_534326/lang-en/index.htm

¹⁰⁰ Chenggang Zhang, *Employment Transformation: Digital Business Models and New Forms of Employment in China*, (Beijing, China: China Workers Publishing House, 2019), 9.

¹⁰¹ Julie Yujie Chen, “The Mirage and Politics of Participation in China’s Platform Economy,” *Javnost - The Public* 27, no. 2 (April 2, 2020): 154–70, <https://doi.org/10.1080/13183222.2020.1727271>

¹⁰² Yadong Wang, “China - Rapid Assessment of the Impact of COVID-19 on Employment,” ILO Policy Brief (Genève, Switzerland: ILO, 2020).

¹⁰³ http://www.gov.cn/zhengce/content/2020-07/31/content_5531613.htm

► 5 Challenges to the Employment Policy Framework of the New Forms of Employment

As discussed in section 4, China's current employment policy is oriented toward promoting 1) quality employment and 2) job creation through a variety of means. Digital labour platforms like those for food-delivery services have created diverse ways for people to get a job. Platforms provide an option to workers left out of the labour market, as well as offering opportunities for individuals to access complementary source of income when other supports are not readily available. However, there are also challenges surrounding platform work, which for some also exist in the broad labour market. These includes challenges in terms of access to labour and social protection for self-employed, clarity on the classification status, and access to skill development. Emergence of digital platforms thus require policy approach that secure working rights and protections for platform workers and maximize the opportunities for growth. It is evident in our empirical findings that the downward trend in income, increasing labour intensity, deteriorating social insurance and labour protections, limited room for skills development, and the limited opportunities for workers to defend their legal rights represent significant challenges to achieving the shift towards quality and fair employment under the current employment policy framework.

5.1 Challenges to the existing national employment policy framework

The challenges are twofold: 1) adapting regulatory frameworks to the platform economy, and 2) addressing new issues related to digital labour platforms.

A low labour contract signing rate and low participation in the social insurance system among migrant workers are not new and not unique to digital labour platforms. Due to the household registration system (*hukou*), there are structural barriers for them to seek equal employment with their urban counterparts. The perceived temporary stay in the city and the relatively high social insurance contribution compared to their income lead to a considerable reluctance among migrant workers to join the urban social insurance program, which usually requires at least 15 years of contributions before one can claim benefits (Box 5). The problem of "low benefits and high compliance costs" goes beyond the scope of the food-delivery sector or digital labour platforms.¹⁰⁴ But with a growing dependence of workers on the platforms for their primary income, measures to lower or even eliminate structural barriers to access social insurance should be prioritized in the national employment policy framework. Exploratory actions would be welcome toward decoupling workers' social insurance from the single-employer-based labour relations and the registered household locations.

While the subcontracting system is not new in China, the increased number of intermediaries and third-party crowdsourcing service companies, create legal unclarity with respect the application of the Labour Contract Law (2008) and Interim Provisions on Labour Dispatch (2014).¹⁰⁵ A clearer framework for labour intermediaries could be needed to establish clear criteria of labour relationships and be incorporated into the employment policy for digital labour platforms.

¹⁰⁴ Jiwei Qian and Zhuoyi Wen, "Extension of Social Insurance Coverage to Informal Economy Workers in China: An Administrative and Institutional Perspective," *International Social Security Review* 74, no. 1 (2021): 80.

¹⁰⁵ http://www.mohrss.gov.cn/SYrlzyhshbzb/zcfg/flfg/gz/201601/t20160113_231678.html

► **Box 5. Rider on Social Insurance**

Voice from riders:

“Honestly, I don't plan to stay long in big cities. So, what does the social security do? It's useless. I cannot stay in one place for more than ten years. It's troublesome to go back and forth. My monthly salary is eight or nine thousand (CNY), and I have to pay more than 1,000 for social insurance. That's insane.”

(Du, a rider in Ele.me, interview data, July 2021)

Source: Interview 2021.

Besides the challenges related to labour protection, the business model of food-delivery platforms require that systems are in place to ensure that regulatory overlaps and policy gaps are minimised given their direct and indirect impact on employment. The platform companies' power to shape the labour conditions for workers and to determine the terms of the business agreements with the franchisees and agencies can put them in a favorable position which could consequently cause serious challenges for digital labour platforms to support the sustainability of the economy and social development.

