

A Research on Innovation of Collaborative Management of Enterprises Orienting Low Carbon Economy

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Abstract The intention of low carbon economy is to cut down the emission of greenhouse gases and make inhabited environment better. In this paper, purpose of collaborative management is analyzed and approaches for innovation are proposed. After analysis to problems that most enterprises have now, it reaches conclusions that enterprise should pay more attention to requirements of inside and outside environment for business affairs, then taking social responsibility and remaining sustainable development while carrying out its collaborative management of innovation.

Key words Low carbon economy; Collaborative management; Innovation; Enterprise

1 Introduction

Low carbon economy was first presented by British government in the year of 2003, which hopes to reduce traditional consumption of energy resource such as petroleum and coal, decrease emissions of greenhouse gas, look for new energy resource and develop economy under the condition of maintaining fine ecological environment. Low carbon economy has reached a common agreement all over the world so that the title of world environment day in year 2008 was defined as “Kick the habit, towards a low carbon economy” by the United Nations (Gao, 2010). Collaborative management is different from office automation which use traditionally, it makes promotion to idea and lever of business management. The goal of collaborative management is to integrate all departments and organizations inside the firm and bring business management into a unified platform so users can work in cooperation for common objectives without duplication of labor and improve efficiency.

Nowadays most of the researches on low carbon economy are focused on fields of government decision making and social development, such as two oriented society and green economy, which are too macroscopic for enterprise to carry out (Fan, 2010). Also the researches on collaborative management are focus on fields of thought of management and construction of model, which are a little abstract for enterprise to knew what to do for there business management (Wang, 2010). After comparing researches on low carbon economy and collaborative management mentioned above, innovative approaches to collaborative management of enterprise orienting low carbon economy are put forward. In this paper, low carbon economy is expected to blend into business management of enterprise and innovation for ways and methods of collaborative management is paid more attention. Enterprise should optimize its economy structure, satisfied requirement from society, enhance market competitiveness, increase income and decrease expenditure and follow a sustainable development road to continue the business.

2 Interactions between Low Carbon Economy and Collaborative Management

When presentation of low carbon economy was given, people have faced a situation with excessive consumption of global resource and growing environment pollution by human beings. While for enterprise, it is also confronted with some challenges, such as shortage of raw materials, high cost of production and hot market competition. The idea of low carbon economy can shed light on management of enterprise, on the one hand it needs to let the operating cost down and change economy structure. On the other hand, it should make expansion and innovation, use advanced management tools to capture commercial opportunities. Collaborative management is at the high lever of business management, comparing to traditional office automation, it has more intelligence, especially on the work flow (Thomas, 2010). Collaborative management provides users a service platform with easy human-computer interaction interface and magical intelligence. Collaborative management combines staffs, resource and tasks of firm with a high degree of collaboration, cuts down consumption caused by meaningless management process. It matches the goals of developing low carbon economy.

2.1 Low carbon economy promoting enterprise reform

As soon as low carbon economy was put forward, it becomes the mainstream of world economy. Low carbon economy ushers in transformation to production and consumption which people used to

evolve, it unseal a new round of changes in the world economy (Toshihiko, 2010). The fundamental of low carbon economy is innovation to energy saving and carbon emission reduction. For this reason, industrial structure should be optimized and lines of development should be updated. Low carbon economy makes great influence on people's living environment. Following this trend, low carbon city, low carbon life, low carbon society and so on are accepted by public and get popularized. Furthermore, low carbon economy has significant value to business management of enterprise. If enterprise want to succeed and be respected in market, it must adjust to the social requirement when it runs business, that is, enterprise needs to transform productive mode to low carbon economy and put strategy and activities into practice with reform and innovation, so it may have opportunities to make breakthrough to constraint of resource and technology and keep competitive strength.

2.2 Collaborative management inspiring low carbon and efficiency for enterprise

Collaborative management reflects the people-centered thought because the common task is completed by persons with their cooperation in the working procedure. Flow of information, application and business of enterprise will be integrated effectively. From system structure of collaborative management which was shown as figure 1, it is known that all sub-systems which belong to each department and organization inside enterprise have combined to a unified collaborative management system with a more whole powerful functions than gathering what each sub-system has and plays overall advantages. Collaborative management and low carbon economy have the same vision. Collaborative management can save business hours, avoid duplicate resource consumption of enterprise and release staffs from limitation of time and space. Collaborative management appears as paperless and anywhere office while on an inside view, it brings enterprise with group collaboration and intelligent decision, turn energy conservation and emission reduction into reality and forms low carbon and effective mode for enterprise running.

3 Issues of Enterprise Management Innovation

Although market has features of economic globalization and fierce competition, outstanding enterprise can access to business opportunities among rapidly changing market information by its ability of innovation. Management innovation can compel enterprise to requirement of market and society, adjust business strategy, optimize product structure and gives more investments in technology innovation. When Enterprise bring forth new ideas in collaborative management, it should not only care about the existing situation of production and equipments, but also pay attention to research and plan in future, which can ensure enterprise to walk on a sustainable development (Bruno, 2010). Innovation of collaborative management is not making simple changes in manner and structure of enterprise. Actually it is the creation of ways to resource integration and accomplishment of assignment and target which enterprise should fulfill. It is innovation that enables enterprise to obtain efficiency and profit. During process of innovation, enterprise could encounter some issues which reveal vulnerable segments of business management.



Figure 1 System Structure of Collaborative Management

3.1 Capacity of developing low carbon economy needs strengthening

Booming low carbon economy all over the world makes challenge in the whole industry chain. Under conditions of energy shortage, environmental pollution and financial crisis, factors of production, such as raw materials, intermediate links and merchandise sales have to input more than before. According to market manifestation, products which provide attributions of stable quality, economic

price, environmental protection and low carbon seems to be more popular to customers for their competitive advantage. Low carbon economy let enterprise must shift its growth pattern of gaining profit from extensive type to intensive type. That means enterprise should transform its generation type from prodigal input, consumption with low output to managing energy and emission with high profitability. In order to achieve this ideal effect, new technology and workmanship needs to be utilized by enterprise. Particularly for those firms of developing countries, it need to strengthen capacity of producing low carbon commodity adapted to rules of international market access according to demand of this tendency.

3.2 Art of collaborative management needs improving

Objects that collaborative management disposes are groups inside enterprise which complement each other to accomplish common tasks with competition and cooperation. All elements of value chain are brought into a unified supervisory system by collaborative management to pursue the maximized interests for enterprise. Most firms have constructed information system which makes changes in staff work from telephone, site meetings and paper files to instant messaging, video conference and E-mail, even systems as customer relationship management and enterprise resources plan can be able to carry out (Watson, 2007). In spite of that, these decentralized systems always do things in its own way and have too many barriers of data, procedure and administration to execute communication. Information islands with meaningless running links are generated artificially and it leads to excessive consumption of resources from lack of collaborative management. While having advanced information technology and software and hardware systems, how to make use of these platforms to incarnate art of collaborative management is the sticking point in fact, for it can bring the excitement of cutting consumption down and improving efficiency.

3.3 Knowledge of management innovation needs deepening

Management innovation is capable of transforming competitiveness from capitalized cost, labor power and technology advantages of enterprise. Notion, organization, technology and institution of firms should get reformation when enterprise engages in innovation activities according to market demand. General consensus and rapid promotion of low carbon economy have profound practical significance for all of us. As we known global warming leads environment has been damaged gradually, which changes natural resources, labor costs and market condition related to business more or less. Links of enterprise, such as production, supply, sale and logistics are all affected, also policies of finance and taxation become severer than before. If enterprise is short of knowledge and progress of management innovation, it can not be confident of facing up to challenges and opportunities which come from low carbon economy. Most current firms of developing countries are at the end of product value chain. Corporations should lay more emphasis on administration and innovation, otherwise, it may be washed out in the low carbon era because of inability to comply with the new standard of what society and economy need. Enterprise must conduct management innovation from strategy and tactics positively to respond to the circumstances of low carbon economy.

4 Approaches to Collaborative Management Innovation

Economy development has close connection to survival and development of enterprise, also it is a hot point to be concerned by the international community. Facing the call of low carbon economy, many governments have made policies and taken activities in recent years. The British government published an energy white paper called our energy future: creating a low carbon economy in year of 2003. The Senate of United States put forward Low Carbon Economy Act in year of 2007. One of Chinese Political Consultative members named Wu Xiaoqing proposed low carbon economy discussion on conference in year of 2008. Lots of governments have made their promise to carbon emission reduction on Copenhagen climate summit in year of 2009. Group of twenty governments have discussed the outlook of global economic in Canada in year of 2010. Economic crisis has not dissipated at present, however, Euro debt crisis has brought the world new shadow of economic development. Government is the navigator which is responsible for formulating policies and create favorable external environment for enterprise, while enterprise is practitioner to develop economy. Enterprise should take advantage of existing conditions and improve the market competitiveness to undertake the responsibility and obligation which conferred by age and contribute to economic and social development.

4.1 Utilize scientific management thought

Business Management consists of activities of plan, organization, cooperation and control and so on. Coordinate activities play vital roles in enterprise management. Practical situation has turned it out

that collaborative management could not make any innovation without mass collaboration. When make innovation of collaborative management, enterprise should utilize scientific management thought, pay ceaseless efforts to improve productivity and efficiency and implement activities reasonably. For innovation of collaborative management, enterprise needs to replace experience with rationality, restrict behavior by criterion, promote cooperation though coordination and apply scientific idea to inspire management innovation.

4.2 Orient low carbon economy trend

It is inevitable to develop low carbon economy. It is an inevitable choice for enterprise too. On the view of industrial structure, particularities of low carbon economy are low energy consumption, low pollution and high added value. Figure 2 and Figure 3 show the ranking distribution of number and industry type among the top 500 companies of the world which was announced by Fortune Magazine in year 2009. From the number distribution, the top 10 countries have about 80% of the top 500 companies. From the industry type distribution, the top 10 industry types own about 60% of the top 500 companies. Only China is developing country while others are all developed countries among the top 10 countries.

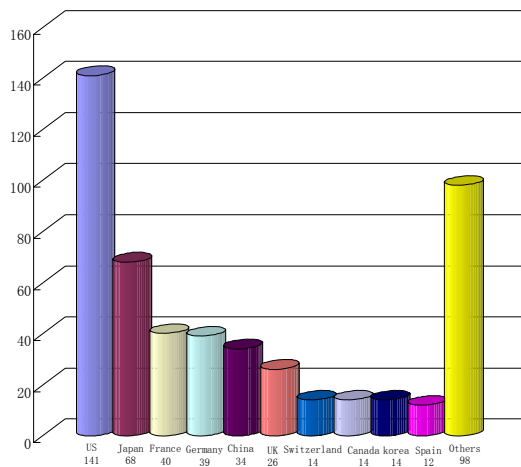


Figure 2 Top10 Number Ranking Distribution

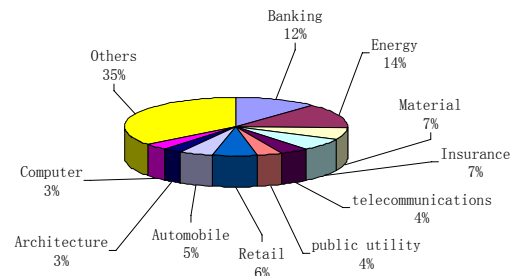


Figure 3 Top10 Industries Ranking Distribution

Industry types such as banking, insurance, automobile, telecommunications and computer have more companies than what energy and raw materials industries such as petroleum and steel have, the former has about 150 companies and the latter has about 100 companies. Thus it can be seen that enterprise must follow the trend of low carbon economy to start innovation of collaborative management, especially for those companies which are short of advantage of monopoly industries like energy and raw materials. As long as enterprises multiply their efforts to develop high-tech and high value-added industries, furthermore, give customers commodities with excellent service, they will be invincible in the competition for a long time.

4.3 Conform to social development requirement

Enterprise is not only the creator of social wealth, but also consumer of energy resource. Enterprise should unify the economical value with the social value and economic development with nature environment in order to realize the win-win solutions which are called two types of social accompanying resource-saving and environment-friendly. If enterprise fails to conform to social development requirement, it will face risk and be punished by administrative department and law enforcement. Currently lots of countries pay much attention to environmental protection issues in the world and frame relevant policies and regulations to guide and restrain the business activities. In the forthcoming 12th Five-Year (2011-2015) development outline, Chinese Government has emphasized that economic development should be unity with social harmony and multiple systems, such as energy supply, financial and tax, price of supply and demand and production and consumption will be constructed to force enterprises to implement energy-saving and emission-reduction. The requirement of social development will bring a profound impact on the business environment. Enterprise should deal with coordination of various social factors well to adapt to the outside requirement conform to social development requirement.

4.4 Deploy advanced information technology

Business management can not deviate from application of information system. Each innovative of information technology has brought new leaps to business management. Cloud computing, Internet of things, earth wisdom and semantic web which represent the most advanced information technology have launched a new round of global information technology revolution and provided enterprise with a higher level of application platform. With deployment of such powerful technology, enterprise could shift information management to knowledge management and transformed manual handling to artificial intelligence. The development of modern civilization can't deviate from innovative activity and practice. By the state-of-the-art information technology, everything involved in business matters can be connected to an intelligent network with huge information. Business management is placed into this powerful computing platform so that administrators can access the collaborative management system anytime and anywhere, then they can master the real-time situation of production, supply, logistics, warehousing and other links of the enterprise. Technological innovation has made content and form of collaborative management become more efficient and intelligent, so it has promoted enterprise management at a high level and reduced production cost continuously.

5 Conclusion

Currently low carbon economy has been an inevitable trend. Many countries have established appropriate policies and regulations to carry out economic restructuring, technology optimization to promote development of low carbon economy. A respectable company not only should have good economic prospects, but also possess high sense of social responsibility to adapt the requirements of social development. Enterprise should make contributions to the harmonious ecological environment. Low carbon economy. Low carbon economy is both opportunity and challenge for enterprise and its administrators must have clear understanding to the direction of what the society and economy go forward and seized business opportunities on a sustainable development way.

When implementing collaborative management, enterprises should adapt scientific management thoughts, and low-carbon economy oriented, and meet requirement of social development. Through advanced information technology and fully integrated internal and external resources, it reduces spending, and improves economic returns. Creation does not only improve the core competitiveness of business, but also provides good drive for sustainable development. In the course of development, enterprise has influenced by many internal and external factors. Committed itself to collaborative management actively can effectively combine the goal of enterprise with every department and their working process. By making use of advanced information technology platform, collecting needed datum widely and analyzing them intelligently, it provides scientific policy-decision to business management and promotes healthy development of enterprises' economy.

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