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The Influence of Innovation Strategy on Enterprise: A Pedagogical Case Study of Lego

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Master in Management

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**BUSINESS
SCHOOL**

Department of Marketing, Strategy and Operations

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Abstract

Toys are an indispensable partner in the growth of children, which can give children boundless joy. Toys can not only satisfy children's playful nature, but also be an important tool to cultivate children's good intelligence and healthy psychology. The growth of the toy industry has given rise to big toy companies such as Lego, Hasbro and Mattel. With the progress of the Internet and the development of electronic games, the traditional toy industry has been impacted to some extent. In 2019, in 13 major markets around the world toy sales fell by 3%, Australia, Belgium, Brazil, Canada, France and the United States have all seen sales decline and even closed large retail stores in 2019.

In the face of the current depressed market situation in the toy industry, Lego Group, on the contrary, has achieved sustained profits. Recent data show that Lego saw significant growth in both sales and profits in the first half of 2020, reporting a 14% rise in sales and a 7% surge in revenues.

The purpose of this paper is to provide a pedagogical case study on the Lego company to the audience – management undergraduate students. The case allows students to apply important strategic tools like Porter's Five Forces model and the VRIO model, and concepts related to innovation and ambidexterity to the case, in order to combine theory with practice, which is hoped will have a positive impact on their understanding of the matters and ability to apply the concepts in new settings.

Key Words:

Toy Industry; Porter's Five Forces model; Strategic Tools; VRIO model; Lego

Resumo

Um brinquedo é um parceiro indispensável para o crescimento de uma criança e pode dar-lhe prazer ilimitado. Os brinquedos não só satisfazem a natureza lúdica das crianças, mas também são uma ferramenta importante para desenvolver a sua inteligência e uma mente sã. O desenvolvimento da indústria dos brinquedos deu origem a grandes empresas de brinquedos, como a Lego, a Hasbro e a Mattel. Com o avanço da internet e o desenvolvimento dos jogos de vídeo, a indústria tradicional de brinquedos sofreu um impacto. Em 2019, as vendas em 13 dos principais mercados mundiais de brinquedos diminuíam 3%. Na Austrália, Bélgica, Brasil e Canadá registaram-se quebras de vendas e viram-se fechar grandes lojas retalhistas.

Face à atual situação do mercado dos brinquedos, o grupo Lego conseguiu manter a sua rentabilidade. Os dados mais recentes mostram que a Lego teve um crescimento significativo nas vendas e nos lucros no primeiro semestre de 2020, com um aumento de 14% nas vendas e de 7% nas receitas.

O objetivo desta dissertação é apresentar um estudo de caso pedagógico sobre o grupo Lego ao público alvo - estudantes de licenciatura na área da Gestão. O caso permite aos estudantes a aplicação de ferramentas estratégicas importantes na gestão, como o modelo das cinco forças de Porter e o modelo VRIO, e a integração de conceitos relacionados com a inovação e a ambidestria; que se espera tenham um impacto positivo no seu entendimento destas matérias e na sua capacidade de as aplicar noutros contextos.

Palavras-chave:

Indústria dos brinquedos; Modelo das 5 Forças, Modelo VRIO, Lego

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List of Abbreviations

CEO - Chief Executive Officer

DKR - Danish Krone

EU - European Union

NPD - New Product Development

OECD - Organization for Economic Co-operation and Development

P & G - Procter & Gamble Company

PS - Playstation

REACH - Registration, assessment, licensing and restriction of chemicals

R&D - Research and Development

RBV - Resource-based view

RoHS - The Restriction of the use of certain Hazardous Substances in electrical and electronic equipment

SMEs - Small and Medium-sized Enterprises

USD - United States Dollar

VRIN - Value; Rare; Inimitable; Non-Substitutable

VRIO - Value; Rare; Inimitable; Organization

WEEE - Waste Electrical and Electronic Equipment

1.Introduction

In today's fast-paced, technology-driven and increasingly competitive business environment, the innovation ability of firms can be a fundamental source of success and survival (Abbing, 2010; Cho & Pucik, 2005). Innovation has been proposed to be the most critical factor for a company to have sustainable competitive advantage (Slater, Hult & Olson, 2010). A good example of innovation is Lego, a company founded 88 years old, based in Billund, Denmark (Lipkowitz, 2012).

In the first half of 2015, The Lego Group became the world's largest toy company by revenue, with sales amounting to US\$2.1 billion. In spite of this achievement, things have not always gone well for the company over the course of its history, and it has even found itself on the brink of bankruptcy in the past.

Lego was founded by Ole Kirk Christiansen and initially made wooden toys. In 1958, when Ole's son Godtfred took charge of the company, the modern Lego model -- the plastic splice block was born. In the 1990s, Lego fell into unprecedented business difficulties (McLean, 2009), until in 2004, Jørgen Vig Knudstorp became CEO and the company's top management began to implement a new approach to overhaul the company's strategy and results (McLean, 2009).

The purpose of this project is to elaborate a pedagogical case study of Lego, it is expected that through the analysis of the Lego case, the target audience of this project -- undergraduate management students - will not only have a deeper understanding of the company, but crucially have the opportunity to apply strategic management concepts and frameworks. It is hoped this case will have a positive impact not only on students' grasp of the relevant concepts but also their future careers.

The next chapter presents the Lego case, introducing the company, its history and its innovation strategies.

Chapter three identifies both the intended audience and the pedagogical objectives of the project.

Chapter four is a literature review, which discusses relevant literature on industry analyse, internal analyse, innovation, the relationship between innovation and enterprise, organizational ambidexterity.

Chapter five, Methodology, indicates how the data for the compilation of the project was obtained and which steps were followed to compile the project. The presentation plan; proposed strategic questions; answers to the proposed questions and resolution slides are presented in the sixth chapter, under the title Case Resolution.

The lessons from the case and managerial implications are presented in the seventh chapter and conclusion of the project are discussed in the last chapter.

2.The Case Study

2.1. Historical Overview

The inventor of Lego bricks was Ole Kirk Christiansen. He was a skilled carpenter and loved to make small toys in his youth. The year 1932 was a difficult and memorable year for Christiansen. Because of the impact of the great depression, craftsmen were not receiving orders. But he remained enthusiastic about life and his career, and was willing to try new opportunities and new technologies. He started making household products and then made a decisive change by positioning his wood factory's products as toys. His decision was met with some opposition from family and friends, as most people did not realize the importance of children's toys. But Christiansen said toys are always a child's most important companion, and children cannot live without them at any time. In fact, he made the right decision, as later, that wood processing factory would become the foundation of the international toy company. Christiansen began applying his fine wooden craft to wooden toys, and in 1934, he set out to come up with a name for his company and products. Eventually, he came up with the name: Lego which was trademarked in 1954.

In 1940, Denmark was occupied by the German army, and the war gave Lego a chance to grow. First, the government banned the import of toys. Second, the government banned the use of metal and rubber in toys. From 1940 to 1942, Lego's production doubled. However, in 1942, a fire nearly destroyed the Lego factory, but with the help of family and employees, the factory was miraculously rebuilt from the ruins. After the reconstruction, the Lego factory added some modern large-scale production equipment.

After World War II, Denmark began using plastic, and in 1947 Lego bought a plastic injection molding machine. In 1949, the first plastic Lego bricks came out. Lego bricks are developed in the spirit of traditional wooden blocks, which can be stacked or "locked" together. They have rounded "studs" at the top and a hollow rectangle at the bottom that stick together, but not so tightly that they cannot be separated. Soon after, Lego came out with bricks specifically designed for children aged 3 months to 5 years. The blocks were eight times bigger than the "ordinary"

blocks currently sold, to prevent babies from eating them.

In the mid-1970s, the company introduced its core product, “the Lego Town Kit”, which children could use to build entire towns, including houses, shops, cars and gas stations. By the 1980s, Lego was rolling out new product lines, from “space castles” to “pirate ships”, to enrich its system. By the mid-1990s, the company was a large groups, with 45 branches worldwide, and nearly 9000 employees.

2.2. Lego over time

From birth, transformation, rapid growth, hesitation and decline to the current rise, in this project, we divided its development history into five key stages.

a) The Beginning (1934-1958)

The inventor of Lego bricks, Ole Kirk Christiansen, bought a wood shop in Billund in 1916, and started by mainly building houses and furniture (Hansen, 1982). In 1924, Christiansen's workshop burned down (Wiencek, 1987), so Ole built a larger space and further expanded his business. During the Great Depression, Ole had fewer customers and had to focus on small projects. In 1932, Ole's shop began to make wooden toys (Hansen, 1982). In 1947, Ole invested heavily in plastic toys and became the first Danish toy manufacturer with plastic injection molding machines (Hansen, 1982). Then, Ole and his son Godtfred were given samples of the chain plastic bricks produced by Kiddicraft (Hughes, 2013). The first pieces of plastic Lego bricks came out in 1949. However, in the beginning, the market response was not ideal. At the time, the belief in the industrial environment was that "plastic toys could never replace sturdy wooden toys "(Wiencek,1987).

The real push for the modern prototype of Lego bricks began in 1950 when Ole's son entered the company's management. In a conversation with an overseas buyer, Godtfred was struck by the idea of a toy "system", in which many toys were added to a range of related products. He evaluated their existing products and decided that plastic bricks were the best choice for such a "system". In 1955, Lego released its "urban planning" system, using building blocks. But from a technical point of view,

there were problems: their "locking" capabilities were limited and not universal¹. In 1958, the brick underside was improved with hollow tubes². This change added basic support for better locking capabilities and enhanced versatility. After a decade of trial and error, Lego bricks with modern prototypes were patented in Copenhagen in 1958³.

At this stage, the Lego group formed its core competitiveness by developing multiple series of products and improving its production systems.

b) Growth Period (1958-1978)

When Godtfred took over the company in 1958, he established the six Lego product principles: Limit size but not imagination; Make it affordable for consumers; Simple, durable and diversified; Suitable for men, women and children; Classic toys, no need to update; Smooth distribution channels.

In 1960, another warehouse fire hit the Lego group, consuming much of the company's stock of wooden toys. Mr Godtfred at this point thought that the plastic line was strong enough to get rid of the wooden toys. As a result, Lego cleared out most of its wooden inventory and began selling the plastic bricks as its core product.