Last but not least, the lack of comprehensive and systemic employment data about platform workers leads scholars, including the authors of the paper, to mainly rely on convenience and/or snowball sampling for their research. Digital labour platforms do not disclose data related to platform-based employment and work conditions. When they disclose relevant information, the data are short of oversight, without any explanation of the methodology used. This prevents scholars, policymakers, and other concerned groups or individuals from conducting large-scale studies and generating comprehensive and in-depth knowledge about platform-based employment. It further undermines the possibility to develop an empirically informed policy decision process.

5.2 Recent responses from the governments, businesses, and social partners

The high accident rate and inadequate labour protection of platform work have attracted a large amount of social attention in the past two years. The Chinese government announced several policy interventions focusing on platform employment in 2021. Local governments and other concerned governmental departments have also taken some corresponding measures, as follows:

At the national level, on July 16 2021, the Ministry of Human Resources and Social Security and another seven departments issued Guiding Opinions on Protecting the Labour Rights and Interests of Workers in New Forms of Employment (known as and hereafter No. 56 document).¹⁰⁶ For the first time, it created an experimental category of employment outside labour relations,¹⁰⁷ which includes workers who are “not completely falling under the circumstances for establishing labour relations but are subject to labour management from enterprises.” The No.56 document stated that “the enterprise should be guided to sign a written agreement to reasonably determine the rights and obligations of the enterprise and the worker.” It also identified areas of improvement to protect platform workers' labour rights and interests, such as working hours, minimum wage, labour intensity, occupational safety and health, and so on. Another important point in the No.56 document was to strengthen occupational injury protection by establishing a pilot occupational injury protection system for platform-based workers which mandates the participation and contribution of platform companies. Shanghai and Guangzhou are among the first pilot cities to

¹⁰⁶ http://www.gov.cn/zhengce/zhengceku/2021-07/23/content_5626761.htm

¹⁰⁷ The labour relations are the only legal reference point in the Labour Law and Labour Contract Law to determine the rights and responsibilities between workers and their employers.

implement the occupational injury protection system. If the pilot system were to scale up, riders could have their own work injury insurance without establishing labour relations.

On 26 July 2021, the State Administration for Market Regulation and another six government departments announced a guiding Opinion on Implementing the Responsibilities of Digital Platforms and Effectively Protecting the Rights and Interests of Food Delivery Workers.¹⁰⁸ This policy prohibited platform companies from using the "strictest algorithm" to assess riders, and encouraged them to improve the order distribution mechanism and explore diversified commercial insurance protection systems for riders. The Internet Information Service Algorithm Recommendation Management Regulations (Draft for Public Comment) released on 27 August 2021 also stated that "algorithmic recommendation service providers, when offering work scheduling service shall establish and improve the algorithms related to platform sign-on and allocation, remuneration composition and payment, work time, rewards, and so on to fulfill the obligations to protect labourers' rights and interests" (Article 17).

At local level, local governments took corresponding actions. For example, in Nanjing, the capital of Jiangsu Province, the government launched Guiding Opinions on Regulating the Labour and Employment of Riders, clearly stating that the employer shall establish labour relations and participate in social insurance for riders, and part-time riders can participate in social insurance on flexible terms. Other cities like Beijing, Hangzhou, and Nantong also announced relevant policies to protect platform workers including drivers on ride-hailing apps, domestic workers, and food delivery riders.

Platform companies and trade unions have also taken action to protect workers in response to increased pressure to improve their protection for riders. Some platform companies (e.g., DiDi, JD, Ele.me) made necessary efforts to establish unions at the municipal levels. For food delivery companies, both Meituan and Ele.me have announced plans to extend riders' delivery time. Meituan launched the Boat Project (tongzhou jihua, 同舟计划), aiming to improve riders' work conditions and social protection. Meanwhile, the All-China Federation of Trade Unions (ACFTU) has also been keen on helping unionize platform-based workers. Xiamen municipal branch of ACFTU demands that food-delivery platforms ensure a no-less-than-the-minimum-wage income for a normally working rider and reduce labour intensity. Nonetheless, the workers' right to freedom of association beyond ACFTU system has not been legally granted.

Overall, there are signs of policy and regulatory interventions to protect the labour rights and interests of platform workers. However, most of the efforts are announced without specifying the implementation departments or agencies, which may undermine compliance and enforcement. Furthermore, the lack of an adequate system for regulatory inspection also poses questions for the effectiveness of the policy interventions.

¹⁰⁸ https://www.samr.gov.cn/xw/zj/202107/t20210726_333061.html

► Conclusion and Policy Suggestions

In the context of China's overall slowing-down GDP growth rate, growing pressure for urban employment, and continued economic transformation toward an economy driven by domestic consumption and innovation, food-delivery platforms and other digital labour platforms have become popular work positions for new jobseekers, migrant workers and workers who are leaving the secondary sector for jobs in the tertiary sector. They have played important roles in promoting employment and diverse and flexible employment under China's national employment policy framework, particularly for the most concerned groups of workers—namely, migrant workers, youth, and urban unemployed or underemployed.

The paper presents one of the first studies tracking the employment changes in food-delivery platforms over a period of four years from 2018 to 2021. The empirical findings reveal significant challenges that have emerged alongside the job creation capacity of digital labour platforms. The platform companies adoption of the intermediary business model has impacts on social policy arrangements in China, increasing the risks to workers and the managing intermediaries.¹⁰⁹ Despite recent policy responses to address the regulatory challenges, it is too early to draw a conclusion on how the new regulations impact the business models that the platforms have adopted. The quick rise of food-delivery platforms also causes fierce competition, which negatively impacts the development of the catering industry. China's employment policy framework should adapt to addressing the regulatory challenges in digital platform employment which is characterized by a highly mobile, young, and work force often excluded from the labour market. A new framework should be developed to integrate the social protection of digital workers with employment policies and promote sustainable and equitable development on the one hand, and on the other hand, to ensure a level playing field among platforms and across labour market intermediaries, including by holding the concerned parties accountable if violation occurs.

In light of our empirical findings and the benefits and challenges in digital platform employment, we put forward specific suggestions for the employment policy along the lines of 1) policy-making process, 2) regulations, and 3) implementation and inspection. The policy recommendations outlined are mainly based on food delivery platforms, which although call for the overall regulation of the platform economy, but policymakers should put emphasis also on how to ensure workers to be protected from the risks of work while continuing to access the opportunities. Acknowledging the multiple manifestations of the platform economy, which is comprised of a complex, heterogeneous ecosystem of businesses and activities, further studies should be conducted.

6.1 Policy-making process

- A.** Consultations with government, and workers' and employers' organizations are needed in the process of making the employment policy. Involvement of scholars and other social organizations that represent workers and technologists are encouraged where appropriate to inform tripartite processes. National employment policies concerning platform-based employment should also be put into a more coordinated policy framework with other economic and social policies, such as anti-monopoly, algorithmic transparency, platform governance, labour protection, and taxation, to promote sustainable and equitable development.
- B.** Addressing the roles of existing labour market institutions, renewing the employment policy framework to make it more integrated into employment policies.
- C.** A more agile and responsive policy-making process is needed by keeping pace of the operations of the digital platform companies, which should be informed by regular data collection on the use of technologies, including algorithms (for the latter two see 6.3).

¹⁰⁹ Chen, Sun, and Qiu, "Deliver on the Promise of Platform Economy: A Research Report".

6.2 Regulations

- A. The criteria to establish labour relations could be clarified and brought up to date to correspond to the de facto work relations between parties, instead of the behavior of signing the legal document designated as a labour contract. The actual working hours (e.g., 40 hours a week) and the dependency on digital labour platforms as the main source of income could be treated as two important benchmarks to determine the de facto labour relations. The criteria to determine the existence or absence of an employment relationship are to be left to the policy makers.
- B. The location-bound social protection system derived from hukou system, which restricts the benefits (e.g., healthcare) to the location where employees and employers make contributions and is bundled with single-employer-based labour relations could be revisited to accommodate the open, flexible, and multi-channel employment situation on digital labour platforms. This requires adaptations to developing practical guidelines to implement labour and social security protection to phase out its connection to the hukou system, which would greatly improve the access to social insurance programs for migrant workers. Furthermore, the system could be suitable for flexible employment, part-time, or other types of non-standard employment by taking into account reduced work hours, high mobility, and jobs involving multiple contracts or employers. The areas worthy of exploration include graded contributions by part-time employer(s) depending on workers' actual working hours and portable (transferable) and cumulative contributions by workers from multi-channel employment. Any revision should nevertheless ensure the sustainability of the social security system.
- C. Labour Contract Law, and Social Insurance Law could be extended to the establishment of multilateral contractual relationships involving workers, third-party intermediary companies (including crowdsourcing platforms) and platforms and specify each party's rights and obligations. The government could update its regulations towards intermediaries and labour agencies. Special attention could also be paid to global intermediary players which are not subject to national laws. It could be the obligations of platforms and intermediary organizations to inform workers about the roles and responsibilities with respect to occupational safety and health, social security system, and minimum pay.
- D. Work injury protection should be developed to cover all platform-based workers, with corresponding contributions from the workers, the government, digital labour platforms and staffing intermediaries (if applicable).

