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Current Status, Problems and Countermeasures of Green M&A in China

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Abstract

This study takes the M&A data of China's A-share listed companies from 2006 to 2018 as the research sample. Based on the manual collection of green M&A data, based on the time and industry dimensions, it analyzes the green M&A behavior of Chinese listed companies from the perspective of government green policy. The study finds that the evolution of government green policies has led to the current situation of green M&A showing obvious time interval characteristics and industry distribution differences, which are realized through two influence mechanisms: pressure effect and incentive effect. The research is helpful to understand the green M&A behavior of enterprises in the context of ecological civilization construction, and also provides some reference and reference for the evaluation of the implementation effect of China's green policy.

Keywords

Green Mergers and Acquisitions; Environmental Regulation Policy; Green Industry.

1. Introduction

In the face of increasing resource and environmental constraints, the construction of ecological civilization has become a basic national policy. The report of the 19th National Congress of the Communist Party of China clearly stated that the construction of ecological civilization is the millennium plan for the sustainable development of the Chinese nation, and pollution prevention and control are regarded as one of the three major battles to win the overall construction of a well-off society. system, focus on solving environmental problems, and promote the development of green industries [1]. The introduction of green technologies through mergers and acquisitions, the elimination of outdated processes and production capacity, the realization of energy conservation and emission reduction and green transformation of polluting enterprises, or the promotion of rapid expansion, technological innovation and industrial upgrading of low-carbon enterprises is to implement pollution prevention and environmental protection strategies and promote enterprises An important means to accelerate the realization of green, low-carbon and circular development is of great significance to the construction of ecological civilization. In recent years, green mergers and acquisitions with green, low-carbon and recycling themes have increasingly become the focus of the capital market. The so-called "green mergers and acquisitions" refers to mergers and acquisitions with the goal of acquiring or expanding green competitive advantages such as green technology, clean energy, green products and services[2]. Under the premise of optimizing the allocation of resources, enhancing the competitive advantage of enterprises, and realizing the unification of economic and ecological benefits. In essence, both green mergers and acquisitions and environmental protection investments belong to the green investment behavior of enterprises. However, compared with environmental protection investments with a longer investment cycle and greater uncertainty, green mergers and acquisitions have obvious speed advantages [1], which can quickly obtain the target enterprise. Clean energy, green products and services, green technology, etc., promote enterprises to accelerate the realization of green transformation and green development. However, its research is still in its

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initial stage, with only a handful of relevant research literature, and the research object is limited to heavily polluting enterprises. The research sample has a short time span, which makes it impossible to comprehensively and systematically reflect the current situation of green M&A in China, analyze its existing problems and cause[3]. Based on this, based on the two dimensions of time and industry, this paper systematically analyzes the current situation and causes of green mergers and acquisitions of Chinese listed companies from the perspective of government green policy, which helps us understand the green mergers and acquisitions behavior of enterprises, and also provides information for the evaluation of the implementation effect of China's green policy. Certain references and references.

2. The Distribution Status of Green M&A

2.1. Based on the Time Dimension

M&A transactions and the proportion of green M& A in Chinese listed companies from 2006 to 2018 . The results show that green M&A generally shows an upward trend, but the growth rate has obvious interval characteristics. From the point of view of the number of transactions, taking 2012 as the dividing point, the growth was slow before that, and then ushered in rapid growth after 2012. The number of green M&A transactions from 2013 to 2018 increased nearly three times compared with 2006 to 2012, of which 2015 hit a record. At the peak, a total of 153 listed companies successfully completed 240 green mergers and acquisitions, exceeding the sum of the five years of the "Eleventh Five-Year Plan" (2006-2010) . From the perspective of the probability of implementing green M&A, the proportion of green M&A has been fluctuating around 15% from 2006 to 2012. After 2012, the proportion of green M&A has increased significantly, and the average proportion of green M&A is close to 25% (except for the correction in 2016 due to the overall weakness of the M&A market))[4]. It can be seen that with the continuous deepening of the concept of green development and the continuous advancement of ecological civilization construction, green mergers and acquisitions are increasingly favored by the capital market and listed companies, and have become an important choice for corporate green investment.

2.2. Based on Industry Dimension

The industry attributes of enterprises and the heterogeneity between industries will affect the investment behavior of enterprises [3]. In order to reflect the industry distribution status of green M&A of Chinese listed companies (mainly merged companies), according to research needs, this paper analyzes the number and proportion of green M&A by industry category and industry segmentation. At the same time, this paper also counts the industry distribution of green M&A target companies.

2.2.1. Statistical Analysis based on Industry Categories

The green M&A of Chinese listed companies is widely distributed, involving all industries except accommodation and catering; however, it is in an uneven state, with significant differences in industry distribution. First, in terms of the number of green M&A samples, manufacturing, electricity, heat, gas and water production and supply, and water conservancy, environment and public facility management occupy the top three industries. Among them, more than 60% of green mergers and acquisitions are concentrated in the manufacturing industry. This may be because the manufacturing industry has the largest number of industry categories (30 in total) and enterprises, and the largest number of mergers and acquisitions. Therefore, the number of green mergers and acquisitions is correspondingly the largest. Second, in terms of the average proportion of green mergers and acquisitions, the top three are electricity, heat, gas and water production and supply, mining, and water conservancy, environment and public facility management, with 0.7259, 0.3466 and 0.3245, indicating that green mergers and acquisitions in these three major industries exceeded 70% and 30% respectively. It is worth mentioning that the proportion of green M&A in the manufacturing industry is only 0.2091, slightly higher than the industry average of 0.1924, indicating that the probability of green M&A in the manufacturing industry is not high. Third, from the perspective of the gap between the maximum value and the minimum value, there is a large gap between the number of green mergers and acquisitions and industries with a relatively high proportion, indicating that there are also significant differences in green mergers and acquisitions among various industry categories in these industry categories. Fourth, from the combined data, the average proportion of green M&A in heavily polluting industries is 0.3682, which is higher than 0.1478 in non-heavy polluting industries, indicating that the higher the pollution level of the industry, the more likely it is to implement green M&A.

2.2.2. Statistical Analysis based on Industry Segmentation

representative industries with a relatively high proportion and relatively high proportion of green M&A in 77 industry categories, including 13 heavily polluting industries and 10 low-carbon industries other than metal mineral mining and dressing industries. The purpose is to have a deeper and more specific understanding of the current distribution of green mergers and acquisitions in the industries where the companies are located, in order to explore its causes[5]. Statistics show that 23 industries account for nearly 83% of the total number of green mergers and acquisitions, and the average proportion of green mergers and acquisitions is 38.21%, which shows that the industry concentration of green mergers and acquisitions is high. To sum up, they are mainly concentrated in the following industries: ① energy industry, such as electricity and heat, coal, oil and natural gas, fuel gas processing and production, etc.; ② machinery, equipment, instrumentation and other equipment manufacturing industries; ③ textile and paper making in heavily polluting industries , chemical, chemical, smelting and other traditional processing and manufacturing industries; ④ Resource recycling, energy conservation and environmental protection industries, such as comprehensive utilization of waste resources, sewage treatment and resource utilization, landscaping and pollution control, etc.; ⑤ Service industries, such as mining auxiliary activities, Professional technical services, etc.

3. Analysis of the Causes of the Status Quo of Green M&A

3.1. Reasons for the Status Quo of Green M&A based on Time Dimension

There are many factors affecting green mergers and acquisitions, such as the environmental level, the government level, the enterprise level and the decision-maker level, as well as the media pressure [1]. However, compared with Western companies, Chinese companies tend to consider the influence of government policies and institutional environment factors more when implementing mergers and acquisitions [4]. Therefore, to explore the causes of green M&A status from the time dimension, this paper believes that it is mainly due to the influence of the evolution of the government's green policy[6].