The first Lego set was released in 1964. In 1966, one of Lego's most successful series -- the "Lego Trains System" was released, which included buildable trains. This series of products included locomotives, tracks, stations, signal boxes and other buildings beside tracks.

In 1969, the Duplo system went on sale. It is a line of Lego products designed for children aged 1 to 5. To make Lego accessible to smaller kids, they changed the size of the original toy. Duplo bricks are twice as long, wide and tall as traditional bricks. They are therefore easier to use and less likely to be swallowed by small children.

In 1971, Lego began to target girls by introducing furniture pieces and dollhouses; In 1972, Lego added boat and ship sets; In 1974, humanoid toys with postural arms appeared in the "Lego family" sets, and the following year, the company introduced

¹ <https://www.Lego.com/en-us/aboutus/Lego-group/the-Lego-group-history>

² Toy building brick US 3005282 A

³

<https://web.archive.org/web/20080131130615/http://www.time.com/time/world/article/0,8599,1707379,00.html>

an early version of its "minifigure" Lego person. This is the company's second most important design after the building bricks themselves.

The first Lego logo was introduced in 1934. It was a rather uninspiring design, though, with the word Lego spelled out in an ordinary, black font. Over the years, the logo would undergo a number of iterations before the company settled on the logo we are now familiar with in 1973⁴. In 1998, digital dissemination became more widespread, to match the spread, Lego further optimized its 1973 logo, adjusting the spacing and curving, that's the LEGO that we know now.

Figure2.1 The Lego logo of 1934 and 1998



Source:Logo Design Love

Lego's biggest achievement during 1958 to 1978 has been to move from making individual toys to creating entire play systems. They built an integrated system of interrelationships between different toys to form repeated sales and create a scale advantage. With this design philosophy, Lego makes all the bricks compatible, and all the innovations are based on the systematic innovation of Lego, so that products of different shapes, different sets and different eras can be put together.

c) Maturity Period (1979-1994)

In 1979, Kjeld Kirk Kristiansen was appointed President of Lego, and three questions about Lego management system are put forward

First, who are the target customers of Lego? Lego is very clear that the building blocks they produce are to help children create unlimited imagination. Therefore, Lego has always placed the needs of children as important as the products of the

⁴ <http://blog.logomyway.com/history-of-Lego-logo-design/>

enterprise.

Second, what kind of products can impress customers? Three product series were launched by Lego in this period – the Duplo series, the Lego architecture series and the Scala series, each aimed at different target customers. Duplo consisted of large bricks for younger children; the Lego architecture series is responsible for the production of the basic puzzle set that forms the core of the Lego system; the Scala series was specially developed for girls, to assemble jewelry products.

Third, how do users experience it? Duplo series for children, Lego Building series and Scala series for girls are all decisions based on insight into the target audience.

These measures led Lego to a 15-year period of rapid growth, from 1979 to 1993, Lego's sales increased more than eight times.

d) Decline Period (1995-2004)

In the 1990s, electronic toys became more popular, and traditional toys gradually declined. Lego company hired Danish corporate transformation expert Paul Bragman to reorganize the company. However, it did not expect that this would directly lead Lego to the verge of bankruptcy. Bragman and his management team started to implement a radical development strategy for Lego, greatly increasing the number of products. From 1994 to 1998, the number of new toys produced by Lego reached three times what they originally had. On average, five new product themes were introduced each year. However, the problem was that most of the newly added themes did not integrate well with Lego's existing product lines. This resulted in several problems:

First, each new product theme required new parts, which implied the development of new molds and the introduction of new production lines. This led to a sharp rise in production costs and a sharp decline in product profit margins. Second, the degree of innovation of the new themes was too high, and the differences with the existing Lego theme products in style, form and audience were too large, resulting in a failure to attract new users and a loss of old users. Third, the market had a limited ability to “digest” new products. The acceptance of new products by consumers was a process that takes time. Lego launched new products too often for consumers to adopt quickly,

thus affecting market performance. Not only that, the new R & D team also cut off the Duplo series that Lego had been doing well for many years, trying to replaced it with the "Lego Discovery" series.

Lego's profits started declining in 1992, and in 1998, the company posted its first-ever loss, at £23 million (Craig, 2009). In the same year, the company laid off 1,000 employees⁵. By 2004, Lego was on the verge of bankruptcy. The company posted a loss of £174 million, and the executive vice-president of marketing, Mads Nipper observed in retrospect that “We failed to realize that we were on a slippery path (...) So play trends changed, and we failed to change. We were not making toys that were sufficiently interesting to children. We failed to innovate enough. And we had nowhere cut deep enough to right-size the company”⁶.

e) Recovery Period (2004-present)

In 2004, Jørgen Vig Knudstorp took over as CEO of Lego and helped transform the company through a series of measures. As soon as he took the stage, he proposed to return to the company's core concepts -- Creativity, Fun and Quality, focusing on the company's competitive business -- matching toy manufacturing.

First, he closed a large number of the company's unsuccessful businesses, refocused on product development and transformation, and pulled the focus of innovation back to Lego's core toy products. Then, Knudstorp abolished many of the building block parts added during the Bragman period, reducing the basic unit type of Lego blocks from 12,900 to 7,000, to encourage designers to better use their creativity and to ensure control quality. Knudstorp also overhauled the management team and relentlessly reduced the burden on the group, laying off about 1,000 workers at the Billund factory. In 2004, manufacturing was moved to Mexico and distribution relocated from Billund to the Czech Republic (Nelson, 2009).

At the same time, Lego is moving into other industries. Lego's first attempt at cinematic products was the release of its "Galidor" series in 2002. In 2009 Dan Lin, a Warner producer, told Lego executives he wanted to make a "Lego Movie" in an

⁵ "Brick by Brick: The Lego Story". Wisconsin Public Radio. 25 December 2013.

⁶ "Lego: play it again", 25 July 2014.

effort to attract back Lego's "older consumers", those over the age of 12. As they get older, these kids are no longer the main consumers of Lego. When The Lego Movie was released in 2014, Lego surpassed Mattel in sales for the first time, becoming the world's largest toy manufacturer. Since then, Lego has stepped up the pace of cooperation with Warner, especially the Lego DC movie series. So far, it has launched "Lego DC Superhero", "Lego DC Batman" and many other works. These films from beginning to end to imitate the effect of the stop motion animation, to create a Lego can build all the feeling, as Lego attracted many anime fans⁷.

The return of Lego's sincerity also brought the return of users. In the five years after the 2008 financial crisis, Lego expanded its business scale 2.45 times and increased its net profit 4.15 times. In the first half of 2015, Lego became the largest toy company in the world in terms of revenue. The Lego group released the first half of 2020 earnings, according to the company in the Americas, Western Europe, Asia Pacific and other major markets have achieved double-digit sales growth. Compared with the first half of 2019, retail sales rose 14% and operating profit reached DKR3.9 billion (USD600 million)⁸.

From 1979 to 1994, Lego experienced 15 years of rapid growth, with an average annual growth rate of 14% and the company's sales doubling every five years. But in the decade that followed, Lego faced the prospect of bankruptcy. It was only in 2004, under Mr Knudstorp, that the Lego Group got back on track to becoming the world's biggest toy company.

The constantly developing electronic game industry has dealt a huge blow to the toy industry. As a big company in the toy industry, Lego is faced with the same crisis as the industry. How to reform and innovate, use their own advantages to find opportunities and achieve sustainable development is the main problem that Lego and the toy industry will face in the future. Therefore, this paper will analyze the whole toy industry and the company's internal, and provide help for the company's later competitive strategy decision.

⁷ https://m.sohu.com/a/401029677_566241

⁸ <http://www.wjyt-china.org/qiye/104145.html>

3. Pedagogical Note

3.1. Intended Audience

This case study is aimed at students of bachelor's degrees in Management and related areas; in particular, for courses related to strategic management. Such courses typically cover topics such as the internal and external analyses, innovation and ambidexterity, among others; and the Lego case presented provides students with a real-world example to which these concepts can be applied..

This case study is specially designed for classroom analysis. It depicts the actual situation of the company and it is hoped that students will use strategic management frameworks to analyze and understand the choices of the Lego Group, and the results achieved thereby.

3.2. Pedagogical Objectives

Case studies and solutions to the problems raised are expected to help students consolidate their knowledge of some strategic management frameworks. Therefore, at the end of the analysis and discussion of the case study, students should be able to know:

- a) In a increasingly fast moving world, companies have to be able to adapt and innovate.
- b) Companies must develop their capabilities for incremental and radical innovation, and they need to leverage their own resources and capabilities to innovate and gain competitive advantage.
- c) Understanding the external environment in which they are operating and the threats and opportunities it presents them with. Use Porter's five forces model to analyze the business environment of the enterprise.
- d) Understand the importance of the analytical tools introduced, and apply the same analytical tools or frameworks in other cases.

4. Literature Review

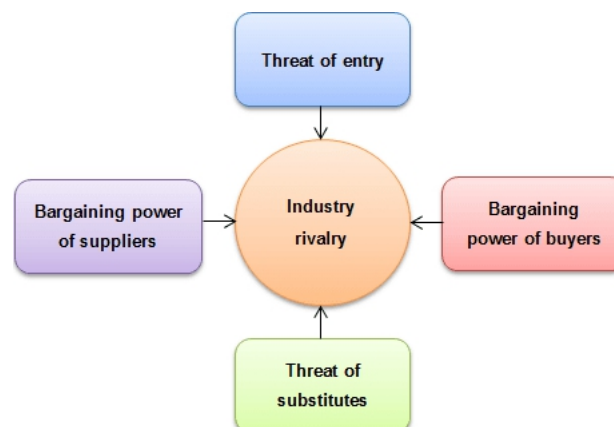
This chapter is about literature review, which discusses relevant literature on the case. This includes industry analysis, internal analysis, innovation and ambidexterity.