6.3 Implementation and inspection

- A. **A digital platform employment monitoring system could be developed.** Such a system could contain at least three components. First, it could make it the legal responsibilities of platforms to inform regulators about the worker's job status and income data. Second, an open and confidential reporting system should be set up for the workers to report regulatory violations committed by platform companies and/or intermediary organizations. Third, systematic and comprehensive data points about platform employment should also be developed and incorporated into national labour statistics to support empirically informed policy making.
- B. **An independent inspection system should** be developed, in consultations and participation of regulators, employers and workers. Used in tandem with the digital employment monitoring system, the independent inspection system should include regular inspections of the policy implementations and be designated with administrative power to ensure compliance. Moreover, this inspection system should allow for independent observations of the daily operations of platform companies and their relating intermediary agencies.

Annex

Questionnaire for Delivery workers (2021)

Section 1. Employment status in the delivery industry

1. Do you work in? [single choice question]
 1. Beijing
 2. Jinan
 3. Other (end of the questionnaire)
2. How long have you been working as a delivery worker? [single choice question]
 1. Less than 3 months
 2. From 3 to 6 months
 3. Half a year – 1 year
 4. 1 year – 2 years
 5. 2 years – 3 years
 6. 3 years and more
3. How did you find this job? [single choice question]
 1. Introduction of villagers or friend
 2. Wechat group advertisement
 3. Wechat Moments
 4. Labor intermediaries
 5. Recruitment website (such as 58 City)
 6. QQ group
 7. Radio broadcasting
 8. Others (please explain)
4. What type of delivery worker are you? [single choice question]
 1. Subcontracted
 2. Regular crowdsourced
 3. Lepao crowdsourced
 4. Hired by the restaurant
 5. Others (please explain)
5. How many platforms are you currently working on?
 1. One
 2. Two or more (jump to question 7)

6. Which platforms is it?

1. Meituan
2. Ele.me
3. FlashEx
4. Dada
5. Shun Feng City
6. Ding Dong
7. Hema Xiansheng
8. Running Errands
9. Jingdond Daojia
10. Taoxianda
11. Others (Please explain)

7. Which platforms are they? [Multiple selection without limits]

1. Meituan
2. Ele.me
3. FlashEx
4. Dada
5. Shun Feng City
6. Ding Dong
7. Hema Xiansheng
8. Running Errands
9. Jingdond Daojia
10. Taoxianda
11. Others (Please explain)

8. In the past month, your average unit price per order is? [single choice question]

1. Below 3 yuan
2. 3-5 yuan
3. 5-8 yuan
4. 8-10 yuan
5. above 10 yuan

9. How much do you usually earn in a month? [single choice question]

1. Less than 3000 yuan
2. 3000-5000 yuan
3. 5000-7000 yuan
4. 7000-9000 yuan
5. CNY 9,000 yuan and above

- 10.** So far, how many delivery platforms have you worked for (including part-time and full-time)? [single choice question]
1. 1
 2. 2
 3. 3
 4. 4
 5. 5 or more
- 11.** Are you working full-time or part-time now? [single choice question]
1. Full-time
 2. Part-time job (jump to question 13)
- 12.** How many days do you take off per month on average? [single choice question]
1. No rest
 2. 1-3 days
 3. 4-6 days
 4. 7 days or more

Section 2. Overview of labour rights and interests

- 13.** Did you sign a labour contract or labour agreement? [single choice question]
1. Yes
 2. No
 3. Unclear (jump to question 15)
- 14.** What type is it? [single choice question]
1. Labour contract
 2. Labour service agreement
 3. Unclear
 4. Other (please explain)
- 15.** How do you pay for social insurance contributions? [single choice question]
1. Don't have one
 2. By myself
 3. By the work unit
 4. Jointly with the work unit
 5. Not clear

