

Internet Platforms and Labour: An Analysis on the Accumulation of Digital Capital

Yanzhi Li^{1*}

¹ Fujian Volunteer Association, Fuzhou, Fujian Province, China

Email Address

yanzhili_fujian@163.com (Yanzhi Li)

*Correspondence: yanzhili_fujian@163.com

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Abstract:

In the digital age, the labour scene has been reconfigured, and new labour processes and behaviours have been created. After introducing the theory of digital labour from the perspective of Marxist political economy, this paper uses Fuchs' research paradigm of digital labour to explore the accumulation of platform capital and the process of digital surplus value production. The surplus value of digital labour has been captured by platforms. In addition, we must consider whether digital workers recognise their status as labourers, and whether digital labour is meant for entertainment or making money. In the context of China's socialist system, China has introduced a number of policies and regulations to address the new situation of digital labour so that the social and public nature of digital labour can be better utilised and have a positive impact on the national economy and social development.

Keywords:

Digital Labour, Capital Accumulation, Labour Identity

1. Introduction

With the development of science and technology, users are becoming more active, and the nature of media platforms is gradually shifting from passive reception to two-way interactions, especially on certain kinds of media (e.g. TikTok) where the content is almost entirely produced by users. On social media, users have three key activities: creation, sharing/engagement, and distribution. Users acquire multiple identities, namely as professional producers. The audiences who create content are therefore also prosumers [30]. Furthermore, users' behaviour is a new commodity that is collected, analysed, and sold by internet platforms [7].

The concept of digital labour emerged in this context, underlining the value of the user. Fuchs [8] uses the 'digital labour' research paradigm to examine the exploitation mechanisms of media platforms, and analyses users of social media and their specific labour practices [10]. Based on Smythe's concept of the labour of the media audience and the commodification of the audience, Fuchs [11] stresses that social media profits are derived from the time spent on digital labour.

Due to the rapid spread of internet technology (IT), digital labour has become generalised. Fuchs [8] [20] extended the notion of digital labour to cover the entire information and digital industry chain, including not only media production and marketing labour, but also miners in Africa, assembly line workers at Foxconn in China, and IT engineers at Google. All activities and labour that employ digital technology for the purpose of using digital media can be called digital labour [21], and ever more labour is being prefixed with 'digital'.

Fuchs [9] argues that capitalist production is a time-based economy in which capitalists make workers produce as many goods as possible in as short a time as possible to earn more money. He claims that exploitation is the appropriation of unpaid labour time of the dominated class by the ruling class; hence, the length of time users employ a platform can be harnessed to measure their labour [9].

For Marx, capital is a self-expanding value and accumulation is its inherent characteristic. The capitalist economy is rooted in the formula $M \rightarrow C \dots P \dots C' \rightarrow M'$: capital (i.e. money) is invested to buy a commodity (labour, means of production), and labour produces (P) a new commodity C' , which is sold on the market to create value-added capital M' (People's Publishing House, 1998). [26]

According to the media platform production process described by Fuchs, there are two production processes from capital being invested in a media platform. Where P1 entails the construction of a media platform with paid labourers, P2 denotes unpaid labour, that is, users produce a new good C' in their use of a media platform. The media platform sells the new product C' to the merchant, thereby generating more capital.

Chinese scholars have conducted numerous studies from different perspectives on different digital occupations such as short video bloggers, chauffeur drivers, interns in large factories, journalists, mobile game escorts, and online water soldiers. They have also investigated users of different age groups such as the elderly and youth, and they have examined different internet platforms such as Jieyin, Xiaohongshu, Weibo, online literature forums, and the game Glory of Kings. The extant research has deepened the understanding of digital labour in concrete practice.

How does platform capital accumulate and what is the process of digital surplus value production? What are the characteristics of digital workers? Answering these questions is the only way to clarify labour relations in the digital age and to safeguard the legitimate rights and interests of digital workers.