4.1. Industry Environment Analysis

Hill (2013) defined industry as “a group of companies providing similar products or services to meet the same customer needs”. Industry analysis is an indispensable part of enterprise management. Through the analysis of various factors affecting the development of the industry, it provides a clear understanding of the enterprise itself, to understand its own position, and to determine the direction of future development. When conducting industry analysis, managers must understand that the industry environment includes a series of factors which determine the competitive intensity and profitability of an industry (Porter 1980) and so can affect the firm and its competitive behavior and response (Hitt, 2011).

The Five Forces model is an industry analysis framework proposed by Porter in the early 1980s. The purpose of this model is to study the competitive forces that exist in an industry to determine its attractiveness and how the firm can best position itself within it (Porter 1979). According to the model, the competitive state of the industry can be determined by the: Rivalry among existing companies; Threat of new entrants; Bargaining power of suppliers; Bargaining power of buyers; Threat of substitutes (Porter, 1980).

Figure 4.1 Porter’s Five Forces Model



Source: Porter (1980)

a) With regard to the rivalry among existing companies, the interests of firms in most industries are closely linked, and the strategic goal of each enterprise is to make its own enterprise gain an advantage over its competitors. Therefore, conflicts and confrontations are inevitable, which constitute the competition between existing firms. Porter (1979) proposed that companies should take advantage of price competition, advertising competition and other ways to gain a better position in the industry. When a company is challenged by the actions of its competitors or when a company is aware of an opportunity to improve its market position (Hitt, 2011), such competition in the industry will intensify.

Generally speaking, the following situations will mean intensified competition among existing firms in the industry: low barriers to entry in the industry; more evenly matched competitors; a mature market, with slow growth; high levels of price based competition and other means of promotion; as well as situations where competitors provide almost the same product or service, and the user conversion cost is very low (Hill, 2013).

b) With regard to the threat of new entrants, Porter (1979) says they “bring new capacity, the desire to gain market share, and often substantial resources”. While bringing new production capacity and new resources to the industry, the new entrants will also compete with the existing firms in the market, which will lead to the decrease of profits of the existing firms in the industry, and in serious cases may endanger their survival.

The severity of the threat posed by new entrants depends on two factors: first, the difficulty of new competitors entering the market, including economies of scale, product differentiation, conversion or switching costs, access to distribution channels, government policies, access to natural resources, geographical conditions (such as shipyards, which can only be built in coastal cities) and so on, some of which are difficult to replicate or imitate. The second factor which affects the threat of new entrants, is the response (or expected response) of the existing firms in the market to the entrants.

If the barriers to entry are high and existing companies fight back hard, it will be

difficult for new entrants to enter the industry and thus the potential threat of new entrants will be much reduced. In a word, the probability of a new company entering an industry depends on the relative size of the potential benefits, costs and risks of entering the industry, which are estimated by the entrants.

c) The bargaining power of suppliers is reflected in price and quality, such that suppliers can impose bargaining power on industry participants by increasing the price or reducing the quality of goods and services purchased (Porter, 1979). Suppliers refer to firms and individuals that provide the industry (the firm and its competitors) with various required resources, such as raw materials, equipment, energy and labor (Guo, 2008). If suppliers are very concentrated and there are only a few of them, then the industry will not have strong bargaining power over suppliers (Porter, 1979). Suppliers have strong ability to raise prices, and the relative cost will be difficult to control, which is not conducive to the stable development of the industry.

d) With regard to the bargaining power of buyers, customers can “force down prices, demand higher quality or more service, and play competitors off against each other” (Porter, 1979).

Porter (1979) proposed that buyers have strong bargaining power when the following conditions exist: the number of buyers is small, the market supply exceeds demand, so the buyer has a strong independent choice; and it is easy for buyers to switch to other suppliers, i.e., there are low switching costs.

The bargaining power of buyers will directly affect the price of products. This reflects that the stronger the bargaining power of buyers, the more it can affect the price of products in the industry.

e) As for the threat of substitutes, Hitt (2011) proposes that substitute products refer to products or services that come from outside a given industry and have similar or the same function as the products produced in that industry.

Hence, the lower the price, the better the quality and the lower the switching cost of the alternative products, the stronger the competitive pressure will be. The entry of substitute products into the market will bring some healthy competition in the industry,

which will promote existing firms to improve product quality, or to reduce prices by reducing costs, or to make their products more distinctive (Chang,1994).

4.2. Internal Environment Analysis

Internal analysis evaluates the strengths and weaknesses of an enterprise through the study of its resources and capabilities. Maunder (2000) defined resources as inputs used in the production process, referring to the general term of various material elements such as material resources, financial resources and human resources. Capability refers to the sum of an enterprise's strength in production, technology, sales, management and capital. Barney (2012) defines capability as the ability that a company can use to control other resources. The purpose of analyzing the internal environment of company is to grasp the history and current situation of the enterprise and identify its strengths and weaknesses. It helps firms to formulate targeted strategies, make effective use of their resources, exploit their advantages, or adopt positive strategies to improve.

4.2.1. The Resource-Based View

According to Wernerfelt (1984), the central argument of the RBV (Resource-Based View) rests on the fact that firms have different tangible and intangible resources, which can be transformed into unique capabilities, and resources are not fully mobile or replicable between firms. The company's unique resources and capabilities thus become the source of lasting competitive advantages.

Wernerfelt (1984) advocated researching and evaluating firms based on resources. Chamberlin and Robinson (1933) studied specific resources owned by firms and proposed that certain resources are the key factors for firms to obtain economic returns, including human resources, technical ability, brand awareness, trademark, patent and others. Internal resources owned by firms are of great significance for firms to obtain economic profits and competitive advantages (Penrose, 1995).

The tangible resources of an enterprise refer to those you can reach out and touch, which includes physical assets such as factories, equipment (Buigues, 2000). Tangible

resources have certain property rights, and their value can be easily measured by accounting standards for firms (Hall, 1989) and reflected in the balance sheet. One of the characteristics of tangible assets is their transparency (Grant, 1991), so that competitors can quickly access the same resources.

Intangible resources are assets that cannot be touched or seen, but have value and are owned by the company, including the company's trademarks, patents, brand awareness and reputation, network, data, etc. Compared with tangible resources, intangible resources are not easily copied by competitors. For example, intellectual property rights and patents are protected by law, and brand reputation is built on a long-term basis, which other companies cannot buy from the market. Intangible resources usually exist within the enterprise and are the main source of the enterprise's continuous competitive advantage.

The basic idea of resource-based view is to regard the enterprise as an aggregation of resources, and to focus on the characteristics of resources and strategic factors in the market, and thus to explain the sustainable advantages and differences among firms. Barney (1991) identified the VRIN framework, which examines whether resources are valuable, rare, inimitable, and non-substitutable. Only when resources conform to the VRIN Framework can they be used as a basis for competitive advantage. Later, the framework evolved from VRIN to VRIO. If the resource has the attribute of VRIO, it will enable the enterprise to obtain and maintain the competitive advantage (Rothaermel, 2012).

4.2.2. VRIO Model

The VRIO model is an analytical framework proposed by Barney (1991) based on the RBV, for analysis of the internal situation of an enterprise. Barney (1991) noted that sustainable competitive advantage cannot be created by simply evaluating environmental opportunities and threats, and then only by operating the business in a high-opportunity and low-threat environment. Sustainable competitive advantage also depends on unique resources and capabilities that firms can apply to the competition. In order to identify the resources and capabilities, and make them the source of

sustainable competitive advantage, Barney (1991) defines the four attributes of the firm resources. A question should be raised for each VRIO dimension and the sustainable advantage will be based on the answers to that question (Hesterley, 2011; Barney, 1991). Four questions are thus posed:

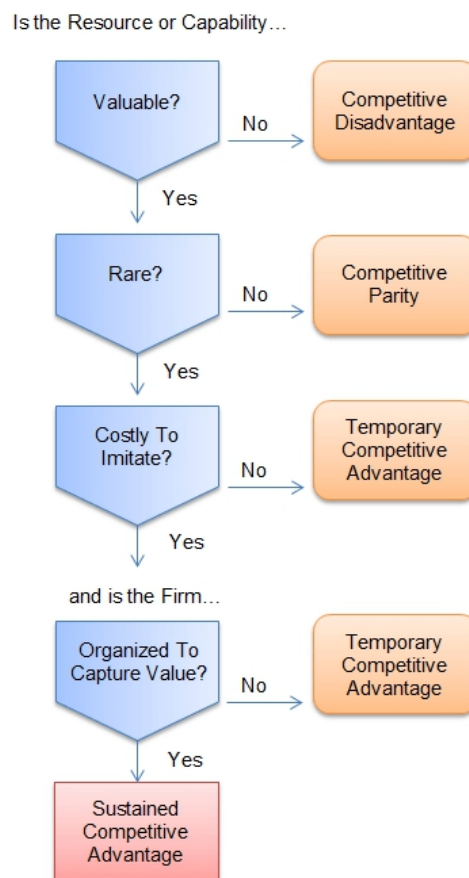
Value: “Do a firm’s resources and capabilities add value by enabling it to exploit opportunities and/or neutralize threats?”

Rarity: “How many competing firms already possess these valuable resources and capabilities?”

(In)imitability: "Do firms that do not have specific resources and capabilities pay a high cost in trying to acquire them?"

Organization: "Is the firm reasonably organized to make full use of the competitive potential of this resource and capability?" I.e., is it organized to fully exploit its VRI resrouces and capabilities and appropriate the returns therefrom?

Figure 4.2 The VRIO Process



Source: Rothaermel (2013)

Value: From the perspective of the enterprise, value lies in whether the resources and capabilities of the enterprise can respond to threats and opportunities in its external environment. From the perspective of consumers, value refers to whether the resources and capabilities owned by firms can meet the needs of users and create value for them (Barney, 2012). In addition, the analysis of value should not be purely static, but rather also pay attention to dynamic changes in value. This is because, as the situation changes, previously valuable resources or capabilities may no longer be beneficial to the current development, and changing internal or external conditions may reduce the value of the resources or render them useless. Therefore, for value, firms should develop new value resources or capabilities according to the situation in a timely manner.

Rarity: Rarity usually refers to how many firms already have such valuable resources or capabilities (Barney, 2012). Rare resources give firms temporary competitive advantages, on the other hand, when many companies have the same resources or the ability to use them in similar ways, it leads to equality of competition (competitive parity). This is because companies can use the same resources to implement the same strategy.