- 16.** Why did you choose to do delivery? [Choose 3 more items]
1. Increase the income and support the family
 2. Laid-off and reemployment
 3. High freedom and flexibility
 4. Low threshold
 5. Recommended by friends
 6. Help by Labour Intermediaries
 7. Others (please explain)
- 17.** How many orders do you deliver on average in peak time? [single choice question]
1. 20 and below
 2. 20-30
 3. 30-40
 4. 40-50
 5. 50-60
 6. 60-70
 7. 70 and more
- 18.** How many orders do you deliver on average in off-time? [single choice question]
1. 10 and below
 2. 10-20
 3. 20-30
 4. 30-40
 5. 40-50
 6. 50-60
 7. 60-70
 8. 70 and more
- 19.** How many hours do you work every day? [single choice question]
1. 8 hours
 2. 8-10 hours
 3. 10-12 hours
 4. 12-14 hours
 5. Over 14 hours

20. As a delivery worker, what are your biggest concerns? [Multiple, only three and sorted]

1. Being stolen meals and cars
2. Working too long
3. Have no social insurances
4. Bad comments or complaints from customers
5. Delivery pressure is too high
6. Low salary
7. Less orders
8. Waiting time is too long
9. Traffic accidents
10. Meals were cooked slowly
11. Customer address is inaccurate/cannot be found
12. Building access problems
13. Others (please explain)

21. What vehicles do you use in food delivery? [Single choice]

1. Electric vehicles
2. Motorcycles
3. Bicycles
4. Car
5. Others (please explain)

22. How do you feel about the following?

(1 very dissatisfied, 2 dissatisfied, 3 general, 4 satisfied, 5 very satisfied)

	Very dissatisfied	dissatisfied	general	satisfied	Very satisfied
Current income					
Stability of income					
The system for distributing orders of the platform					
The platform's protection mechanism for the rights and interests of workers					
Assessment method of the platform/out-sourcing company					
Current working status					
Current state of life					

23. Have you seen any changes in the following aspects since this year (2021)?

	Declined	Unchanged	Increased	Unclear
Number of delivery workers in the area				
Number of delivery stations in the region				
Work hours				
The number of orders				
The number of restaurants				
Delivery fee				
The number of times the platform offers bonuses				
Your morale				

Please answer the following questions [single choice questions]

24. Have you seen any changes in the following aspects since this year (2021)?

- 1. Yes
- 2. No

25. Have you ever had a traffic accident?

- 1. Yes
- 2. No

26. Do you have any complaint experience about work disputes?

- 1. Yes
- 2. No (jump to question 29)

27. What was the result of the final complaint?

- 1. It works
- 2. It is useless

28. Does the company intend to favor the customers in the process of handling complaints?

- 1. Yes
- 2. No

Section 3. Delivery workers' career development

29. Do you agree with the following views?

	Very disap- proved	Disapprove	General	Approve	Very ap- proved
Delivery is a job that can last long					
Delivery is a decent job					
Delivery work should be respected					
Being a delivery worker can improve skills and promote personal development					

- 30.** What kind of jobs did you do before joining food delivery? [multiple choice questions]
1. Manufacturing (clothing/shoes/electronics factory, etc.)
 2. Construction
 3. Waiters/Waitress
 4. Salesman
 5. Domestic worker
 6. Driver
 7. Delivery man
 8. Self-employed
 9. Office/white-collar
 10. Agricultural (farming, forestry, animal husbandry, side-line production and fishery)
 11. Beauty industry (beauty, hairdressing, manicure)
 12. Delivery is my first job
 13. Other
- 31.** Where are you likely to be in the next three years? [multiple choice questions]
1. Stay here
 2. Go home
 3. First-tier cities in Beijing, Shanghai, Guangzhou and Shenzhen
 4. Municipalities or provincial capitals
 5. Economically developed non-provincial capital cities
 6. Other cities (regions, autonomous prefectures, leagues)
 7. Country/township
- 32.** What do you plan to do in the next three years? [multiple choice questions]
1. Continue to do delivery
 2. Parcel couriers
 3. Start my own business
 4. Manufacturing (local factories)
 5. Work at a supermarket/convenience store
 6. To become a white-collar office worker
 7. Live streaming/ network customer service / e-commerce
 8. Domestic work
 9. Farming
 10. Do not work, husband (wife) to support me
 11. Finance / insurance / sales
 12. Do not think about it
 13. Care for the aged
 14. Other (please fill in)

- 33.** What are the factors that limit your career development? [multiple choice questions]
1. Age
 2. Gender
 3. Family conditions
 4. Educational background
 5. Skills
 6. Previous work experience
 7. Opportunity
 8. Personality
 9. Other (please fill in)
- 34.** Which three of the following options do you think would be most helpful for your personal career development? [multiple choice questions]
1. Online training
 2. Offline training
 3. Training with financial incentives
 4. Training that awards certificates
 5. Training that can help to obtain or award professional technical level
 6. The company has a definite promotion system
 7. The company sets up scholarships to motivate employees to advance their education and skills further
- 35.** How long will you continue to do delivery? [single choice question]
1. Less than 1 year
 2. 1-2 years
 3. More than 2 years
 4. Not too sure
 5. Keep doing it
- 36.** What adjustments have the platform made that would make you more willing to be a delivery worker? [multiple choice questions]
1. Increase the unit price
 2. Increase the delivery time per order
 3. More reasonable order distribution
 4. Support to pay part of social security
 5. More bonus payments
 6. Reduce penalties
 7. Increase insurance
 8. Will not stay long no matter how it changes
- 37.** Your current financial situation is: ___ _ [single choice question]
1. with debt
 2. without debt (skip to question 40)

- 38.** Your current debt situation is ____ [single choice question]
1. Less than 10,000 yuan
 2. 10,000-50,000 yuan
 3. 50,000-100,000 yuan
 4. 100,000-300,000 yuan
 5. 300,000 yuan or more
- 39.** The reasons for debt are ____ [multiple choice questions]
1. house/car mortgage
 2. taking care of children and the elderly
 3. business failure
 4. illness of family member
 5. wedding and funeral
 6. others ____
- 40.** How many roommates do you have ____ [single choice question]
1. Self-occupancy (go to question 42)
 2. 1-2 people
 3. 3-5 people
 4. 6-8 people
 5. 9 people or more
- 41.** Who are these people? [multiple choice questions]
1. Spouse/children
 2. Other family members/relatives
 3. Friends / fellow countrymen
 4. Colleagues
 5. Strangers
 6. Others (please specify) ____
- 42.** How much is your monthly rent ____ [single choice question]
1. No need to rent
 2. 500 yuan or less
 3. 501-1000 yuan
 4. 1001-2000 yuan
 5. 2001-3000 yuan
 6. 3001-4000 yuan
 7. 4000 yuan or more

- 43.** What activities do you mainly do after work____ [multiple choice questions]
1. Surfing WeChat subscription
 2. Watching short videos (Douyin、 Kuaishou etc.)
 3. Chatting on WeChat/QQ
 4. Playing online games
 5. Watching video (drama, movie, small video, etc.)
 6. Listening to songs/books/audiobooks
 7. Reading novels
 8. Others (please specify)
- 44.** What kind of information do you focus on or want to know most on the Internet?____ [multiple choice questions]
1. Legal
 2. Employment
 3. Life and entertainment
 4. News
 5. Sports
 6. Education
 7. Others (please specify)
- 45.** How many WeChat groups of delivery do you have? [single choice question]
1. Less than 3
 2. 3-5
 3. 5-8
 4. 8 or more
 5. No WeChat
- 46.** What are the main contents you discuss in the WeChat group____ [multiple choice questions]
1. Working issue (receiving orders/transferring orders)
 2. Looking for a job
 3. Finding an apartment
 4. Meeting villagers
 5. Paying social insurance
 6. Gossiping and griping
 7. Second-hand sales and purchases
 8. Others (please specify)
- 47.** How many hours do you spend online every day after work____ [single choice question]
1. Basically no Internet access
 2. Less than 1 hour
 3. 1-3 hours
 4. More than 3 hours

Basic personal information

1. [Fill in the blank] Age _____
2. Gender : 1)Male 2)Female [single choice question]
3. [Fill in the blank] Your hometown _____(34 provinces in the questionnaire platform)
4. Your household registration type [single choice question]
 1. Urban household registration (non-rural)
 2. Rural household registration
5. Your Educational Background [single choice question]
 1. Primary school and below
 2. Middle school
 3. High school/ Technical secondary school /Training school
 4. Junior college
 5. Undergraduate
 6. Master's degree and above
6. Marital status [single choice question]
 1. Unmarried
 2. Married
 3. Divorced
 4. Widowed

(If you are willing to accept a non-public interview with the researcher, please leave your contact information, we will contact you, the interview will be 50-80 yuan per hour labour reimbursement)

7. Name (nickname)_____
8. Mobile phone number (Wechat number)_____

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