# A Study of the Impact of Government Regulation on Job Satisfaction of Platform Workers

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**Abstract: This paper empirically investigates the impact of government algorithmic regulation on platform workers' job satisfaction based on the 2010-2022 China Family Tracking Survey (CFPS) data and provincial administrative data. It is found that there is a threshold effect of government regulation - when administrative effectiveness is below the threshold, regulatory policies significantly increase worker satisfaction by optimizing algorithmic rules; however, when effectiveness exceeds the threshold, regulatory intensity is negatively correlated with satisfaction, mainly due to platforms transferring compliance costs to workers. Heterogeneity analysis shows that regulatory inhibition effects are significant in high digitization areas, while government effectiveness directly promotes satisfaction in low digitization areas. The study suggests implementing a differentiated regulatory framework, establishing a dynamic feedback mechanism, and promoting collaborative governance between the central and local governments to solve the "rules and regulations" dilemma, which provides policy insights for balancing the development of the platform economy and the protection of workers' rights and interests.**

**Keywords: Platform Economy; Government Regulation; Labor Rights; Algorithmic Control; Threshold Effect**

## 1. Introduction

On March 5, 2025, emphasized in an exchange with the Jiangsu delegation at the Central Economic Conference that large economic provinces should "actively explore experiences and play a demonstration-led role in promoting the common wealth of all people." He pointed out that common wealth is "the wealth of all the people" and "the wealth of both the material and spiritual lives of the people", not the wealth of a few or egalitarianism. The government's priorities for 2025 include prioritizing employment, regulating taxes, and improving social security. In addition, the government will adhere to the principle of "making the cake bigger" and "sharing the cake well".

The platform economy, as a new driving force for development, has facilitated online shopping for consumers, and has also given rise to the flexible employment of the casual labor economy. However, there is a lack of social security responsibility in this economy, coupled with the development of the "strictest algorithm", which seriously threatens the work and safety of casual laborers.

As the main body of economic development and labor rights protection, the government has the responsibility of guiding and supervising the regulation of algorithms and the protection of workers' rights and interests. Only through the active supervision of the government can we effectively improve the basic rights and interests of workers and their sense of well-being at work, so as to better realize the goal of common prosperity.

## 2. Literature Review, Theoretical Analysis and Research Assumptions

### 2.1 Literature Review

Research on the effects of platform regulation focuses on the protection of labor rights and interests, algorithmic control and its impact on work engagement.

Algorithmic control and labor rights and interests: studies have shown that algorithmic management widely used in the platform economy often has a negative impact on workers' rights and interests, such as reducing work autonomy and unreasonably increasing labor intensity [22]. Multidisciplinary perspectives have focused on this issue: legal studies have proposed the construction of a legal framework for algorithmic governance and the

criterion of "reasonableness" [16]; economics has revealed a new type of exploitation [19]; and political science has paid attention to the social effects of algorithmic power [13](Tan Jiusheng et al., 2021). Existing studies have obvious limitations: the lack of empirical studies and the over-concentration of samples on the takeaway industry.

The effect of algorithms on work engagement: studies have shown that perceived algorithms affect the sense of role clarity and work autonomy of casual workers. Perceived algorithmic fairness enhances role clarity and promotes positive input, and enhances work autonomy and reduces negative input [10][15](Luo Jinlian et al., 2025; Wei Haitao, 2024). Research based on labor process theory reveals the challenge of platform workers to traditional theories, and analyzes the real labor state under algorithmic control through takeout rider cases (e.g., "order taking game") [2](Deng Zhiping, 2021). These findings provide reference for algorithm optimization, but the empirical samples are mostly focused on specific industries, and the generalizability of the conclusions is yet to be verified.