(In)imitability: Imitability is based on the value and rarity of resources or capabilities. It refers to whether the valuable and rare resources or capabilities currently possessed by an enterprise can be easily imitated by other firms (Barney, 2012). If a resource is easy to imitate, the competitive advantage it brings to the enterprise will be temporary; if it is difficult to imitate or cannot be imitated by other firms, the competitive advantage it brings to the enterprise will be sustainable (Barney, 2012).

Organization: Barney (2012) proposed that although the potential of an enterprise depends on the value, rarity, and inimitability of its resources and capabilities, in order to fully realize this potential, the enterprise must organize to develop these resources and capabilities. Through the effective organization of leaders, firms can obtain sustainable competitive advantages.

4.3. Innovation

4.3.1. The Concept of Innovation

The term “innovation” appeared at the beginning of the 20th century and was intensively studied by Austrian economist Joseph A. Schumpeter (1912). He put forward that innovation is the establishment of a new production function, that is, the introduction of an unprecedented new combination of factors and conditions of production into the production system.

Frankelius (2009) proposed that innovation is achieved by providing more efficient products, services, technologies or business models to the market and society. This means innovation is related to invention, but it is not the same as invention (Bhasin and Kim, 2012). Consistent with this view, Morgan (2015) proposes that innovation is more inclined to put an invention into practice, which has a meaningful impact on the market or society.

Innovation also needs to be distinguished from creativity. In recent years, some scholars have studied this, such as Hughes, Lee, Tian, Newman, Legood (2018). They believe that creativity is the cognitive and behavioral process of generating new ideas, while innovation focuses on the processes used to implement new ideas. In other words, innovation must first identify problems and opportunities; second, come up with new ideas to address these problems and opportunities (Hughes, Lee, Tian, Newman & Legood, 2018).

In this paper, we adopted Crossan and Apaydin definition of innovation, they had defined innovation as to produce or absorb new things in the economic and social fields, and through the development of new production methods, establish a new management system to continuously update and expand products, services and markets (Crossan & Apaydin, 2010, p.1154). In this sense, innovation is both a process and also a result (Edison & Torkar, 2014).

4.3.2. The Type of Innovation

As a basic behavior of an enterprise, innovation can take on many forms and involve many aspects of corporate activities. It can be divided into product innovation,

process innovation, marketing innovation and organizational innovation (OECD, 2005).

Product Innovation improves or creates new products to further meet customer needs or open new markets.

Process Innovation improves or changes the production technology and processes, including the adoption of new processes and new equipment.

Marketing Innovation improves or creates new ways to communicate with customers and grasp their needs, in order to sell products.

Organizational Innovation improves or creates a better organizational environment and systems, so that various activities of the enterprise can be carried out more effectively.

a) Production Innovation

Product innovation plays a key role in the process of enterprise development, it is a crucial performance factor which provides the capability to expand into the new market and industries (Damanpour & Gopalakrishnan, 2001) and enables exploiting opportunities to earn an abnormal profit (Nambisan, 2003). Cooper (1998) listed six different product innovations:

- 1) New products. The new product is the first of its kind and has created an entirely new market;
- 2) New product line. These products are not new to the market, but they are new to some manufacturers;
- 3) Supplement of existing products. These new products are part of the company's existing product line, on the basis of the original products, add new varieties which may be new to the market;
- 4) Improvement of old products. These not-so-new products are essentially replacements for older factory products. They have improved performance and more intrinsic value;
- 5) Repositioned products. Applications of old products in new areas, including repositioning to a new market or applying to a different area;
- 6) Products that reduce costs. These are designed to replace older products, with

no change in performance or utility, just a reduction in cost.

Product innovation is crucial to the development of firms, so how to obtain product innovation? We analyze it from both internal and external perspectives.

Internal R&D innovation includes independent innovation and cooperative innovation. Leites (2006) proposed that independent innovation refers to the fact that companies do not purchase technology outside, and the company's own research and development department invents new products or improves old products. According to Senge (2002), obtaining the unique technology of an enterprise through technology research and development is the main characteristic of an enterprise's independent innovation. Many large companies have their own specialized research departments. Cooperative innovation refers to the joint innovation behavior among firms or between firms and scientific research institutions, which has an important impact on product innovation (Freeland Harrison, 2006). Today's global technology competition is constantly intensifying, and the technical problems faced by firms in their innovation activities are becoming more and more complex. As a result, more and more companies choose to cooperate with external resources to achieve resource sharing and complementary advantages, shorten innovation time, and enhance the competitive position of their firms (Rosenfeld, 1996; Hagedoorn et al., 2000). For example, P & G invests USD 1.7 billion each year in innovation, has more than 8,300 scientists, and specializes in basic research, product development, design and equipment development in 18 large-scale research centers around the world. On average, it applies for more than 20,000 patents each year. After entering into China, P & G cooperated with Tsinghua University and established a large-scale technology research center in Beijing in April 1998, specializing in products suitable for the Chinese market (Devlin, Robert; Estevadeordal, 2005).

External acquisition means that instead of doing their own research and development, the enterprise gets a new technology, a new process or a new product from somewhere else. This includes innovation introduction, enterprise mergers and acquisitions, and licensing. The introduction of innovation refers to the direct purchase of new technologies or the right to produce and sell new products. By

procuring technology from the outside, companies can alleviate the problem of insufficient internal resources and capabilities (Park and Kang 2010; Du, Wu, Lu and Yu 2013). Corporate mergers and acquisitions refer to the acquisition or merger of equity in other companies, so that the firm can take ownership of the acquired company's technologies and products (Arora and Gambardella, 1990; Cassiman and Veugelers, 2002; Hagedoorn and van Kranenburg, 2003; Adams and Marcu, 2004). Licensing refers to an enterprise obtaining a license to produce and sell a product from another enterprise. The benefits of external acquisitions are that companies do not have to spend huge amounts of money to develop new products, save R & D funds, and shorten the time to quickly participate in new markets (Lowe and Taylor 1998; Veugelers and Cassiman, 1999; Tiwana and Keil, 2007). In addition, since the failure rate of new product development is high, this strategy can help avoid some of the risk of new product development.

b) Process Innovation

Process innovation is the implementation of new or significantly improved production methods, innovations in operating procedures, methods and rules in technical or production activities (Dong and Zhou, 2009).

Tidd (2009) proposed that process innovation is a change in the way a product or service is created and delivered. Process innovation occurs when an organization solves an existing problem or performs an existing business differently.

Process innovation is more about improving operational efficiency (Ettlie & Reza, 1992; Un & Asakawa, 2015), and may therefore have influence on the productivity, productivity growth or profitability (Veugelers, 2008).

Frishammar (2012) proposed three prerequisites for process innovation: strategy, collaboration and culture.

1) Strategy: One of the main factors determining the success of process innovation is the company's strategy (Reichstein and Salter, 2006; Utterback and Abernathy, 1975). Process innovation must be consistent with product innovation, that is, new processes may result in modification of existing products, and new products may cause process changes (Lim, 2006; Linton and Walsh, 2008; Macher and Mowery,

2003).

2) Collaboration: Cooperation within and outside the enterprise has an impact on the innovation capability of the enterprise (Asakawa, 2010; Gopalakrishnan, 1999; Pearce and Ensley, 2004; El Sawy, 2001). In terms of internal collaboration, Frishammar (2012) and Stadler (2011) proposed that the company provides employees with learning opportunities, especially across disciplines, to promote the flow of different knowledge and ideas within the company. In terms of external collaboration, Narula and Hagedoorn (1999) pointed out that process innovation can be achieved through the establishment of strategic alliances of firms, sharing and exchanging resources with other cooperative companies, thereby improving the innovation ability of firms (Chesbrough, 2006; Chesbrough, 2006 Enkel, 2009).

3) Culture: Innovation culture refers to a behavior pattern cultivated in order to meet the need of maximizing the number of innovative ideas (Boronat, 1992). The existence of an innovation culture can empower employees and encourage them to innovate, thereby improving the company's process innovation capabilities (Akgün, 2009; Ekvall, 1996; Pearce and Ensley, 2004; Repenning and Sterman, 2002).

c) Marketing Innovation

According to the OECD (1996), marketing innovation refers to the introduction of new marketing methods that involve major changes to product design, layout, and product promotion or pricing. According to Naidoo (2010), marketing innovation helps firms develop and maintain a competitive advantage on the basis of reducing costs and differentiation. Thus, marketing innovation is a process that allows companies to better penetrate target markets and gain a competitive advantage (Johne and Davies, 2000, Halpern, 2010), it helps the company's sustainability and helps the company stay in the market longer (Kumar, 2012).

Marketing innovations can help the company expand its product range while increasing its competitive advantage (Pan, Li, 2016). Therefore, companies should use innovative marketing ideas to promote products that are not well-known in the market (Gupta, Malhotra, Czinkota, Foroudi, 2016), which can help increase the influence of the company and its products.

For example, in SMEs, due to their small size, innovation can be the most important way to gain competitive advantage in fierce market competition (Dwyer, Gilmore, Carson, 2009). As SMEs continue to develop their current products and services, in order to best meet the needs of their customers and improve market performance, they prefer to choose marketing innovation to develop productivity (Langerak, Hultink, Robben, 2004).

d) Organizational Innovation

Organizational innovation is considered as "fertile soil for innovation" (Volberda, 2013). It refers to the innovation that firms make by changing their daily activities to improve the productivity, profitability, flexibility and creativity of the organization.

Lawson and Samson (2001) proposed that the implementation of organizational innovation helps firms to shape and manage multiple capabilities within the company to stimulate the success of innovation. On one hand, organizational innovation reflects the ability of firms to implement emerging technologies (Khanagha, 2013). As Adler and Shenbar (1990) emphasize, innovation capabilities can help firms apply appropriate process technologies to develop new products that meet market demands, thereby reducing competitive threats. On the other hand, organizational innovation also reflects the ability of firms to improve production performance (Volberda et al., 2013). Wang, Zhao, and Chen (2009) describe organizational innovation as a basic element to improve an enterprise's core competitive advantage, enabling the enterprise to achieve better performance in a highly competitive market.

In the 21st century, due to rapidly changing market and economic situations, innovation becomes more and more important in the development process of firms (Bagheri, Mitchelmore, Bamiatzi, & Nikolopoulos, 2018; Bodlaj, Kadic-Maglajlic & Vida, 2018; McDonough & Lin, 2013). The next section will introduce the impact of innovation on the enterprise.

4.3.3. Innovation and the Enterprise

Abbing (2010) proposed that in today's complex competitive environment, innovation is the most fundamental source of enterprise success and survival. It is also a key

factor in a country's economic growth (Freeman, 1994; Buesa, Heijisa , Baumert, 2010). Gloet and Samson(2016), supporters of this view, also believe that innovation is crucial to firms, they regard the innovation ability of firms as the most critical factor to gain competitive advantage in highly volatile market environments. In addition, Mansury and Love (2008) believe that the best use of innovation is directly proportional to the profitability of the company.

Laforet (2011) said that innovation can only happen if the company has the ability to innovate. Adler and Shenbar (1990) define innovation ability as the ability to develop new products to meet market demands; the ability to produce new products using appropriate technology; the ability to develop and adopt new products and technologies to meet future needs; and the ability to respond to accidental technical events and unexpected opportunities of competitors. The ability to innovate guides the organization to constantly develop innovations to cope with the changing market environment (Slater, Hult & Olson, 2010).

In recent years, many scholars have studied management innovation ability from different perspectives and proposed that the sustainable development of firms is inseparable from management innovation. Meuer (2014) defined the sustainable management innovation capability of an enterprise as the innovative integration of internal and external resources in order to achieve the goal from the perspective of the sustainable innovation capability of an enterprise. According to this author, management innovation ability is an important manifestation of the vitality of a company's core competitiveness.

Business model innovation is also very important to enterprise development. Business model refers to the basic logic of enterprise value creation, that is, how firms provide products and services to customers and make profits in a certain value chain or value network (Timmer, 1998; Linder et al., 2000; Rapper, 2001). Cardozo (1996) argues that as market demands become clearer, companies will have clearer ideas about how to meet them or how to allocate resources; these ideas then mature and eventually evolve into a full-fledged business model. In addition, business model innovation is considered to be one of the "most sustainable forms of innovation"

(Sosna, Rodriguez, & Velamuri, 2010, p. 384) and is seen as providing firms with "alternatives or supplements to product or process innovation" (Amit & Zott, 2012, p. 41). In the changing business environment, companies should innovate their business models to ensure that their goals are achieved.

Thus, in today's economic situation, the innovation ability of firms is an important source of sustainable competitive advantage. Innovation and the development of firms are inseparable.

We will discuss in detail in the next chapter whether firms should use their existing capabilities to innovate or develop new innovation strategies.

4.4. Ambidextrous Organizations

In the 1970s, due to the constantly changing market environment, firms often found themselves in a dilemma in the process of seeking survival and development. That is, they could not find a balance between the implementation of the utilization innovation (exploitation) aimed at developing and utilizing existing capabilities; and the exploration innovation aimed at building new capabilities. It has been argued, however, that for firms to successfully carry out competition and achieve sustainable competitive advantage, they need to have the innovation in both aspects. It was Duncan (1976) who first proposed that an organization should have two different innovative abilities at the same time, and called the organization with the two abilities an "Ambidextrous Organization". One is the exploitation innovation activities which have relatively low risk and use existing knowledge and resources. Such innovation activities are important for the short-term survival of firms (March, 1991). Another kind is to explore new knowledge and resources for the breakthrough, higher risk innovation activities, which are vital for the long-term development of the enterprise. firms should not only continue the existing ability, knowledge and business model, but also constantly break through the existing technology to ensure the future development (March, 1991).

Exploitative innovation refers to the behavior of refining, screening, production, selection, implementation, and execution the existing value of an enterprise (March,

1991). The essence of it is that the enterprise utilizes existing capabilities, technologies, and business models to develop. That is to say, exploitation innovation means that in order to adapt to the changing environment or the needs of their own development the firms adopt a series of measures to innovate . These includes learning from experience, using the existing technology and ability, continuously improving the performance of existing products, improving user experience, and constantly meeting new customer's value pursuit.

Exploratory innovation refers to the behaviors of exploration, change, risk taking, experimenting, trialling, and discovery (March, 1991). Its essence is to produce new technological choices through experiments, where results are uncertain. In other words, exploratory innovation means that in order to adapt to the changes in the environment or the needs of their own development, firms explore and discover new ideas, technologies and methods through continuous experiments, research and development and other scientific activities. The result of such behavior is of great risk and high failure rate.

In fierce competitive environments, different types of firms will choose different innovation modes. Market-oriented firms will tend to invest more in exploratory innovation (Abebe & Angriawan, 2014), while large-scale companies with more resources will choose to implement ambidextrous innovation, so as to gain more profits (Yu & Khessina, 2012)and give the organization a long-term competitive advantage.

Exploratory and exploitative innovation both compete for organizational resources and pursue different values. Some firms will only choose a single innovation mode (only exploitative innovation or exploratory innovation). But at the same time, the two are interdependent. firms should not only upgrade and transform existing products and technologies to ensure short-term benefits, but also explore and develop new technologies or products to ensure long-term benefits.

Since the return time and space of exploratory innovation are more remote and uncertain than that of exploitative innovation, firms are more likely to choose to use existing solutions instead of exploring unknown resources and technologies (March,

1996). Similarly, due to the consideration of risks and benefits, firms are more inclined to choose exploitative innovation activities. Gupta and Shalley (2006) pointed that if the enterprise only focuses on exploratory innovation, it will not work properly, because the enterprise has limited resources, so it needs to invest a lot of resources to carry out exploratory activities.

So firms should not only upgrade and transform existing products and technologies to ensure short-term profits, but also develop new technologies or products to ensure long-term profits (Ou & Zhu, 2019). Therefore, there is a potential opposition between exploratory innovation and exploitative innovation, because the two will compete for the scarce resources of the organization (March, 1991). When organizations devote more resources to exploratory innovation, they leave less resources for exploitative innovation. Conversely, if more resources are devoted to exploitative innovation, the organization will invest less resources in exploratory innovation. Therefore, how to effectively balance exploratory innovation and exploitative innovation is crucial to the survival and development of firms (Garzia, Bruno, 2009; Raisch, Birkinshaw et al., 2009).

There are three ways to balance exploratory innovation and exploitative innovation:

a) "Ambidextrous Organization"

Duncan (1976) first introduced the concept of "Ambidexterity" into the field of management to describe organizational capabilities, while the concept of an "Ambidextrous Organization" was proposed by Tushman and O'Reilly in 1996. They see the organization as a business that has both the ability to leverage existing resources in mature markets and the ability to develop new products and services in emerging markets. The former enables low-cost, efficient and incremental innovation; the latter enables the experimentation, speed and flexibility required for breakthrough innovation. Existing research generally proposes that in the increasingly fierce dynamic competitive environment, firms should pay attention to exploratory innovation and exploitative innovation at the same time (Raisch et al., 2009; Cao, Simsek, Zhang, 2010).

Chen and Li (2013) found through empirical research on China's electronic information manufacturing industry, that the financial performance of Chinese firms adopting ambidextrous technology strategy at the present stage is lower than that of those firms without ambidextrous technology strategy. Yang, Li and Liang et al. (2011) believe that existing studies overemphasize the binary balance strategy that attaches importance to exploratory innovation and exploitative innovation at the same time, and overemphasize the synergistic effect between those two, while leaving out another balancing strategy, the Punctuated equilibrium strategy proposed by Gupta (2006).

b) “Punctuated Equilibrium”

It is another mode of balance between exploratory innovation and exploitative innovation, which shows that not all firms can achieve absolute balance. In each stage of development, firms focus on exploratory innovation or exploitative innovation according to the changes of the external environment and internal resources. As the market environment and the organization's internal changes and adjustments, the company the next stage will be focusing on more valuable resource or ability (Yang, 2011). The advantage of this kind of punctuated equilibrium strategy is that on the one hand, it concentrates energy and resources on exploratory innovation or utilization innovation to improve the efficiency of enterprise operation and innovation; On the other hand, it is beneficial for firms to adapt to the rapidly changing external environment, which is conducive to the long-term development of firms (Gupta, 2006).

Of course, it is not easy for companies to adopt punctuated equilibrium strategies. The development of firms will be constrained by habitual thinking and previous successful experience. In the process of exploratory innovation or exploitative innovation, it is difficult for firms to realize automatic switching of innovation mode, and path-dependent characteristics and historical inertia will hinder the occurrence of this behavior. Therefore, there is a third mode to balance exploratory innovation and utilization innovation--separation mode.

c) “Separation Mode”

It treats exploratory innovation and exploitative innovation independently and divides them into different units for independent operation, which ensures that they are not affected by each other (Zhang & Cai, 2012). Floyd, Lane (2000) and Volberda et al. (2001) emphasize that the management level could be separated, and the top, middle and grass-roots managers show different characteristics in strategic renewal: the grass-roots managers would pay attention to the exploitation, the middle managers would do the balance, and the senior managers would the exploratory innovation.

According to the literature study, in order to achieve sustainable competitiveness and high performance, firms must keep ambidexterity-balancing, that is, rational allocation of exploration and exploitation strategies, which is a double-edged sword for firms. Companies are in the different stages of development according to the changing social environment and adjust their own circumstances, therefore, choosing the appropriate innovation strategy in the enterprise life cycle has an important influence on the development of firms. And how to choose a different innovation strategies to keep the enterprise ambidexterity--balancing, so as to promote the sustainable development of firms is one of the purposes of this case study.

The above is the discussion of the literature, the next chapter will introduce the methodology of project.

5.Methodology

Case study teaching is a description of a real situation in the teaching process, and the emphasis is on the dynamics of teaching. Boehrer (1995) pointed out that case study teaching is a philosophy of professional education, which directly links theoretical knowledge with practice. Students should not learn passively, but on the basis of continuous accumulation of experience. Hammond (2002) proposed that the purpose of case study teaching method is not to get the right answer, but to train and improve students' ability to analyze problems on the basis of mutual discussion and research.

In the classroom, a case study can help students combine theory with practice. Compared with simply listening to theoretical knowledge, a pedagogical case study can enable students to better understand what the teacher is saying and connect them to future situations similar to the case (Davis & Wilcock, 2003; Yin, 2003). A pedagogical case study compiles data collected from various secondary sources, including academic journals, professional websites, interviews, and official published articles. Before writing the final project, first the project theme should be determined, and then the relevant information should be collected, understood, organized and analyzed for the development process of the research object, so as to form an in-depth and comprehensive understanding and conclusion of the relevant issues.

Case studies have always played an important role in the development of many disciplines (Yin & Robert, 2003). Teaching case studies have become a very popular form of teaching. For example, professors at Harvard Business School often use case studies to achieve learning goals (Garvin & David, 2003; Ellet, 2007).

With the completion of the methodology discussion, the next chapter of the project will be the discussion of the case resolution.

6. Case Resolution

6.1. Presentation Plan

A pedagogical case study needs educators to guide students to combine theoretical knowledge with the practice case, to solve problems and improve their analytical and professional skills.

In order to make the case study produce effective teaching results, the teaching framework and class plan should be developed in advance. For this case study, the presentation plan will be developed according to the following phases:

Phase 1 - Preparation: In this phase, students need to read theoretical knowledge carefully and make preparations, including research on key concepts and strategic management tools, such as Porter's Five Forces model and VRIO model. Students should also actively search for relevant theories, especially in the recommended literature, in order to prepare for the study of the case and the class discussions. This phase lasts about 90 minutes and is carried out by the students individually, outside the classroom.

Phase 2 – Class Work

a) Theoretical Clarification: In this stage, educators need to provide students with theoretical background relevant to the case, such as internal and external environmental analysis, as well as the corresponding strategic management framework. This part lasts around 90 minutes.

b) Case Study: At this stage, students read case materials and additional information about this company and the industry at home. Secondly, during the class, educators should introduce the case to the students and divide them into groups of 4-5, to discuss the case and exchange views about it. During this time, the educator is ready to answer the students' questions, give them advice and help them. This will take about 180 minutes.

c) Group Presentation: Next class, each group is required to give a presentation explaining their understanding of the case and their answers to the questions (as shown below). Educators can ask group members questions after the presentation. The aim is to ensure that students understand the case based on the theoretical

framework. This part lasts about 90 minutes.

Table 6.1 The Presentation Plan Schedule

Phase	Activity	Task	Time
Phase1-Homework	Individual Study	Studying the different theories; Researching further information related to the case.	90min
Phase2-Class Work	Theoretical Clarification	Explanation of the different theoretical frameworks (Porter's five forces, RBV and VRIO, ambidextrous organizations) by the educator.	180min
	Group Discussion	Introduce the case and students debate and share ideas with group members during class.	90min
	Group Presentation	Presentation of the case study; Answer questions from educators.	90min

After presenting how the classes will unfold, the next section will be to present the project's proposed questions.

6.2. Proposed Analysis Questions

Here, three strategic analysis questions are proposed in the attempt to bring the students closer to the proposed pedagogical objectives of this project.

Question 1 – Assess the industry environment in which Lego is operating;

Question 2 – Based on the VRIO framework, analyze the sustainability of Lego's competitive advantage;

Question 3 – Analyze how Lego has balanced exploratory innovation and exploitative innovation over time.

Each case question posed is related to one or more of the strategic analysis tools that students are required to master, in order to achieve the teaching goal of the project.

6.3. Proposed Resolution

Note: Before the classroom case study, students need to consult theoretical knowledge like strategic management tools and also additional information about the company and the industry. Therefore, the answers to these questions may contain a few additional elements not directly mentioned in the case.

Question 1: Assess industry environment analysis of Lego.

Proposed Answer:

The five forces model identifies five main sources of competition, namely the bargaining power of suppliers and buyers, the threat of potential entrants, the threat of substitute products and rivalry among existing competitors. Porter (1979) believes that these five forces together affect the attractiveness of the industry and the competitive strategic decisions of existing enterprises. In any industry, whether producing products or providing services, the law of competition will be reflected in the strength of these five forces. In this paper, we focus on the toy industry and analyze its competitive situation from five aspects. In particular, for the case of Lego Group in this case, we study what threats and challenges it faces.

Next, we will analyze how these five forces affects the toy industry especially the attraction of the Lego Group.

a) Bargaining Power of Suppliers

Suppliers are enterprises and individuals that supply enterprises with all kinds of required resources, including raw materials, equipment, energy and labor services. The strength of the supplier mainly depends on the input factors they provide to the buyer. When the value of the input factors provided by the supplier constitutes a large proportion of the total cost of the buyer's product, it is very important to the production process of the buyer's product, or seriously affects the quality of the buyer's product, it indicates that the supplier has strong bargaining power.

The toy industry mainly assembles electronic products, textile, wood and plastic raw materials into finished products through technical processing. There are many raw material suppliers in the market, so its suppliers have low bargaining power. In general, industry suppliers have little bargaining power when negotiating, because there are a lot of options and industry players are not dependent on any particular supplier.

b) Bargaining Power of Buyers

The buyer is the intended demander of the products, which refers to the intended customer of the seller when selling the products. Buyers affect the profitability of existing firms in the industry mainly by demanding lower prices and higher quality of products or services. First of all, the toy industry is not a new industry, the market is gradually mature, there are many companies in the industry, buyers have more choices. Second, with the improvement of people's consumption power, the demand for a variety of products increases, and the new products also have a good sales prospect. This belongs to the seller's market, the price is dominant in the seller's hands.

Individual consumer purchasing power is limited, will not have a huge impact on product sales. But individual buyers have some bargaining power, because without them there would be no sales market. Instead, the purchasing power of the retailer is huge. A retailer is a middleman who sells goods directly to the final consumer as opposed to a producer. Retailers exist in the form of shopping centers, supermarkets and other large places. They have huge demand and purchasing power, so they have certain bargaining power. Some big retailers, such as Amazon, have a lot of bargaining power because of their size and influence. However, with the application of online stores, consumers can purchase products directly from online stores, which limits the bargaining power of retailers to some extent.

To sum up, for the toy industry, the bargaining power of buyers is medium.

c) Threat of New Entrants

The market barriers faced by new entrants in the toy industry are mainly reflected in the following three aspects:

First, R&D and design barriers. People pay more and more attention to the role of

toys in children's growth, the intelligence of toys, educational functions and other aspects of new personalized needs are constantly emerging. Therefore, toy products should constantly adapt to the needs of consumers and get rid of the stale and bring forth the new, which requires toy firms to have a strong R&D ability to develop products to meet the new needs of consumers.

Second, safety and environmental standards barriers. Toys are mainly aimed at children. In order to ensure the health and safety of children, all countries have strict requirements on the safety of toy products. European and American countries have issued a series of safety and environmental protection standards, for example, the EU has issued "RoHS directive", "WEEE Directive", "REACH regulation" and so on. Every country in the world has strict requirements on toy products. Therefore, only in the long-term operation of enterprises to accumulate experience, with high R&D strength and production technology, can firms meet the certification standards of various countries in terms of product quality. On the one hand, it is difficult for new entrants to meet all kinds of standards in a short period of time. At the same time, meeting the standards means additional costs, so the competitive advantage of the product will be greatly reduced.

Third, brand barriers. The main consumer group of toy products is children, which not only affects the growth of children, but also relates to the safety and health of children. Therefore, adult consumers more cautious when choosing products, they are more likely to choose brands that have been approved by users. On the other hand, while children may not be paying for the products, they have a big say in their choice, so brand could also matter in that way. To build and maintain the brand image of an enterprise, it is necessary for the enterprise to accumulate gradually in the process of development, including many factors such as product quality, enterprise culture, technology research and development, management service and marketing channels. Therefore, the formation of a well-known toy brand requires long-term and massive investment, which is an insurmountable obstacle for new entrants in the short term.

In today's toy market, Lego, Hasbro and Mattel are the three biggest brands, consumers tend to buy products of big brands.

d) Threat of Substitute Products

Two firms in different industries may compete with each other because their products are substitutes for each other.

Toy is a kind of entertainment products, with the improvement of people's consumption level, the way of entertainment is more and more diversified. With the popularity of electronic products and online games, the traditional toy industry has suffered an unprecedented development crisis, and children's interest has gradually shifted from ordinary toys to modern high-tech electronic products. Video games have their unique advantages over traditional toys, such as Playstation (PS) handheld game console launched by SONY, which can be carried around and played anytime and anywhere, which greatly attracts consumers' purchase.

e) Intensity of Rivalry among current Competitors

Five major toy companies -- Lego, Hasbro, Mattel, Spain Master and MGA occupy the main share of the toy market. At the same time, there are a large number of other toy firms in the toy industry. For example, ZURU is a New Zealand toy company and one of the fastest growing toy manufacturers in the world in recent years. In 2018, it became the sixth largest toymaker in the world⁹. ZURU launched a new toy brand in 2019 called "MAX BUILD MORE," which works on the same principles as Lego's classic bricks blocks, but at a fraction of the price. It can be seen that the competition within the toy industry is very fierce.

Based on the analysis of Porter's Five Forces model on the toy industry, we can see that, expect for the threat of new entrants and the low bargaining power of suppliers, the other three kinds of forces are of great threat to the toy industry. Thus, the competitive situation in the toy industry is not optimistic.

By contrast, despite the threats to the toy industry, but for Lego, in the face of such serious situation, still did not stop its profitability. In 2008 during the financial crisis, despite the global economic downturn, but in Lego, 2008 annual financial report shows the company full-year net profit amount to DKR 13. 5 million (\$213

⁹ http://www.360doc.com/content/20/0919/19/71628950_936594732.shtml

million). Recent data show that as of June 30, Lego saw significant growth in both sales and profits in the first half of 2020, reporting a 14% rise in sales and a 7% surge in revenues to DKR 15.7 billion (approx. USD 2.5 billion).