Before 2012, China's green policy was in the embryonic stage of green industrial policy, which was dominated by command-control environmental regulation and supplemented by market-incentivized environmental regulation. In 2006, China's "Eleventh Five-Year Plan" clearly put forward the energy consumption hard constraint target for the first time, to the "Energy Conservation Law" in 2007, to clearly implement the energy conservation target responsibility system and energy conservation assessment and evaluation system, and then to the 2011 "10,000 Enterprises Low Energy Conservation". "Carbon Action Implementation Plan" strengthens the responsibility assessment and reward and punishment mechanism, clearly puts forward the total emission control and energy saving goals of 10,000 enterprises during the "Twelfth Five-Year Plan" period, and strictly implements total control, target decomposition, accountability and supervision and a Command-control environmental regulation such as the veto system became the core environmental policy tool in this period [6], and “energy saving and emission reduction” became the focus of environmental protection work in this period. However, energy conservation and emission reduction policies led by the "Five-Year Plan" are often time-sensitive, and the tasks proposed are usually urgent. If companies rely on their own research and development, it will not only take a long time, but also have great uncertainty. Under this circumstance, companies are more likely to seek to complete their tasks by quickly acquiring the target companies' energy-saving and emission-reduction technologies and green M&A methods for clean energy[7]. Therefore, this promotes the growth of green M&A of heavily polluting companies to a certain extent, but this The effect is not significant. Under the high pressure of command-control environmental regulation, the regulated have no independent decision-making power in target setting and technology selection, which is not conducive to mobilizing the enthusiasm of enterprises for environmental protection [6] . An uptrend has not formed (as shown in Figure 1). Although the government introduced and implemented market-oriented policies such as pollutant discharge charges, government subsidies and trading licenses during this period, such as the reform of the resource tax calculation and collection method in 2011, and the 2011 Notice on Carrying out the Pilot Work of Carbon Emission Trading Promulgation, and the adoption of green industry policy tools to promote energy conservation, environmental protection and new energy development in 2011, etc., but due to the lag in policy effects, it did not have much impact on green M&A before 2012[8].

2012 , China's green policy entered the policy combination stage of combining environmental regulation policy and green industry policy. In 2012, the 18th National Congress of the Communist Party of China made "green development, circular development, and low-carbon development" an important focus of ecological civilization construction for the first time, which became the beginning of the green transformation of China's production mode [6]. At the level of environmental regulation and policy, the government continues to strengthen the command-control environmental regulation that emphasizes pollution control. For example, it has formulated stricter industry emission standards, and the "13th Five-Year Plan" clearly stated that compared with 2015's 2020 "energy saving" emission reduction”, promulgating and implementing the “Ambient Air Quality Standard (2012)” and the “First-Phase Monitoring Implementation Plan for the New Air Quality Standard”; on the other hand, strengthening market-oriented policy tools, such as the Environmental Protection Tax Law introduction and implementation. At the same time, the green industry policy has entered the initial stage of development from the embryonic stage [6]. The government has launched a series of policies to encourage the development of low-carbon industries. industry, new energy industry and new energy automobile industry, the "Industrial Green Development Plan (2016-2020)" proposed to focus on supporting the transformation of traditional industries, green manufacturing pilot demonstrations and comprehensive utilization of resources, etc. In 2012, the "Green Credit Guidelines" were issued, etc. . Through financial subsidies, tax incentives, credit incentives and other policy tools to guide and encourage the rapid expansion, technological innovation and transformation and upgrading of low-carbon enterprises, it will force the green transformation of heavy-polluting enterprises with excess capacity and backward technology, and green mergers and acquisitions are the realization of the above The quickest and most important way to the goal . Therefore, under the dual effects of environmental regulation policies and green industrial policies, the number and proportion of green mergers and acquisitions from 2013 to 2018 increased significantly compared to 2006 to 2012.

3.2. Reasons for the Status Quo of Green M&A based on Industry Dimension

The market environment and government policy support faced by different industries are different. Therefore, it will cause the imbalance of resource elements that the industry can obtain, which will in turn affect the decision-making of enterprises [8]. As mentioned above, the evolution of government green policies has led to the time interval characteristics of green M&A. Similarly, it also affects the industry differences of green M&A, which are realized through two mechanisms: pressure effect and incentive effect. On the one hand, the government's green policy forces the implementation of green mergers and acquisitions by heavily polluting enterprises by increasing the pressure on the government, suppliers, creditors, the public and other stakeholders to the legality of the enterprise's environment; Subsidies, tax incentives and credit incentives, as well as positive market expectations, have an incentive effect on low-carbon companies to implement green mergers and acquisitions, but also have a pressure effect on green mergers and acquisitions of heavily polluting companies.

In the early studies of organizational behavior, scholars mostly regarded legitimacy as the objective requirements and constraints of external rules on the development of enterprises. For example, Suchman [7] defined the general concept of legitimacy as a system of norms, values, beliefs and regulations constructed by society. Perceptions and judgments of whether organizational behavior is correct and desirable. With the deepening of research, academia gradually regards legitimacy as an operational strategic resource that organizations can actively acquire, and believes that organizations can win legitimacy through a series of positive strategic behaviors. Colleoni[8] believes that the main source of legitimacy is that enterprises actively fulfill their social responsibilities and strive to create social contributions. In the period of economic transformation, environmental legitimacy has become one of the important dimensions to measure the legitimacy of enterprises. The evaluation of corporate environmental legitimacy existed before the green behavior of enterprises, and was embedded in the system. The focus of attention of external stakeholders such as creditors and the public. As an important strategic resource, environmental legitimacy not only helps companies obtain support and resources at the government level, but also helps companies obtain resources and support at the level of external stakeholders such as suppliers, creditors, and the public . In order to meet the requirements of environmental legitimacy, enterprises will inevitably implement environmentally friendly strategic behaviors to meet the environmental demands of external stakeholders.

Command-control environmental regulation has been the main environmental system implemented in China since 2006, especially in the energy conservation system centered on “strict total control, target decomposition, accountability and supervision, and one-vote veto system” from 2006 to 2012. Under the emission reduction policy , the pollution behavior of enterprises mainly faces the pressure from the government level, such as punishment and forced closure, and the pressure on the legality of enterprises is relatively small. In this case, companies have three choices: First, if the punishment is lighter, the company may rather bear the lower environmental penalty cost than the higher environmental governance cost, which is not conducive to the long-term development of the company. The second is to actively increase investment in environmental protection, independently develop clean energy or energy saving and emission reduction technologies to meet the requirements of environmental regulations. The environmental protection investment cycle is long, the short-term economic benefits are low, and the future is uncertain. The third is to implement green mergers and acquisitions, quickly obtain energy-saving and emission- reduction technologies and clean energy, and complete the energy-saving and emission-reduction targets within the time limit specified by the policy. According to the theory of M&A synergies, the introduction of green targets can break the shackles of the existing conditions of enterprises, and the catalysis of heterogeneous technology, talents and management elements can also accelerate the realization of the innovation compensation effect of the "Porter Hypothesis". Weighing the pros and cons, heavily polluting companies may choose to implement green M&A.

The introduction and implementation of market-oriented environmental regulation policies such as pollutant discharge charges, trading licenses, and environmental taxes, especially the implementation of environmental taxes, has increased the pressure on enterprises' legitimacy. The green production situation of enterprises directly affects the ability of enterprises to obtain support and resources from the government. In order to maintain the legal requirements of the government's environmental tax, enterprises will take the initiative to quickly acquire energy-saving and emission-reduction technologies by means of green mergers and acquisitions to accelerate green transformation; On the other hand, the performance of enterprises in complying with the legality of environmental taxes will also affect the reassessment of enterprise risks by external stakeholders such as suppliers, customers, and creditors, as well as the decision on whether to continue to provide support and resources to the enterprise. Due to the legality of environmental tax, and to win the resources and support of external stakeholders, companies have to choose to implement green mergers and acquisitions. The germination and development of green industrial policies, as well as their combination with environmental regulation policies, have further increased the pressure on corporate legitimacy.

