

Research for Dynamic Mechanism and Path of Green Management in Small and Medium-sized Manufacturing Enterprises

Chen Qi, Jin Kangwei

Zhejiang Normal University, Jinhua, P.R.China, 321004

(E-mail: jhcq2011@163.com; zkw@zjnu.cn)

Abstract: Green Management (GM) is the new focus of the researches in theory and practices within the enterprise management field. On the basis of previous studies and combined with the actual situation in small and medium-sized manufacturing enterprise (SMEs) of Zhejiang Province, this paper analyzed the dynamic mechanism of Green Management by contingency theory. Also, authors discussed about the path of Green Management in SMEs from the both perspectives of the government and the enterprises.

Key words: The small and medium-sized manufacturing enterprises; GM; Dynamic mechanism

1 Introduction

Manufacturing brings human wealth and material civilization, but also brings serious environmental damage, resources shortage and some other series of problems. So, from 1960s, the voice of green management is louder and louder. In this context, on the one hand, the government for the enterprise green management made many positive and practical efforts. On the other hand, enterprise also began to try to green management as strategic tools to gain a competitive advantage^[1]. This sparked much green management theory and the practice exploration. In Carson and Moulden's book "Green is Gold: Business Talking To Business About The Environmental Revolution" (1991), there are some introduction of how the story of North America's world famous company reduce pollution, provide green products, create green management typical case of miracle and legend. And put forward the theory "The green management is the better management". Porter and some others pointed out that if proper environmental standards lead to enterprise innovation and can more efficient use of raw materials and energy resources, reduce costs, enhance product value, and the industry will be more competitive. Also, it could solve the deadlock between environmental protection and competitiveness^[2]. In 1996, ISO launched the ISO14000 series environmental management standard; promote green management theoretical research and practical activities to become more active. Besides, many scholars are researching on the motivation of enterprise green management from several perspectives. Welford deem that consumer pressure, ethics, rigorous legal and potential cost savings drive enterprise to be engaged in environmental concerns^[3]. Hu Meiqing indicates that empirical studies have found that the legality, ecological responsibility, resources, and competitiveness are the main motivations to realize green management initiatively^[4].

But from the results view, SMEs green management approaches are not consistent: some have proactive implementation, and also some have passive implement. Why? How is the dynamic mechanism of enterprise green management? This article attempts to use contingency theory to research dynamic mechanism and path of green management, combined with the actual SMEs in Zhejiang Province.

2 The Analysis for Dynamic Mechanism of Green Management in SMEs

Contingency theory is one of the theories of management sprouted in the early 1960s, the basic point of which is that the management methods used by enterprises base on external environment and internal conditions of the enterprise. The core content of contingency theory is a study on the relationships between environment variables (independent variables) and management functional variables (dependent variable), which is called the contingent relationships. Since the business environment is very complex, it is a function of many variables as follows:

$$y = f(X_1, X_2, \dots, X_n)$$

Where y refers to management methods, X_1, X_2, \dots, X_n refer to related environment variables.

Contingency theory pays close attention to that which environmental variables influence management behavior, and how the different environment variables to manage behavior. Applied with the theories discussed above, Green management behavior, considered as a dependent variable, varies with market demand, governmental action, competitor, the social credit theory, business goals, and some other

variables, which is the result of various environmental factors.

2.1 Green consumption demand pulling power

Consumers will have a strong sense of exclusion on the enterprises which neglect of environmental protection and in the subconscious will give priority to those products produced by the enterprises dedicated to environmental protection. Drumwright's research also showed that 80% consumers in America are willing to pay more for environmentally friendly products ^[5]. This radical changing of consumption and the formation of the green consumer market will guide SMEs to combine conserve resources, protect the environment concept into production and operating process, implementing green management.

2.2 The government behavior guidance

Usually the Government will guide and urge enterprises to implement green management by laws and regulations, policies, in recognition of outstanding and other means. For instance, through legislative and enforcement, government forces punishment manufacturing enterprise excessive using resources, polluting environment, damaging consumer health, non-green manufacturing behaviors; they also develop and implement related policies to give tax offers right for the enterprises which actively adopt of advanced environmental protection equipment, clean energy, and implement recycling resources, or "green subsidies", or procurement favored; government functions sector recurrent to carry out some green enterprise construction excellent appraisal activities.