2. The Platform's Approach to Capital Accumulation

There are two phases of capital accumulation on a platform: the use stage and the production stage. Digital labour is also divided into two types: labour where one is aware of being a worker and labour where one is not aware of being a worker (Figure 1).

2.1. Labourers who are not aware of their status as labourers in the use stage

The capital accumulation process of platforms in the use phase includes four aspects: the commodification of data, the commodification of users, the commodification of emotions, and the use of new technologies.

First, according to Fuchs' view of the concept of surplus value to explain the formula for platforms' exploitation of users, data as a factor of production provide the

basis for the continued growth and perpetuation of capital, and data become the backbone for the development of platform capital. [27]

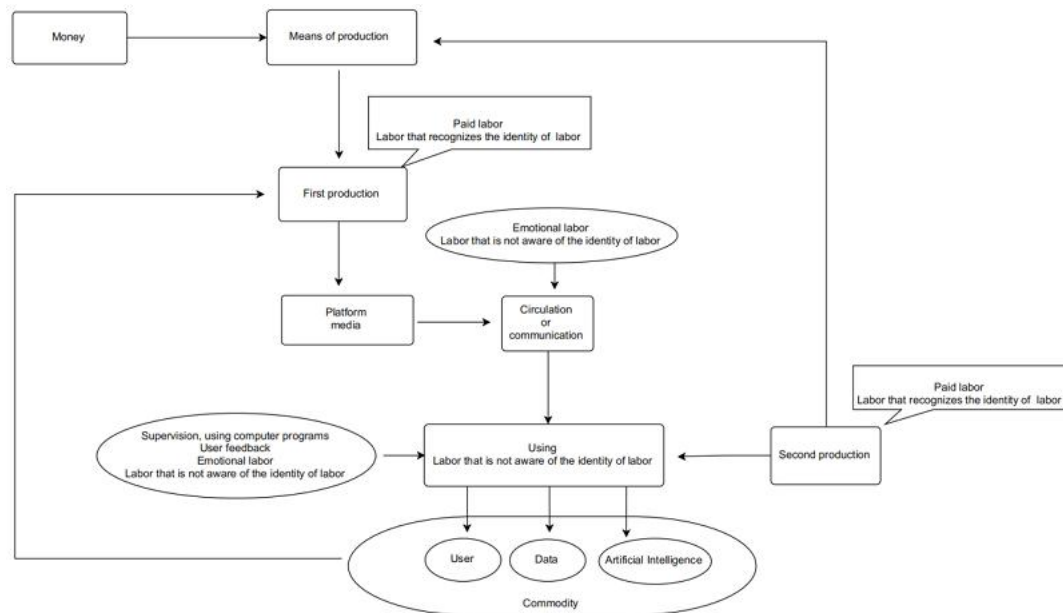


Figure 1. Flowchart of a platform's capital accumulation.

On the one hand, the direct benefit of a platform lies in advertising. For advertisers, users are categorised by information tags such as age, gender, and place of residence. Depending on the advertiser's needs, the platform consolidates users into products for sale. TikTok has already generated over RMB 100 billion in advertising revenue in 2019. 'Today's Headlines', one of TikTok's news media platforms, uses its algorithm to push relevant ads based on users' preferences [19]. Baidu claims that it 'shows your ads to precise users' and that 'with industry-leading Baidu search and information stream recommendations, over 2 million features identify each user's true needs and interests' [Baidu Marketing, <http://e.baidu.com/advantage/?refer=106000497>, 20 May 2022]. Tencent's advertising page also introduces customers to his multi-dimensional targeting service, which divides users into different tags for age, gender, industry, behaviour, and interests. Advertisers can follow the tags to find more accurate sales people ['Tencent Advertising', <https://e.qq.com/ads/>, 21 May 2022]. When an advertiser enters into an advertising agreement with a platform, every click, share, and retweet is work for the platform, and the user becomes a digital labourer, or what Fuchs calls P2 (unpaid) labour.

On the other hand, platforms analyse and reprocess data through artificial intelligence (AI) in order to grasp users' preferences and retain their attention. As a result, some scholars have creatively extended the object of digital labour from humans to AI, where evolving AI technologies and machine learning with deep learning capabilities will replace labourers in various fields; some have begun to explore whether AI creates surplus value like human labour [32]. Not only does data collection begin when a user opens a social networking app, but data may continue to be collected even if the app is deleted.

Second, the number of users is the most important criterion for advertisers to consider when choosing whether to place an ad. From the advertising product profiles found on the official websites of Tencent, TikTok, and Xiaohongshu, we can see that the number of users is a critical resource for them. An ad promotion page emphasises

Douying (China's version of TikTok) and claims that it 'triggers 600 million daily active users, allowing your ads to be seen by more people'. An ad placement page about Tencent claims to cover '800 million+ users', and an ad about WeChat (China's WhatsApp) openly states that it has a 'billion monthly active users'. In Baidu's 2019 annual earnings report, Baidu declared: 'Our large user base and traffic provide advertisers with broad reach and the best profitable results' ['Baidu: 2019 financial results', <https://ir.baidu.com/static-files/ee02be35-ab39-496b-9119-3f30a5e99e6f>, 15 May 2022].

When the user becomes a factor of production, the act of 'free' entails expanding the scale of users for the platform's profits. For example, ride-hailing platforms such as Drip and Cao Cao (China's version of Uber) collect passenger location data to match passengers with drivers and provide travel services. Although it is free for passengers to use the platform, the ride-hailing platform cannot charge drivers if there are no passenger data. Passengers are the foundation of ride-hailing platforms. To earn greater profits and to capture the market, platforms not only let people use them for free, but also attract users by giving them subsidies and lotteries; for example, there is the case of DDT, which attracted 78 million users in 2014 with 1.4 billion yuan in subsidies [Chengdu Business Daily, 'Is it worth it to grab a user taxi software for 18 yuan? New user growth is slowing, policy risks are beginning to emerge, and the "money war" is nearing its end', https://e.chengdu.cn/html/2014-04/04/content_462917.htm]. From the time users start using an internet platform, the platform gains access to the raw material for sales, but terms like 'free', 'lottery', and 'subsidies' cover up the fact that capital will commercialise the user. By adding users to the production process, capital accumulates more surplus labour time and surplus value, creating favourable conditions and a basis for further accumulation, which becomes a hidden product.

Taking the process of digital labour production by users in live video streaming as an example, data on users' personal information and trading behaviour are the products sold by live streaming platforms. Users have generated a constant stream of productive content in the form of comments, an introduction to live products, and the number of users, which brings economic benefits to the platform without offering compensation to users [17]. Their information data play an important role in the capital accumulation of internet platforms. Throughout the process, users are alienated into 'commodities'. Thus, in the accumulation of data monopoly capitalism, the identification of user data preferences and algorithmic recommendations help capital to win competitions and gain profit in the market [13].

Third, in addition to the most basic forms of labour (such as using, clicking, and sharing), platforms employ many users' emotional labour and content production for free. Some scholars argue that workers in digital labour gain a sense of social identity, belonging, happiness, and self-worth, and that they are contributing to culture and knowledge rather than pure capital exploitation [35].

However, according to the rules of the Jitterbug platform, users give away interactive messages that they share and disseminate in their views; this expression of emotion toward the host or video content is exploited by a platform's capital, providing value-added traffic and economic benefits [3]. Users' emotional labour is expressed through commodities with value exchanges, such as virtual gift [33]. More typically, users' 'quantitative data such as the number of spectators, comments, gifts, topics and orders become direct indicators of the host's popularity, topicality and

ability to bring in goods' [31]. Moreover, user-generated content is an important indicator of customer brand perception, as users are active content creators who express and share their perceptions and opinions about brands, products, and companies through social media [1].

