The Impact of Competitive Experience on Enterprise Performance in a Green Innovation Environment

Fenghai Zhang¹, Yixin Jiang²

¹Department of Business Management, Dalian Polytechnic University, Dalian, China
²Department of Business Management, Dalian Polytechnic University, Dalian, China

Abstract: This is a constantly changing era. With the development of economic globalization, domestic and foreign enterprises are constantly facing fierce competition. The so-called "pulling the trigger and moving the whole body" refers to the chain interaction effect between the competitive behavior of enterprises and competitors, and its means are hierarchical and mutually influencing. In recent years, not only has national policies strongly supported green environmental protection, but green innovation, as an important component of an enterprise's core competitiveness, is not only affected by the intensity of competition between both sides of the competition, but also has a catalytic effect on improving enterprise environmental performance. In the context of green transformation, enterprises have spontaneous learning behaviors, constantly learning, selecting, and accumulating competitive experience. This article discusses the key factors that affect the viability of organizations in the process of green transformation, as well as how enterprises can obtain competitive advantages in a constantly changing environment, providing useful insights for improving organizational viability.

1. Introduction

In July 2020, the National Development and Reform Commission and other nine departments jointly issued the "Notice on Solid Promotion of Plastic Pollution Control", strictly using non-degradable plastic bags, disposable plastic straws, and disposable plastic tableware. For enterprises, from focusing on rapid economic growth to focusing on economic green development, how to maintain their competitiveness in the changing logic of competition has become an important issue.

Enterprises were once the main producers of pollution. With the increasing demand for green in the market, they are now becoming pioneers in advocating environmental protection. According to the theory of the Red Queen, the business environment changes, and the logic of competition changes accordingly, and enterprises are prone to fall into the lagging effect of competition. Therefore, it can also be seen that the more recent competitive experience is more conducive to the development of the enterprise, the more long-term competitive experience is not conducive to the survival of the enterprise. (Ji Fang, 2011)⁴

So how much impact does the change in the logic of competition brought about by the green transformation process have on companies? How does competitive experience affect enterprise viability? How can companies use competitive experience to survive better in a green environment? From the perspective of the Red Queen theory, this article explores the impact of competitive experience on corporate viability by analyzing the changes in the logic of competition, and provides suggestions for companies to improve their organizational viability.

2. Theoretical Summary

Li Haiping et al. (2005)² proposed that the purpose of implementing green innovation measures in enterprises is to promote energy conservation, emission reduction, and improve environmental quality. Under the premise of sustainable development, the benefits of green innovation are not only the reduction of environmental pollution, but the greening of products and technologies through innovation has brought high benefits to enterprises. The development model of enterprises pursuing profit maximization has brought about high pollution, wastewater discharge, and high energy consumption. Under the background of green innovation, enterprises should strive to create more social value.

The Red Queen theory includes two aspects:
Competitive experience: Barnett and Hansen (1996) introduced the Red Queen theory to organizational survival: the target organization learns in order to make itself stronger and gains a slight advantage in the competition, which in turn promotes the learning behavior of competitors; the competitiveness of competitors is enhanced, resulting in the target organization being at a disadvantage in the competition and the lack of resources, so that another round of problem search is carried out. The two compete with each other and influence each other, accumulating rich competitive experience. Deng Xinming, Guo Yanan (2020) proposed that the more recent competitive behaviors, the more advantageous the competitive experience it produces will be to the enterprise and the more it can improve the viability and competitiveness of the enterprise; the more long-term competitive experience the more adverse the impact on the enterprise. Will reduce the viability and competitiveness of enterprises.

Competitive Logic: Competitive logic has evolved in the competition between enterprises again and again. It is the rules of competition, the way of competition, and the key to the success or failure of competition. Enterprises will discover the competition logic after gaining a wealth of competitive experience. This article discusses based on these two aspects.

3. Changes in the logic of competition in the environment of green innovation

Since the 19th National Congress of the Communist Party of China, the practical implementation of the development concepts of innovation, coordination, greenness, openness, and sharing, taking into account economic and ecological benefits, and promoting sustainable development have become an important issue for national development.

Green innovation requires enterprises to carry out technological transformation to achieve the purpose of reducing pollution. According to the Red Queen theory, companies will learn independently to discover and adapt to the logic of competition; the logic of competition is the rules of competition, the way of competition, and the key to the success or failure of competition. Due to the requirements of green transformation, the market's competition rules, competition methods, and business success or failure. The standards have changed, and the changes in these elements are in line with the definition of competitive logic. Therefore, the Red Queen theory is suitable for studying the relationship between the environment, ecology and individual enterprises. The transformation of green innovation is embodied in a series of changes in policies and standards from a macro perspective, and embodied in the emergence of new technologies, the rise of new competitors, changes in competitive concepts, and so on from a micro perspective. The original competitive environment is very different from before. According to the Red Queen theory, when the environment undergoes major changes, the above-mentioned series of changes all reflect that the logic of competition is also changing accordingly. At this time, the competitive experience derived from the fierce fighting in the original competitive logic will no longer apply.

