

Killer Acquisition: Antitrust Control on Internet Platform

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Abstract

As the platform economy has boomed, the world's five largest Internet platforms made more than 400 acquisitions worldwide over the past decade, according to the Digital Competition Expert Panel. And many of the acquired parties are startups that are considered competitive threats. To some extent, M&A can improve business efficiency and profitability, but excessive M&A will affect the development of the companies themselves and the industries in which they operate. The data monopoly behind such M&A may create a double systemic antitrust that threatens innovation and potential competition, harming the market economy. Antitrust review of mergers and acquisitions can be a good way to prevent and control the emergence or growth of monopolistic platforms, protecting effective competition in the market and the incentive to innovate. This paper discusses the concept, motivation, and regulatory dilemma of Killer acquisition on Internet platform at the business level, and makes suggestions for the antitrust governance path of Killer acquisition in the Chinese Internet sector.

Keywords

Antitrust; Platform Economy; Killer Acquisition.

1. Overview of Internet Platform Killer Acquisition

1.1. The Concept of Internet Platform Killer Acquisition

Killer acquisition is, instead of a traditional academic classification, an abstract generalization of a phenomenon that has emerged in the marketplace in recent years. The concept discussed in this paper has not been defined in the same way by Chinese academics. Cunningham et al. (2019), in their empirical analysis of M&A in the healthcare industry, found that 6% of M&A acquirers in the U.S. pharmaceutical industry stop the development of the target's relevant competitor after the transaction. Acquirer's intention in the merger is to stop developing the target's innovation project and to capture future competition. They called the phenomenon as "kill acquisition", arguing that the main purpose of such acquisitions is to stop company growth or product development in order to prevent the dominant company from facing new future competition or integrating the target business into the ecosystem of existing firms [1]. The introduction of this concept has triggered heated discussions among foreign scholars, and Chinese scholars have translated "killer acquisition" as "Eshashi Binggou". Kill-acquisition does not only exist in the healthcare industry, but it is still possible in other industries, such as the Internet.

According to a professor called Xu Jin, a platform is a real or virtual space that leads or enables transactions between two or more customers [2], that means the platform has an intermediary nature. Internet platform, on the other hand, is a multi-subject interaction carrier built up based on a series of information technologies. According to the Chinese regulation, *the Antitrust Guidelines on Platform Economy*, Internet platform refers to a business organization form that enables interdependent bilateral or multilateral subjects to interact under the rules provided by a specific carrier through network information technology to create value together. All Internet platforms used in the following discussion use the concept specified in the Antitrust

Guidelines on the Area of Platform Economy [3]. Internet platform-killing M&A is an M&A that occurs on an Internet platform with the intention of stopping the target company's growth or product development, and connotes both the theory that the product or service itself is killed, thus leading to competition being killed as well, and the theory that the product or service exists and only competition is killed.

1.2. Characteristics of Killer Acquisition on Internet Platform

Killer acquisition on internet platform is an inevitable by-product of companies in seeking their own development in the Internet era. It is different with traditional M&A, and its main features are as following.

1.2.1. Subject

An acquirer is usually a leading platform with certain market control in the Internet that has formed or may form a monopoly. The target company, may be a competitor or a potential competitor which should have a large enough user base. A company that develops software, applications or devices but has not yet attracted users cannot be considered a potential competitor of the incumbent. From a business development lifecycle perspective, this includes both start-ups or companies that have entered the growth phase, as well as companies that have entered the maturity or decline phase. In the start-up and growth stages of a company, the company's business risk is higher, and the stage goal is mainly to seize the market and divide the market, so it is reasonable that the company may not be able to fight against the counterattack of the head platform and be acquired in the end.

1.2.2. Field

According to Gautier, Axel et al, 36% of GAFAM's acquisitions occurred in the main business sectors of the platform, and 82% occurred in sectors where the platform was already active [4]. This suggests that the areas of M&A are usually in the same or similar areas as the core business of the head platform or in the same or similar areas as the soon-to-be core business, and that these platforms mainly use their M&A activities to strengthen their current business models rather than to increase direct competition between them by entering new markets.

1.2.3. Method

The Killer acquisition approach is usually a hybrid M&A. This includes both horizontal and vertical M&A, with horizontal M&A being the main focus. Vertical M&A is usually not aimed at terminating the operation or product business of the target company, but often to reduce costs, strengthen control over upstream and downstream, enter upstream and downstream fields, and create industrial ecology, etc. However, there are also factors such as market expansion, the WeChat platform was initially used only for daily information interaction, but with the change of strategic objectives, the platform has entered into the self media industry through the public module, the small program, the game and shopping. As its strategic objectives changed, the platform entered the self-publishing industry through the public number module and the gaming and shopping sectors through small programs. At the same time, the Killer acquisition approach is also frequent. For example, GAFAM (Apple, Google, Amazon, Facebook, and Microsoft) made 55 different acquisitions in 2017 alone, most of which seem to be young and innovative startups [4].

1.2.4. Intention

The purpose of Killer acquisition has the intention of stopping the target company's growth or product development, monopolizing patents. For example, a company announces on its own that it has discontinued its products, that the product or the company's website has been removed, that the website is still running but no longer offers the products, that the website is still running and offers the products but announces that it has stopped supporting these

products or will not provide updates. For example, when “Didi” acquired “Kuaidi”, “Kuaidi” disappeared from the market.

2. Analysis of the Motivation of Internet Platform Killer acquisition

According to "Moore's Law" and "Metcalfe's Law" and the externalities of the Internet, Internet platforms inherently and naturally have the drive to expand infinitely, thus passively or actively forming monopolies, but there are various means to form monopolies. The following analysis is based on Porter's five forces model, which the competitive analysis includes five dimensions: the competitive ability of competitors, the ability of potential competitors to enter, the substitution ability of substitutes, the bargaining power of suppliers and the bargaining power of buyers.

2.1. The Threat of Substitutes

According to the theory of "lock-in effect", platform users who have used an Internet platform for a long time will get used to the products or services provided by the platform and will not easily switch to other Internet platforms due to the transfer cost. Users are the basis for the survival and development of the platform, and the platform domesticates and cultivates user habits to increase user stickiness. At the same time, individual categories of platforms can also be through the users themselves to pursue, gain and accumulate social attention, economic benefits, social impact and other operational behavior, the establishment of higher switching costs. Once the same type of platform with substitutability appears, the original platform will face the risk of user loss and data loss, which drives the Internet platform to carry out strangulation mergers and acquisitions.

2.2. Existing Competition within the Industry

First, the Internet platform qualities make it more likely to achieve killer acquisition. Concentric diversification is one of the strategic choices for companies to grow and develop. An advantage is the ability to diversify business risks, find new profit growth points when companies encounter bottlenecks in development, and easier access to external financing. However, diversification in traditional fields faces many risks, such as the risk of entering new industries, the risk of the original industries, external systematic market risk and the risk of failing to coordinate and integrate old and new industries. However, the Internet platform's own qualities have weakened the boundaries between industries and greatly reduced entry barriers and entry costs, making industry and market boundaries unclear. When Internet platforms plan strategic changes and shift the focus of the industry, the platform qualities make it easier to achieve the change goals. An example is the acquisition of “Kuaidi” by “Didi”.

Second, the unique aggregation of data in the Internet space enables economies of scope. User data accumulated by competitors in the same industry can, to some extent, be complementary, and merging complementary data sets can generate more economic value through data mining. Therefore, through mergers and acquisitions, Internet platforms can obtain unlimited data value within a limited cost range.

Finally, the platform's pursuit of benefits. Market power theory suggests that M&A behavior is conducive to the growth of market share of the acquiring firm, and the reduction in the number of competitors is conducive to reducing the degree of intra-market competition into and expanding corporate profits [5]. The direct effect of Killer acquisition is the reduction of existing competitors.

2.3. Threat of Entry by Potential Entrants

Cunningham argues that the underlying rationale for killer acquisition is that the acquirer is trying to eliminate the target from achieving and posing a competitive threat before a fully

developed product or service can [6]. When Internet platforms identify a smaller startup with a dangerous potential growth opportunity in the product they are developing or in the industry they are entering, they usually suppress or acquire it because they believe that the existence of these startups will harm the platform's interests in the future, and even some platforms have a "better to kill than to let go" attitude. Some platforms even hold a "better to kill than to miss" attitude.

3. The Negative Effects of Killer Acquisition on Internet Platforms

Throughout the history of the development of foreign (such as GAGAM) domestic (such as BATTMD) and other platforms, almost all are developed and grown by way of mergers and acquisitions, to a certain extent at the expense of industry innovation, market competition and consumer rights, the negative effects of mergers and acquisitions are mainly.

3.1. Industry Innovation

In Christensen's book, he proposed the "innovator's dilemma" theory, in which he, through statistical analysis, found that good companies are more likely to fail, mainly because they focus more on the consumer experience of their existing customer base and instinctively focus on their existing products and services, leaving room for others to innovate which leaves room for others to innovate and therefore vulnerable to the threat of disruptive innovation by small firms [7]. All things have "inertia", and inevitably, in business, companies will form path dependencies in their development. If companies focus too much on the present, they may lose their innovation ability or lose it, a typical example is the tragedy of Kodak and Nokia. If a company does not want to lose both the benefits of the present and the opportunities of the future, then the optimal solution is to make a chokehold merger. Killer acquisition is a direct and realistic way to capture innovation and to terminate the innovation process of others, which is typical of "fetishism" and in turn leads to the loss of innovation momentum within the platform.

As the same time, market confidence is a core factor for industry development and economic prosperity. For investors, the confidence to invest in a certain industry is the key to survival and innovation of startups, and the decline in investment is bound to curb the incentive to innovate, as evidenced by the aforementioned findings of the Digital Market Competition Survey, where the acquisition of startups in related fields by platforms such as GAFA resulted in a 40 percent or more [8], suggesting that post-merger effectively has some direct negative impact on industry innovation. For entrepreneurs, a favorable external competitive environment contributes to the "internal confidence effect" [9], while frequent killer acquisition by platforms can "discourage" internal and external actors, which will weaken the incentive for potential entrepreneurship and innovation, and seriously undermine The social confidence of enterprises is seriously undermined.

3.2. Industrial Benefits

In the market economy system, the optimal allocation of resources is achieved by competition, and the process of ensuring competition is the prerequisite for securing the rational production, consumption and distribution of goods and achieving the basis of social efficiency. Market performance is necessarily the effect of the operation within the market. In the theory of competitive markets proposed by Baumol, he argues that even in monopolistic markets, good market performance can be generated if the firms in the market feel the pressure of the presence of potential firms to enter, provided that the market is free to enter and exit [10]. However, the problem is, on the one hand, that the presence of killer acquisitions does not "free" market flows, and on the surface, extra-market players do have "free" access to the market, but in reality, killer acquisitions strengthen the dominant position of the platform. On

the other hand, M&A by strangulation also reflects the effect of "making an example of the chicken", because entrepreneurs or entrepreneurs are usually sensitive to the probability of failure, they usually avoid entrepreneurial fields to direct or indirect competition with the platform, while investors are speculative, knowing that startups that do not have growth prospects are not worth investing in. Therefore, the result of a killer acquisition makes the platform less likely to encounter potential competitive pressures, and then good market performance perceived by Baumol is unattainable. Therefore, anti-monopoly killer acquisition is necessary to achieve market efficiency. Meanwhile, from another point of view, a full market will lead to a sense of crisis and prevent the platform from stopping. If the killer acquisition is not regulated, the inevitable consequence will be the formation of a "monopoly" in a certain field. Full market competition can open up the competition gap with foreign counterparts and improve the competitiveness of our export goods. This mergers and acquisitions violate the laws of economics and prevent the rational allocation of resources, which will certainly cause a waste of social resources and harm the interests of society as a whole in the long run.

3.3. Consumer Rights

The impact on consumer rights is reflected, first of all, in the loss of consumer freedom of choice. On September 24, 2020, a consumer report "*Platform Perceptions: Consumer Attitudes Toward Competition and Fairness on Online Platforms*" was released in the United States, which showed that 79% of respondents indicated that they believe that Internet platforms' Mergers and acquisitions undermine competition and consumer choice, which is unfair [11]. Specifically, the increasing control of platforms is accompanied by a strengthening of control over prices and product quality, and driven by the pursuit of greater profits, platforms are more likely to compress costs, which leads to a decline in product quality, and consumers pay higher or equal consideration for products or services of declining quality, while the lack of substitutes in the marketplace forces them to continue to purchase products or services on the platform, passively forming a "rigid demand", which seriously undermines consumers' freedom of choice and violates the legislative spirit of the anti-monopoly law. As the same time, data monopoly resulted by the inevitable result of the lock-in effect, the platform uses the usage data generated by consumers to use algorithms to "Kill the familiar" and advertise, which will further damage consumers' rights and interests. In summary, the platform's mergers and acquisitions will cause "double damage" to consumers' rights and interests. In addition, theoretically, less competitor in the marketplace is less force for peer monitoring, although in practice the target company may not play a monitoring role, which is detrimental to the protection of consumer rights.

4. The Governance Dilemma of Killer acquisition on Internet Platforms

The current antitrust theory is still confined to the antitrust theoretical framework of a single commodity market, which deviates significantly from the current practice pattern. Some scholars in China propose the need to build a new antitrust framework around the Internet platform economy, while the regulation of a specific phenomenon in the antitrust field, but the governance dilemmas are mainly as follows.

4.1. Inadequate Review Mechanism

At present, China's merger and acquisition review is divided into the platform to take the initiative to declare and law enforcement agencies to take the initiative to review. There are some the main problems.

4.1.1. A Single Standard for Active Reporting

The declaration standard refers to the conditions that the subject of the proposed merger and acquisition should take the initiative to report when it meets the provisions of laws and

regulations. According to the provisions of Article 3 of the Regulations of the State Council on the Declaration Criteria for Operator Concentration, it can be seen that China currently adopts a prior mandatory declaration system for operator concentration, which can play a certain role in the traditional field of anti-monopoly, but due to the characteristics of the Internet platform, the declaration criteria cannot fit the valuation method of the Internet platform and the judgment criteria of market position. For example, in the case of DiDi's acquisition of YouTuber in China, DiDi has already occupied the vast majority of the market share after the acquisition of "Kuaidi", and acquired YouTuber China in 2016, less than six months after the integration of the YouTuber App's user volume almost completely wiped out, the speed of the brand's demise is even faster than the user volume, the merger case has caused more controversy, mainly on whether the operator parties meet the prescribed declaration threshold, but the operator The parties believe that they have not met the required filing threshold and do not have to file, while the enforcement agencies believe that they have met, and if there are other filing standards then the controversy can be reduced.

4.1.2. The Calculation of the Standard is Unclear

First of all, the concept of turnover is very vague and has no definite connotation. It is neither a legal term nor a financial term, and it is generally believed that turnover is equal to business income, while the calculation of business income in financial terms is determined by the nature of the business activities of the accounting subject. Therefore, in the case of DiDi's merger and acquisition of YouTuber China, the calculation of turnover was initially explored, and the subsequent introduction of the Interim Measures for *the Management of Network Booking Rental Car Operation Services* clarified the nature of DiDi's business activities and basically clarified the calculation of turnover. However, there are certain problems in other areas of the Internet, such as e-commerce platforms.

Secondly, China has introduced new revenue recognition guidelines since 2017, and according to the provisions of the new accounting standards, Taobao, Jindo, Weidian and Idlefish use ordinary agents, which the main revenue comes from collecting commissions and business handling fees. But Jumei, Vipshop and Tmall use direct sales, and Jingdong includes both direct sales such as Jingdong self-operated, and ordinary agents, such as xx flagship stores. According to the logic of the turnover reasoning of M&A of DiDi and YouTuber, the calculation of the turnover of the ordinary agent model is mainly the platform's draw and commission, while the direct sales are sales, and the mixed model is classified to calculate. If Vipshop merges with Jindo, there is no clear rule whether to calculate by category. Meanwhile, due to the innovation of Internet business model, the way and timing of revenue recognition will depend more on the ability and experience of finance personnel [12].

Finally, according to the relevant anti-monopoly regulations in China, when calculating the turnover of an operator participating in a concentration, is a mount that it has a "control" relationship needs to be calculated. Article 10 of the Regulations on Review of Concentration of Operators (Draft for Public Comments) provides that "the turnover of an operator participating in a concentration shall be the sum of the turnover of the operator and all operators with whom the operator has a direct or indirect control relationship at the time of declaration, but excluding the turnover between the above operators...", and Article 4 provides that "To determine that the operator has control over other operators or is able to exert decisive influence on other operators, consideration shall be given to the operator's direct or indirect holding of voting rights or similar interests in other operators, as well as to the appointment and removal of senior management of other operators, financial budgets, business plans and other operational decisions. financial budgets, business plans and other operational decisions and management". Article 10 further refines that turnover should exclude relevant internal transactions, while Article 4 further clarifies the circumstances under which minority shareholding acquisitions trigger the control criteria, citing the appointment and removal of

senior management, financial budgets and business plans as factors to be examined. However, financial budgets and business plans are internal documents of the platform, and there is no mandatory obligation to disclose them, and there is no way to verify their authenticity if they are submitted to law enforcement agencies. At the same time, in addition to the external nature of the shareholding structure, those who play a controlling role through other means such as documents, agreements or proxy holdings are often hidden and difficult for law enforcement agencies to detect. And even if they can detect, it is not in line with the principle of cost effectiveness.

4.1.3. Vague Criteria For Active Review Considerations

China's existing laws and regulations on anti-monopoly regulation of killer acquisition are mainly reflected in Article 26 of the *Anti-monopoly Law*, Article 4 of the *Regulations of the State Council on the Criteria for Declaration of Operator Concentration*, Article 66 of the *Interim Provisions on Review of Operator Concentration*, and Article 19 of the *Anti-monopoly Guidelines for the Platform Economy*, as well as Article 52 of the *Measures for Review of Operator Concentration (Revised Draft for Public Comments)*. That means China are enhancing the pre-reviewer. However, the existing provisions are still principle-based and still insufficient in operation, resulting in difficulties in the implementation of the antitrust level.

Prior to the introduction of the *Platform Economy Antitrust Guidelines*, there were no regulations or normative documents specifically targeting mergers and acquisitions in China, and no relevant enforcement precedents existed for reference. Article 19(3) of the "Platform Economy Antitrust Guidelines" states that "the antitrust enforcement agencies of the State Council shall pay great attention to the concentration of operators in the platform economy where one of the operators involved in the concentration is a start-up or an emerging platform, where the turnover of the operators involved in the concentration is low due to the free or low-price model, where the concentration of the relevant market is high, and where the number of competitors involved is small. For those that do not meet the declaration criteria but have or may have the effect of excluding or restricting competition, the anti-monopoly enforcement agency of the State Council will investigate and deal with them in accordance with the law" is mainly for the regulation of mergers and acquisitions described in this article, which the standard of regulation may be an exclusion or restriction effect on competition, and the act of mergers and acquisitions has a double effect. On the one hand, mergers and acquisitions will certainly discharge to a certain extent. On the other hand, the synergistic effect generated by the merger may be more beneficial to consumers and market efficiency, and in turn promote competition. Therefore, it is more appropriate to change the provisions to seriously exclude or restrict the effect of competition. At the same time, the review considerations stipulated in Article 20 of the Guidelines include the market share of the relevant market, the control of the market, the concentration of the relevant market, the impact of technological progress, consumers, the impact of other operators, and the impact on the development of the national economy. Taking an analysis of market share as an example, the calculation of market share uses turnover as the main indicator, and considers the use of the transaction amount, the number of transactions, the number of active users and clicks, hours of use and other indicators in the relevant market share, turnover and transaction amount for financial indicators. Non-financial indicators listed companies are not mandatory disclosure obligations, belong to the company's core trade secrets. Even if the announcement is made to the public, it is difficult for the law enforcement authorities to verify, and the denominator of the proportion is more difficult to be precise, even under the principle of insisting on individual cases, the operability of these measurement indicators is not strong.

In general, for the regulation of mergers and acquisitions, China currently adopts an active review model. The problems are that the factors to be examined are subjective. Compared to the EU and the U.S., which are relatively more mature jurisdictions for antitrust enforcement,

China is still in the exploratory stage in the field of antitrust enforcement in the platform economy, and specific enforcement measures on how to detect and prevent mergers and acquisitions are yet to be improved.

4.2. Problems on Damage Assessment

The reason for governing killer Acquisition is that they harm competition in the marketplace, so how to determine competitive harm and measure the magnitude of competitive harm is the most important and fundamental aspect of regulating chokehold merger antitrust. The assessment of harm in the case of a killer Acquisition is usually based on the theory of harm around the loss of potential competition. Currently, the analysis of competitive harm in China's antitrust M&A enforcement is still mainly focused on the short-term price impact of the transaction and changes to the static market structure, and the damage analysis framework for digital platform killer acquisition has not been established [13]. Therefore, some Chinese scholars have proposed to apply a counterfactual analysis method, which requires comparing the state of the market that actually occurred with the state of the market due to the platform M&A behavior, and if the level of competition in the market is significantly lower than the level of competition in the market when the behavior did not occur given the circumstances in which the behavior occurred, then the M&A behavior is presumed to restrict and exclude competition. Conversely, if the level of competition in the market is not significantly lower than it would have been had the M&A not occurred, then it is presumed that competition is not restricted or excluded.

While the counterfactual analysis is indeed theoretically effective in assessing potential harm, in practice there are limitations due to the existence of various factors that make this counterfactual status difficult to prove. Firstly, it is the inherent defect of this analysis method, the implementation of the method is predicated on assumptions, due to the existence of technological uncertainty, strategic uncertainty and other problems of startups, the reasonableness of the assumptions depends more on the analyst's experience, ability and other subjective factors. Second, to compare the hypothetical situation with the problem of the hypothetical situation will affect all dimensions of the competitive assessment of the impact of the acquisition on the market, such as consumers, innovation, market efficiency and so on. And these dimensions are not quantifiable, invariably increasing the bias, and there is also a mutual influence relationship between the dimensions. Again, the analysis framework on the time variable, the current international general use of 2-3 years, the market reaction and adjustment is needed time. Therefore, considering only 2-3 years may underestimate the damage impact of the acquisition. Finally, because the counterfactual analysis based on the need for the existing market structure, the market competition structure, a large amount of information needs to be collected. However, due to information mismatch and collection channels, analysts cannot be fully aware of all the latest developments in the market, which inevitably simplifies the analysis process. In the case of the merger of Tiger and Douyu live broadcast, the State Administration of Market Supervision and Administration believes that "..... after this concentration, Tencent has strong market control in both upstream and downstream, and has the ability and motivation to implement online game copyright license blocking for competitors in the downstream game live broadcast market and upstream online game operation service market to implement a live-streaming promotion channel blockade against competitors in the upstream and downstream markets, forming a closed loop to crowd out existing competitors and stifle potential competitors" [14], it can be seen that China currently only uses a simplified counterfactual analysis in assessing potential damages, but it overly relies on the impact of market share changes on market competition and does not elaborate on whether Tencent before the merger has been able to form a two-way blockade.

In summary, the existing analytical framework and methods in China are not sufficient to achieve the realistic need for anti-monopoly of killer acquisition.

4.3. Lack of Ex-Post Review by Antitrust Enforcement Agencies

The threshold value of the active filing standard is a subjective choice made by the legislature. The factors considered in the active review can depend on the subjective judgment of the enforcer, so the process of competition damage analysis is full of uncertainties. Also, due to the existence of the problem of information mismatch, the so-called "false negatives" may arise, if the merger case that should be agreed was terminated, the "efficiency" of the market is harmed. If a merger case that should be recognized, the "effect" of the market is harmed. According to *the Anti-monopoly Law, the Anti-monopoly Committee of the State Council's Antimonopoly Guidelines on the Platform Economy, and the Guidance on the Declaration of Operator Concentration (Revised 2018)*, China has not clearly established an ex-post review mechanism. Meanwhile, according to *the Annual Report on Antitrust Enforcement in China (2019), the Annual Report on Antitrust Enforcement in China (2020)* and the relevant antitrust enforcement cases in China, there is also no precedent of ex-post evaluation of ever M&A cases in China. In summary, both in legislation and in terms of enforcement, China has not yet established an ex-post evaluation system.

5. Recommendations for Governancing Killer Acquisition on Internet Platforms

5.1. Improve the Pre-merger Review Mechanism

Some scholars propose to improve the M&A filing standard by improving the turnover calculation, but from the financial perspective, the turnover calculation belongs to the internal behavior of enterprises. Despite there are the constraints of accounting standards, but still can be adjusted by some financial means, there is a greater subjectivity, specifically in the Internet field, a single turnover no matter how perfect cannot accurately measure the market position and market value of the platform. In many emerging industries, a single turnover standard is often unable to accurately measure the real market power of the operator, to the extent that Internet platforms often have super high market valuation, dominant market share or super high number of active users, but their turnover or profits may be extremely small, so when setting the criteria, it is more scientific to consider the industry characteristics and scale to set diverse reporting criteria. For this reason, this paper suggests that a variety of reporting criteria can be introduced under the categorization and classification review mechanism.

5.1.1. Transaction Consideration

As stated in Article 4 of *the Draft Reporting Criteria*, "..... (b) the market value (or valuation) of the other parties to the merger specified in Article 2(1) or other operators specified in Article 2(2) and (3) is not less than RMB 800 million, and the turnover in China in the previous fiscal year is not less than RMB 1 billion", China is preparing to update and improve the existing reporting standards for operator concentration in China, in which whether to declare not only the turnover standard, but also the transaction consideration standard.

A company with a very high valuation, the amount of financing will also be very high. Then, for more than a certain amount of investment and financing, it is also necessary to declare the concentration of operators. On the one hand, capital is profit-seeking, and the value of the target company determines its own M&A costs. Usually, the acquirer will hire a third-party institution to conduct the valuation, after which both parties will usually conduct round after round of consultation to reach an agreement, which means that the transaction consideration determined under the game between the two parties will most likely reflect the actual value of the target company, which can better measure the impact of the merged entity on the market.

On the other hand, the market mechanism can reduce the enforcement cost of enforcement agencies. For example, in the case of Meta's acquisition of whatsapp, the transaction consideration was \$14 billion and the turnover of the target company could not meet the filing standards, so the merger was not declared. However, the EU Monopoly Committee considered that the target company had excellent prospective expectations and market influence, so the transaction amount was included in the filing standards, which effectively organized the occurrence of strangulation-type mergers and acquisitions.

In addition, the use of transaction consideration can effectively protect foreign investors against small platforms in China. In the history of M&A in China, there is the U.S. Procter & Gamble acquired all the assets of "Panda", but after the completion of the acquisition, Procter & Gamble no longer operates the Panda brand products, but uses all the production lines to produce its own Tide, Biron and other products, and soon swallowed the "Panda " market, and Nanfu was Gillette control that withdrew from the overseas market, half of the production capacity was idle. There are also Lepai, Arctic Ocean, Dingjiayi, small nurse, Lao Cai soy sauce, Meijiajing, Chinese toothpaste and so on. Although these cases are not occurring in the field of the Internet, but still has a warning, foreign capital can be through the national proxy or other means to attempt to strangle emerging industry, multi-dimensional review criteria can effectively reduce the occurrence of this situation.

5.1.2. Unilateral Turnover

For the dilemma on China's declaration standard, some scholars proposed that it can be solved by lowering the declaration threshold. However, according to the refinement of Article 8 of *the Regulations on Review of Concentration of Operators (Draft for Public Comments)*, the turnover includes the income obtained from the sale of products and provision of services by the relevant operator in the previous fiscal year, less relevant taxes and surcharges. The "previous fiscal year" referred to in the preceding paragraph refers to the previous fiscal year as of the date of signing the concentration agreement. On the one hand, the turnover can be adjusted by financial means, on the other hand, only listed companies have mandatory audits, for start-ups not only usually have a negative turnover, and whether the financial data is true and fair is still questionable. So, lowering the filing standard does not solve the problem.

China also seems to be aware of the advantages of using unilateral turnover, in the "draft declaration criteria" Article 4 "..... one of the operators involved in the concentration of the previous fiscal year in China's turnover of more than 100 billion yuan... ..", China's initiative to declare the threshold value of turnover of 100 billion yuan, through the observation of BATTMD and other platforms in recent years financial statements, 100 billion threshold value can basically delineate the domestic Internet head platform, with unilateral turnover indicators can be supplemented, can more directly focus and identify killer Acquisition and acquisitions. However, there are still flaws, for example, Sina Weibo, one of the domestic head social platform, is a wholly owned subsidiary of Sina, but according to the disclosed operating revenue 2021-2018 is 2.257 billion, 1.690 billion, 1.767 billion, 1.719 billion, respectively, and its group company Sina (Sina) 2021-2018 operating revenue is 1.340 billion, 1.334 billion Therefore, it is undeniable that Sina Weibo has a strong market competitiveness in the field of social platform, if Sina Group acquires Tan Tan Technology Co. Ltd. or the "Stranger" platform of Beijing Stranger Technology Co. For this reason, the number of users and the number of active platforms could be considered as another criterion.

5.1.3. Number of Users and Platform Activity

In digital markets, the core feature of the market is that "the average net revenue per user increases with the total number of users due to the presence of demand-driven network effects" [15]. Therefore, the number of users determines the value of digital platforms, and the number of users and the number of active users are used to reflect the special nature of Internet

platforms that distinguishes them from other killer acquisition. Some scholars point out that the information and potential value embedded in big data makes Internet platforms acquire startups for the purpose of acquiring data, and the existing filing standards may make this situation excluded [16], which means there may be clear forms of Internet platforms that are called acquiring the business of a startup but actually acquire the data of the business and are not included in the M&A review, if Sina Weibo acquires Stranger or Tan Tan, while, in such In social platform M&A, due to the widely adopted free strategy for ordinary users, social platform companies have already moved away from the profitability model centered on market transactions, and the assessment of their market power should focus on more non-price factors [16]. If the number of users and the number of active platforms is used as reference both can better help law enforcement agencies to identify and judge the nature of M&A behavior.

In China, the number of active users is included in the reference measurement when judging the abuse of market dominance, but in practice, China has not yet established a disclosure system for the number of users and the number of daily active platforms, and even if the calculation methods of individual companies are disclosed, they are slightly different and cannot be compared horizontally. Therefore, this data can be obtained from the platforms' own reports, consulting reports or line research reports, or third data analysis companies. As mentioned above, the consulting report stated that in June 2021, Weibo had 566 million monthly active users and 246 million average daily active users; in addition, as DataReporta, a data analysis company, disclosed in the "*Digital 2021 Global Overview Report*" the head In addition, DataReporta, a data analytics company, has disclosed relevant statistics of the top platforms in its Digital 2021 Global Overview Report, Statista database, and domestic companies such as Ai Rui Consulting and cnzz. However, the number of users and the number of active platforms is calculated differently due to the different model algorithms of each data analysis platform in the market. Ideally, the Statistics Bureau and the Antitrust Supervision Bureau can jointly enforce the law and build their own or use third-party platforms to measure. Our current research on the application of daily activity numbers is focused on enterprise valuation, and further research and study on the possibilities of daily activity numbers in the antitrust field by scholars in the computer field is needed in the future.

5.2. Optimization of Damage Analysis Framework and Methodology

China currently only has more detailed regulations for ordinary horizontal mergers and acquisitions, and there are only principled regulations for killer acquisition. Compared to ordinary horizontal mergers and acquisitions, killer acquisition and acquisitions have special characteristics, which are more concerned about the current and future substitutable products of existing products, and the substitutability of future products. In the face of this special situation, under the existing basic analysis framework, there should also be concerned about the degree of market power of existing products needed by institutions in the current market and the substitutability of existing products of the target company in the current market.

5.2.1. Extended Time Frame

The issue of time frames is particularly relevant to the acquisition of startups. An excessively short time frame may underestimate the potential for acquisitions by start-ups, and the CMA's Lear report concluded that two years is also too short and recommended an extended time frame [17] In some cases, counterfactual analysis of expected competitive harm may not begin to impact consumers and markets until years later. The results of extended time frames are already being considered abroad for some controversial mergers, such as six years for WhatsApp, eight years for Instagram, and 14 years for YouTube. Based on the disclosed relevant instruments, it is not yet possible to determine the time frame for our assessment, but an appropriate extension would be more beneficial to the accuracy of the assessment.

5.2.2. Incorporating Data Factors into the Assessment System

The competition of Internet platforms is essentially data competition. In the case of Google's acquisition of doubleclick, facebook's acquisition of whatsapp, and Microsoft's acquisition of Yahoo, the European Commission assessed the advantages brought by data collection, which is not a decisive factor but is one of the important factors to measure the impact of competition [18]. In the Douyu Tiger merger case, the enforcer only considered also the business on the damage impact and did not consider the possible amount of data aggregation factors, such as the possibility of requesting the M&A parties to provide structural analysis of user data and analyze the damage of data value on the market in terms of age, geography, gender and other dimensions. Although the motive of killer acquisition is mostly business level, taking data factors into consideration is more conducive to avoiding the formation of business and data duopoly.

5.2.3. Progressive Establishment of an Anti-Monopoly Computer System

Facing the increasingly complex market, the tasks of antitrust agencies are gradually complicated. The development of science and technology plays an important role in maintaining and improving the detection and analysis capabilities of antitrust agencies, and can moderately reduce the cost of law enforcement. At the same time, the essential attributes of the Internet platform determine that its governance cannot be done without data reliance, and in the foreseeable future is still the era of big data, the implementation of intelligent supervision has its necessity. Big data technology, deep learning, cloud computing and other technologies are mature in Jing, and it is possible to gradually establish an anti-monopoly computer system through technological empowerment.

From the 1990s, some scholars have constructed antitrust computational models [19]. In January 2021, Stanford University launched the "Computational Antitrust" project to study the use of legal informatics to navigate complex and dynamic markets by automating antitrust procedures and improving antitrust analysis. Massarotto and Ashwin Ittoo have built and tested an unsupervised antitrust machine learning (AML) application [20].

The main roles of computerized systems for enforcers are useful. Firstly, computational antitrust should help enforcers organize the law and facts. The enforcer, as a market monitor, has asymmetry in information holding. At present, when dealing with antitrust enforcement cases in China, we still mainly rely on manual retrieval of data information, which inevitably will not occur without omissions, while crawler technology can improve the integrity of data. Algorithms can be used to search for platform data traces to match with filings to provide faster and more consistent analysis. Big data, deep learning and data mining can help identify relevant market variables. Algorithms can also explain the interactions between metrics, correlate information with familiar information, and provide predictions based on untrained parameters. Also using techniques such as natural language understanding and text analysis can help enforcers be more accurate in analyzing the illegal intent of platforms, and can also greatly improve the speed of case processing. Second, computational antitrust should help simulate the results of mergers and acquisitions. The use of artificial intelligence to identify factors that are particularly closely watched in cases can be more helpful in determining the impact of platform purchases on market share and competition, aiding enforcers' decisions from a quantitative dimension. At the same time, antitrust calculations collect more evidence, improve the accuracy of applicable probabilities, optimize economic models, and other aspects to optimize dynamic counterfactual analysis. Finally, it can form the basis for enforcement and strengthen the rationality of its own enforcement. Due to the differences between industries, it is impossible for the enforcer to maintain knowledge of all industry characteristics. Computational antitrust allows enforcers to rely on computational power and extensive data analysis to confidently assume that some confluence of facts may lead to anticompetitive harm. At the same time, the

model is able to continuously optimize the assessment results with machine learning algorithms. Markets are fickle, and some factors may be routine and others may have case-by-case variation as enforcement agencies weigh competitive effects and identify influencing factors. On balance, calculating antitrust can go some way to reducing the time and effort required to analyze a case.

However, it should be realized that since the computational antitrust model is built on assumptions and the accuracy of the model is often directly related to the assumptions, the computerized system can only play an auxiliary role. Of course, the computer system can be applied not only in the field of law enforcement but also discussed in the judicial field, but regardless of the field of application, it is undeniable that there are still many problems of antitrust calculation that need to be explored and concluded.

5.3. Reinforce the Ex-post Review of Antitrust Enforcement Agencies

The U.S. Survey of Competition in Digital Markets requires long regulation for killer acquisition by digital giants. Pre-merger review is important, a post-merger oversight also is. Because there is a lag in the appearance of damage from killer acquisition. Throughout our M&A cases, we have not yet established a post-event assessment review mechanism. For this purpose, consideration may be given to establishing, within the framework of a classification and grading system.

5.3.1. A System of Continuous Tracking of Key Cases

The fading of time increases the uncertainty in the market, and it will be more difficult to judge the relationship between the act and the result, so the merger cases with greater uncertainty should be continuously followed and the ex-post assessment should be strengthened. Key cases, such as for merger cases that do not meet the filing standards, active review and comprehensive research and judgment is still uncertain; there is business overlap business re-merger; the head platform is the merging party; the case is difficult and controversial and so on.

5.3.2. Regular Review System for General Cases

For simple cases or cases with little uncertainty and controversy, the regular review system can be used. First, it is necessary to obtain accurate market data, including market product data before and after the merger, as well as predicted data and so on. Second, assess the accuracy of the counterfactual analysis with reference to documents such as strategic plans provided or disclosed by the acquirer, and verify the results of the damage analysis. Finally, summarize the enforcement experience and form positive feedback.

6. Conclusion

Taking a further strength for the review of Killer acquisition is necessary. Properly judging the nature of M&A behavior will help distinguish between transactions that truly improve market efficiency and optimize resource allocation and those that have the potential to curb competition. As China is a late starter in Internet development and antitrust governance, it is more necessary, under the premise of balancing enforcement costs and enforcement benefits, to optimize the enforcement path and techniques in the whole stage in conjunction with the local law enforcement reality to govern killer acquisition of Internet platform. Only in this way can it maintain a good atmosphere of innovation and entrepreneurship and stimulate economic vitality

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Social Science.

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