

Platform Work in the Context of Big Data: Legal Issues and Countermeasures

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Abstract: Based on the sharing economy and big data operation, platform work has the characteristics of platform dependence and digitalisation. However, traditional labour relations based on subordination theory and related standard systems are no longer applicable under the new employment model, which has led to difficulties in the identification of labour relations and judicial practice and has triggered several derivative contradictions. These contradictions will be aggravated by improvements in the sharing economy and the internal digitalisation of platform employment. Accordingly, the operating logic of platform-based employment and the essence of digitalisation should be emphasised to enhance the judgment standards of labour relations and strengthen the legal regulation of data platforms so as to provide legal and social responses for effective negotiation between labour and management in the context of big data.

Keywords: Labour relations; Big data; Subordination theory; Platform employment

1. Statement of the problem

On the concept and foundation of platform work, a consensus has been more or less reached that platform-based employment is a new type of labour model based on the internet platform with information sharing and the matching of supply and demand (Jiang & Wang, 2017). The foundation of platform work is an emerging economic model, that is, the sharing economy. According to Farrell (2017), the sharing economy can be divided into two varieties: asset sharing and labour sharing – platform work such as online car-hailing belongs to the latter. Because the platform economy cannot fully satisfy the traditional formal or informal labour employment model, its risks and regulatory deficiencies have attracted the attention of relevant scholars. Furthermore, research on enhancing regulations of platform work provides different views, including theories of conservative regulation, reconstruction of rights and obligations, and labour subject innovation.

1.1 Theory of conservative regulation

According to the theory of conservative regulation, for new forms of employment based on the Internet, big data, and the sharing economy, such as platform work and flexible employment models, traditional labour regulatory frameworks can resolve related disputes and contradictions without needing adjustments for theoretical and institutional systems. Furthermore, the innovation and application of technologies such as big data and sharing platforms have shown a rapid development trend, and their impact on the field of labour employment has become increasingly significant. Therefore, reflecting upon and reconstructing the existing legal theory system and regulatory framework is considered to be an important way to build a harmonious labour market.

1.2 Reconstruction of rights and obligations

Different from the theory of conservative regulation, according to the reconstruction of rights and obligations theory, with the development of the economy and technology, the challenges and impacts caused by atypical labour and employment patterns need to be fully addressed, and legal regulations should be innovated and improved accordingly. In addition, reconstructing the rights and obligations system and the regulatory system in the existing labour field is considered to be an effective way to improve the existing system of labour law, such as the expansion of labour rights and obligations, the adjustment of the scope of labour law, the improvement of rules, and the explanation of legal connotation. In short, the reconstruction of rights and obligations theory mainly emphasises balancing the status of labour and management and the relationship between rights and obligations to alleviate the disharmonious status quo in the labour field of platform work, which has strong legal significance. In addition, it is necessary to further discuss the causes of this inharmonious status quo and the root causes of the contradictions, such as the data platform as the medium of platform work and changes in labour tools and labour conditions. However, the lack of data considerations and demonstrations in existing research leaves room for improvement in this field.

1.3 Theory of labour subject innovation

For the theory of labour subject innovation, platform work in the context of the Internet and the sharing economy should be given full attention and not conservatively applied to the existing legal framework. Different from the reconstruction of rights and obligations theory, this theory emphasises the importance of new labour law subjects, such as ‘labourer-like’. In addition, according

to the theory, the subject of innovative labour should be between the labourer and the labour provider, who are different from the traditional labourer and labour provider in terms of personal and economic subordination. However, the analysis of this theory on platform work is limited to its general characteristics, and it also does not involve the operating logic of data interaction on the platform, the economic subordination of the platform work intermediary, namely data platform.

2. Conflict between the characteristics of platform work and labour subordination theory

Generally, laws need to be adapted in response to innovations and transformations of science and technology. While the labour and employment model is being innovated, the platform-based employment model is also facing several contradictions and risks, which are mainly reflected in the lag in legal development and the mismatch between the current legal framework and the operating characteristics of new sharing economy models, such as platform work. With the rise and development of new technologies such as the Internet and big data, these contradictions have intensified, which has made the improvement of labour law theories and the response of the institution necessary. Accordingly, the digitalisation essence of platform-based employment as well as its unique characteristics in the new social context should be clarified. Combining these new characteristics and traditional labour subordination theory, which is the theoretical basis for labour relationship judgment and related regulations, further helps identify contradictions and enables scientific and feasible solutions. Based on an analysis of relevant literature, the essential characteristics of platform work include its dependence on data and platforms and its inability to be covered by the economic subordinate. Traditional labour subordinate theory needs to be extended and broadened in all aspects to perfect the existing labour regulation theoretical system and solve the many contradictions in the labour field caused by new labour models such as platform work.

2.1 Platform dependence and digitalisation: The essential characteristics of platform work

The root of the contradiction is that the traditional theoretical system cannot match the new operating characteristics of the innovation process of platform-based employment. Faced with the new features and models embodied in the platform-based employment model, the traditional labour model, including labour information integration and organisational operation control, shows some lag. Therefore, it is important to analyse the operating logic of platform work, to analyse the new features reflected in the new labour model, and to match the features with traditional subordination theory. For the operating logic of the employment model, the essential connotation and logical framework hidden by its surface operating process can be used to determine the difference between the new employment model and the traditional model. In the platform-based employment model, without considering other nonimportant factors, elements such as online streaming, online car-hailing drivers, proxy drivers, WeChat business owners, and web writers can all be abstracted into the following models:

- a) The labourer provides production materials by themselves
- b) The labourer signs a contract with the platform through registration
- c) The labourer provides services or goods to consumers
- d) The platform provides rewards to the labourer

The above models show the dilemma of disconnection between theory and practice. The labourer's own provision of production materials eliminates economic subordination, while the flexible and fragmented working method eliminates personality subordination or produces cross-elimination effects. The elimination effects of these two aspects lead to the absence of traditional subordination theory in the platform-based employment model. In addition, the signed network contract does not meet the traditional labour contract's formal requirements and standards, which is also one of the reasons for the unclear identification of labour relations and the difficulty in applying labour laws. These network contracts even directly stipulate the exclusion of labour relations, such as the Didi Service Cooperation Agreement and 58 Daojia User Service Agreement. Therefore, the legality of the terms of these agreements is also disputed. Furthermore, in terms of remuneration, the commission ratio is not uniform across different platforms, which affects the income level of employees. The labourer's commission ratio is generally between 10% and 20%, while 23.02% of platforms' commission ratio exceeds 20%. There also exist disputes in this ratio and its determination methods, whether the ratio should be negotiated and agreed between the two parties or unilateral decisions by investors, which implies social and governance risks.

2.2 The data characteristics of platform work cannot be covered by labour subordination theory

The theoretical system of subordination is generally the academic standard and theoretical foundation used to determine the labour relationship of various types of employment models, including platform-based employment. Regarding the connotation of subordination theory and its application in the identification of labour relations, professor Shi Shankman's related description is the most respected, that is, 'labour is an obligation based on contract, and it has professional and paid characteristics in subordination relationship'. This means that the labourer generally does not have complete freedom and self-determination in labour relations, and the contract in labour relations forms a kind of subordinate status for the labourer. Based on this, labour subordination theory has become the most important basis in the judgment of labour relations. In the process of labour subordination theory transferring from Germany, which was where it originated, to China, differences appeared in practice, due to the lack of unified interpretations of corresponding standards, elements, and composition.

Scholars have reached a consensus on the classification of subordination theory, that is, subordination is classified into personality subordination and economic subordination. Although organisational subordination is mentioned in several studies in the literature, the dichotomy of labour relation determination theory holds that organisational subordination can be included in economic subordination. On the one hand, according to Huang, personality subordination refers to the suppression of the labourer's free decision-making power, that is, the labourer obeys the employer's work instructions and orders and accepts their inspections and sanctions. In reality, the personality subordination embodied in the relationship between labour and management under the network platform work model has been greatly weakened. For example, various platform work models such as online car-hailing, webcasting, and food delivery

have all witnessed the corresponding weakening of employers' suppression of labourers' personalities. In contrast, the labourer in the Internet environment has more self-determination, or labour flexibility.

On the other hand, from the perspective of economic subordination, the existing theoretical disputes do not hinder the analysis of contradictions in platform labour relations. Scholars have different views on the connotation of economic subordination. Zhou argues that economic subordination mainly reflects that labourers believe that their labour is their means of earning a living or their main source of income, which means there is economic subordination to their employer. Huang analysed economic subordination from the perspective of purpose and argues that the labourer 'worked for the purpose of the employer', putting forward four aspects of attribution analysis: production organisation system, production tools or equipment, raw materials, and responsibilities, all of which belong to employers. However, it is difficult for these two viewpoints to conform with the platform labourer. In terms of working for a living, many platform workers regard platform work as a part-time job due to its modes of fragmented work time and flexible employment.

2.3 The impact of theoretical contradictions and their evolutionary trend

In the traditional labour law system, the law abstracts the facts in labour relations, forming a theoretical system, legal relations, and norms and systems. However, big data and other new technologies have triggered the sharing economy revolution, which is represented by the platform-based service provision model, that is, the platform work model, which makes the application and interpretation of existing labour laws difficult. The rise of the tertiary industry, the development of the Internet economy, and the application of big data have impacted the traditional intensive labour model, as well as traditional labour-related theories, working time and space, work content, work forms, traditional labour, and employment models. These influences have further differentiated labour relations in terms of logical abstraction, thereby dismantling the existing legal and regulatory systems, leading to difficulties in the application of labour subordination theory and labour laws.

2.3.1 Impact on the traditional labour environment

The contradictions and conflicts between the traditional labour subordination theoretical system and the new employment model of digitalisation and platformisation have impacted the traditional labour environment and various internal labour factors. First, working conditions have changed. In traditional labour relations, as an important theoretical basis for determining labour relations, the main content of economic subordination is labour materials, labour conditions, and labour tools, including labour sites, labour organisation systems, work equipment, and production materials. Second, in the platform-based employment model, the importance of labour conditions in the traditional sense is weakened. Specifically, the self-ownership of labour tools and the fragmentation of labour sites have impacted the traditional theoretical system of economic subordination. Instead, the data platform, which is the centre of data collection, release, and interaction, has become one of the most important means of production and labour conditions in the platform economy in the era of big data. More dangerously, in terms of external performance, this type of employment model is still a new and advanced production model, and employers' management of employees is concealed by the sharing economy. Third, the workspace is diversified.

2.3.2 The evolutionary trend of adverse impacts

As mentioned above, the impact and influence are reflected in many aspects, including work time, space, income, and security. The above three evolutionary trends have aggravated the theoretical and social contradictions caused by platform work. Specifically, the strengthening of digitalisation has led to the continuous expansion of the contradiction between the reality of platform work and the theoretical system of labour subordination. The increase in the application and integration of digitalisation has transformed this theoretical contradiction into a practical contradiction in reality and has intensified the impact on society and justice. In addition, the increase of information asymmetry and the monopoly of data technology have further increased the gap between the status of labour and management.

3. Dual path for improving legal regulations related to platform work

According to the above discussion, the legal regulation of platform work is facing a contradiction between the application of theory and the new essential characteristics caused by the innovation of the employment model. The digitalisation and interactivity of the platform labour model cannot be effectively covered by all aspects of traditional subordination theory, which leads to the inefficiency of the existing labour law system, which is intensified by the advancement of technology and the process of model innovation. According to the logical structure and essential characteristics of platform work and the evolutionary trend of the characteristic system, the subordination theory system should be expanded at the theoretical level, regulation of the labour platform should be strengthened at the practical level, and the status gap between labour and management should be balanced at the social level so as to improve the harmony of labour relations in the new context and the overall labour efficiency of society.

3.1 Expansion of labour relation judgment elements: Expansion of labour subordination theory

As the main theoretical basis for determining labour relations, in addition to traditional work materials, work equipment and work tools, as indispensable production conditions for platform-based employment and sharing economy innovation economic systems, big data and Internet platforms should be added into the traditional judgment element system. The expansion of elements is conducive to the improvement of the traditional labour subordination theoretical system, which enables it to cover the data and platform characteristics in the new labour relationship and labour mode in the background of big data. It is also conducive to protecting the rights and interests of platform workers. The labour autonomy of labourers, the value of efficiency in enterprise platform-based operation, and the original purpose of new technologies such as big data in the labour field can also be embodied. The expansion of the judgment standard also reflects the transformation of thinking about the identification of labour relations, and it is an ideal response to the revolutionary and subversive impact caused by the transformation and application of new technologies such as big data, the Internet, and cloud computing. In the era of big data, responding to changes in thinking such as data interoperability, value sharing,

and production mode changes requires new regulatory concepts.

3.2 Strengthen data platform regulation and reduce information asymmetry and technology monopoly

As mentioned above, different from traditional labour relations, the logical nature of platform-based employment has multiple characteristics of the Internet, big data technology, and internet space and directly impacts the labour market. In the era of big data, the value, huge amount, and high-speed liquidity of data have caused capital, technology, and other forces to flood into this emerging field. With great progress being made in data technology, the data industry, and data applications, a technology monopoly has begun to take shape. Data technology, cloud computing, and even artificial intelligence are all in the hands of a small group of technical elites and large-scale capital owners, which has caused several social problems, such as data discrimination, information leakage, and privacy violations. In the field of labour, the existence of this asymmetry is also significant. For example, in the platform-based employment model, the power gap between employers and labourers is mainly rooted in the control of platforms and the asymmetry of data and information. With mastery over the most important production tool of platform service employment, that is, the data platform, employers control the interactive data of customers, labourers, and other parties, which is also the important production material and information in the new labour model. This information monopoly may cause employers' bargaining power to greatly increase, thereby arbitrarily increasing their profit-sharing ratio and potentially causing information security risks.

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