Philosophical Defense and Policy Strategy Research on Income Distribution Equity in the Digital Economy Era

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Abstract: The digital economy is growing quickly, and this has changed how income is shared. This is because data monopolies, differences in skills, and platform effects make distribution problems worse. However, they make production more efficient by changing data elements and improving technology. This article talks about the many ways that the digital economy changes how income is shared. It also looks at how owning data and getting training can change how income is first spread out, and how digital taxes and social security can change how income is spread out again. It suggests a way to make things more fair by using three distribution synergies and making the governance system better. Studies have shown that sharing data revenue and bridging the digital divide through institutional innovation can bring together efficiency and fairness in the digital economy. This can help with inclusive development.

1. The Core Concept and Historical Background of Income Distribution Equity in the Digital Economy Era

1.1. The Connotation and Core Features of Digital Economy

The digital economy is an economic system that uses data as its main production factor and digital technologies like the Internet, artificial intelligence, big data, and cloud computing as its main driving force. It also combines old and new sectors. Its main features can be seen in three areas, as shown in Figure 1: first, the centrality of data elements, where data overcomes the limitations of traditional elements and can create value over and over again through processing and analysis; second, the penetration driven by technology, where digital technology fully penetrates agriculture, manufacturing, and service industries, changing the way production and transactions are done; The third is the cross-border integration of business formats, which has led to the creation of new formats like the platform economy, the gig economy, and digital trade. These formats have broken down regional and industry barriers and created an efficient network for allocating resources.

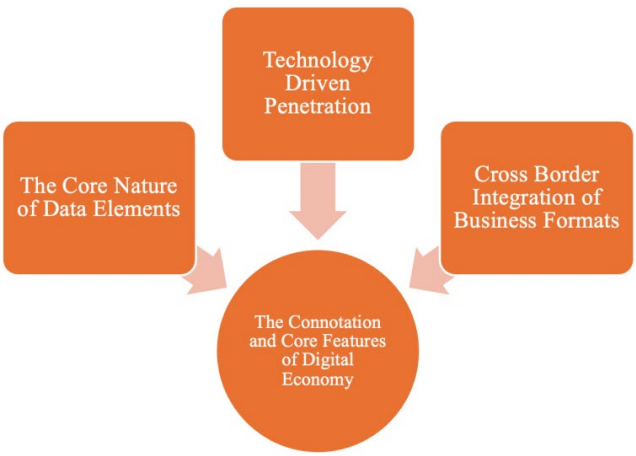

Figure 1: The connotation and core features of digital economy.

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1.2. The Basic Connotation of Fair Income Distribution

There is no such thing as complete equality when it comes to income distribution fairness; rather, it is an organic unity that encompasses opportunity fairness, process fairness, and outcome fairness, as seen in Figure 2. Equal opportunity places an emphasis on the fact that different groups have equal access to digital resources, work chances, and growth channels when it comes to engaging in the process of revenue generating. A good illustration of this would be the provision of equitable access to digital tools and training for individuals with modest incomes [1]. In order to ensure that the distribution process is fair, it is necessary to have rules that are both transparent and fair. It is also necessary to eliminate factors that distort the distribution process, such as algorithmic black boxes and data monopolies. Furthermore, it is necessary to ensure that factors such as labor, capital, and data participate in distribution in accordance with their respective contributions. The goal of achieving fairness in results is to reduce the income difference to a range that is appropriate, to prevent polarization, and to make certain that the benefits of the development of the digital economy are distributed to all members of society, rather than just a select few groups.

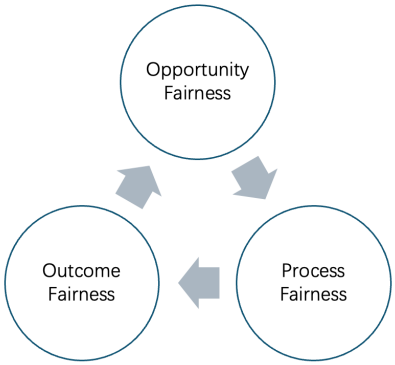

Figure 2: The connotation of fair income distribution.

1.3. The Impact of Digital Economy on Income Distribution Pattern

There are two ways in which the digital economy affects patterns of income distribution, as demonstrated in Figure 3. On the one hand, it eliminates conventional barriers to employment, resulting in the emergence of new job types like remote work and the gig economy, which provide low-income individuals and those living in distant places flexible work options and increase their revenue streams; However, it worsens the disparity in income distribution: the digital divide increases the economic gap by making it harder for distant and low-skilled groups to enjoy the digital dividend; Platform businesses use algorithmic advantages and data monopolies to generate excess profits, and the ratio of capital to data factors is much larger than that of labor factors; A Matthew effect in the distribution pattern results from the undervaluation of gig workers' labor due to their lack of steady pay and benefits, which further widens the income gap between platform providers and highly trained groups.

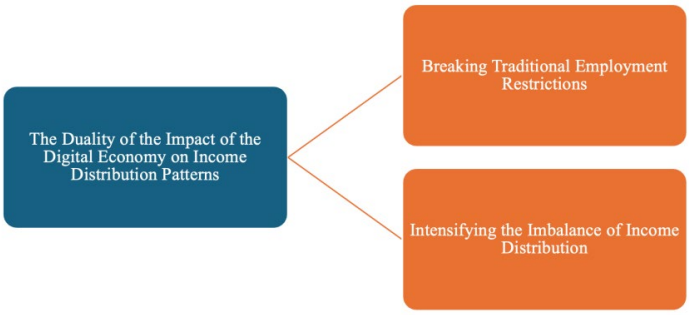

Figure 3: The duality of the impact of the digital economy on income distribution patterns.

2. Philosophical Defense of Fair Income Distribution in the Digital Economy Era

2.1. Defense Based on the Theory of Fairness and Justice

The veil of ignorance and the principle of difference are important parts of Rawls' theory of fairness and justice that support equitable income distribution in the digital economy. Rawls posited that the notion of justice ought to be formulated behind the veil of ignorance [2]. When individuals don't know what their social position, abilities, and resources are, they will adopt regulations that protect the interests of disadvantaged groups while still giving everyone a fair chance. In the digital economy, resources like data and digital skills are naturally not spread out evenly. If the market is allowed to run things, it will make the difference between the digital affluent and the digital poor even worse, which goes against the idea of equal opportunity.

According to the principle of differentiation, if there is a difference in distribution, it should be based on the idea of helping the most disadvantaged. For example, policies should be put in place to make sure that low-skilled groups and people in remote areas can equally access digital skills training and data benefits. This is an example of this principle in action. The core of fair income distribution in the digital economy is to make sure that everyone in society can fairly share in the digital dividends, regardless of whether they know about them or not. This is in line with the main ideas of the theory of fairness and justice.

2.2. Defense Based on Utilitarianism Theory

Utilitarianism's main purpose is to make the most people happy, and it supports moral legitimacy by enhancing total social welfare [3]. This is quite similar to the need for equitable income distribution in the digital economy. If the digital economy becomes unequal, it will mean that a few platform companies and highly skilled groups will have most of the wealth. For example, low-income groups won't be able to enjoy the digital dividend because they can't afford to buy things, which will limit the size of the digital economy. On the other hand, the gap between the rich and the poor will grow, which could lead to social conflicts, lower overall social stability, and ultimately hurt the overall social utility.

Fair income distribution can enable more people to share the fruits of the digital economy. For gig workers, they can receive reasonable compensation; For rural areas, increasing income through digital infrastructure means that ordinary people can also participate in the distribution of data benefits. These can not only directly improve the welfare of vulnerable groups, but also expand the digital consumption market, stimulate social innovation vitality, and form a virtuous cycle of fairness, consumption, growth, and re fairness. From a utilitarian perspective, the fairness of income distribution in the digital economy is not only a sacrifice for efficiency, but also fundamentally important for achieving the maximization of overall social welfare [4]

2.3. Defense Based on Marxist Distribution Theory

Marxist distribution theory is based on the labor theory of value, which advocates for distribution according to work and opposes the exploitation of labor by capital. This logic, without a doubt, has generated profound defense even in the era of digital economy. In the digital economy, the important form of labor is digital labor: raw data generated by ordinary users, platform services created by gig workers, and various research and development work of digital technology practitioners. These are the most important and core sources of digital value creation in the current digital economy era. However, in the current distribution of the digital economy, if platform enterprises monopolize and convert the enormous value generated by digital labor into excess profits through data and algorithms, then for those digital workers (such as data contributors and gig workers), they will not receive the benefits they deserve. Without a doubt, fundamentally speaking, this is the exploitation of digital labor by capital, which undoubtedly violates the core viewpoint of Marxism that labor determines value [5].

To achieve fair income distribution in the digital economy, it is necessary to return to the labor value theory: it is necessary to confirm the value attributes of digital labor, so that digital workers (including data contributors and gig workers) can participate in the distribution of digital benefits,

fundamentally breaking the monopoly of platform enterprises [6]. This can fundamentally avoid the alienation phenomenon of labor creating value and capital monopolizing profits. In this way, it is also in line with the fundamental goal of Marxism to oppose exploitation and achieve the interests of workers.

3. The Realistic Challenges Faced by Income Distribution Equity in the Digital Economy Era

3.1. The Digital Divide Exacerbates the Unequal Opportunities for Income Distribution

There are many manifestations of the digital divide, mainly reflected in the gaps in infrastructure, digital skills, and usage capabilities, as shown in Figure 4. In practical applications, the digital divide will directly manifest and transform into inequality in income opportunities. For rural and remote areas, insufficient network coverage and high network fees make it difficult for residents in rural areas to participate in the digital economy scene; For the elderly and low educated groups, they lack the digital skills required by contemporary times, making it difficult for them to participate in the digital economy scene, engage in online employment, digital entrepreneurship, and enjoy the convenient services brought by the internet.

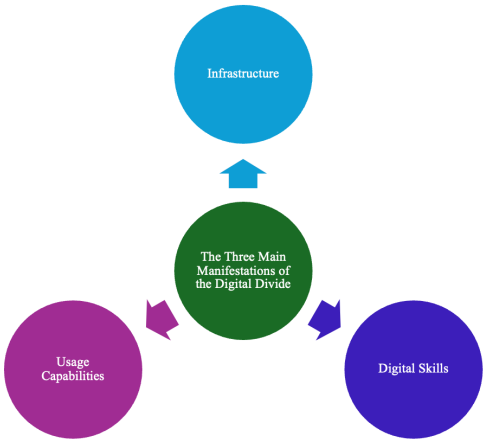

Figure 4: The three main manifestations of the digital divide.

For those who have equal and easy access to digital resources, they can earn income through live streaming sales, online consultation, and even obtain high paying positions based on their digital skills. This digital divide is a dual divide of access and skills, which creates different opportunities for different groups. Many groups have lost an opportunity to participate equally in the distribution of digital dividends from the source, further widening the income gap and creating a vicious cycle of "unequal opportunities - income gap - harder to cross the gap".

3.2. Platform Monopoly Leads to Structural Imbalance in Income Distribution

The top digital platforms mainly dominate the distribution structure through data barriers and market dominance. On the one hand, the platform accumulates massive user data to establish a strong competitive advantage, thereby excluding small and medium-sized competitors and occupying a monopoly position to enjoy the value-added benefits brought by data alone; On the other hand, platforms set high commission rates for merchants and gig workers (such as some platforms charging over 30% commission), which greatly compresses the profit margins of downstream participants, resulting in meager profits and even bankruptcy for these participants [7] .

In the digital economy, platforms use algorithms to regulate order allocation and pricing rules, strengthening their bargaining power. This platform monopoly and profit concentration model allows a small number of platform enterprises and capital parties to occupy the vast majority of market share, while for small and medium-sized businesses and ordinary workers, their income is meager, resulting in a market distribution structure that presents a state of top concentration and bottom dispersion. This state is abnormal and unhealthy, and violates the principle of factor distribution according to

contribution.