2.3 The promotion of the international community "green movement" wave

In the beginning of its founding, the world trade organization established the trade and environment committee, which will trade and environmental protection policy linked with sustainable development, as a priority of the world trade organization. In order to protect its environment, natural resources and people's health, developed countries lifted green waves constantly, and making a series of strictly by the environmental protection standards for goods imported under strict limit, such as green packaging system, green technology standards, green environment mark, green tariffs and so on. In 1996, the International Standards Organization (ISO) launched ISO14000 Environmental Management Standard, which attached series attention by the international society. At present, there have been more than 200 countries and regions that introduced and pushed the standard.

2.4 The inherent requirement of enterprise sustainable development

With the increasingly fierce market competition, persistently rising of labor costs and the prices of raw materials, the profit space of SMEs is less and less. The implementation of the green management can not only make enterprise save cost and obtain high added value of green products, namely get considerable green profits, but also strive for to the policy from the government subsidies, namely get "policy returns" of green management. In addition, in the current "green economy" time, the evaluation and approval of social enterprise not only depends on whether it can provide inexpensive and high-quality products and service, but more concern for whether enterprises can provide consumers with green products, social economical utilization resources, recycle waste system and the attention to environmental protection, etc. Thus, for SMEs, only if develop with saving energy to reducing consumption and protecting the environment as the main line of green management, can they make itself improve the initiative development ability and a sustainable competitive advantage in the increasingly fierce competition.

3 Discuss of SMEs to Carry Out the Green Management Path

3.1 The government perspective

3.1.1 Government management system to realize the transformation of the green

The government should take economic, social and ecological comprehensive coordination development as the goal. By building of green management system, the green laws and regulations and policies, the governments conduct public management activities and urge enterprise to implement green management. Specifically, first of all, we shall establish a special legal laws and regulations, and promote SMEs in accordance with the manufacturing of clean production. Secondly, we shall branch lines of business establishment of a scientific energy conservation and emission reduction, and clean production of green standard system to avoid "one size fits all" for SMEs by the unfair treatment. Moreover, we shall organize finance, audit organization and tax departments as soon as possible to carry on joint research involved in the content of the green accounting listed in the accounting elements. Last but not least, we shall set to report the prize to regulate the enterprise production activities, which can give full play to the populace to supervise role.

3.1.2 Cultivate and strengthen public awareness of the green consumption

The public green consumption determines consciousness green demand of the size of the market. At the same time, it also can form powerful social pressure of public opinion, which can urge enterprises to enhance social responsibility. However, on the whole, it says that the real green consumption groups also have not been formed, especially in the vast rural areas. Because of the consumers' weak sense of environmental protection and green consumption, and of the information asymmetry of producers and consumers, consumers is insufficient cognitive about the harm to human health and the pollution to the environment caused during the using of many products and disposition process. Instead, sometimes low price is more attractive, which limits the market capacity of green products and makes a lot of enterprise prefer to pursuit short-term interests rather than insist on the green management.

3.1.3 Efforts to increase financial support to the green management enterprise

If enterprises want to implement green management, they have to invest the development of green products, green technology, improvement of related equipment and facilities, staff training, the establishment of green repository and so on. So, for SMEs, financial weakness is bound to become the great obstacles to implementing green management. For this reason, the government should intensify the financial support to the enterprises which implement green management. For example, under the background of the current increasingly tightening of monetary policy, the government can consider establishing some platforms to SMEs and banks on financing activities, and provide direct financing channels for the enterprises implemented green management; do some preferential loan policies for those green industries with high technical content, deep processing, larger product added value; establish environmental information database and the green management talent cultivation system by the government. Searched experiences of western developed countries, the government financial support plays an important role in green management.