The green industrial policy is an exclusive and selective industrial policy. While the government provides various preferential policies such as land, capital and taxes for supporting enterprises, it also imposes restrictions and pressures on non-supporting enterprises, such as the investment approval system. Differential treatment such as strengthening and intensifying debt financing constraints. In addition to the direct impact of resource constraints at the level of government support, enterprises are often indirectly affected by the market's lower expectations for industry development and the deterioration of the development environment, thus creating pressure for transformation and a crisis of survival. Therefore, in order to survive and develop, enterprises will choose green mergers and acquisitions as a strategic response. (2) Based on the perspective of public participation. Public participation is a useful supplement to government intervention and insufficient market mechanisms, and to a certain extent can replace the role of government environmental regulation. Public participation mainly affects green mergers and acquisitions of enterprises through the following two paths: First, the public's attention to environmental issues and the news media's reports on environmental pollution incidents will bring strong legal pressure to the companies involved and increase the cost of environmental governance. , affecting the decision-making of enterprises, forcing enterprises to implement strategies related to environmental protection, energy conservation and emission reduction; second, environmental petitions and complaints, which induce government administrative intervention, deteriorate the relationship between enterprises and the government, and even force the introduction of formal laws and regulations, by influencing policy makers to impose restrictions on polluting companies, forcing companies to implement environmental protection measures. China’s new environmental protection law in 2015 included a separate chapter on “information disclosure and public participation,” underscoring the importance of public participation in supervision and putting companies under greater public pressure. In the critical stage of pollution prevention and control, in order to convey to the society a positive signal of protecting the environment and actively fulfilling social responsibilities, enhancing corporate reputation and reducing the pressure on environmental legitimacy caused by environmental pollution issues, companies will actively choose to participate in environmental governance, and green mergers and acquisitions may become It is one of the tools for heavy polluting enterprises to deal with the pressure of the public.

4. Research Conclusion and Enlightenment

This paper takes the M&A data of China's A-share listed companies from 2006 to 2018 as a sample, and based on the manual collection of green M&A data, based on the time and industry dimensions, from the perspective of the government's green policy to analyze the current situation and causes of green M&A in China's listed companies. The study found that: First, a single command-control environmental regulation has no significant impact on the enthusiasm of enterprises for green M&A. The combination of command-control environmental regulation with market-incentivized environmental regulation and green industrial policy can effectively improve the green M&A of enterprises. possibility. Second, different types of green policies and the completeness and coordination of the policy system will affect the industry differences in corporate green M&A. Third, the evolution of green policy forces enterprises to implement green mergers and acquisitions by increasing corporate legitimacy pressure and increasing public participation; at the same time, by obtaining resources and support from the government and corporate stakeholders, as well as positive market expectations, companies are encouraged to implement green M&A.

This paper draws the following inspirations: First, in order to promote the transformation and upgrading of enterprises and increase the enthusiasm of enterprises to implement green mergers and acquisitions, the government should gradually change the status quo in which command-control environmental regulations dominate A combination of green policies supplemented by controlled environmental regulation. Second, the government should take into account the completeness and coordination of the green industry policy system, increase support for service industries and supporting industries in the middle reaches of the green industry chain such as energy conservation and environmental protection, and coordinate the promotion of green services, ecological agriculture, and green technology research. Implementation of industry green mergers and acquisitions. Third, the government's green policy promotes enterprises to implement green mergers and acquisitions through the two mechanisms of pressure effect and incentive effect. We provide empirical support for objectively evaluating the role of the government's "visible hand"..

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