3.3. Fuzzy Recognition of Digital Labor Value Stimulate Distribution Disputes

Currently, in the digital economy, there is a lack of unified standards for value recognition. The reason for this is the diversification of digital labor forms, which can easily lead to distribution disputes. In daily life, users generate various browsing records, consumption data, and other data, which are the core resources for platform value creation. But although these labor processes that generate data come from users, they do not receive direct benefits and even need to transfer their data rights to the platform for free; For gig workers' online labor (such as platform riders and content reviewers), they create direct economic value, but they are not considered formal labor due to their independent contractor status. Therefore, the labor intensity and compensation of these workers do not match, and there are significant differences; In addition, for content creators, what they are doing is creative labor, and its value is easily underestimated by platform algorithms [8] . The distribution of profits depends on platform rules and lacks a fair negotiation mechanism. At present, there is a significant ambiguity in the value of digital labor, and there are no specific laws and regulations, making it difficult for workers to claim reasonable returns. These are important reasons why the value of digital labor has become an unfair distribution.

3.4. Insufficient Adaptability of Social Security System Amplifies Allocation Risks

In the past, the social security system was mainly built through stable employment relationships, but currently, its opinions are difficult to adapt to flexible employment forms in the digital economy. Due to the lack of fixed employers, gig workers, freelancers and other groups are unable to obtain protection such as work-related injury insurance and unemployment insurance. If these groups suffer from work-related injuries or unemployment, they will lack economic support; In addition, some digital practitioners (such as self media professionals) have significant income fluctuations and may not have enough income to pay social security fees. However, these groups need to bear the full amount of social security fees themselves, so many practitioners have low willingness to participate in social security.

In the era of digital economy, with the emergence of new professions such as AI trainers, there are no clear regulations on their social security payment standards and rights recognition. This ambiguity has led to a gap in social security, causing vulnerable groups in the digital economy to lose their risk buffering mechanisms, and putting these workers with high income fluctuations at a higher risk of living. This further amplifies the phenomenon of unequal distribution and has significant negative social impacts.

4. Policy Strategies for Achieving Fair Income Distribution in the Digital Economy Era

4.1. Bridging the Digital Divide and Solving the Unequal Distribution of Income Opportunities

To close the digital divide, we need to start with both hard infrastructure and soft skills. This will help us create equal opportunities for everyone to participate in the digital world. From an infrastructure point of view, more money needs to be spent on digital infrastructure in rural and remote areas. It is also important to encourage the expansion of 5G networks and fiber broadband to areas that are far away, like counties and townships. In addition, financial subsidies should be used to subsidize network fees in remote areas as much as possible, reduce network costs in these areas, and ensure that everyone can access and participate in the use of digital tools; At the same time, a mechanism for evaluating the balanced development of digital infrastructure should be established, incorporating regional digital coverage into local government assessment mechanisms to avoid resources being monopolized by urban areas [9].

From the perspective of digital capabilities, customized digital skills training should be carried out for elderly people, low education groups, rural residents, and other groups. For example, communities can offer courses on smartphone usage, online employment platform operation, etc. They can also cooperate with enterprises to launch a linkage mechanism between skills training and employment

recommendations to help vulnerable groups master digital employment skills; In addition, it is necessary to promote the integration of online and offline public services such as government services and medical education. However, it is worth noting that offline service windows need to be retained to provide services to vulnerable groups who are not familiar with digital platforms. This is to solve the problem of unequal opportunities from the perspectives of access fairness and ability fairness, and lay a solid foundation for equal participation in income distribution.

4.2. Regulating Platform Monopolies and Optimizing Income Distribution Structure

Regulating platform monopolies requires balancing efficiency and fairness as the core, as well as improving legal and administrative measures to regulate current non-standard platform behavior. One is to improve anti-monopoly regulations in the field of digital economy, clarify the criteria for identifying platform data monopoly, and prohibit platforms from exploiting the profits of small and medium-sized merchants on the platform through means such as big data killing and exclusive agreements; Establishing a platform data sharing mechanism should require top platforms to open up non sensitive data to small and medium-sized competitors, avoid platforms monopolizing all data resources, further break down data barriers, and fundamentally promote fair market competition.

The second is to strengthen the supervision of platform revenue distribution. For application scenarios such as gig economy and e-commerce platforms, it is required that the platform set an upper limit on the percentage of commission (such as specifying that the technical service fee of the e-commerce platform should not exceed a certain percentage of the transaction amount), establish a sound mechanism for publicizing and negotiating commission standards, and ensure that downstream participants can obtain certain benefits; At the same time, progressive digital taxes can be used to regulate and optimize platform excess profits, such as imposing higher tax rates on platforms with market share exceeding a certain threshold, and setting a targeted use path for the tax revenue to support the development of small and medium-sized digital enterprises.

The third is to strengthen algorithm supervision. This puts forward clear requirements for the core algorithm logic of public order allocation, pricing, and revenue calculation on the platform. It is necessary to establish a sound third-party algorithm review institution to prevent algorithm discrimination from exacerbating distribution imbalances and promote the transformation of income distribution structure from top concentration to diversified sharing [10].

4.3. Clarifying the Value of Digital Labor and Resolving Distribution Disputes

Clearly defining the value of digital labor requires classified policies, and differentiated value recognition and distribution mechanisms should be established for different forms of digital labor. For user data labor, clear laws should be established to ensure that users have certain ownership and revenue rights over their original data. At the same time, legislation should also require platforms to return revenue to users in proportion to their earnings (such as establishing a data revenue sharing pool, platforms should follow the principle of fairness and justice, and distribute revenue to users based on their data contribution). In addition, the data collection process should be standardized and improved to ensure that users have the right to informed consent, rather than allowing the platform to occupy the benefits and valuable data obtained by users for free.

For online labor of gig workers, clarify and improve labor laws and regulations, formally include gig workers (such as riders who provide services for a certain platform and accept platform management) into formal labor relations, and require the platform to fulfill its social security payment obligations to ensure that gig workers can receive the necessary minimum wage, work-related injury insurance, and other rights. Ensure policy implementation through labor supervision and platform compliance assessments.

For creative labor of content creators, a revenue negotiation mechanism should be established between creators and platforms. Platforms should be required to publicly disclose content revenue calculation rules and establish channels for creators to protect their rights. In addition, efforts should be made to crack down on harmful competitive behaviors such as traffic theft and piracy infringement; At the same time, we will improve and optimize the intellectual property protection system, and use methods such as copyright revenue sharing and original creation incentive subsidies to ensure that

the value of creative labor is reasonably rewarded, thereby gradually resolving disputes over digital labor distribution from the root.

4.4. Optimizing the Social Security System and Reducing Distribution Risks

The essence of optimizing the social security system lies in breaking the inherent and traditional employment relationship limitations, and constructing a security model that can match the current flexible employment forms of the digital economy. One is to establish a special system for flexible employment social security, clarify and set flexible payment standards, so that gig workers, freelancers and other groups can adjust the payment base and payment cycle according to income fluctuations, further reducing the insurance threshold for these groups; Establish a tripartite funding mechanism between the platform, individuals, and the government, requiring the platform to fulfill its obligation to pay social security based on a certain proportion of the income of gig workers. In addition, the government should increase its obligation to provide social security payment subsidies to low-income flexible workers and comprehensively increase their willingness to participate in social security.

The second is to expand the coverage of social security and include new digital professions (such as AI trainers, self media professionals, live streaming practitioners, etc.) in the social security system, clarify and improve the standards for recognizing the social security rights and interests of these new digital professions; For high-risk positions in the digital economy, such as outdoor gig workers and data annotators, platforms should also be required to simplify the work-related injury identification process based on special work-related injury insurance to ensure that workers can receive quick compensation.

The third is to improve the social security transfer and continuation mechanism, which requires the platform to break through regional and employment form limitations, truly achieve smooth transfer of social security relationships and seamless transition of employment forms for flexible employees across provinces, and fundamentally avoid the occurrence of social security payment interruptions caused by changes in workers' employment. By improving and optimizing the adaptability reform of the social security system, a risk buffer network is built for vulnerable groups in the digital economy, gradually reducing the life risks caused by income fluctuations, and comprehensively consolidating the achievements of fair income distribution.

5. Conclusion

In the current era, the core force that reshapes the global economic landscape and social structure is undoubtedly the digital economy. The emergence of the phenomenon of fair income distribution is fundamentally not only an economic issue, but also a fundamental issue related to social stability and the goal of common prosperity. This article conducts a systematic study on income distribution equity in the digital economy era, comprehensively clarifying the core concepts of digital economy and income distribution equity. Combining three theories, namely, the theory of fairness and justice, utilitarianism theory, and Marxist distribution theory, it provides philosophical theoretical support from more perspectives for achieving income distribution equity; At the same time, this article also faces practical difficulties such as the phenomenon of digital divide, platform monopoly, ambiguous value of digital labor, and insufficient adaptation of social security. It proposes a targeted policy strategy system to bridge the digital divide, avoid platform monopoly, clarify the value of digital labor, and optimize the degree of social security adaptation, forming a complete logical loop of theoretical defense, practical analysis, and practical path.

The development of the digital economy should not come at the cost of sacrificing fairness and justice in social distribution. Essentially, only by achieving a dynamic balance between fairness and efficiency can its lasting vitality be unleashed. The several policy strategies proposed in the article not only focus on breaking through inherent opportunity barriers through infrastructure and skills, but also emphasize regulating and avoiding distribution imbalances through institutional regulations, and are committed to providing services for vulnerable labor groups through rights protection. At its core, these policy strategies aim to ensure that the dividends of the digital economy are truly enjoyed by

all members of society, rather than being monopolized by minority groups.

However, it is worth noting that in the era of digital economy, the digital economy situation is still evolving, and in the future, more new forms of labor and distribution models will emerge. The challenges faced by income distribution fairness will also continue to change and iterate. This puts forward higher requirements and standards for subsequent research, that is, future research must keep up with the pace of digital economy development, dynamically optimize theoretical frameworks and policy tools, and continuously improve the guarantee mechanism of income distribution fairness. Only in this way can we ultimately promote the development of the digital economy towards greater inclusiveness and fairness, laying a solid economic and social foundation for achieving common prosperity.

References

[1] Yan, J., Tu, X., & Zheng, J. (2023). Does digital economy strengthen the income distribution effect of fiscal expenditure? Evidence from China. Plos one, 18(8), e0290041.

[2] Peng, Z., & Dan, T. (2023). Digital dividend or digital divide? Digital economy and urban-rural income inequality in China. Telecommunications Policy, 47(9), 102616.

[3] Cui, P., & Zhuang, K. (2025). Digital economy and industrial structure transformation and income distribution. Applied Economics, 57(35), 5215-5231.

[4] Deng, X., Guo, M., & Liu, Y. (2023). Digital economy development and the urban-rural income gap: Evidence from Chinese cities. Plos one, 18(2), e0280225.

[5] Zhang, Z., Xu, H., & Qiao, Z. (2024). Has the digital economy enhanced the income distribution effect among industries? Evidence from China. Sustainability, 16(20), 8969.

[6] Jiang, C., & Jin, B. (2024). Does the development of digital economy infrastructure reduce the urban-rural income gap? Theoretical experience and empirical data from China. Kybernetes, 53(2), 600-619.

[7] Zhang, B., Dong, W., Yao, J., & Cheng, X. (2023). Digital economy, factor allocation efficiency of dual-economy and urban-rural income gap. Sustainability, 15(18), 13514.

[8] Wang, F., & Shen, S. (2024). Does the digital economy development improve or exacerbate income inequality? International evidence. Managerial and Decision Economics, 45(6), 4012-4038.

[9] Xia, H., Yu, H., Wang, S., & Yang, H. (2024). Digital economy and the urban–rural income gap: Impact, mechanisms, and spatial heterogeneity. Journal of Innovation & Knowledge, 9(3), 100505.

[10] Tian, L., & Xiang, Y. (2024). Does the digital economy promote or inhibit income inequality?. Heliyon, 10(14).