3.1.4 Strengthen the organizations to the development on the key technology

Technology innovation can effectively curb the increased cost of green. But to most of the SMEs at present, green technology development capability is not strong. What's more, the factors such as the long development period of green technology, high fees, the big uncertainties of market demand cause that the green technology development innovation is not so active, the lack of green technology. Thus, these impede the implementation of green management and require our government to organize a wide range of scientific and technological forces to solve the problem. We can establish specialized research institutions of green technology based on different sectors to research on key technologies and common technologies and compensate the defect of green technology development capability: either commissioned some universities to establish research center for green technology, or combine the environmental protection sector, industry, universities and research institutes to form the green production technology development agencies.

3.2 Perspectives of the enterprises

3.2.1 Change the managers' business philosophy

Compared with the big companies, the managers of SMEs which are paid less attentions by public don't have so much green management consciousness and also lack of understanding of the green management. Shown in detail, although some enterprises are to "use green manufacturing and offer green products" as the business purpose, they still use the old management model. And there still exist some enterprises was driven by others such that green management measures are quite arbitrary and the managers cannot reach their own goals, which is called the "slogan" or "follow suit". Therefore, the managers of SMEs must enforce changing principle of management and implementing the green philosophy into the enterprises managements to guarantee reducing or eliminating the pollution during design and manufacture process and to realize the transformation from "controlling end" to "controlling full-process".

3.2.2 Active construction of enterprise internal green management system

Enterprise green management system includes all management system and management activities that benefit enterprises from developing the green production and business operation activities. SMEs management system and management activities are not as normative as large enterprise, so they should establish a new internal green management system in main purpose of reducing and recycling fuel energy during the production process. Secondly, according to the specific situation of the enterprise itself and the ISO14000 demands, they need either set up the environment management system alone, or combine the environmental management contents into the quality management system. The enterprises must be strict to all the steps including product design, material purchase, manufacture process, finished products, use and setup and disposal after using. Also, the enterprises should play an active part and try

to pass ISO14000 certification to get green pass of the international market, eliminate green barriers.

3.2.3 To strengthen the cooperation of enterprises

Because of the limited resources, SMEs should break the original idea of "do it ourselves" and develop the cooperation between the enterprises and communication actively, which can give enterprises more green management information and technical support to realize a win-win situation. At present, the joint between SMEs is mainly the form of enterprise clusters. The core of enterprise clusters is the complementary between enterprise and enterprise and other agencies. On the basis of cooperation to develop green technology, this contact and complementary to each other is very helpful to the SMEs in the manufacturing industry to fight the resources, environment and other aspects of the growing pressure. In addition, SMEs should strengthen the cooperation of large enterprises actively, share the experience and technical advantage of large enterprise green management and improve the level and ability of green management.

4 Conclusion

The 21st century will be a green ecological civilization century. For the purpose of the human society sustainable development, green management will become the basic way to realize the sustainable development of the enterprise. At present, the forces from the government, market, social reputation theory, competitors, the enterprise itself and other aspects are promoting the small and medium manufacturing enterprises to carry out the green management. However, there are still many environmental factors, which are against the implement green management of small and medium manufacturing enterprises. Therefore, also we need the active action of government. At the same time, it is more important for the enterprises to consciously practice and to work together to achieve the win-win road of enterprise and social sustainable development.

References

- [1] Terry T., Emma A., Margaret Bates. Drivers and Limitations for the Successful Development and Functioning of EIPs: A Literature Review[J]. *Ecological Economic*, 2007, 61(23):199-207
- [2] Porter Vander Linde. Green and competitive-ending the Stalemate[J]. *Harvard Business Review*, 1995,(73):120-134
- [3] Welford R.J. Corporate Environmental Management, Technology and Sustainable Development: Postmodern Perspectives and the Need for a Critical Research Agenda[J]. *Business Strategy and the Environment*, 1998,7(1):1-12
- [4] Hu Meiqing, Luo Shoujian. The Empirical Research the Influence Factors of Green Management in Multinational Company[J]. *Journal of Zhongnan University of Economics and Law*, 2009, 169(4):37-42 (In Chinese)
- [5] Drumwright M. E. Socially Responsible Organizational Buying: Environmental Concern as a Non-economic Buying Criterion[J]. *Journal of Marketing*, 1994, 58(3):1-19