

# The Game of Capital: Prosperity or Exploitation? A discussion of Platform Economy Monopoly

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## ABSTRACT

With the rapid development of digital economy, the Internet platform economy has become a new momentum of world economic development because of its unique advantages. However, with the continuous improvement of ultra-large Internet platforms and the market concentration, there are "Two Choose One[1]" and "Data Haunting[2]" and other phenomena, which hinder orderly competition and damage the rights and interests of consumers, thus attracting wide attention from all walks of society. For the platform economy, on the one hand, we hope to use the sales network it has established to facilitate the public and provide trading opportunities for small and medium-sized merchants, but we are deeply concerned about the monopoly caused by it. Therefore, this paper starts with the operation mode of several large platform enterprises in China and the United States, analyzes the performance and causes of Internet platform monopoly, and realizes that the Monopoly is caused by three reasons: "Information Monopoly", "Algorithm Cage" and "Capital Occupation". To this end, this paper also thinks about the possible solutions, that is, to establish a trading system based on Blockchain technology, and make the use of Blockchain decentralization, non-tampering and other characteristics to change the current platform monopoly pattern.

**Keywords:** Internet Platform, Antitrust, Information Monopoly, Algorithm Cage, Capital Occupation, Blockchain.

## 1. INTRODUCTION

In recent years, China 's Internet economy has been booming and became a strong impetus for its economic growth[3]. Among many e-commerce companies, especially the top platform companies represented by Alibaba and Meituan, have expanded rapidly in nearly 10 years, completely changing Chinese market. With the development of e - commerce, today China's Express Delivery and Takeout industries have been unprecedentedly developed, providing a large number of employment positions for the society. However, the doubts to them gradually emerged. Since 2020, the Anti - Monopoly Review against Ali, Meituan and other enterprises began, a huge fine of 18. 2 billion against Ali was issued in March this year[4], and the review of Meituan is also under way. At the same time, the criticism of similar enterprises has also emerged in an endless stream.

## 2. THE ALGORITHMIC CAGE CREATED BY GIANT VENTURES

Why are these platform companies were criticized? Take Meituan as an example, in 10 years, CEO Wang Xing led the company to create a trillion - level business empire. However, in 2018, a Peking University doctor named Chen Long conducted a half - year survey and his final report[5] revealing the huge cage Meituan built with information and algorithms.

In his investigation, Chen Long registered as a "Meituan rider1" and experienced the life of express delivery man. He described in the report that the "Data Control" constantly strengthens the precise management of riders. Delivery platform company constantly compressed delivery time precisely because they using the data to calculate the extreme speed of the rider, constantly squeeze the rider 's time, rider average delivery time from 41 minutes to 30 minutes seems to be the myth of technology creation, actually it is eventually

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<sup>1</sup> Delivery man.

at the cost of the rider's safety and fatigue. Finally, the platform enterprises lead the game mechanism to takeout delivery "skillfully combines the realization of individual self - value with the management of labor"[6] . Accurate control of time brings not only a shortened delivery time, but also a significant increase in the accident rate. Being late will cause fines or even cancel the order qualification, riders can only crazy grab time, even driving in violation of regulations, resulting in many traffic accidents. Under seemingly reasonable algorithms, the security problem in the delivery industry seems to be getting out of control.

It is not just the riders controlled by the algorithm.

In late 2020, Meituan was revealed that it was using big data to do "Data Hunting" (committing price fraud on its members). The reason why Meituan can attract a large number of members in a short period of time is the membership subsidies. Generally speaking, the price of Meituan members is 15 yuan every month, they become members, and they will get a no - threshold voucher of dozens of yuan every month. For new users, Meituan does not charge anything in the first month, and the next few months will attract users at very low discounts, so that users can get coupons at a very low price and develop the habit of using meituan. However, once the user loyalty increases, Meituan will play tricks on the commodity price, such as increasing members ' delivery fees or raising prices when booking hotels and air tickets.