Table 6.2 The Lego Group's net profit for 2004-2008

Financial Highlights LEGO Group					
(mDKK)	2008	2007	2006	2005	2004
Income Statement:					
Revenue	9,526	8,027	7,798	7,027	6,295
Expenses	(7,522)	(6,556)	(6,393)	(6,605)	(6,394)
Operating profit before special items	2,004	1,471	1,405	423	(99)
Impairment of non-current assets	(20)	24	270	86	(677)
Restructuring expenses and other special items	116	(46)	(350)	(129)	(136)
Financial income and expenses	(248)	(35)	(44)	(51)	(75)
Profit before income tax	1,852	1,414	1,281	329	(987)
Profit, continuing activities	1,352	1,028	1,290	214	(1,284)
Profit, discontinuing activities	-	-	-	-	(516)
Net profit for the year	1,352	1,028	1,290	214	(1,800)

Source: Annual Report 2008 LEGO Group

The reason why Lego Group can make profits in the depressed toy industry is related to the reasonable utilization and development of the company's resources and capabilities. The next question is about to analysis to the Lego group get sustainable competitive advantage of resources and capabilities.

Question 2: Based on the information available and the VRIO framework, analyze the competitive advantage of the Lego.

Proposed Answer:

Porter (1997) believed that as long as an enterprise can maintain a business performance higher than the average level of its industry for a long time, it can be deemed to have a sustainable competitive advantage. Judging whether an enterprise has sustainable competitive advantages cannot simply assess its development environment, but also depends on its own resources and capabilities. Resources are the inputs that an enterprise possesses in the production process (Maunder, 2000). Capability is the ability of an enterprise to coordinate resources and put them to productive use (Barney, 2012).

The VRIO framework puts forward four questions regarding a company's resources or capabilities, and assesses whether a resource or capability can become a source of sustainable competitive advantage. Sustainable competitive advantage can only be created when a company has valuable, rare, and not easily imitated resources and capabilities, and has an organizational structure that collects the value created by those resources and capabilities.

This paper will analyze the following resources of Lego company:

a) Financial resources

After Jorgen Vig Knudstorp became CEO of Lego in 2004, Lego's revenues have quadrupled over the past decade, in the end of 2013, its net profit reached DKR 6.119 billion (USD 4 billion), making it the world's second largest toy manufacturer after Mattel. On March 4, 2020, the Lego Group released its financial report for the year ending December 2019. According to the financial report, the Lego Group's annual revenue reached DKR 38.5 billion (about USD 6 billion) in 2019, up 6% from the same period in 2018. The operating profit was of DKR 10.774 billion (USD1.7 billion), up 1% from the previous year; and net profit was DKR 8.3 billion (USD1.3 billion), up 3% from a year earlier. Full-year operating cash flow from operations amounted to DKR 9.6 billion (about USD 1.5 billion).

Table 6.3 The Lego Group's net profit for 2009-2013

(mDKK)	2013	2012	2011	2010	2009
Consolidated Income Statement:					
Revenue	25,382	23,095	18,731	16,014	11,661
Expenses	(17,046)	(15,489)	(13,065)	(10,899)	(8,659)
Operating profit	8,336	7,606	5,666	4,973	2,902
Financial income and expenses	(97)	(84)	(124)	(84)	(15)
Profit before income tax	8,239	7,522	5,542	4,889	2,887
Net profit for the year	6,119	5,613	4,160	3,718	2,204

Source: Annual Report 2013 LEGO Group

Table 6.4 The Lego Group's net profit for 2015-2019

(mDKK)	2019	2018	2017	2016	2015
Income Statement					
Revenue	38,544	36,391	34,995	37,934	35,780
Expenses	(27,707)	(25,617)	(24,636)	(25,486)	(23,536)
Operating profit	10,837	10,774	10,359	12,448	12,244
Financial income and expenses	(85)	(264)	(158)	(57)	(96)
Profit before income tax	10,752	10,510	10,201	12,391	12,148
Net profit for the year	8,306	8,076	7,806	9,436	9,174

Source: Annual Report 2019 LEGO Group

Financially, Lego is a very stable company. This is a valuable resource, but not so rare or hard to imitate.

b) Physical resources

Lego is unique in that every block can be connected to each other, so standardized production is key to ensuring perfect building blocks. All of Lego's factories around the world use the same manufacturing process to maintain the same standards for bricks that have been in place since 1958. Each building block is manufactured in a very precise way, and goes through three major manufacturing processes: molding, coloring and packaging. At each line, Lego sets up six weight stations that track the weight of each particle in milligrams to make sure there are no errors in the number of blocks per pack. All of the blocks also have to complete a saliva test, in which Lego tests each plastic particle with a spit-like liquid to ensure that the blocks that eventually reach the child's hands are not easily discoloured by saliva, and that it is safe for the child to chew on them.

Lego's superior product quality is valuable, but it's not entirely difficult to imitate and not scarce. Therefore, it cannot be regarded as a source sustainable competitive advantage of firms.

c) Human resources

Lego releases a large number of new products to the market every year, and this creativity is the result of Lego's human resources. On average, 180 Lego designers from 24 different countries create 200 new products for Lego every year, 60% of

which are new. Lego's designers do not just sit in an office and design, they practice in their own place and improve the user experience. For example, in order to understand the structure of fire engines and build fire engines with realistic details, designers will even follow the fire department to experience the life of a fireman all day. To create new play experiences, Lego has set up a special division called "The Future Lab". The department collects the latest information on the toy market, learns what children think, and eventually creates new story themes.

Lego's excellent R&D team is a rare resource that Lego constantly absorbs and cultivates during its long-term development. For its competitors, it takes a lot of money and time to acquire R&D talents of the same quality, so this is a valuable resource that is not easy to be imitated, which also means that Lego's human resources are a potential source of sustainable competitive advantages.

d) Innovation resources

From its inception to now, Lego has experienced several major innovations, such as the first development of plastic toys in 1947, the acquisition of patents in 1958, the establishment of the Lego game system in 1960 and so on. Innovation seems to be part of the company's very DNA. Since 2005, Lego has enhanced the introduction of popular storylines while retaining its classic products. By introducing popular storylines such as Star Wars, Superman and The Harry Potter series, Lego combines children's favourite characters with their toys.

At the same time, in order to capture the changes in consumer psychology, Lego has set up laboratories around the world to collect the latest changes in the local market, capture the trend demand of consumers, and then gather this information together to generate new ideas. For example, Lego China has a "Future Lab", where senior designers observe popular characters, stories and designs in China and even the whole Asia, conduct research, and assess business strategies from the perspectives of cultural elements and fashion trends. In 2013, "LEGO Legends of Chima" series was launched, which integrated Oriental elements into interactive experience games.

Lego's unique innovation is a valuable and rare ability, this is also difficult to imitate. Lego as an old toy company, focuses on building block games and holds

patents, which has a great influence in the market. For innovation resources, the company has a huge advantage when it first enters the market.

e) Brand resources

Lego Group adopts the multi-brand strategy for its core building blocks products, which is reflected in two aspects:

First, through the brand joint strategy, Lego group has obtained the authorization of world-renowned brands including Disney, Marvel and Warner to produce building blocks products.

Secondly, promote the brand through Legoland. Legoland is a theme park for families, inspired by the creative power of Lego bricks. Legoland park greatly enhances the enjoyment of toys, and diversified experiences also enhance the consumption stickiness of children.

Lego's brand is deeply rooted in people's hearts. The multi-brand strategy enables Lego Group to obtain the authorization from Star Wars, superheroes and Disney, etc. With a wide variety of products, Lego group basically occupies the most popular IP series among consumers in the existing market, with a high market share. It can be seen that Lego's brand resources are valuable, scarce and hard to imitate.

f) Organization

An enterprise with valuable, rare and hard to imitate resources and capabilities has the potential to gain a competitive advantage. But to fully realize this potential, firms must organize effectively to utilize these resources and capabilities.

In 2004, Jørgen Vig Knudstorp became the CEO of Lego. He led the company's management team to help Lego make full use of its resource advantages through the following measures: First, cut costs. To reduce product development costs, Knudstorp has reduced the number of basic Lego units from 12,900 to 7,000 to ensure quality control. Centralize production and distribute plants to low-cost, low-rent countries. Knudstorp has outsourced all of Lego's basic manufacturing to the Czech Republic, where labour costs are lower. Second, focus on the core. The Knudstorp team has focused its development on Lego's core resource strengths, such as its emphasis on the consumer experience. Lego added customer feedback and updated development

procedures, which greatly increased the success rate of toy concept innovation.

When faced with a major crisis in 2003, through the effective organization management and use of these resources and capabilities, Lego was able to reshape the corporate culture, and return to its core values. This reflects that the right organization can bring sustainable competitive advantage to the enterprise.

The following table summarizes the VRIO analysis for Lego:

Table 6.5 The Summary of Lego Group's VRIO analysis

Resource or Capability	Valuable	Rare	Imperfectly Imitable	Exploited by Lego	Competitive Implication
Financial Resources	Yes	No			Competitive Parity
Physical Resources	Yes	No			Competitive Parity
Innovation Resources	Yes	Yes	Yes	Yes	Sustainable competitive advantage
Human Resources	Yes	Yes	Yes	Yes	Sustainable competitive advantage
Brand Resources	Yes	Yes	Yes	Yes	Sustainable competitive advantage
Organization	Yes	Yes	Yes	Yes	Competitive advantage

Other than financial and physical resources, the other four key resources or capabilities can create sustainable competitive advantages for firms. This means that if the Lego Group makes full use of these resources, the company can gain a sustainable development advantage in the industry and improve its financial performance.

Question 3: Analyze how Lego has balanced exploratory innovation and exploitative innovation over time.

Proposed Answer:

Exploitative innovation (March, 1991) refers to the enterprise using existing technology to develop resources and achieve their goals. Exploratory innovation (March, 1991) refers to the enterprise adapting to changes in the environment or its own development needs, through continuous research and development activities, to explore new technologies and methods. According to the literature, there are three perspectives on how to balance and coordinate exploratory innovation and exploitative innovation: first, the perspective of the ambidextrous organization; second, the perspective of punctuated equilibrium; and the third, the perspective of separation mode.

We can analyse the influence of Lego's innovation methods in different life cycles on the development of the company.