Companies that incorporate green into their corporate strategy, guided by government policies and corporate strategies, can effectively alleviate or even circumvent many restrictions that companies face in the process of green innovation transformation, and help companies better and faster adapt to the new competitive logic; if you are addicted to the past achievements, the impact of lagging competition will also cause great harm to the enterprise. (Deng Xinming, Guo Yanan, 2020)

4. The impact of competitive experience on enterprise viability

The theory of the Red Queen comes from the book "Alice in the Mirror". Alice asked the Red Queen: "Why am I still in the same place after running for so long?" The Red Queen replied: "In this country, if you want to stay in It must keep running!" If an enterprise wants to gain a competitive advantage, it must continue to learn, and the improvement of enterprise capabilities triggers the learning behavior of competitors. This is a process of co-evolution. In this process, the company can accumulate a wealth of competitive experience, which is the result of the company's "continuous running".

Today, the ISO 22316 standard adds organizational acceptance and adaptation to environmental changes in the definition of organizational viability. This extension not only requires the company to achieve its goals, but also requires the company to have the ability to survive and grow. It focuses on the organization's adaptability and whether the organization can withstand the test of time. The reasonable operation and continuous success of the company can be comprehensive and perfect. As shown in Figure 1, ISO 22316 clarifies the six principles of enhancing the viability of the organization.

When a company gains experience in competition from time to time, it will naturally be more able to adapt to the external environment. However, there are no absolutes, and the impact of historical experience on business operations is extremely complex. The closer the competition occurs, the greater the impact on the company, and the impact of long-standing historical experience will gradually decline due to memory and environmental changes. When the logic of competition changes, the company's original competitive experience may have a negative impact on the company because it does not adapt to the new competitive environment. Every competition has a subtle impact on the company. Therefore, the closer the time of the occurrence of competitive behavior, the closer the competitive experience generated will be to the changing competitive logic, the greater the impact of the generated competitive experience on the enterprise, and the greater the survival and competitiveness of the enterprise; the more long-term competitive experience, the more in line with the original competitive logic, the more unfavorable the impact on the enterprise, which will reduce the
enterprise’s viability and competitiveness. If you insist blindly, the company will fall into a competitive trap, and thus go into decline.

In addition, companies with relatively rich competitive experience are more adaptable to the environment than those without competitive experience, and are more conducive to the survival of the company. According to the resource-based theory, the internal organizational capabilities, resources and knowledge accumulation within an enterprise are the key to explaining that an enterprise obtains excess returns and maintains a competitive advantage. Learning in the competition can bring more knowledge to the enterprise. Like the external environment, the internal resources of the company also play a major role and play a decisive role in creating a competitive advantage in the market. This shows the importance of the accumulation of corporate knowledge and historical competitive experience for companies to face competition.

![Diagram of ISO 22316 Principles](image)

**Fig. 1** The six principles of ISO 22316 to enhance the viability of an organization

### 5. How companies can improve their survivability

From the internal point of view of the enterprise, the competitive logic of using competitive experience to adapt to changes is the key point, and attention should be paid to selecting the essence and removing the dross. First of all, companies with rich competitive experience have a certain degree of sensitivity to changes in the environment and can better adapt to changes in the logic of competition. However, in order to avoid blunders, business managers should be more rational and sensitive to changes in the market environment. Carefully compare the difference between far and near competition, and avoid blindly self-confidence because of past success. According to the Red Queen's competition theory, companies with rich competitive experience, especially those that have gained a competitive advantage because of this, are more likely to ignore the basics, and the environment is not as careful as they were when they were fledgling. This way, it is easy to produce short-sighted learning. This leads to corporate cognitive biases. Historical experience can help companies to a large extent, but companies must make reasonable trade-offs and make good use of historical experience: for example, some traditional processes and routine processes owned by companies may become obsolete over time and cannot adapt to the new environment. Although the recent innovative strategic actions require more effort to understand, the advantages they bring to the enterprise are huge. Special attention is needed to understand the recent actions of competitors.

### 6. Conclusion

The pace of competition cannot be stopped. Market competition is like the kingdom in "Alice in the Mirror". There is no eternal victory, and no one will stop and wait, because the only consequence of waiting is ruthless elimination.

Nowadays, a new trend of advocating environmental protection is set off at home and abroad. As a participant, companies bear the brunt of changing their development concepts, incorporating green concepts into corporate strategies, and using government policies as guidance. Only through continuous learning, improving their own capabilities, and absorbing experience in every competition, can they alleviate the many restrictions they face in the transformation of green innovation, gain a relatively equal position in market competition, and help them become better and better. Quickly adapting to the new competitive logic can help companies gain a competitive advantage within a certain period of time.

### References:

