# Research on the innovation of occupational injury guarantee mechanism for crowdsourcing online delivery men

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Abstract: The rapid development of the platform economy has exposed the drawbacks of the system design that closely links labour relations with occupational injury protection. At present, the risk of delivery men's employment is high, and the existing guarantee mechanism is ineffective. Against the background, many places have carried out pilot explorations on the occupational injury protection of platform flexible employees, providing local experience for the construction of top-level design, and also reflecting the practical difficulties in the construction of occupational injury protection system. The occupational injury protection of Crowdsourcing online delivery persons needs to be improved by clarifying the occupational injury identification standards and innovating the construction of occupational injury insurance.

Keywords: Crowdsourcing online delivery men, Occupational injury protection system

The rise of the digital economy promotes the transformation and upgrading of the service industry. The new employment methods based on the platform are favored, and the crowdsourcing model is emerging on a large scale in this context. In the takeaway industry, the crowdsourcing online delivery persons receive and examine the customer 's order through the mobile Internet platform, and deliver the order items to the designated location within a certain time according to the demand. For this, localities began to explore the path of occupational injury protection. In order to evaluate the practical effect of the pilot of occupational injury protection and optimize the practice of occupational injury protection, we should start from the current situation, compare the pilot projects in different places, and promote the improvement of the system.

# 1. The status quo of occupational security of Crowdsourcing online delivery person

## 1.1. Analysis of occupational injury risk status

In order to understand the main risks of occupational injuries of Crowdsourcing online delivery person, the team conducted a questionnaire survey on Crowdsourcing online delivery person in Hangzhou, Huzhou, Lishui and Jiaxing from July 1 to July 31,2022. A total of 318 valid questionnaires were collected.

In the survey, 69.81 % of delivery men said they had been injured during the meal delivery process, and the degree of damage was different and the frequency was high. Among them, 90.5 % of the occupational injuries came from traffic accidents. The main reason for Crowdsourcing online delivery person 'violation of traffic rules is insufficient delivery time, followed by wrong delivery routes.

# 1.2. The effectiveness of the industrial injury insurance system.

The application of the existing industrial injury insurance system is based on the existence of labor relations. However, among the 41 cases involving the employment legal relationship of Crowdsourcing online delivery person in Zhejiang Province from 2017 to September 2022, 37 cases identified employment relationship or labor employment relationship, and 4 identified service cooperation relationship.

At the ought-to-be level, labor relations under the current legislative system cannot be applied to

most delivery men. The "Notice on Matters Related to the Establishment of Labor Relations" issued by the former Ministry of Labor and Social Security elaborated the constituent elements of defacto labor relations, and established the labor relations standards around personal subordination, economic subordination and organizational subordination. However, most Crowdsourcing online delivery person do not meet this theoretical hypothesis: Crowdsourcing online delivery person appear to control their income through independent orders and grabbing orders, and the economic dependency of their employment is uncertain. Therefore, the traditional industrial injury insurance is out of reach for the occupational injury protection of Crowdsourcing online delivery person.<sup>[1]</sup>

## 1.3. The effectiveness of the industrial injury insurance system.

Common platforms such as Meituan and Ele.me currently provide job opportunities only to delivery men who pay insurance premiums. Some service providers have purchased 'employer liability insurance', and some service providers have purchased comprehensive insurance for delivery men that combines' personal accident injury insurance' and 'third party liability insurance'.

However, in practice, due to the implicit cooperative relationship between platform enterprises and commercial insurance companies, the more complex commercial insurance claims process, and the tendency of some employers to avoid employers 'responsibilities, there are many difficulties in achieving the goal of commercial insurance guarantee:

First, in practice, commercial insurances are not equally applicable to delivery men. On the one hand, different platforms have different choices of commercial insurance; on the other hand, commercial insurance companies and platform companies form interest links through commercial insurance, and platforms sometimes do not focus on the interests of delivery men.

Secondly, the cumbersome compensation process leads to reduced effectiveness. Our survey have found that the number of crowdsourcing delivery men with bachelor 's degree or below (excluding bachelor 's degree) accounted for 90.57 % of the total number, and 27.87 % of crowdsourcing delivery men thought that they were not familiar with or completely did not understand the insurance compensation process.

Furthermore, the tendency of employers to avoid their liability increases the resistance of delivery men to be compensated. Therefore, in practice, platform enterprises and service providers tend to make a limited interpretation of the 'process of providing distribution services', denying that the injury caused when a delivery man is online but without meal delivery and in the gap period of the order is occupational injury.<sup>[2]</sup>

# 2. Analysis of the pilot scheme of occupational injury protection system for new business practitioners

Under the background of the failure of the existing protection mechanism, in many provinces and cities across the country, the governments have carried out pilot projects of occupational injury protection system.

## 2.1. Pilot program and implementation of occupational injury security system in Zhejiang Province

In Zhejiang Province, the core of the new business insurance is to incorporate the new business practitioners into the industrial injury insurance alone. In the insurance payment rules, standards of industrial injury certification, treatment payment and other systems, it mainly refers to the traditional industrial injury insurance.

Specifically, the main audience of 'individual industrial injury insurance 'in Zhejiang Province is practitioners who have not established labor relations with new business enterprises, and the payment subject is platform enterprises or other employment units. The payment base refers to the average wage of the employees in the province in the previous year, and the payment is implemented at a floating rate. In addition, the identification of work-related injuries and insurance benefits are implemented with reference to the 'Injury Insurance Regulations'.

However, Our team survey have found that the pilot policy is not universal for delivery men in Zhejiang Province. Only 15.72 % of crowdsourcing delivery men have heard of individual industrial injury insurance, and even more fewer have enjoyed insurance benefits.

#### 2.2. Investigation on the pilot program of occupational injury security system across the country

In order to accumulate more pilot experience in occupational injury protection, the team investigated and analyzed the occupational injury protection system programs implemented for practitioners of new forms of business across the country.

#### 2.2.1 Inclusion model

The three-insurance bundling model is represented by Nantong City, Jiangsu Province and Weifang City, Shandong Province. The policies of the two places stipulate that the industrial injury insurance premiums and employee pension insurance premiums and medical insurance premiums are collected simultaneously. In terms of payment rules, both places adopt fixed rates, but Nantong policy stipulates that flexible employees pay by themselves, while Weifang requires employment units to pay. The industrial injury insurance of individual insurance in Guangdong Province is the same as that in Zhejiang Province, but no supplementary commercial insurance is created.

#### 2.2.2 Creative mode

Taicang City, Jiangsu Province and Jiujiang City, Jiangsi Province set up new social insurance for flexible employees. The source of funds for social insurance in Taicang City is mainly the transfer of total social insurance contributions of flexible employees and financial subsidies; jiujiang City implements the social insurance of "wide coverage and low treatment.", the insurance fee is low and paid by the employees themselves. At the same time, the occupational injury disability insurance is cancelled, the insurance treatment is determined to be one-time payment, and the amount of insurance treatment is reduced.

Wujiang District of Jiangsu Province entrusts commercial companies to undertake injury insurance for flexible employees, that is, government-led commercial insurance, which is characterized by no need to limit household registration and age.

#### 2.3. Excellent experience of pilot programmes in various regions

The protection path regulations of the pilot programs in various places are committed to solving the binding of occupational injury protection mechanism and labor relations,the system design provides reference experience for the construction and improvement of occupational injury protection system. [3]

First of all, in view of the current situation that crowdsourcing delivery men may work on multiple platforms at the same time, all cities in Zhejiang Province stipulate that new business practitioners can participate in multiple units, which is conducive to resolving the problem of platform enterprises' shirking their responsibilities.

Secondly, some pilot programmes provide experience for the loosening of social insurance and labor relations. China's existing legal system incorporates industrial injury insurance into labor relations for adjustment, and the pilot program's single-insurance operation type, three-insurance bundled type, and newly established industrial injury insurance and other protection paths expand the scope of application of social insurance with occupational injury protection and survival protection as the core, providing an innovative perspective for system development. [4]

# 2.4. Universal problems of pilot schemes in various places

Some pilot projects are based on the existing industrial injury insurance, but the basis of the operation rules of the industrial injury insurance system is precisely the subordination of personality, so this path has difficulties in implementation and promotion. Some pilot commercial insurance has been promoted, but there is a lack of protection. Specifically, the pilot programs in various places reflect universal problems, which is the direction of further improvement:

First, most pilot policies lack mandatory. Except for Weifang City, which has higher insurance conditions, the pilot policies in other regions are not mandatory due to the lack of basis of the higher-level law, and the implementation of the policy is not ideal. <sup>[5]</sup>

Second, the setting of insurance coverage is not reasonable. On the one hand, in order to maintain the operation of the insurance fund, some areas have set up special insurance conditions, resulting in a lack of comprehensiveness and fairness of protection. On the other hand, in the relatively backward areas, the financial pressure and organizational difficulty of constructing the occupational injury

security system are high.

Thirdly, almost all policy pilots refer to the traditional standards of work injury accreditation. However, the working time and place of Crowdsourcing online delivery person are not fixed, and the determination of working reasons also faces problems such as unclear scope and difficulty in proof. Moreover, delivery men can participate in insurance on different platforms, which is easy to cause difficulties in the identification of work-related injuries and the determination of insurance liability, and cause disputes.

Fourth, it is difficult to allocate responsibilities such as work injury wages and disability allowances. If such long-term treatment is borne by platform enterprises, it may lead to excessive burden; cancelling it will lead to insufficient follow-up protection.

