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# Discussions on the Environmental Strategies of SMEs

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**Abstract:** Environmental issues have become the focal point of society. However, China enterprises have not paid enough attention to environmental issues, especially those of SMEs. In this paper, it points out that environmental issues of SMEs are imperative. By analyzing the restrictive factors, we put forward four environment strategies based on internal capability and the pollution degree of the enterprises and analyze each strategy in details.

**Keywords:** SMEs; environmental issues; environmental strategy

## I. Introduction

The increasingly serious environmental problems have managed to bring people into reconsideration of their behaviors. Environmental protection is not only concerned with the sustainable development of national economies, but also closely related to the future of human beings. To protect our earth and turn sustainable development into true, various countries have been actively taking part in bilateral and multi-lateral co operations, signing international environmental conventions, and being devoted to solve global environmental problems. Environmental problems caused by enterprises have become a big concern of governments and the public. A survey of British SMEs by Hillary (1995) revealed that 70% of pollution in Britain is caused by SMEs. In China, with the rapid growth of SMEs, SMEs have increasing contribution to industrial pollution, which has, actually, become the emphasis of industrial pollution control. According to a survey by China National Environmental Protection Bureau, pollution caused by SMEs makes up 60% of the national total. Faced with such a serious situation, it is undoubtedly indispensable for SMEs to implement environmental strategies and strengthen environmental management.

## II. Urgency of Implement Environmental Strategies in SMEs

In China, SMEs account for 99.7% of enterprises in number, employ 73.3% of the total industrial enterprises staff and produce 66.9% of the total output by all the industrial enterprises. All these facts speak for the decisive position of SMEs in China's economy. However, environmental problems are seriously blocking the further development of SMEs, and it is inevitable for them to put environmental

problems onto the agenda for the following two reasons. On the one hand, it is a prerequisite to avoid green trade barriers. With economic globalization and China's entry into WTO, enterprises in China are exposed to complicated international trade regulations and rules, and a lot of countries in the world, especially developed countries, have set non-tariff barriers in various ways, for example, SA8000 standards in the U.S.A, AVE standards in Germany, ETI standards in the UK and ISO14000 international environmental standards, and so on. In China, SMEs are playing a key role in export; therefore, greening their products and production process have become a necessity. On the other hand, it is a precondition to improve the competitiveness of enterprises. Resource-based theories (RBT) point out that environmental problems have already become a significant factor affecting an enterprise's competitiveness (Russo & Fouts, 1997). Due to various factors like small scales, backward technologies, insufficient capitals, and inadequate ability to take risks, SMEs are suffering from heavier environmental pressure than large enterprises, and, more seriously, they even become the victim of fierce competition among enterprises. Consequently, against the background of increasing attention to enterprises environmental problems worldwide, SMEs should have a clear profile themselves, correctly cope with the opportunities and threats brought by environmental problems, adopt proper environmental strategies to foster their own competitive advantage, and improve sustainable development of enterprises.

## III. Restriction Factors of SMEs Environmental Strategies

Environmental strategies are the overall programs for enterprises to collaborate all the production and operation activities with eco-environment. In this sense, enterprises' environmental strategies are restricted by two types of factors. Proper analysis of these factors is the precondition of working out counter measurements, and is beneficial to integrate their competitive factors and build environment-oriented competitive advantage. Generally, the restriction factors of SMEs are as follows.

The first factor is government regulation. At present, majority of enterprises take environmental protection actions with the purpose of influencing Government's environmental regulations. Increasing perfection of environmental regulations and rules has become an essential external condition to promote enterprises to strengthen environmental management. Due to the worsened environmental conditions, all the Governments have enhanced their intervention into the environmental problems, and promulgated relevant

