

# The Rise of Platform Capitalism

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## Abstract

The great charm of platform capitalism in the new century seems to give people the illusion that in fact, capitalism is coping with the 70s and 2008 of the 20th century. The policies implemented during the economic crisis laid the foundation for the birth of platform capitalism, and the gradually developed platform has three characteristics of data, network effect and cross-subsidy, and has evolved into five different types, namely advertising platform, cloud platform, industrial platform, industrial platform, and lean platform. The expansion of data-driven forces is bound to lead to the development of different platforms into the same field, which in turn will cause monopolistic competition between platforms, and the new provisions of socialism with Chinese characteristics on data interconnection between platforms in the new era have opened a milestone in the mutually beneficial development of platforms, and the dawn of the future path of platform capitalism has emerged.

## Keywords

Platform; Data; Digital ecology.

## 1. Introduction

As a new upstart of capital seeking profit in the new century, the platform economy has spread digitalization and networking to every corner of the world through a very short time span, and if you want to understand these seemingly incredible new phenomena, you must clarify their inextricable connection with the past. Since the 70s of the 20th century, the golden age of capitalism has been slowly declining. The rise of German and Japanese manufacturing broke the situation that the US manufacturing industry was alone, and the profit crisis in the United States gradually spread to Germany and Japan, eventually leading to the global economic crisis of the 70s. In response to the crisis, manufacturers began to break down the production process into the smallest components, reduce production costs by streamlining the process, and crack down on unions around the world, which were restricted by new laws, internal systems became loose, and members left, and companies took advantage of this to reduce workers' wages and outsource more and more jobs.

The stagnation of the development of the manufacturing industry has prompted financial capital to turn to investment in the telecommunications industry, and loose policy support, abundant capital entry and high level of stock valuation have made the Internet industry the object of crazy pursuit by capital. Telecom companies spent huge sums of money to build computing infrastructure, such as millions of miles of submarine cables and fiber optics, laying the foundation for the development of the Internet in the new century. In response to the economic crisis of the 90s, the United States began to adopt loose monetary policy to stimulate economic development by lowering loan interest rates, an unsustainable economic means that led to the formation of the Internet economy bubble and the real estate economic bubble. In 2008, as U.S. home prices fell, the bubble finally burst, and a super-destructive financial crisis centered on the United States quickly spread to every country in the world. While governments adopted quantitative easing to mitigate the negative effects of the crisis, companies began to

hoard large reserves overseas at lower interest rates than paying taxes. Tax evasion and cash hoarding have brought a lot of money to tech companies.

Whenever an economic crisis occurs, capitalism reorganizes in search of new avenues of capital accumulation. The high profits brought by new technologies are often the focus of capital. Automation, the gig economy, and the sharing economy, as products of the new century, began to dominate a new economic model, theorized by Italian autonomy's concept of "general intelligence," in which collective behavior and knowledge can create value. Srnysek further proposed in "Platform Capitalism": In the 20th century, the refinement and use of data became the focus of economic development of developed capitalism, and the birth of massive data was inseparable from the large-scale construction of Internet infrastructure since the 90s. [1] In the 21st century, the cost of data extraction is greatly reduced, mobile phones, tablets and other constantly updated multimedia mobile terminals for the generation of new data to open up a channel, enterprises can understand market dynamics and consumer preferences through data more and more accurately, this alone, making data analysis and processing become the most important business of enterprises.

## 2. The Type of Platform

In the process of commodity production, traditional capitalist enterprises have weak perception of market and consumer information, and enterprises cannot effectively record the conditions of decreasing costs, and the emergence of platforms has solved this problem. Nissen defines a platform as a digital infrastructure that enables two or more groups to interact, simply put, an intermediary system for exchanging information between different groups. [2] Often, platforms also provide tools for users to develop their own products, services, and marketplaces. For example, Huawei open-sourced its own Hongmeng system, which supports third-party manufacturers to use, compile, and republish, Baidu opens its own search engine for users to search for information, and Didi supports drivers to exchange services carrying passengers for cash. The biggest feature of the platform is to make user activities or industry data, and has the trend of including everything in the data flow, the biggest advantage of platform capital over traditional capital is that the platform can obtain the user's activity track on the platform. For example, Baidu can get users' search records on its search engine, and Didi can get users' trip records. Network effects play an important role in the creation and development of the platform, and the more users of the platform, the greater the value of the platform. For example, Facebook, as the most extensive social networking platform, has a large user group, and people often want to join the social software used by friends around them to achieve the purpose of convenient communication. By analogy, the more Baidu obtains a user's search history, its algorithm can be continuously upgraded to provide better service to users. However, the growing number of users may make the platform a natural monopoly, in addition to the platform's dependence on the infrastructure of the previous market system and low marginal costs, which means that it can omit most of the investment in constant and variable capital, and only need to purchase additional servers. The importance of network effects means that platforms must constantly attract users to the platform, and cross-subsidy strategies become mainstream business models, such as Google opening up a free search engine to users on the one hand, and maintaining the balance of revenue by charging other companies to advertise on the platform on the other. Nissen divides emerging platforms into five different types, which are outlined in turn.

### 2.1. Advertising platforms

Early tech companies escaped the depression of the false Internet boom of the '90s, while other competitors were devastated, entrenching their monopoly in the Internet industry and penetrating all areas of other technology industries. In addition, affected by the bursting of the

Internet economic bubble, venture capital does not invest funds in new projects, and the scale of emerging technology companies is no longer expanding, on the one hand, it further strengthens the position of early Internet companies, on the other hand, it no longer spawns new competitors. The depletion of venture capital funds has another major impact, Internet companies can not continue to implement the "develop first, then profit" strategy, but should find ways to find profit generating points, because to companies like Google, there is no surplus value income, so Google starts Auctioning ad space on search engines, the purpose of data extraction has also shifted from improving the user experience to how to maximize advertising auction profits. This is a huge shift, digital stores and print newspapers no longer monopolize the dissemination of information culture, and any user can publish their own content online and spread it for free.

Critical communication theorists believe that users' online activities blur the boundaries between labor and non-labor, but to attribute all traces produced by users on the Internet to unpaid labor is obviously another fallacy. In the 1844 Manuscript of Economic Philosophy, Marx believed that labor in capitalist society is alienated, which is manifested in four points: first, the alienation of laborers from the products of their own labor; Second, the alienation of workers from their own labor activities; Third, man is alienated from his own quasi-essence, that is, from his free and conscious activity and from the world of objects of his creation; Fourth, people are alienated from others. For when man is opposed to the product of his own labor, to his own labor activity, and to his own quasi-nature, he must also be opposed to others. [3] Inserting the theory of alienation into it, it will be found that not all traces of the network are "unpaid labor", only the data extracted by the platform for profit purposes falls into this range, while other data is in a shared stream, does not produce surplus value, and is neutral.

Advertising platforms extract and analyze user data, package and sell this data to other companies, in fact, enterprises do not need all data, they only need data to understand consumer needs and future trends of the market. For example, Amazon, as the world's largest commodity retailer, earns multiple profits by tracking and recording consumers' product purchase records, timely adjusting its own commodity inventory to respond to consumers, and selling consumption records to cooperative commodity manufacturers. As a new platform that accumulates a lot of wealth, advertising platforms divide their income into three parts: the first is reserve funds. The world's largest technology companies have strong capital flows, and the second is to acquire other companies to expand their scale. The third is to invest in new technology companies to obtain the latest scientific research and development results and maintain their technological leadership.

## 2.2. Cloud platform

commerce, which emerged in the 90s, could not outsource all the material aspects of business, so it built its own warehouse system, logistics network, data center and computer system. Represented by Amazon, in the process of building a huge logistics network, the company naturally formed an internal platform, which is used to extract and analyze data, implement new services, and develop software and applications. Soon, Amazon realized that the platform could rent functions to other businesses in addition to its own use. For companies in need, they can build infrastructure without spending time and capital, and only need to rent someone else's cloud platform for project development. Other tech giants have followed suit, such as Google, which developed a machine learning process to analyze complex algorithms and rent them out, and Microsoft, which developed an artificial intelligence platform that provides software development tools for other companies to build their own intelligent services. The emergence of cloud platforms has realized the outsourcing of data analysis and storage, software design and development. Of course, enterprises with cloud platforms occupy the

upper position in the entire Internet industry, and the rental business of the platform allows them to continuously obtain new data and continuously improve their ecosystem.

### 2.3. Industrial platforms

Industrial platform is based on the cloud platform brought by the positive effect of data analysis and storage cost reduction, when cloud computing in the digital field success and considerable profits, many companies can't wait to develop this technology to the traditional manufacturing field, the most influential of many attempts is the "Industrial Internet of Things" (referred to as industrial network), its basic operating concept is: by deploying sensors in the production process and logistics process, The production, circulation and network of products are closely integrated. In the industrial network, the host computer can obtain data information on the status of each component in real time, and the whole process is automated, which means a reduction in labor and energy consumption costs and a significant increase in production efficiency. At the same time, production automation makes mass customization possible, and the platform can issue commands to the host according to the user's needs, and the host manipulates the components to produce products of different content and scale on the assembly line. By digitizing manufacturing, the industrial platform establishes itself as an intermediary between factories, consumers and software developers, and consolidates its monopoly with strong glue and huge databases.

### 2.4. Industrial platforms

Cloud platform and Internet of Things with data as the core to add digital networks to material life, triggering the market's demand-side reform, because customer needs can be tracked and presented in the form of data, which provides basic conditions for revitalizing social idle resources, and the platform dedicated to this field is called an industrial platform. A very important impact of the '08 financial crisis was the stagnation of personal income and the decline in household savings, which made it difficult to buy expensive items such as houses and cars, but everyone had corresponding car demand and housing demand, so asset rental companies sprang up, such as American car rental companies Zip car, a rental company Apartments. The impact spread to many industries, such as music products, which seemed to herald the end of the physical music industry when it spread digitally on the Internet, and people stopped buying CDs With vinyl records, record companies continued to decline in sales and were on the verge of bankruptcy, and the emergence of online music platforms saved a precarious market, paying royalties to record companies, which in turn charged listeners a fee on a subscription model. In fact, compared to buying physical records, the online subscription model is a flexible rental method, users do not have to pay a one-time fee to buy out an album, only need to renew the music platform's membership at a relatively low price to enjoy a large number of tracks.

### 2.5. Lean platform

Digital industry through the development of data to achieve rapid development, and profits have accumulated abundant funds, traditional industries have been digital, networked, intelligent transformation and upgrading, in the context of negative growth in global trade, digital service trade has achieved substantial growth, in the process of economic globalization, digitalization and networking has become a key link, for the cross-border flow of data, countries have made similar flexible policies, the establishment of data flow rules. Digital industries have become the engine of economic growth and led other industries to gradually achieve a comprehensive recovery of the global economy. [4]

The re-improvement of the economic form is an important condition for the emergence of lean platforms, because this platform adopts the strategy of first developing and then profiting in the 90s of the 20th century, and it has to be said that although this strategy consumes more

costs, it can quickly attract a large number of people. Users enter the platform, and e-commerce platforms such as Taobao and Pinduoduo allow merchants to enter the platform for free in the early stage, quickly occupying the market and becoming a leader in the e-commerce industry. Why classify such companies as lean platforms? This is because as a well-known domestic e-commerce platform, but there is no factory and store, they just use software and data analysis platform to migrate traditional manufacturing or service industries to the virtual space, unlike the industrial platform, the lean platform uses the form of contract or outsourcing, the business and risks involving the real industry are all contracted to other social economies, such as Alibaba and shops to sign contracts. The actual products and their quality problems are the responsibility of the merchant, and Alibaba provides two types of services for the merchant and collects related fees, the first is the marketing service fee, which mainly includes the keyword bidding ranking fee, advertising display fee, traffic promotion fee, and position display fee; The second is the transaction commission and membership fee, which are levied according to a certain percentage of the transaction amount. A simple analysis of the relationship between the two shows that the e-commerce company only established an intermediary platform, introduced merchants and customers, and controlled all merchants through the platform and data and extracted huge profits. In essence, lean platform is an externally decentralized, internally centralized process, external through contracts or outsourcing and other means to transfer cumbersome processes and burdens to other economies, and internally use the power created by the platform and data to try to gather all economies, network effects are also vividly reflected here, in order to compete for users, there will be extremely cruel competition between enterprises.

In the past 10 years, the fastest development period of China's Internet is also the most fierce competition between lean platforms, e-commerce, OTA (Online Travel Agent ), takeaway, ride-hailing, endless new industries, opened one after another money-burning war, hundreds of millions of funds like thrown into the fire, overnight, turned into ashes. It seems that the emergence of lean platform is a retrogression of Internet development, not only consuming social wealth but also using a lot of opportunistic means in its growth process, but we cannot deny that the lean platform has driven the rapid improvement of infrastructure and production service capabilities in various industries in a very short time span, and has innovated people's "clothing, food and travel" in an all-round way, making great contributions to resource reset and efficiency improvement, and also making capital get a rich return on the whole. .

### 3. The Platform Trend and Dawn

Looking back at the 30 years of development of the Internet, the Internet has deconstructed the material world into two parts, virtual and real, and data is the bridge between the two, and the platform, as a lifesaver for capital to revive the economy, is vigorously exuding brilliant light in the new century, but there are indiscernible crises and opportunities in its light.

Data is the core element of the development of different types of platforms, but the main source of its generation is only user activities, so the competition between platforms has two trends that can be predicted: the first is that different platforms cooperate with each other based on shared data and gradually aggregate into a mutually beneficial community; The second is that different platforms build their own closed ecosystems, which intensifies the fierce confrontation in the data resource market. "From a data production perspective, activity is like land waiting to be discovered. Whoever gets there first and owns the land holds the resources it needs to produce it – in this case, data is wealth. [1] P110 This will lead to the expansion of the platform to all areas where data can be obtained, in addition to new areas including the old "land" that has been developed, based on the discovery of new fields requires technology, time, and opportunity, so marching to the old "land" has become the choice of most enterprises. For

building and expanding its own digital ecosystem, Alibaba can be said to be a world-class success case, Alibaba, which started with e-commerce, is gradually penetrating into the fields of big data, cloud computing, artificial intelligence, urban services, etc., and mergers and acquisitions and investments in other enterprises have become the main means for Ali to build an industrial ecology, such as acquiring Yahoo China and UC UVision in the field of search engines, and creating Quark and Shenma Browser; In the OTO field, it acquired Koubei (local online life service information and reviews), Fliggy (online travel), AutoNavi (online map), Hema (online fresh food), and Hungry (online takeaway), building the group's urban service segment; In the field of cloud computing, it acquired China Wanwang and merged with Alibaba Cloud to form the new Alibaba Cloud Company; In the financial sector, Alibaba's Ant Financial has invested in more than 30 financial industry companies, acquired global payment giant World First and a number of e-wallet companies in Southeast Asia, and promoted inclusive financial services around the world. The strategic investment in Sina Weibo, China's largest social platform, in the social sector, and the in-depth cooperation between the two parties on data exchange, this transaction makes up for Alibaba's lack of social and media data and brings a lot of real traffic to its own e-commerce platform. In the field of logistics, Cainiao Logistics has been established as a joint venture with enterprises such as Three Links and One Express, and SF Express, to continue to promote the construction of global logistics infrastructure and escort domestic and international trade; Other fields include entertainment, healthcare, sports, insurance, hardware, and so on. Today, Ali Group, which was once a lean platform, has six business segments: e-commerce, finance, urban services, logistics, medical care, and data services, covering the characteristics of five types of platforms, in addition to Ant Financial, which originated from Alipay, is creating a new type of platform - financial platform, covering online and offline by digitizing and networking financial services In the all-payment scenario, relying on the huge traffic brought by payment, it provides users with financial services such as investment, loans and insurance, builds a full-financial ecological service system, and ultimately realizes the purpose of Ant Financial where there is a money transaction.

After more than 20 years of expansion, Alibaba's business footprint covers all walks of life in the virtual economy and the real economy, accumulating a huge amount of users and data, creating a powerful closed digital ecosystem, and the advantages of data can also support its continued touch Horn goes deep into other industries to increase its own volume. So, can Alibaba's business growth model break the nightmare of capital monopoly? The answer is no, because Ali abused its market monopoly position and put forward the "one of the two" requirements for merchants within the platform, it was fined 18.228 billion yuan by the State Administration for Market Regulation, in addition to the sky-high fine, Ali also faces competitive pressure from other Internet giants, because the development of any platform needs to be driven by more data, which will cause them to cannibalize the same market and data field. China's two major technology giants Tencent and Ali dispute well reflects this trend, the two in payment finance, cloud computing, life services, entertainment culture and other aspects of the fierce competition for users and data market, as the domestic traffic market in the competition slowly shaped, in order to maintain their respective advantages, this makes it difficult for both sides to inevitably enter the cruel Red Sea region. Its drawbacks are specifically manifested in the fact that a lot of capital is wasted in homogeneous competition, vicious price wars, pseudo-demand subsidies, traffic bidding and buying, market share competition, inefficient resource investment, etc.; As a result of market fragmentation, many small and medium-sized enterprises and emerging industries can only face bankruptcy or acquisition; Consumer rights and interests have become difficult to protect in the platform monopoly competition. And all kinds of adverse consequences will only be paid by the public in the end. So, where should the digital platforms and sharing economy of the future go, and can they only move towards

ecological closure and monopolistic competition? Perhaps, through the country's measures to rectify the Internet ecology, the digital industry can begin to see the light.

#### 4. Conclusion

Competition and expansion by giants such as Alibaba and Tencent have repeatedly touched the bottom line of anti-monopoly laws, and China's Ministry of Industry and Information Technology has issued documents requiring Internet companies to stop "blocking links" and "ensure legal compliance." URL access". Undoubtedly, this is an epoch-making event in the history of the entire Internet, first of all, the interconnection of data, will directly promote the cross-platform flow of users, break the situation of high walls of each platform, create a good ecology of cross-platform circulation, secondly, in the context of data interconnection, the traffic entrance is no longer fixed with a platform, users can reach the final page they want to go to through any channel. The attempt at data interconnection reunites the gradually fragmented Internet and is a big step forward in the mutually beneficial development of the platform. However, this measure can only alleviate the phenomenon of platform monopoly competition in a certain sense, and cannot completely change the profit-seeking nature of capital, and each platform will still find ways to retain users in its own market, unable to shift from the purpose of commercial profit to the purpose of truly serving the public interest. So, in addition to supervising and guiding the development of private platforms, it is also possible to create public platforms. The great promise of the cloud platform may be the first step in establishing a public platform, funded by the state to build a super cloud platform owned and controlled by the public, on the one hand, integrate all data for open sharing, promote the continuous flow and opening of the digital industry, on the other hand, analyze and develop data, devote to the development of public utilities, and make digital technology better serve the people.

The development of the Internet with Chinese characteristics in the new era should strengthen the determination to break down the data fence, lead the platform economy towards openness and sharing, and contribute Chinese wisdom and Chinese solutions to the integrated development of the world's digital civilization.

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