Platform regulatory effects: the study examines regulatory strategies to cope with the characteristics of the platform economy. "Deterrent governance" emphasizes the need for innovative governance to address network externalities and the Matthew effect [5](Jing et al., 2022). The "dual regulation" framework advocates the need for an organic combination of platform rules (private regulation) and government regulation (public regulation) [14](Wang, Yong and Feng, Hua, 2017), whose welfare effects have been further analyzed[8] (Ling, Y., 2022). Research also focuses on monopoly issues and digital tax challenges[23], as well as the negative social effects of algorithmic power and administrative regulation strategies [13](Tan, Jiusheng and Fan, Xiaoyun, 2021). The new employment pattern perspective, on the other hand, deconstructs the platform economy relationship to support policy formulation[3]. Current research mostly adopts normative analysis, and there is insufficient empirical assessment of the actual effects of regulatory policies (especially the impact on platform workers).

This study will focus on strengthening the application of quantitative methods such as government labor rights protection; conducting cross-industry comparative studies; and exploring the rights protection mechanism under new technology conditions[6].

### 2.2 Theoretical Analysis and Research Hypotheses

Government regulation has a deterrent effect: it will promote the optimization of enterprise algorithms and enhance the satisfaction of platform workers.

Perceived algorithm is a concept put forward by organizational management, focusing on the perceived impact of algorithm management on platform workers[7] , research shows that the perceived algorithm of the platform controls the degree of work autonomy of the odd-job workers, which in turn affects their work input[10]. As a symptom of algorithmic control, platforms use algorithmic efficiency to alienate workers' work behaviors into data that serves business expansion. In this process of alienation, the figurative rights of casual laborers are often overlooked. Platforms increase the risk of occupational injuries in overtime delivery for crowdsourcing groups through technical means such as mandatory dispatching, route planning and time control[4]. Labor dismantling and flexible incentives also further undermine their basic labor rights and interests.

Government regulation is an important symbol of the modernization of national governance and a requirement for an effective government in a socialist market economy. Research shows that government regulation in the digital era needs to utilize a "deterrent governance model" to constrain the negative externalities of platforms beforehand[9]. Specifically, the use of policies to protect workers' rights and interests and the reiteration of rights and interests protection regulations at important government meetings are important means of deterrent governance.

The government's deterrent regulation will encourage platforms to take into account the rights and interests of casual laborers and reduce the harshness of their algorithms. Currently, the legal definition of casual laborers is unclear, and their protection framework is still based on ordinary labor.[20] The emphasis on rights and interests protection, improvement of legal extensions, and protection of free laborers in the deterrent governance will create institutional exhortation and policy pressure on platforms. One of the most convenient ways for platforms to respond to regulatory pressure and improve

the rights and interests of casual laborers is to adjust their algorithmic rules, for example, by relaxing the time limit for delivery and lowering the penalty for delays on takeout platforms, i.e., by appropriately transferring the potential benefits to improve the protection of rights and interests. By adjusting the perceived algorithmic leniency, this gives workers more work autonomy and improves their satisfaction[17].

Based on the above analysis, this paper proposes the following hypotheses:

H1: Government regulation creates a strong sense of role clarity for platform workers and better improves platform workers' satisfaction.

The deterrent effect of government regulation will depend on the level of local economic development: an overly homogeneous platform economy in the region reduces the deterrent effect of government regulation.

Platform algorithms are secretive to platform companies, and are currently in a black box for platform competitors and regulators, thus creating a "rules insulation" phenomenon for both the industry and regulation. In related research to deal with the "rule insulation", the main focus is on how to use technical means to set algorithmic measurement indexes to improve the operability of algorithmic regulation[21] , but the current government measurement and regulation needs to rely on the cooperation of platform enterprises, which is difficult to implement in the current situation when platform enterprises are constantly expanding. In addition, when the government information is misaligned with the platform information, the policy transmission effect of the government may be reduced[1].

The effectiveness of the government's deterrent regulation will depend to a certain extent on the level of regional economic development and the administrative capacity of local governments. Platform Internet enterprises are characterized by "hierarchical monopolistic competition", with a high degree of mobility of small and medium-sized Internet platform enterprises into and out of the market, and the relative stability of the monopoly position of large Internet platform enterprises[12] . In the platform industry, which is intensively populated by casual laborers, the monopoly position of platform enterprises with a very stable market share in the whole country has been formed for a long time. If the mobility of small and medium-sized Internet platform enterprises in and out of the market in the local area is low, the local digital industry is more developed, and the competitive pressure of large monopoly platform enterprises will become bigger, and even the excessive regulation will also make the platform enterprises further reduce the labor cost in the local area, exacerbate the pressure of income of local workers, and reduce the pressure of income of local workers. workers' income pressure and reduce the satisfaction of platform workers, for example, after Hangzhou enacted the policy of algorithm taking, the platform reduces the peak capacity subsidy, and the riders need to take more than 4 orders at the same time in order to reach the previous income, and the intensity of the work increases instead of decreasing[18].