regulations, for instance, the U.S.A has managed to issued a series of regulations like CAA (the Clean Air Act), CWA (the Clean Water Act), RCRA (the Resource Conservation and Recovery Act), CERCLA (the Comprehensive Environmental Response, Compensation and Liability Act), TSCA (the Toxic Substances Act), SARA (the Superfund Amendment and Reauthorization Act) and EPCRA (the Emergency Planning and Community Right-to-Know Act). Japan and some developed countries in Europe and even some developing countries have also issued some acts, which tend to be increasing strict. China has also issued a series of acts to protect water, atmosphere, and resources and eliminate solid waste materials, for example, Environmental Protection Law of the People's Republic of China, Atmosphere Pollution Prevention Law of the People's Republic of China, Water Pollution Prevention Law of the People's Republic of China, and so on. Usually, Government's intervention to the market would apply different effects on the enterprises in the industry; that is, this intervention would result in some winners and losers, namely, some unqualified enterprises forced to withdraw from the market, and others actively taking part in environmentally friendly practices and obtaining competitive advantage. China has started to handle the pollution problems of SMEs since 1995, and a special pollution rectification is carried out once a year. By 2004, the 10th rectification has been held, and approximately over 1,000,000 SMEs have been closed as a result of pollution problems.

Secondly, market acts as another factor. Pressure from consumers is the major restricting factor SMEs are facing. With speeding of the course of industrialization, deteriorating of global environmental pollution, existence and development of human beings are threatened, which has contributed greatly to the growing consciousness of environmental protection, and even the big turn of the people's way of thinking, values, consumers' psychology and behavior. Consumers gradually turn to green food, pursuing eco-health. They tend to pay a high price for the products of some environmental protection features, and refuse those enterprises and products with low environmental performance. Compared to the large scaled enterprises, SMEs could not produce products with high environmental performance, which, as discussed above, implies great threats to the further expansion of the enterprise, especially those exporting SMEs: without improvement of their products and collapse of the green barriers, they could hardly obtain any long-term development. Besides, pressure from the public, green competitors, green suppliers and potential green entrants to the market would also become the realistic threats to the enterprise, and therefore, they have to change their conventional environment-blind views and behavior to obtain a position in the market.

Thirdly, internal factors of the enterprise could also play a role. Plenty of factors existing within the enterprise also affect their environmental strategies. As a complicated organization, an enterprise is composed of staff, managers,

shareholders, and the board et al. These stakeholders have different interests, and consequently, bear different environmental pressure. Managers' environmental consciousness is crucial, and their tasks in directing environmental strategies include defining enterprise's prospects, mission, operating philosophy and targets, formulating innovative strategies, fostering environmentally friendly culture, setting up environmentally friendly organizational structure and training staff, and so on. Only under the guidance of managers' environmental consciousness, environmentally friendly organizational structure and environmental protection culture could be built up to realize environmental organization management and root environmental consciousness into the mind of staffs. Managers should make full use of opportunities to protect or improve environment, positively instill the concept of environmental protection into every department, and build an environmental culture. However, a survey has been delivered among the Chinese managers, and it illustrates that less than 1/3 of the managers think that they have a full understanding of relevant environmental laws and regulations, and majority of them have very weak environmental consciousness, especially SMEs managers. In addition, organizational structures also play a significant role in enterprise environmental strategies. Russo and Fouts (1997) argue that bureaucratic enterprises usually react passively to environmental problems, while organic enterprises tend to adopt positive preventive environmental strategies. Study of SMEs by Castka and Balzarova (2004) points out that the system structure of an enterprise (e.g. ISO 9001:2000) is an effective tool to assign the social responsibilities to the individual enterprises. Some domestic research also proves that enterprises with standardized management system like ISO 9000 are more positive in implementing environmental strategies. In China, organizational structure and system of SMEs are still incomplete, which, inevitably, seriously undermines the implementation of environmental strategies. Moreover, an analysis by a research group of Beijing Normal University implies that SMEs are still faced with plenty of barriers in the process of carrying out environmental strategies. Firstly, financial inadequacy is the most serious problem. Due to their small scales and limited strength, SMEs has seriously inadequate input to environmental protection. Secondly, backward technical support is another barrier. Lin Hanchuan et al (2001) have carried out a survey of among SMEs in Hubei and Guangzhou, and it reveals that the most of them still stay at the technical level of 1980s or even earlier. In recent years, new technologies with environmental consideration are seldom applied in majority of SMEs. The third barrier is related to incomplete policies and social service system of SMEs.

Enterprise environmental strategies are mainly restricted by the three factors stated above. Undoubtedly, these three factors are interactive and dependant to one another, which is shown in Figure 1.

#### IV. Selection of SMEs' Environmental Strategies

Comparatively speaking, factors like government regulations and market are uncontrollable for enterprises, while their internal factors are controllable. Since enterprises could hardly change their situation and behavior by working on the uncontrollable factors, the internal factors become crucial in implementing environmental strategies. However, it is still undeniable that pressure from both the government and market also affect the strategic choices of enterprises, although the former acts in a more direct way than the latter. Petts et al (1999) mention that scholars have already reached an agreement on the driving factors of business environmental performance, and point out further that

abiding by the relevant regulations and laws is them most essential one. For SMEs, controlling and managing power is far more influential than market power and social power. Due to the incomplete market economic system in China, SMEs are usually lack of long-term consciousness, and, as a result, have a slow reaction to market pressure. Furthermore, influence of Government regulations is decided by the pollution level of the enterprise and related industry, and in this sense, using enterprise strength and its pollution level as two dimensions, we have built up a matrix, which could have some implications for SMEs in selecting environmental strategies.

According to Figure 2, SMEs could adopt four strategies for their environmental management: sustainable development, proactive, compliance and adjusting.

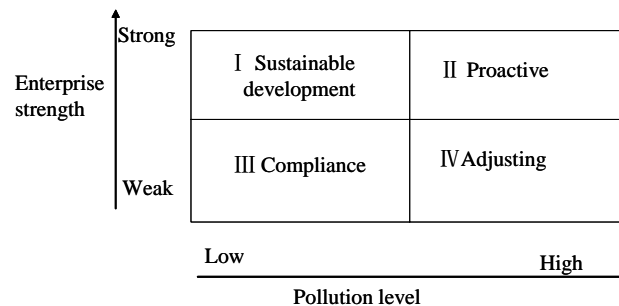


Figure 2. Environmental Strategies of SMEs

##### IV. 1 Environmental Strategy of Sustainable Development

Some SMEs with features of clear organizational structure, competitive products, advanced technologies and sufficient fund usually have strong enterprise strength and low level of pollution, and they are recommended to adopt environmental strategies of sustainable development. Thanks to the advanced technologies and environmental friendliness of their products, environmental protection standards of these businesses usually outperform the regulatory standards of government. These businesses are usually of high competitiveness, for example, clothing industry, and they are faced with no external environmental pressure, and it is a wise decision for them to concentrate on improving competitive advantage by their existing green advantages, and constantly expanding.

##### IV. 2 Proactive Environmental Strategy

Some other SMEs are characterized as having clear organizational structure, competitive products, but these products have relatively serious pollution due to some their specific properties or some technical factors. These businesses enjoy rapid development and certain scale, however, their development is at the price of consumption of resources, for example, chemical industry, and result in serious environmental pollution. Therefore, they are at the top list of government control. Due to the uncontrollability

of government regulations and market factors, these businesses are required to work on their internal factors, for instance, adopting new technologies, eliminating backward technologies with serious environmental effects, or relocating factories in the sparsely populated areas, and control their environmental effects to the minimum. This kind of strategy is "proactive environmental strategy". On the other hand, enterprises should be active to communicate and collaborate with the government, and obtain political support by political tactics. This strategy is tailored for those with strong strength but poor environmental performance, and with implementation of it, businesses could not only reduce their damage to environment, but also lower the unit cost of product, enhance internal strength and competitive advantage.

##### IV. 3 Compliance

Due to various individual strengths, environmental strategies of different SMEs businesses should have different emphasis. Without strong market power, advanced technologies, and large scale, some SMEs are at the beginning stage of development and of little negative environmental effect, such as small high-tech companies. Although Government's regulations have limited impacts on these businesses, they still should strictly comply with these rules, and then devote to expand and upgrade their strength. This is "environmental strategies to comply with". This kind of businesses should focus on solving bottleneck problems like financing,

shortage of human resources, featureless products and weak research ability.

#### IV. 4 Adjusting

Those with backward technologies, uncompetitive products, small organizational scale, and serious environmental pollution are the emphasis of government's control, such as some small paper mills. This kind of SMEs is at the edge of life-and-death, and they must positively adjust themselves, close some production lines with serious environmental effects, and introduce new technologies. However, in the case of lack of cash and human resources, they could consider cooperate with other large companies, and seek for further development. This is what we call "environmental strategies to adjust", which is usually accompanied by the integral strategic adjustment of the company, covering organizational structure adjustment, production technology adjustment, staff adjustment, and product type adjustment.

#### IV. 5 Benefits From Implementing of Positive Environmental Strategies

According to Bichta (2003) and Russo & Fouts (1997), implementing of positive environmental strategies can bring the following benefits to the company:

(1)Economic profits. Pollution means waste. Investments on new technologies can result in effective reduction of raw materials, improved operating efficiency of equipments and facilities, effective recycling and reuse of waste and reduction of operating costs, which would inevitably upgrade the economic profits of the organization.

(2)Reputation. Businesses could positively publicize their environmental policies to win reputation, which is undeniable competitive advantage. Therefore, SMEs in China should be aware that there are no conflicts between implementing environmental strategies, and positively shoulder the social responsibilities and economic profits.

Here, we propose four types of environmental strategies for SMEs: sustainable development, proactive, compliance and adjusting. However, it can not be inferred that a SME could have only a choice for these four environmental strategies to be applied in its environmental management practice. Moreover, in fact we think that these strategies can be utilized in the same SME during its life cycle, and the tactics contented in a strategy and their portfolios should be a continuous pedigree.

#### V. Conclusions

Environmental issues have become the focus of society. However, China enterprises have not paid enough attention to environmental issues, especially those of SMEs. In this paper, it points out that environmental issues of SMEs are imperative. On the basis of analyzing the restrictive factors, we puts forward four environmental strategies based on internal ability and the pollution degree of the enterprises and analyze each strategy in details. It should be pointed out that each environmental strategy has its corresponding

strengthens and weaknesses, and the tactics contented in a strategy and their portfolios should be a continuous pedigree. The further studies should focus on the structure and distribution of continuous pedigree of environmental tactics and its effect direction and intensity with respect to SMEs.

John Naisbitt, author of *Mega trends*, et al has raise the theory that the lager the world economic scale is, the more powerful SMEs are economically. A number of economists also state that with full potential, SMEs will play a main role in 21st century's economic development. At present, China's economy is at the turn of transformation, and SMEs are all faced with the problems of improving their ability to start a second undertaking as soon as possible, and to make full use of resources. However, increasingly rapid development of technologies and globalization of environmental problems do provide a perfect opportunity for SMEs, which requires that SMEs to get rid of their traditional short-term concepts, grasp opportunities, fulfill their social responsibilities, correctly work out and carry out environmental strategies, so that further development and growth could be achieved in the fierce competition.

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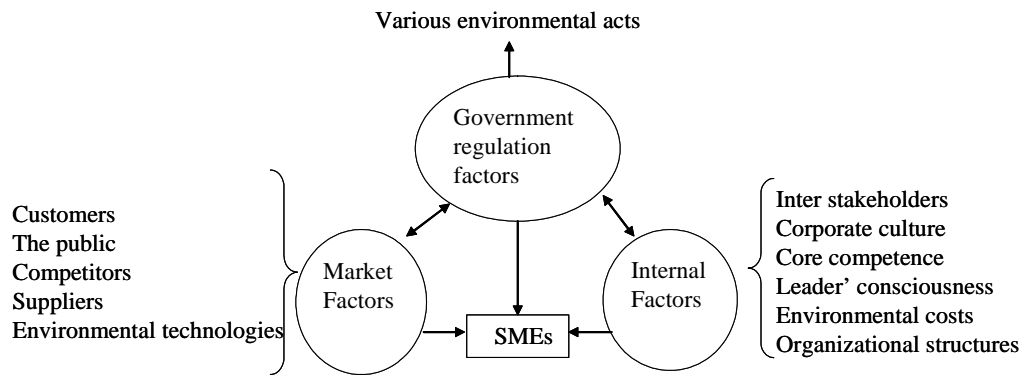


Figure 1. Restriction Factors of Environmental Strategies of SMEs