Bilibili, a Chinese video site, embodies the value of user engagement within it. Bilibili describes itself as a 'cultural community for young people in China'. Through users' production of secondary content, bullet chats in video, and other methods to create high-frequency interactions, these young people—who enjoy secondary culture—gather at Bilibili spontaneously. This is why Bilibili stated that 'an active creation ecosystem with upkeep is the driving force behind the community's continuous development' [Beili Beili About Us', <https://www.bilibili.com/html/aboutUs.html>, 18 May 2022]. Bilibili attracts target users through secondary cultural content, promotes secondary games, and uses the games to cash in on user traffic.

This has given rise to research on digital and emotional labour. Some scholars have developed the concept of digital labour and introduced emotional labour as well. The term 'emotional labour' refers to a situation where the worker toils emotionally to increase their income. Exploitation of emotional labour can also be found in labour that is paid for. Scholars have studied this specifically, with the income of takeaway riders as an example, who invest emotional labour in the construction of relationships with consumers, but are paid only for their physical work, with emotional labour being 'unpaid' [29]. The focus is on the labour of e-commerce on social media platforms, that is, the practice of marketing in a circle of friends, and how posting and sharing one's daily life in a circle of friends becomes part of digital labour and creates surplus value for capital [22].

Fourth, platforms use algorithms, campaigns, feedback, and reviews to make users undertake work for the platform for free or for very low pay. To capture more residual value, platform providers harness programming techniques and algorithms to motivate digital labourers to work. Moreover, different platforms set different rules. On Bilibili, for example, coins allow users to express recognition of UPzhu, the characteristic name of a video creator; this virtual currency, which can be obtained through the daily act of logging onto the site to watch videos, has become a means for the platform to attract users to simply log on ['BILIBILI', https://www.bilibili.com/video/BV1rK4y1H7FU?spm_id_from=333.337.search-card.all.click, 15 May 2022].

For example, Pingduoduo, a Chinese shopping site, set up rules for inviting friends to help cut prices and leveraged users' connections to become their promoters. The users contribute to the platform's growth and even take on the jobs of supervisors and auditors, but the platform does not pay the users accordingly.

TikTok is another example; it uses algorithms to determine the high or low quality of videos by collecting data on user behaviour. TikTok sends short videos to a small number of users for testing and defines the video's quality based on data obtained from users in terms of re-tweets, comments, likes, and video completion rates, among other things. TikTok pushes videos with high data to more users, with the aim of attracting users to employ the Jitterbug platform for longer.

Cao Cao openly recruits mystery passengers who are invited to perform certain actions on the platform's behalf; for instance, to record the entire process of placing

an order, getting into a car, driving and ending a trip, or taking photos of designated objects or environments (e.g., bodily cleanliness, drivers' attire, and cars). Next, users give feedback to Cao Cao so as to promote service improvements. The coupons for rides obtained by becoming a mystery passenger do not pay the user accordingly.

Let us also examine the platform Meituan Takeaway; when a user receives a delivery, they will be able to evaluate the takeaway staff, which helps the platform to monitor the staff.

In sum, unaware workers are doubly monetised for platforms, with users themselves and the data content they produce being commodities. A platform's exploitation of unaware digital labourers involves production throughout the process, with the platform transforming users' every online action into value [6].

Digital laborers also engage in 'anti-digital connectivity' behaviours, such as reclaiming the initiative to use software by turning off digital interfaces [14], controlling the time spent using media, working in spaces such as libraries to control access, or increasing the mobility of digital laborers between platforms. These actions represent a 'revolt' against their own labourisation, that is, a 'digital strike' [36]. User resistance to platform exploitation also includes acts of 'reclaiming time sovereignty, cutting back on working hours, building more democratic workplaces, fighting for more rational work schedules and more humane forms of work, and obtaining a fairer distribution of labour, among others' [34].

Yet, because of the multifaceted approach to digital integration into individual lives and the sellers' advantage of platform capital, a strike can only be temporary and relative. More generally, there is an unequal status and information asymmetry between internet platforms and users. In 2018, the China Consumers Association (hereinafter referred to as the CCA) released the 'Evaluation report of 100 apps' collection of personal information and privacy policies', which found that 91 apps excessively collect users' personal data ['CCA releases 100 app privacy policy evaluation', <http://finance.people.com.cn/n1/2018/1204/c1004-30442062.html>, 10 July 2022.]

Users must accept a data licensing agreement as early as the first time they use a platform, having exchanged personal data for platform services. Internet platforms bundle user data for authorisation rights in the agreement; it is agreed that personal data can be passed on to third parties. Individual users create data but have no direct control over it, and many users are unaware of how much data they have left behind; it is difficult for them to migrate their data to third-party platforms. When data are not circulated, it is hard for digital workers to gain a reasonable right to enjoy the benefits of the data produced. Currently, major platforms do not show society an accurate way of calculating their profits, nor do they present people with a specific algorithm for their platform technology. Platforms silently capture the revenue generated by data.

In terms of accumulating capital, the capitalisation of data is not only a data monopoly, but also leads to an extreme concentration of power on the platform, with its perceived limited user activism under conditions of technological empowerment.

2.2. Labour as an aware labourer in the second stage of production

Digital platforms have created a large number of jobs, and the number of workers employed on internet platforms is growing. The income level of workers in new forms of employment on internet platforms is no longer lower than the income level of workers in traditional manufacturing industries. The Guangzhou Municipal Federation

of Trade Unions released ‘Reference information on collective bargaining for workers’ and ‘Remuneration and benefits in major industries in Guangzhou in 2022’ which sheds light on the remuneration of workers in new forms of employment. There are about 80,000 takeaway delivery workers in Guangzhou, with about 82% earning more than RMB 8,000 per month and an average income of RMB 109,387 per year. There are about 50,000 online taxi drivers in Guangzhou, 78% of whom can earn more than RMB 8,000 per month, with an average annual income of RMB 116,761 [34]. These figures are much higher than the average annual wage of RMB 74,452,000 for those employed in private urban units in Guangzhou in 2021 according to the Guangzhou Bureau of Statistics [2021 Average annual wage of those employed in non-private and private urban units in Guangzhou, http://tjj.gz.gov.cn/stats_newtjyw/tjsj/tjgb/content/post_8540235.html, 11 July 2022].

On an interconnected platform, the labour of workers in new forms of employment is not compulsory, and digital workers can reconfigure temporality. Workers are free to decide on the number of hours they work, rest, and when they go on vacation. For example, takeaway workers are paid on the basis of completed orders. Chinese researcher Chen Long had a takeaway job; when he worked, the lowest-ranked rider received a commission of RMB 8 per order delivered (Long, 2020). When a takeaway rider does not want to work, they can turn off the platform and not accept orders.

However, online platforms control digital workers’ commitment and attention through algorithms, ranking systems, and rules surrounding reward and punishment, directing labourers to work longer and more efficiently.

First, the existence of ranking and rating systems is also the basis for the development of technical specifications in the form of controls and monitoring efforts. For example, Ele.me, the takeaway platform divides the riders of Hummingbird Special Delivery into different levels. The platform gives riders the same ranking categories as the game *Glory of Kings*: bronze, silver, gold, platinum, diamond, and king (in that order). The number of orders delivered by the rider becomes an important factor in judging the ranking criteria. The highest ranked rider’s delivery commission can be RMB 0.5 more per order than the lowest ranked rider (Long, 2020). On-time delivery of orders is another assessment criterion. From the time the customer fills in the order’s start and end points, the estimated delivery time of the predicted order is displayed on the page, and riders face penalties if the order is late. Another means of extending the working hours of the digital workforce is the order rush bonus. In addition to takeaway workers, online taxi drivers, couriers, and others are rewarded for this.

According to the pay rules designed by a platform, such as Didi, the number of hours worked largely affects the income level of digital workers. Thus, in Guangzhou, more than 94.1% of couriers work more than 9 hours a day, 93% of takeaway drivers work more than 9 hours a day, and only 25.39% of online taxi drivers work less than 8 hours a day (No author listed, 2022).[25]

Second, platform indicators guide the actions of digital workers, and workers in new forms of employment are actively subordinated. For example, Uber’s ‘peak hour pricing’ mechanism, a representative strategy for labour process control, ‘softly controls’ drivers’ behaviour by increasing fares in areas where demand is high [12]. Moreover, one of the core rating indicators controlled by a platform is ‘satisfaction’. This criterion requires workers to exercise self-control through a great deal of emotional labour to ensure that customers are satisfied. However, workers are only

paid for their work on a single order. The additional benefit of satisfaction—which helps the platform to build up its reputation and expand its market share—is not relevant to workers' earnings. Capital freely appropriates the added value of workers' emotional labour through emotional exploitation [16]

Third, in the digital age, people's labour is quantified as a set of data, and the platform system controls all labour processes of digital labourers from registration to exiting (Long, 2020). The digital surveillance of the internet symbolises the official formation of a closed online space for the disciplined subject. The labourer is regulated as data in an AI algorithm, and resistance to the platform's power weakens. The platform establishes strict and regulated discipline, which is enforced by the workers through various management tools. In addition, more severely than in traditional factories, digital technology exerts full control over the labour process through feedback and evaluation systems. For example, the user of a takeaway platform sees the deliveryman as a dot on a dynamic map, and the rider's whereabouts are monitored by the user throughout the process; the user can intervene in the rider's labour process by reminding them of the order on the platform or by calling them [23]. Digital technologies have exacerbated the inequality of rights between hiring parties (Dieuaide and Azaïs, 2020). The core of data and technology of internet platforms still revolves around how capital can access more generative information, but through a more covert and abstract form of labour control.

Finally, labourers' different motivations and identities result in different labour behaviours and work attitudes. When digital workers start to realise that they are working for the sake of remuneration, they are more likely to be influenced by platform rights and regulated by the platform than users who do not see themselves as workers. Successful labourers on platforms—such as anchors, short-form video producers, and online literature authors—generally take the initiative to reinforce algorithmic rules and join algorithmic platform-dominated value systems to increase their users' stay and time spent. [24] Whether users of online literary platforms view writing as a simple income-earning form of labour and whether they identify with their labour identity influence different ethics and perceptions of writing. Some online literary authors define themselves as 'word workers' to earn income, while those who join a platform to satisfy their creative aspirations define themselves as 'users' [28].

Thus, when money-oriented platform writers subscribe to the labour rules set by a platform and are controlled by it, they are also trained by the platform to become labour workers on the production line, producing a large number of homogeneous works in order to create traffic [28] Webcasters actively 'break' the platform's exposure mechanism, and for the sake of traffic and exposure, their emotions are commodified; they manage and express their emotions in live broadcasts, catering to the tastes of their audiences [15]. The anchor becomes a tool for producing data-driven products. Profitably aware workers actively become digital labourers, and compared to unaware workers, they are more active in adapting and accepting a platform's rules. In pursuit of profit, aware workers are forced to cooperate with the platform's capitalist exploitation system.

However, the labour practices that result in the maximum extraction of surplus value through AI computing have a negative impact on the physical health of digital workers, for example, psychological anxiety and burnout [20]

3. The Regulatory Practices of Digital Labour in China

The inequality of rights between platforms and workers requires the intervention of government departments to provide more just treatment to ordinary workers. China is also constantly introducing relevant laws and improving its market system.

3.1. A clear presentation of data as a factor of production

At the Fourth Plenary Session of the 19th Central Committee of the Communist Party of China (CPC), it was proposed to improve ‘the mechanism whereby factors of production such as labour, capital, land, knowledge, technology, management and data are evaluated by the market for their contribution and remunerated according to their contribution’ [Report on the Work of the Government - 5 March 2022 at the Fifth Session of the Thirteenth National People’s Congress, http://www.gov.cn/gongbao/content/2022/content_5679681.htm, 10 July 2022 10 July 2022.] In 2021, China established the Shanghai Data Exchange to evaluate data compliance, quality, assets, and security, forming a foundation to support trading practices and promote the transformation of data from a resource to an asset [‘Shanghai Data Exchange’, <https://www.chinadep.com/>, 10 July 2022].

In 2022, the 26th meeting of the Central Committee of the CPC’s Comprehensive Deepening Reform Committee adopted the Opinions on Building a Data Foundation System to Better Play the Role of Data Elements; this document mentions that it is necessary to improve the market-oriented allocation mechanism of data elements, better leverage the government’s guidance and regulatory role in data element income distribution, and establish an efficient and fair data element income distribution system. [18]

3.2. Regulating the conduct of internet platform operators

China has publicly solicited comments on the Interim Provisions on the Administration of Personal Information Protection for Mobile Internet Applications. China has also introduced laws and regulations such as the Law of the People’s Republic of China (PRC) on the Protection of Personal Information, the Data Security Law, and the Method of Determining the Illegal Collection and Use of Personal Information by Apps. The aforementioned regulations prevent user-produced data from being used indiscriminately by capital through oversight of algorithmic rules. Weibo’s User Agreement from 2017 allowed Weibo to force users to choose between agreeing to transfer the copyright of their content to the platform and giving up access to all of the platform’s features [4], but this clause has since been removed from the new version of Weibo’s user agreement. The government has broken up the platform’s capital monopoly and considered meeting people’s diverse needs to be a more important matter.

3.3. Protecting the rights and interests of digital workers

To help digital workers escape the plight they face with excessively long working hours and unstable incomes, the Chinese government, trade union organisations, labour regulators, and others have taken a multi-pronged approach to empowering them. In July 2021, China’s Ministry of Human Resources and Social Security, along with eight other departments, jointly issued the Guidance on Safeguarding the Labour Security Rights and Interests of Workers in New Employment Patterns. Furthermore, China’s Government Work Report of 2022 proposes improving social security

policies for flexible employment and launching a pilot scheme on occupational injury protection for new employment patterns.

3.4. The use of data to benefit the public

Many Chinese government departments have discovered the public nature of internet platforms and have begun to use data for the public good. For example, short video platforms are active in promoting fire safety hazards by firefighting agencies, and staff from public security authorities guide users to prevent online fraud. Examples of using the internet to perform public functions include live-streaming activities to help farmers revitalise the countryside, videos of travel bloggers to boost the travel economy in various regions, and the live-streaming of Bao Mama selling goods to help women to realise their purpose.

4. Conclusions

In the debate on whether digital labour is exploited by internet companies, some scholars argue that users' data have no value and that data goods need to be processed by platforms before they can be sold [2]. Some scholars also judge whether exploitation exists based on whether digital labourers are employed, and believe that the work of platform users, as non-employed labourers, does not produce surplus value. However, both the aforementioned views neglect to examine the process of capital accumulation on internet platforms.

Digital labour involves dynamic processes of production, circulation, use, and a second round of production. The accumulation of capital on internet platforms is based on the exploitation of unpaid online labour. Irrespective of whether digital labourers identify as workers and whether they are seeking entertainment or to earn money on digital platforms, platform capital extracts their surplus value.

The line between leisure interests and labour becomes blurred, with unaware workers identifying more with a platform's culture than aware workers, whose choice of platform is profit oriented.

Important features of Marxist 'Chinese-isation' include the recognition of data as a factor of production in China according to the principle of socialist public ownership, the regulation of data, and the protection of the rights and interests of newly employed workers in accordance with the essential requirement to integrate development production and common prosperity, as well as the general public's enjoyment of digital dividends.

Conflicts of Interest

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