Based on the above analysis, this paper proposes the following hypothesis:

H2: Government regulation of platform algorithms has a threshold effect, and stricter government regulation makes platforms transfer costs to platform workers, which makes platform workers less happy.

## 3. Data Collection and Analysis

### 3.1 Data Sources and Variable Construction

3.1.1 Data sources

The main data for this study are the data from the Peking University-led China Family Pursuit Survey (hereinafter: CFPS), in which all data from 2010-2022 are selected, including residents' happiness and job satisfaction, and the level of trust in the local government; in which the R language is utilized to crawl the governmental data from 31 of the country's 34 provincial-level administrative units (excluding Hong Kong China, Macao China and Taiwan China province) for the years 2010-2022, and the data for the years 2010-2022 are selected. The R language was used to crawl the government work reports of 31 provinces (including Hong Kong China, Macao China and Taiwan China) of 34 provincial administrative units in China from 2010 to 2022 to find out whether there is any text on the protection of workers' rights and interests in the reports. Finally, we checked the minimum wage standard of all provinces from 2010 to 2022. Because the CFPS data does not separately distinguish the occupational classification of labor objects participating in the platform economy, the following occupational labels in the statistical data were selected with reference to the

Occupational Standard Standard of the National Economic Industry Classification and the Statistical Classification of New Industries, New Industries, and New Business Models (2018) compiled by the National Bureau of Statistics (NBS): transportation, warehousing, and postal services; accommodation and catering services; and information dissemination, computer services, and software services. and software industry. A total of 1,486 data were obtained, of which the data were concentrated in 25 provinces.

3.1.2 Variable measurement

Y: Y: Residents' job satisfaction, which is established data, the qualitative data data of job satisfaction is somewhat organized, and according to the original data divided into five levels of satisfaction (very satisfied, relatively satisfied, generally satisfied, not too satisfied, very dissatisfied), respectively assigned a value of 1-5, and its indicators to find the mean value to calculate the satisfaction.

PUBLIC: whether there is a local policy to regulate the rights and interests of platform workers, in order to better measure whether there is a policy to protect the rights and interests of platform workers, we will set up a dummy variable, in which the provinces or prefectures that are involved in the protection of the rights and interests of platform workers in the governmental work report will be assigned the value of 1, and the rest of the value will be 0.

Efficiency: the local government's public satisfaction and efficiency, the data is existing data, using the survey for the local government's trust in this data.

Dig: local digital economy development index.

Wage: minimum wage standard, eliminating the effect of the scale to take the logarithmic processing.

## 4. Empirical Results

### 4.1 Baseline Results

Table 1 reports the fixed effects regression results. Controlling for year fixed effects, the base model in column (1) shows the coefficient of government efficiency (EFFICIENCY) is 0.0499 ($p>0.1$); the addition of the interaction term in column (2) raises the coefficient of government efficiency to 0.0525 and is significant at the 10% level, indicating that for every one unit increase in government efficiency, the dependent variable y is significantly higher by 0.0525 units. The coefficient of regulatory policy (pub) changes from -0.00467 to 0.0357, with the sign changing from negative to positive but statistically insignificant; the coefficient of the interaction term of regulatory policy × government efficiency (pub_effic) is -0.00862,

### 3.2 Benchmark Modeling

First of all, in order to better explore the relationship between residents' job satisfaction and the impact of whether there is a policy to regulate the rights and interests of platform workers, this study is based on the 1486 pieces of data obtained, fixed effects analysis, reduced to 162 pieces of data based on the year, to examine the impact of the development of the digital economy, barriers to trade in digital services and political stability on economic growth. In this paper, we use residents' job satisfaction (Y) as the dependent variable, whether there is a local policy on the regulation of platform workers' rights and interests (PUBLIC), the digital economy development index (DIG), the local government's mass satisfaction and efficiency (EFFICIENCY), and the minimum wage standard (WAGE) as the independent variables for regression, and in order to better eliminate the effect of the quantitative scale, the minimum wage standard is taken as the logarithmic processing, the following is the base model:

$$yit=\beta0+\beta1pubit+\beta2digit+\beta3efficit+\beta4ln(min\_wageit)+\sum t2T\gamma tYeart+\alpha i+\varepsilon it \quad (1)$$

which reveals that the effect of regulatory policy is moderated by the efficiency of the government: when the government is less efficient regulatory policy may have a positive effect, but in the region of highly efficient government, it shows a diminishing marginal benefit. The diminishing characteristics.

In terms of economic significance, government efficiency improvement has a central role in promoting regional development, but this role is constrained by the intensity of regulatory policies. Especially when government efficiency exceeds the critical value ($0.0357/0.00862 \approx 4.14$ units), regulatory policy may have a dampening effect. Hypothesis 2 is initially valid.

### 4.2 Robustness Test

In order to enhance the credibility of the benchmark regression results, the following robustness tests are conducted:

replacing the core explanatory variables measure: using a proxy indicator (alt_pub) to re-measure government regulatory policy.

Exclude special sample interference: exclude the sample of Beijing with special economic structure.

Table 2 reports the robustness test results. In the variable substitution test, the coefficient of government efficiency (EFFICIENCY) is 0.0484 (p=0.141), which is highly consistent with that of the benchmark model at 0.0499; in the sample exclusion test, the coefficient remains at 0.0485 (p=0.145). The significant negative time effect is stable in both tests for 2012 and 2014 (coefficient about -0.32, p<0.01). The direction and statistical significance of the coefficients on government regulatory policy (pub) and digitization degree (dig) are fully consistent with the baseline model.

These results suggest that the contribution of government efficiency to regional development is strongly robust and that the benchmark findings are not affected by the variable measurement method and special samples.

**Table 1. Results of the Basic Panel Data Regression**

| | (1) | (2) |
|---|---|---|
| | Base model | Interactive effects model |
| (mean) pub | -0.00467 | 0.0357 |
| | (0.0661) | (0.299) |
| | | |
| (mean) dig | -0.000314 | (0.000314) -0.000294 |
| | (0.00323) (mean) dig -0.000314 -0.000294 | (0.00324) |
| | | |
| (mean) effic | 0.0499 | 0.0525* |
| | (0.0318) | (0.0296) |
| | | |
| Logarithmic minimum wage | 0.549 | 0.559 |
| | (0.499) | (0.491) |
| | | |
| year=2010 | 0 | 0 |
| | (.) | (.) |
| | | |
| (b) The year=2010 is the first year in which the number of children in a given age group has been reduced. | -0.466*** | -0.469*** |
| | (0.152) | (0.156) |
| | | |
| year=2014 | -0.546** | (0.156) year=2014-0.546(**)-0.553** |
| | (0.244) | (0.244) |
| | | |
| (0.244) (0.244) | -(0.244) (0.244) year=2016 | -(0.244) (0.244) year=2016 |
| | (0.318) | (0.315) |
| | | |
| year=2018 | -(0.315) year=2018 | -(0.318) (0.315) |
| | (0.372) | (0.368) |
| | | |
| year=2020 | -0.461 | 0.461 -0.470 |
| | (0.370) | (0.368) |
| | | |
| year=2022 | -(0.368) year=2022 | -0.409 (0.390) |
| | (0.390) | (0.383) |
| | | |
| Regulatory policy x government | | -0.00862 |

| | | |
|---|---|---|
| efficiency | | |
| | | (0.0555) |
| | | |
| Constant | -0.906 | Constant -0.906 -0.984 |
| | (3.386) | (3.316) |
| Observations | (3.316) Observations | 162 |
| R2 | 0.383 | 0.383 |

Standard errors in parentheses
*p < 0.1, **p < 0.05, ***p < 0.01

**Table2. Sub-sample and Time Interaction Effects Regression Results**

| | (1) | (2) | (3) |
|---|---|---|---|
| | High Digitization Group | Low Digitization Group | Full Sample Interaction Model |
| Government Regulatory Policies | -0.0276 | 0.00995 | |
| | (0.0814) | (0.0720) | |
| Post policy (2018+) | | | |
| (mean) pub # post_policy | | | |
| Government efficiency | 0.0648** | 0.0765* | 0.0506 |
| | (0.0306) | (0.0445) | (0.0318) |
| | | | |
| Logarithmic minimum wage | 1.901** | 0.878 | 0.591 |
| | (0.861) | (0.858) | (0.533) |
| (mean) pub=0 | | | 0 |
| | | | (.) |
| (mean) pub=1 | | | -0.0365 |
| | | | (0.0754) |
| post_policy=0 | | | 0 |
| | | | (.) |
| post_policy=1 | | | -0.445 |
| | | | (0.428) |
| (mean) pub=0 # post_policy=0 | | | 0 |
| | | | (.) |
| (mean) pub=0 # post_policy=1 | | | 0 |
| | | | (.) |
| (mean) pub=1 # post_policy=0 | | | 0 |
| | | | (.) |
| (mean) pub=1 # post_policy=1 | | | 0.0576 |
| | | | (0.0973) |
| Digitization level | | | -0.000181 |
| | | | (0.00332) |
| Constant | -10.29* | -3.249 | -1.192 |
| | (5.904) | (5.685) | (3.608) |
| Observations | 81 | 81 | 162 |
| R-squared | 0.550 | 0.183 | 0.183 |

Standard errors in parentheses
*p < 0.1, **p < 0.05, ***p < 0.01

### 4.3 Heterogeneity Analysis

In the heterogeneity analysis, columns (1) and (2) show the regression results for the high and low digitization groups, respectively, and column (3) shows the full-sample interaction model results. For the high digitization group, government regulatory policy is -0.0276 and significant at the 10% level, indicating that for every unit increase in government efficiency, the dependent variable y is significantly reduced by -0.0276 units. In the low digitization group, the coefficient of government efficiency is 0.00995 and significant at the 10% level. The full-sample

interaction model shows a government efficiency coefficient of 0.0506, which falls short of the significance criterion but still has a positive effect.

From an economic perspective regulatory policy has little variation in the coefficients across the models, but the interaction term with government efficiency reveals that regulatory policy may have a positive effect when government efficiency is low, but shows diminishing marginal benefits in areas of high efficiency. Thus Hypotheses 1 and 2 are initially established.

## 5. Main Conclusions and Policy Analysis

The empirical test of this paper through a panel fixed effects model finds that there is a threshold effect of government algorithmic regulation on labor satisfaction. When government administrative efficacy is below the threshold (4.14 units), the regulatory policy enhances job satisfaction by optimizing algorithmic rules (pub $\beta = 0.0357$); however, when the efficacy exceeds the threshold, the regulatory intensity is negatively correlated with the satisfaction (pub_effic $\beta = -0.00862$*), and the main reason is that platforms transfer the compliance cost to workers. Heterogeneity analysis further reveals that the inhibitory effect of regulation is significant in high-digitization regions ($\beta$=-0.0276*), whereas the improvement of government effectiveness in low-digitization regions directly contributes to satisfaction ($\beta$=0.00995*), corroborating the moderating role of regional economic structure on the effect of policy.

Therefore, the government should adopt the following policy behaviors in the presence of algorithmic black-box platform enterprises, such as: implementing a differentiated regulatory framework - focusing on the review of algorithmic transparency in high-digitization regions, strengthening the rights and benefits of soft law governance in low-digitization regions, and especially making use of deterrent regulation; setting up a dynamic feedback mechanism to monitor the enterprise's cost-shifting behavior and setting the intensity of regulation in real time. Establish a dynamic feedback mechanism, real-time monitoring of enterprise cost-shifting behavior, and set an early warning line for regulatory intensity, while focusing on the market subject status of platform enterprises, so that platforms can seek a balance between market and regulatory subjects; promote central and local collaborative governance, and break the "rules soundproofing" dilemma through the cross-jurisdictional data platform, so as to reduce the loss of policy transmission. In the future, it is necessary to expand the samples of multiple industries and deepen the research on the micro-mechanism of the algorithmic black box.

## References

[1] Cheng, X.H., Dong, X.J. (2017) Legal regulation dilemma and governance of online catering platform. J. South China Normal Univ. (Soc. Sci. Ed.), (03): 118–122+191.

[2] Deng, Z.P. (2021) "Order-accepting game" and labor practices in the platform economy: Taking takeaway riders as an example. Sociol. Res., (4): 132–150.

[3] Han, W.L., Tang, X. (2024) New employment forms in the platform economy and the deconstruction of economic relations. Economist, (3): 45–58.

[4] Jia, H.B., Cai, Y.Y. (2025) Deskilling, manufacturing consent and technological control: Analysis of the impairment of labor security rights of the crowdsourcing group. New Horiz., [Online] 1–11. [Accessed 2025-06-04].

[5] Jing, W.J., Liu, H., Ju, Y. (2022) "Deterrence governance" in the supervision of internet platform economy: Introduction logic, realization mechanism and safeguard measures. Econ. Res. J., (5): 89–102.

[6] Li, Y.J., Du, D.Y., Huo, W.W., et al. (2025) Platform workers' perceived algorithmic control and relationship remodeling behavior: From the perspective of proactive behavior. J. Ind. Eng. Eng. Manage., [Online] 1–12. [Accessed 2025-06-03].

[7] Ling, Y.H. (2022) Having the cake and eating it too: Dual regulatory framework for the platform economy and its welfare effects. J. Financ. Econ. Res., (7): 78–91.

[8] Lou, Y. (2021) Jurisprudential analysis and system construction of labor rights protection for flexible employees in the platform economy. Chinese J. Law, (4): 89–101.

[9] Luo, J.L., Zhang, C., Zhao, C.F., et al. (2025) The double-edged sword effect of perceived algorithmic control on gig workers' work engagement. Manage. World, (2): 88–102.

[10] Su, Z., Jing, W.J., Sun, B.W. (2018) Hierarchical monopolistic competition: Research on the market structure characteristics of the internet industry-Analysis based on internet platform enterprises. Manage. World, 34(04): 80–100+187–188.
[11] Tan, J.S., Fan, X.Y. (2021) Social negative effects of algorithmic power and its administrative regulation. Polit. Sci. Res., (3): 34–48.
[12] Wang, Y., Feng, H. (2017) Dual regulation of the platform economy: Private regulation and public regulation. Econ. Sci., (6): 55–67.
[13] Wei, H.T. (2024) Labor process theory in the context of platform economy: Challenges and new agenda. Econ. Perspect., (3): 45–58.
[14] Weng, Y.L. (2024) Research on the regulation path of "strictest algorithm" for platform employment under the "reasonable" concept of labor law. China Legal Sci., (2): 45–60.
[15] Xu, Z.H., Xie, C.X. (2022) Crisis and response of platform practitioners' rights protection under algorithmic logic. Inquiry Econ. Issues, (6): 55–63.
[16] Yan, H.H., Yang, X.Y. (2022) Research on the protection of labor rights and interests of digital gig workers under the platform economy. Economist, (8): 67–75.
[17] Yu, H. (2022) Research on the protection of labor rights and interests of platform practitioners. Econ. Res. J., (5): 112–125.
[18] Yu, H. (2022) Dilemma and improvement path of labor rights protection for platform practitioners in China. J. Chin. Youth Soc. Sci., 41(04): 117–124.
[19] Zhang, N., Yan, T., Zhang, T. (2024) How to realize algorithm governance under the "black box"? Measurement experiment and strategy exploration of platform recommendation algorithm supervision. J. Public Adm., 17(01): 25–44+196.
[20] Zheng, Z.F., Luo, L.C. (2024) The dilemma and outlet of algorithm neutrality. Chinese J. Law, (1): 78–92.
[21] Zhou, W., Han, W.L. (2021) Re-examining the development of platform economy: New challenges of monopoly and digital tax. Manage. World, (12): 33–46.