Merger Policy Decision Based on the Verification of Bargaining Effectiveness

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Abstract

Based on the discussion of the impact and optimization of regulatory policy in the process of merger and reorganization, this paper makes an in-depth study of merger and reorganization supervision policy by means of literature research, comparative study, and mathematical model reasoning and so on. The first chapter of this paper introduces the research background and significance, the related literature review, the research content and the innovation point; the second chapter is based on the theoretical model, the basic concept of merger and reorganization, the theoretical overview of the model method. The third chapter is based on the benchmark model, the analysis and research on the effectiveness of the negotiations. The fourth chapter is from the perspective of merger supervision, study the role and reference of merger policy in the process of enterprise merger. The fifth chapter is the discussion of the mathematical parameters in the model, as well as the policy suggestions for merger supervision. The sixth chapter is the conclusion summary and the prospect of the theoretical practical significance.

Keywords

Merger; merger policy; bargaining effectiveness.

1. Introduction

Economic globalization is the most remarkable feature of world economic development after "World War II", which makes the market elements such as capital, technology and commodities flow freely and optimize the allocation on a global scale, so as to achieve the lowest cost and the highest profit. As communications technology and the Internet create better conditions for globalization, a new round of globalization will develop more rapidly, and the financial crisis of the 2008, far from stopping the pace of globalization, will make the model of globalization dominated by developed countries face structural adjustments. This is an unprecedented challenge and opportunity for Chinese enterprises and individuals, and at home, China's economic development mode is moving from extensive growth in scale to mass efficiency intensive growth, and the need for transformation and upgrading of many manufacturing enterprises is urgent, and merger and reorganization is an important means to promote the transformation and upgrading of enterprises and supply-side reform to capacity. These two domestic markets have set off a wave of mergers, but the merger and reorganization of enterprises have also encountered difficulties in cross-regional restructuring, the high cost of merger and reorganization of enterprises, the potential risk of merger and reorganization is large, the development of market intermediary service organizations is slow and so on. In the international market, in recent years, Chinese enterprises have also become more and more involved in international cross-border merger and acquisition transactions, with the intention of obtaining foreign scarce raw materials, high-quality staff, advanced production technology and management experience, and quickly obtain strategic resources, brands and sales channels, so as to obtain scale and synergy in a short period of time, Enhance international competitiveness.

2. Properties

2.1. Benchmark Model

In this paper, the three-way symmetric market merger and multi-party asymmetric merger are established, and the market model is established respectively. Based on the Dixit commodity differentiation model and the Cournot model, the validity criterion of merger negotiation in merger supervision is studied. The validity of this paper is that In the company's merger plan, there may be mergers and acquisitions that benefit both consumers and enterprises. Among them, the merger plan that can maximize corporate profits and increase consumer surplus is effective merger (negotiation).

Based on the effectiveness test, for the regulators, in the case of anti-monopoly and market competition, it can make the most favorable merger decision-making for market development; for enterprises, when they are subject to local merger control in other countries At the time, it is possible to conduct anti-regulatory statements with their effectiveness and strive for corporate interests.

Given the growing strategic importance of mergers, it is necessary to deepen theoretical insights and expand the scope of research from a research and practitioner perspective. If the companies are symmetrical, then in the context of Courno equilibrium, building a soldier is profitable because it can improve efficiency. Perry & Porter examines how to generate mergers and acquisitions when there are external M&A options [1]. What this article is going to study is that when there are multiple profitable merger options, which merger is more likely to happen. At the same time, from the perspective of supervision, how to choose the most effective merger, what kind of rules should be formulated, or from the motive of corporate mergers. This paper gives a budgeted merger rule reference value and gives a probability calculation of the effective merger within this reference value range.

In order to simplify the merger process and various parameters, it is assumed that there are three companies in the competitive market of a certain industry, and each company has the same share in the market. The three companies can conduct mergers and acquisitions between the two companies. Once the negotiations are agreed, the merger proposal can be submitted to the regulator. The regulator can judge whether the criteria are met according to the information submitted by the two companies, and whether to approve the merger. decision making. A new company formed by the merger of two companies after merger is called a merger company; a company that does not participate in mergers and merges with the merger company in the market is called a separate company; and for more than three non-nickname companies, it is based on The Cournot model gives an observation of the outcome of the merger under the conditions of a merger policy.

2.2. Property

In this model, assuming that the scale technologies of the three companies have the same constant returns, then the initial costs of the three companies are the same. Then the profit of the three companies in the equilibrium market and the consumer surplus are the same, respectively.

The original three companies in the market are 1, 2, and 3 companies. In order to better compare the different effects of different synergies on the market consumer surplus, we assume that the company 1, 2 is symmetrical, that is, the company 1 The synergy effect between 2 and 2 is the same, and the synergy effect of the merger of 1, 2 companies is greater, that is, the cost is lower. Representing the synergy effect of the merger of i company and j company, that is, the profit of the merger company; and the sub-meter represents the company profit of each stage of the merger company and the third company that did not participate in the merger; for some mergers and acquisitions The described competitive market model proposes the following three properties:

Property 1:

This merger is only beneficial to the market when the marginal cost of the company is acquired.

Property 2:

A favorable merger for the market is also beneficial to the company itself.

Property 3:

Mergers that are favorable to the market are not good for individual companies.

3. Merger Policy

3.1. The Efficiency of Merger Negotiation

In the benchmark model, there is a merger that can maximize market interests, that is, consumer surplus, and maximize corporate interests. We call this merger an effective merger. Then in all possible mergers, the probability of an effective merger is the effectiveness of the merger negotiation.

The analysis of the perspective of the regulatory body yields three assumptions that are met under our baseline model. These three assumptions balance the company's interests and social welfare from the perspective of the market, but do not explain how to choose better from the standpoint of the company.

In the benchmark model of the three companies, how the company reached a two-two agreement, the key is to see how it started.

First of all, we must naturally choose two companies from the market. The natural choice here means that the choice at this time does not affect the probability of mergers and the probability of effective mergers. Then, by probability calculation, one company is selected as one of the merger parties, and another company is invited as a merger partner. After the merger of the two parties is determined, one of the parties proposes to pay the offer as the proposer, and the other party chooses to accept or reject the merger according to the payment content. As with the above benchmark models, here we discuss three companies in the market to merge and standardize this merger selection process.

In the above negotiation process, the choice of company A, the decision of company B, the choice of company F and the decision of company E, these dynamic processes will bring different mergers and acquisitions. In order to study how the regulatory approval price affects the realization of effective mergers, we analyze the relationship between the cost of each merger portfolio and the approved price cost, and also use the three companies in the benchmark model to analyze

3.2. Control Variable

In the benchmark model, the marginal cost represents the company's commodity technology and market share. In order to study how the rules of the regulatory body will affect the realization of effective mergers, we analyze the relationship between the cost of each merger and the price of the approved merger, and also analyze the three companies in the benchmark model. There are three types of merger costs for each company. In the case, this is the case where the budget value of the marginal cost is used. This budget value is the control variable that the regulator can choose.

In the benchmark model, we introduce several parameters, which have a certain c_n existence in both price competition and quantity competition, so that there is $CS(c_n) = CS_0$,and $\frac{dCS(c_{ij})}{dc_{ij}} < 0$. CS_0 it is the consumer surplus of each company before the merger reaches equilibrium. $CS(c_n)$, it is the consumer surplus when the marginal cost of the merger is made c_n, and the consumer surplus function is about the diminishing marginal cost of the merger company. At that time, the consumer Surplus will increase due to the synergy of mergers. Therefore, the merger is only beneficial to the market when the marginal cost of the company is merged $c_{ij} < c_n$. Every company wants to participate in the merger, and the market does not allow monopoly. Therefore, the three companies do not want to be the company that did not participate in the merger. We can derive the marginal cost of the merger company and the marginal cost of the original company and the approved The relationship between the marginal cost thresholds:

$$c_{ij} < \overline{c} < c_0$$

Then, when the regulator chooses to use the marginal cost as the control variable, it first obtains the corresponding approved marginal cost threshold according to different mergers. The threshold is

$$c_n = c_0 + \frac{\gamma(c_0 - \alpha)}{2(\beta + \alpha)}$$

Therefore, the regulatory variables that regulators need to develop

$$\overline{c} = c_n + \Delta c$$

Which is $c_n = c_0 + \frac{\gamma(c_0 - \alpha)}{2(\beta + \alpha)}$

4. Conclusion

The antitrust regulators we study hope to maximize the expected consumer surplus. Our main result is in the form of an optimal policy for antitrust regulators, and we have demonstrated that a more stringent standard should be imposed for mergers (including larger merger partners, in terms of market share before mergers). In addition, for all merger partners, the minimum increase in consumer surplus is positive, and the greater the market share of the pre-merger company, the greater the increase in consumer surplus. Because in our model, a large pre-merger share is equivalent to a large post-merger Herfindahl index (the calculation considers that the merger share of the merger company is the sum of the merger shares of the merger partner, the external share does not change). Another way of saying this is that the merger of the Herfindahl index, which has been greatly improved, must create a large increase in consumer surplus before it can be approved. The form of optimal policy reflects a basic view of the company's proposed motives: no matter when a larger merger can at least produce the same consumer surplus as a smaller merger, if both can be approved, the big one The merger will be submitted. However, if both can be approved, the big merger is sometimes more disadvantageous for the consumer and sometimes it is proposed; therefore, the optimal merger policy rejects some large mergers of consumer surplus, but instead leads the company. Propose better and smaller mergers. After completing the research of the theoretical part of the thesis, the article needs to verify the theoretical model proposed in the article. So the next step will focus on the application of the model and the analysis of the model results.

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