# 3. Suggestions on improving the occupational injury protection of Crowdsourcing online delivery person

## 3.1. Reconstruct the identification standard of occupational injury

Due to the relatively flexible and autonomous working hours and places, the identification of occupational injuries of delivery men has problems such as unclear scope and difficulty in proof. The team used the Peking University magic database to collect 155 judgment documents from all over the country, and investigated and analyzed their judgment results and reasoning. After investigation and analysis, the team believes that the identification of occupational injuries can be carried out from the time dimension, the location dimension and the behavioral appearance dimension: in the time dimension, the platform issues an order and the employee receives the order can be regarded as a satisfactory achievement. The end of the meal means the completion of the contract, during which the behavior is the employment behavior; in addition to this process, the risk of going to work is uncontrollable and unpredictable for the platform, but the time for employees to end the order is relatively certain, which can be regarded as the extension of the employment behavior, and the guarantee period should be extended to a period of time after the end of the order. In the dimension of location, the fit between the location of the incident and the distribution route can be used as a sign of employment behavior; however, in practice, the platform 's route guidance does not have a mandatory binding force on delivery persons, and emphasizing the delivery men's obligation to follow the platform 's route planning is bound to deepen its algorithmic dilemma. Therefore, the role of location factors should only be limited to promoting the identification of occupational injuries, not as negative evidence. Moreover, the delivery man uses the platform 's food incubator, wearing platform clothing and other elements, indicating the possibility of delivery men being employed, which can also be used to prove.

#### 3.2. Innovative construction of occupational injury security system

# 3.2.1. Enrich the level of social insurance protection

The insurance system includes social insurance and commercial insurance, and the latter is divided into compulsory insurance and fully voluntary commercial insurance.

Commercial insurance is flexible, but there are some problems such as high cost, small coverage and low level of treatment, while commercial compulsory insurance needs to be accompanied by certain punishment measures, which is weak in constitutionality and limited in development potential due to the restrictions on property rights and freedom of contract.

In contrast, the government can ensure equal treatment and equal service to the greatest extent by handling occupational injury insurance for employees in new formats with the medium of social insurance institutions. However, the juxtaposition of the system will inevitably lead to institutional discrimination, so social insurance should be applied equally to crowdsourcing delivery men.

#### 3.2.2. Establish innovative rules of insurance payment

Crowdsourcing delivery men have high employment autonomy and should bear certain responsibilities in the occupational injury system. In terms of the subject of payment, platform enterprises formulate reward and punishment rules and set up dispatch and orders grabbing mechanism, which actually form a certain control over the work of delivery men and should bear the responsibility of payment. Delivery men have a high ability to prevent themselves from occupational injuries, and

their average income is not low; the crowdsourcing service enterprise establishes an employment relationship with the delivery men legally and is closely related to it. Under the demand of balancing the interests and the continuous implementation of policy insurance, it is reasonable for platform enterprises, crowdsourcing service enterprises and delivery men to jointly pay fees. In terms of insurance premium rate, in order to promote enterprises to pay more attention to occupational safety and injury prevention, and to arise delivery men' awareness of their safety, a floating rate mechanism should be implemented.

## 3.2.3. Realize the socialization of insurance benefits payment

In the construction of the occupational injury protection system, the distribution of responsibilities such as disability allowance and work injury wages is difficult. On the one hand, due to the importance of evidence such as platform records to the identification of occupational injuries, in the practice of industrial injury insurance, some employers hinder the identification of industrial injuries in order to avoid supplementary liability, which will only be more prominent in the identification of occupational injuries of delivery persons; on the other hand, the working platforms of Crowdsourcing online delivery persons are sometimes difficult to determine. Therefore, strengthening collective responsibility may be the ideal solution. Specifically, the establishment of an employment relationship between the delivery men and the platform triggers the establishment of an insurance relationship. After the platform enterprise and the crowdsourcing service enterprise pay a certain amount of industrial injury insurance fees to the statutory body in accordance with the law, they do not need to bear direct liability for occupational injury, but are liable to the delivery men from the insurance fund.

#### 4. Conclusion

With the increasingly serious employment risk problem of new business practitioners such as crowdsourcing online delivery men, the corresponding occupational injury protection mechanism needs to be implemented urgently, and innovation has become an inevitable trend in China. Starting from the real needs of delivery men, the occupational injury protection mechanism of delivery men can be dynamically adjusted to comprehensively promote the perfect and powerful protection mechanism. We have reason to believe that with the improvement of the occupational injury protection mechanism for delivery men, we will eventually realize the beautiful vision of human society-harmonious and stable development.

# References

- [1] Irene, Determination boundary of "reasonable time" on the way to and from work. Contemporary Jurisprudence, 2021, 4, 116-124.
- [2] Bai Yanli, Research on the construction of occupational injury protection system for new business practitioners. Zhongzhou Journal, 2022, 7, 80-89.
- [3] Chen Chengwen, On improving the social insurance system and achieving common prosperity in the new era. Social Scientist, 2022, 1, 34-41.
- [4] Hu Jing, Problems and solutions of occupational injury protection for employees in new industries in China. Guangdong Social Sciences, 2020, 6, 243-251.
- [5] Wang Tianyu, From identity insurance to behavioral insurance: research on occupational injury protection for employees in new business forms. Insurance Research, 2022, 6, 115-127.