For the merchants who have settled on the platform, Meituan also draws high commissions[7] from each single, coupled with the high operating costs, and the profits of the merchants have been repeatedly compressed. To make matters worse, as an emerging sales model, Takeout has greatly occupied the original in-room food market, especially during the epidemic, offline passenger flow decreased sharply. If merchants do not use takeout platforms to attract customers, they will lose a large part of customers and business opportunities. What makes it more difficult for merchants is that Meituan conducted "Two Choose One", forcing merchants to choose one platforms Meituan and Ele. me. If businesses open stores on both platforms, they could get closed or discriminatory pricing. In addition to using big data to recommend preferred goods for customers, Meituan also collects commissions like other platforms. As long as a certain cost of promotion, Meituan can get more exposure, which is done without the knowledge of consumers.

In this way, Meituan firmly controls consumers, small and medium-sized merchants and takeout riders in the algorithm system it has established, eroding the interests of the public.

### 3. EXPLOITATION BEHIND PROSPERITY

In 2020, China's scale of digital economy reached

39.2 trillion yuan, up 3.3 trillion yuan compared with last year, accounting for 38.6% of GDP, and up 2.4 percentage points year-on-year, effectively supporting epidemic prevention and control and economic and social development. Longitudinal comparison, under the impact of the epidemic and the combined impact of the downward global economy, the digital economy still maintained a high growth rate of 9.7%, more than 3.2 times the nominal growth rate of GDP in the same period, which has become the key driving force for stable economic growth.[8]

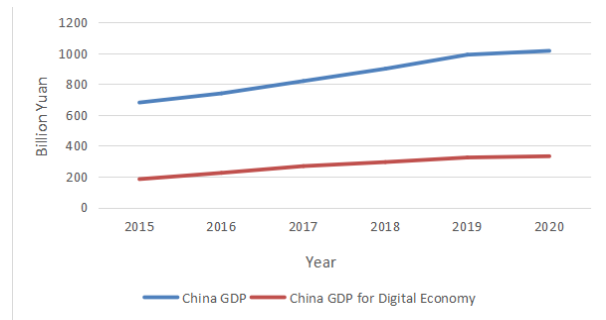


Figure 1: The scale of China's Digital Economy from 2015 to 2020

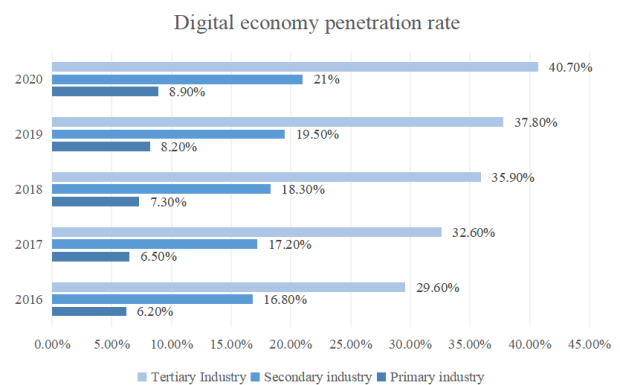
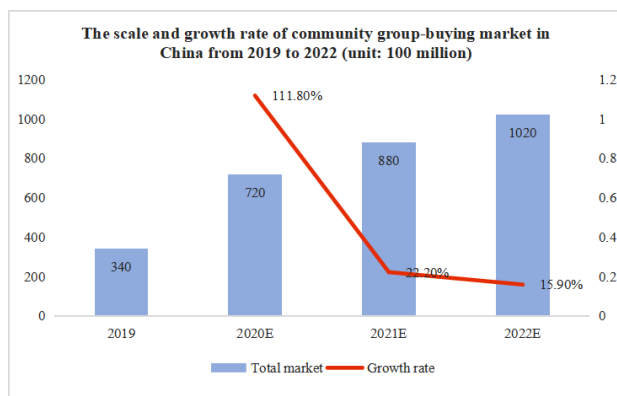


Figure 2: Digital economy penetration rate in China

The development of the Internet platform economy is not only reflected in the economic data, to some extent, it can be said that it has completely changed the lifestyle of modern people. The development of traditional platforms will inevitably be limited by various reasons such as cost, technology and space and time, so its economic scale and social influence are relatively limited. However, with the continuous popularization of Internet technology, the platform economy has connected service-oriented enterprises, consumers and merchants and other market entities together, effectively integrating online and offline resources, and greatly broadening the service boundaries. Platform economy has also greatly expanded employment. On the one hand, the platform has spawned a large number of new jobs and new jobs such as renting home stay, online ride-hailing and so on. On the other hand, the construction of the Internet platform

makes people no longer need to fully abide by the eight-hour-per-day work system every Friday day, and the restrictions on the work place have also been greatly relaxed. The advantages of the platform make to fully arrange the working time and place according to their own situation, and only need a device that can connect to the Internet to start work. Especially during the epidemic, Internet platforms played an important role in life services, online education, online consultation, telecommuting, etc.

However, this prosperity is not without a cost. In 2020, e-commerce company Pinduoduo released its financial report, with the annual revenue of RMB 59.491.9 billion, and the annual revenue of 5.1 million active merchants in the previous year increased to 8.6 million, up by 69%. On March 26,2021, Meituan reported 2020 showed that the annual revenue of RMB 114.8 billion yuan. Behind the data, the biggest victim is the small and medium-sized businesses in the market. In urban community convenience stores, store owners feel hostility from the Internet platforms. With the huge capital subsidies, agricultural products as low as a few yuan or even a few cents, the original small and micro economic ecology has been destroyed, and the income of small and medium-sized operators has been compressed again and again. And for consumers, low prices to purchase fruits and eggs, and often a variety of defects. Agricultural and sideline products with extremely low prices are at the cost of reducing the profit of suppliers and retailers. This raises questions that such a business model is not sustainable, when fully occupying the market, the original subsidies will disappear and the platform will obtain the pricing power.



**Figure 3:**The scale and growth rate of community group-buying market in China from 2019 to 2022 (unit: 100 million)

#### 4. ROOT OF THE DILEMMA

It is not the only China that has noticed the negative effects of Internet platforms. At the end of 2020, China, the United States and Europe simultaneously launched a wave of Internet super platform governance. In the end

of 2020, the US Department of Justice and the Federal Trade Commission (FTC) and states formally filed antitrust lawsuits against Google and Facebook, and in the EU, in addition to intensifying antitrust lawsuits, institutional innovation has also been conducted. On December 15,2020, the European Commission formally submitted the Digital Service Law and the Digital Market Law, two draft laws for digital platforms and large technology enterprises, which specially set up the "Gatekeeper System" became the largest institutional innovation in the field of digital governance. In China, in addition to the official anti-monopoly investigation on Alibaba, the Central Economic Work Conference will also strengthen anti-monopoly and prevent the disorderly expansion of capital, as the focus of the economic work in 2021, emphasizing the need to improve the legal norms of platform enterprise monopoly identification, data collection, use and management, and the protection of consumer rights and interests.

This coincidence can to some extent illustrate the similarities between the problems in China, the United States and the European Union.

The platform economy or the multilateral platform under the Internet scenario, relying on the Internet, the Internet of Things and big data technologies and facilities, has shown a high degree of aggregation in the development of major countries and regions in the world. Their operating model may be described as, through the accumulation of online and offline elements and resources, it has innovated into an ecosystem based on digital data technology and business models, with the collection, sorting, analysis and operation of user massive data, they could feed back their own development, even forming cross-industry multilateral platforms. Microsoft, Facebook, Amazon, Netflix, and Google in the US, China's Baidu, Alibaba, Tencent, Jingdong and other fully functional operators with high market influence can be considered such platform economies. The development of platforms can usually be attributed to following factors:

##### 4.1. Free Service to Get Data[9]

The first step to establish the platform is always obtaining of user's data. First, using free services to obtain a large amount of information from users, such as gender, age, consumer preferences. Big data technology ensures that this information can be used for further business activities. Take Facebook, for example, which has about 2 billion users, representing almost half of the entire Internet population. These huge customer base allow Google and Facebook to collect lots of data from billions of consumers. This data is used to improve the services provided on the digital platform. At the beginning of the establishment of the platform, the legal norms on the privacy of personal information were not

perfect, and people often do not know that their personal information has been stolen by a secret way. Later, even if it was stipulated that user information had to be approved, many platforms still try to acquire user data (such as putting privacy terms in humble places). This didn't improve until recent years.

**4.2. Use of Information Monopoly for Benefits**

The next step is to use the data. There are two main ways to use information, the first is advertising. Information obtained from users using free services may include gender, age, consumption preferences, etc., and the platform can deliver personalized advertising, with its efficiency and conversion rate much higher than traditional TV ads or leaflets. This is also why many consumers think their shopping software is sometimes very "knowing themselves" and can easily discover their shopping needs and drain their wallets. Google is a very good example. Google also uses its free search service to access user information, using its data about consumers to enable advertisers to target consumers who are most likely to buy advertising products. The same goes with Baidu in China. Founded in 2000, Baidu operates in a largely similar model to Google and dominates in China's search engine market. Using a large number of user information collected, Baidu put advertising to users to seek high profits.

Another method of utilizing information is known as an "Information Asymmetry". Part of the revenue of the platform is to get commissions from the merchants on the platform. In the traditional market, transactions between merchants and consumers are usually completed in the market, and merchants need to pay a rent from the market manager, and can be able to trade freely afterwards. Similar to the traditional market, merchants in online platforms also need to pay a fee to platform operators, and often rank first the higher the bid and attract more passenger flow.

Year	Fees
2003-2005	No Charges
2006	Launched the bidding ranking charging service
2007	Deposit is divided into A, B, C Class III stores Class A store: deposit RMB 3000; Class B store deposit RMB 5000; Class C store deposit shall be negotiable. The security deposit shall be deposited in Alipay Company and frozen in the merchant's Alipay account. In addition, merchants should also pay a 198 yuan information confirmation fee to a third party to check the user information
2009	Deposit of RMB 5,000, with no technical service fee
2010	Deposit of RMB 10,000, with technical service fee of RMB 6,000 per year
2011	Deposit of RMB10,000 yuan to 150,000 yuan according to the type of shops, with technical service fee of 3 0,000 yuan or 60,000 yuan

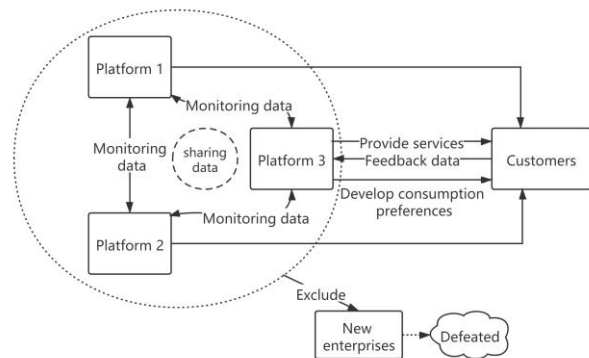
**Figure 4:** Rent of Alibaba's online shop

However, unlike traditional markets, on the Internet, platforms have more opportunities to control transactions, such as platform-led discount activities or differentiated pricing for different users. For example, Meituan, the platform will regularly launch voucher activities to enhance user loyalty. Although the activity

is non-mandatory, if merchants does not participate, the exposure of merchants will decrease. From this dimension, although the platform has built a trading platform for merchants and consumers, when both sides enter the bureau, they will find that they have already fallen into the control of the platform, and the information obtained by both sides is often different, so there is a saying of "information asymmetry", which is also a good channel for the platform to profit.

**4.3. Using influence and huge capital to occupy markets**

After building a certain scale platform through the first two steps, the next step is to capture the market. Due to the absolute advantages of information and capital, the platform at this time has a strong rejection to the new competitors, but still not enough to constitute a monopoly. This is the time for the capital to work. Platforms usually spend a lot of money dumping and subsidizing, brutally acquire customers, and then raise the price of products or services after customers develop the habit of spending on their platform. For example, becoming an Amazon Prime member can not only enjoy the offline two-day service service, but also get preferential packages such as e-books at the same time. Initially Amazon charged only \$ 79 an annual membership fee, then moved to \$ 99, and even so, 95 percent of the members chose to continue using their services while complaining about the price increase. Another example is China 's competition for the online taxi market several years ago. Didi and Kuaidi companies issued huge subsidies to passengers, and taxi-hailing even hardly need to pay. However, as Kuaidi failed, Didi' s price has also soared. The recent community group buying war in China is also in the white-hot stage.



**Figure 5:** The model of internet platform monopoly

In addition to the capture of the market, the platform will also use its scale advantage to reap rising similar operators. Take the case of Amazon and Quidsi ( a maternal and infant product enterprise) as an example, Quidsi initially refused to accept Amazon's acquisition, but in addition to better pricing, Amazon managed to

provide consumers with its own two-day logistics system and free distribution services to attract consumers to itself, finally forcing Quidsi to agree to the purchase. From is visible, although super platform has the characteristics of ordinary platform, but different from the general platform, super platform online accumulated influence can be expanded to other fields, especially to realize the entry and control of offline industry, their competition with other platforms is no longer limited to the same market, also can use the advantage of other unrelated market easy to defeat the operators. Therefore, the super platform has surpassed the stage of simply relying on technological innovation and development, and its restriction and elimination of the risks and hazards of competition are far beyond that of the platform enterprises in the general sense, which is suspected of monopoly threat.[10]

## 5. POSSIBLE SOLUTION

In order to solve the problems brought by the Internet platforms, the current mainstream method is to use the anti-monopoly law to impose high penalties on large Internet enterprises. But it proved hard to change the monopoly of large platform companies, so fines may not be a good way.

Considering the current situation: the Internet platform has built a bridge between businesses and consumers, created a large number of business opportunities and employment opportunities, so it is the practice to ban the platform is obviously unreasonable. Therefore, the possible solution is to seek alternatives. Qualified alternatives need to prevent the center of information (which is fundamental to platform monopoly) but need to make transactions reliably. Such features are reminiscent of the Blockchain.

Blockchain is the technology underlying the cryptocurrency, or electronic money, Bitcoin.

The core advantage of Blockchain technology is decentralization, can through the means of data encryption, timestamp, distributed consensus, and economic incentives, in the nodes without decentralized credit transaction, coordination and collaboration, so as to solve the high cost, low efficiency and unsafe problems of data storage. The McKinsey study[11] notes that Blockchain can be applied to payments and settlement, can easily achieve point-to-point payments, reduce intermediate fees and ensure security. All these theories inseparable from smart contracts.[12]

The concept of "smart contracts" originated in 1995, first proposed by cryptographer Szabo[13], who noted that "smart contracts promote the execution of contracts through the use of protocols and user interfaces". Essentially, smart contracts are event-driven, stateful computer programs deployed on shareable distributed databases, and existing smart contracts work similar to

the If-Then statements of other computer programs[14]. Smart contracts automatically enforce the protocol when triggering predetermined conditions." Both parties use encryption security technology to "sign" intelligent contracts and deploy them to a distributed ledger or blockchain. When the conditions in the code are met, the program triggers the required operation. For example, once goods or services are delivered, smart contracts can enforce payment through a distributed ledger. If unpaid, it may begin recovering the goods or suspend the services.[15]

If a trading system is created based on Blockchain, it has the following advantages[16]:

### a. Greater transparency

Transaction histories are becoming more transparent through the use of Blockchain technology. Because Blockchain is a type of distributed ledger, all network participants share the same documentation as opposed to individual copies. That shared version can only be updated through consensus, which means everyone must agree on it. To change a single transaction record would require the alteration of all subsequent records and the collusion of the entire network. Thus, data on a Blockchain is more accurate, consistent and transparent than when it is pushed through paper-heavy processes. It is also available to all participants who have permissioned access. To change a single transaction record would require the alteration of all subsequent records and the collusion of the entire network. This feature also addresses credit issues. When all the transaction records can not be changed, it is impossible for merchants to cheat on credit issues, to ensure the safety of transactions.

### b. Enhanced security

There are several ways Blockchain is more secure than other record-keeping systems. Transactions must be agreed upon before they are recorded. After a transaction is approved, it is encrypted and linked to the previous transaction. This, along with the fact that information is stored across a network of computers instead of on a single server, makes it very difficult for hackers to compromise the transaction data. In any industry where protecting sensitive data is crucial.

### e. Improved traceability

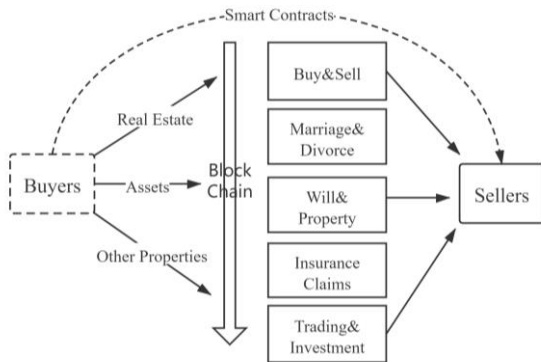
If companies deals with products that are traded through a complex supply chain, it can be hard to trace an item back to its origin. When exchanges of goods are recorded on a Blockchain, there will be an audit trail that shows where an asset came from and every stop it made on its journey. This historical transaction data can help to verify the authenticity of assets and prevent fraud.

**d. Increased efficiency and speed**

Traditional commercial transactions have the possibility of price or quantity errors, and consume a lot of time and money costs to mediate or take judicial procedures. By streamlining and automating these processes with Blockchain, transactions can be completed faster and more efficiently. Since record-keeping is performed using a single digital ledger that is shared among participants, you don't have to reconcile multiple ledgers and you end up with less clutter. And when everyone has access to the same information, it becomes easier to trust each other without the need for numerous intermediaries. Thus, clearing and settlement can occur much quicker.

**e. Reduced costs**

The most important, with Blockchain, any third parties or middlemen to make guarantees will never be need again because it doesn't matter if you can trust your trading partner. Instead, Blockchain itself is reliable enough. Business also won't have to review so much documentation to complete a trade because everyone will have permissioned access to a single, immutable version.



**Figure 6:** Smart contracts based on Blockchain technology

Of course, the current Blockchain also faces security issues such as "51% attack", "Double-spending", and because of its imtamper ability and uniqueness of the private key (all data will permanently lost if users forget about it), it may also cause a series of problems. But this cannot prevent Blockchain from becoming a good measure to solve the problem of platform monopoly. It can be expected that if some characteristics of Blockchain can be improved, coupled with the Internet of Things and other technologies, we may eventually get a decentralized autonomous society[17], which greatly reduces transaction costs and monopoly will no longer exist.

**6. CONCLUSION**

At present, the monopoly of Internet platform enterprises comes from its monopoly on data. The cage

constructed through data and algorithms damages the legitimate rights and interests of consumers, suppresses the ability of users to effectively make legitimate and reasonable choices effectively, so that each user is more and more dependent and more vulnerable on the platform enterprises. On the other hand, through the locking of a large number of users, the platform strengthens the control of its market and field, enlarges the effect of winner-take-all, makes its influence more and stronger, and its influence is not limited to the original market field, but will expand to other industries and penetrate into all fields of society. Although Internet platform enterprises have made great contributions to economic growth, this prosperity is facilitated at the expense of the public interest and is not sustainable.

Blockchain is aimed at the use of platform enterprises to control consumers, blockchain is undoubtedly a good way to solve the monopoly problem. Blockchain itself has the characteristics of decentralization and high transparency, which can well replace the platform to connect the transactions between merchants and consumers. Although there are still many problems in blockchain technology, it is expected that by the day of mature technology, the monopoly position of the platform will be broken, and the cost of market transactions will be greatly reduced.

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