In the 1990s, Lego hired Paul Bragman, a Danish corporate transformation expert, to restructure the company during the crisis. Bragman and his team embarked on a radical innovation strategy for Lego, frantically adding to the number of products. At the end of 2002, Lego's sales began to plummet and retailers were left with a backlog of huge inventories. The reason leading Lego into such a predicament was actually innovation, namely Bragman's radical exploratory innovation strategy, making Lego constantly fall into the "failure trap". "Failure trap" refers to when an enterprise is carrying out exploratory innovation, and some new ideas are transformed into new products and businesses, for which the results are uncertain and may fail. This prompts firms to search for more novel ideas and engage in more exploratory activities, which may also fail, such that they fall into a "failure trap" (Gupta et al., 2006). Levinthal and March (1993) point out that when an enterprise encounters continuous failure in exploration, it may enter into a state of feverish experiment, change and innovation, because failure will prompt the enterprise to conduct new research and learning. However, new ideas and technologies may fail, and this failure again promotes more research, and the enterprise may be trapped in an endless cycle

of failure (Zhu & Chen, 2008).

From its inception, the Lego Group has focused on innovation at every stage. During the beginning, Lego attached great importance to technological innovation. It took the lead in developing plastic toys and applying for patents, which is an exploratory innovation. In the growth stage, the game system proposed by Lego changed the business model of the toy industry and formed advantages of scale, which is also an exploratory innovation. In the maturity period, through the way of restructuring product line let Lego rapid growth again, this is a kind of exploitative innovation. All of the above are innovations that Lego has used at various stages of its development, this single innovation strategy has a negative impact on the development of firms to a certain extent.

On this basis, the management decided to restructure the management team and adjust the development strategy of the enterprise. As Jansen and Van den Bosch (2005) put it, in a dynamic and competitive market environment, large firms should set up an "ambidextrous organization" in order to pursue exploratory and exploitative innovation activities at the same time.

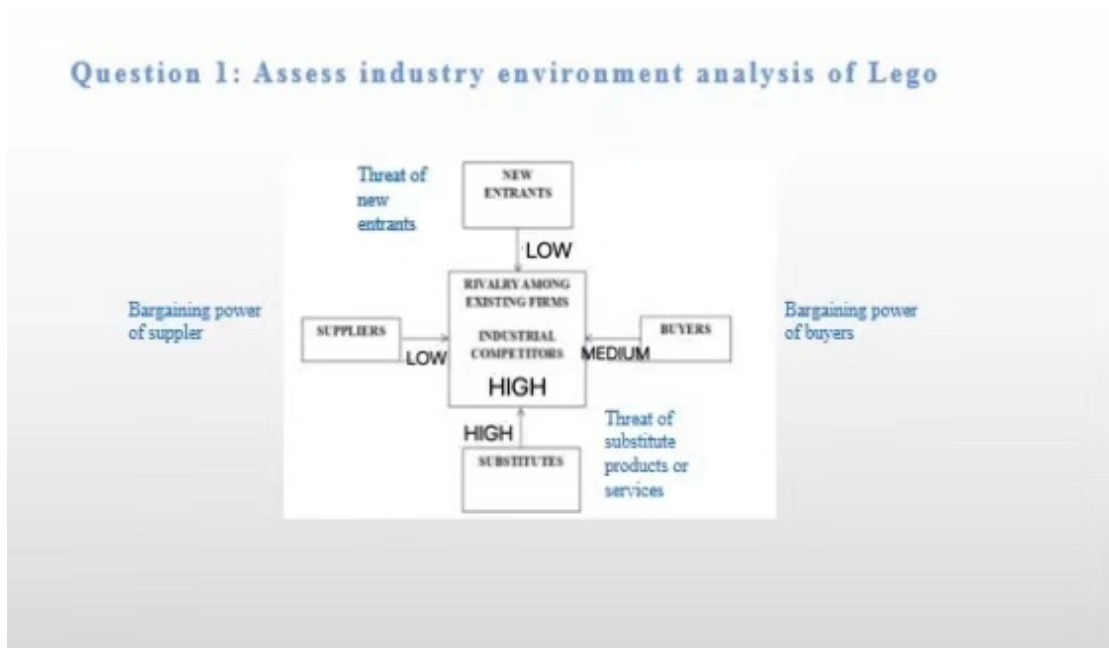
Instead of focusing entirely on radical innovation strategies from the beginning, the Lego Group first identified a very clear direction for its future development, and then rediscovered the fundamental values of Lego, focusing on core products and core customers. On the basis of a stable management and sustained profitability, they then set foot in new areas and engaged in marginal innovation. With the increase of similar products in the market, Lego has made defensive innovation measures around its core business in order to adapt to the changing market environment. For example, Lego invites the most inventive Lego adult fans to participate in tests and even work together on a series such as the Brainstorm NXT. The combination of exploitative innovation and exploration innovation strategy is the solid foundation for development.

The development history of Lego tells us that effectively balancing the exploitative innovation and exploratory innovation strategies within the organization has an important influence on the development of the enterprise.

6.4. Resolution Slides

Question 1: Assess the industry environment in which Lego is operating.

Slides 1 Porter's Five Forces Analysis of the Toy Industry



Slides 2 Lego remain profitable in the downturn of the toy industry

Question 1: Assess industry environment analysis of Lego

Despite the threats to the toy industry, but for Lego, in the face of such serious situation, still did not stop its profitability.

During the 2008 financial crisis, despite the global economic downturn, but in Lego, 2008 annual financial report shows the company full-year net profit amount to DKR 13. 5 million (\$213 million).

Financial Highlights LEGO Group

(DKK)	2008	2007	2006	2005	2004
Income Statement:					
Revenue	9,516	8,047	7,798	7,047	6,295
Expenses	(7,521)	(6,558)	(6,313)	(6,605)	(6,394)
Operating profit before special items	2,004	1,471	1,475	433	(99)
Impairment of non-current assets	(20)	24	230	86	(677)
Restructuring expenses and other special items	116	(68)	(350)	(106)	(196)
Financial income and expenses	(248)	(35)	(44)	(51)	(75)
Profit before income tax	1,852	1,404	1,281	309	(307)
Profit, continuing activities	1,351	1,028	1,290	214	(1,184)
Profit, discontinuing activities	-	-	-	-	(94)
Net profit for the year	1,351	1,028	1,290	214	(1,800)

Source: 2008 annual report Lego

Question 2: Based on the VRIO framework, analyze the sustainability of Leg's competitive advantage.

Slides 3 Resources to help the Lego Group gain a sustainable competitive advantage

Question 2: Based on the VRIO framework, analyze the sustainability of Lego's competitive advantage

Resource or Capability	Valuable	Rare	Imperfectly Imitable	Exploited by Lego	Competitive Implication
Financial Resources	Yes	No	No		Competitive Parity
Physical Resources	Yes	No			
Innovation Resources	Yes	Yes	Yes	Yes	Sustainable competitive advantage
Human Resources	Yes	Yes	Yes	Yes	Sustainable competitive advantage
Brand Resources	Yes	Yes	Yes	Yes	Sustainable competitive advantage
Organization	Yes	Yes	Yes	Yes	Competitive advantage

Question 3: Analyze how Lego has balanced exploratory innovation and exploitative innovation over time.

Slides 4 Lego Group's innovation strategy before 2004

Question 3: Analyze how Lego has balanced exploratory innovation and exploitative innovation over time



During the beginning, Lego took the lead in developing plastic toys and applying for patents, which is an exploratory innovation.
 In the growth stage, the game system proposed by Lego changed the business model of the toy industry, which is an exploratory innovation.
 In the maturity period, through the way of restructuring product line let Lego rapid growth again, this is a kind of exploitative innovation.

All of the above are innovations that Lego has used at various stages of its development, this single innovation strategy has a negative impact on the development of firms to a certain extent.

Slides 5 Lego Group choose "Ambidextrous Organization"

Question 3: Analyze how Lego has balanced exploratory innovation and exploitative innovation over time



Firstly, Lego Group identified a very clear direction for its future development, and then rediscovered the fundamental values of Lego, focusing on core products and core customers.

On the basis of a stable management and sustained profitability, they then set foot in new areas and engaged in marginal innovation.

With the increase of similar products in the market, Lego has made defensive innovation measures around its core business in order to adapt to the changing market environment.

7.Lessons from Case Study

From this pedagogical case study, we can see the importance of internal and external environment analysis. A successful company cannot ignore its external environment. Both large and small companies face competition in the industry. But on the other hand, it can also promote the company to continuously improve product quality, innovation, improve service, etc., which is a kind of healthy competition for the company and the whole industry. At the same time, internal analysis of the company itself is also crucial. Managers should be aware of their valuable, scarce and difficult to imitate resources and capabilities, and make the most of them through reasonable organization and coordination, so as to bring long-term competitive advantages to the company.

Even as the world's largest and arguably most influential toy company, Lego has experienced innovation puzzles and tests. This case study focused on the influence of the innovation strategy in the different development stages of the LEGO Group, and we can draw the following enlightenment from it:

First, innovation requires focus, and the choice of innovation strategy also requires focus, not to do things beyond the boundaries of the firm's capabilities. Only when the company's valuable resources are used in the core production area, and creative talents are no longer distracted from researching too many products, can they produce more profitable products on the market. When an enterprise expands into a related or field, it must implement careful and prudent plans, such as paying special attention to expanding new channels, value chains, technologies or product series. During Bragman's period, the Lego Group adopted a radical development strategy and frantically increased the number of products, which caused a significant increase in production costs and a significant decline in product profits.

Second, innovation must have its own value proposition. In the process of innovation, companies must always check whether products are consistent with their own value propositions. Although Lego survives by innovation and develops by innovation, innovation is only a tool and a spirit, but it cannot be used as an end. firms cannot innovate for the sake of innovation. That way, they will lose the most original

things, and happiness and decline will all start from this.

Third, innovation needs to be managed. firms need not only innovation, but also effective innovation management. Innovation is not only reflected in the launch of a new product, but also in any small part of product development, such as how to evaluate consumers' attitudes. The management of innovation is not only embodied in the product link, but also in the sales link, but also in how to maintain close contact with consumers. Similarly, strategic innovation needs to be strictly managed and scrutinized. The selection of talents and the innovation of organizational control models play an important role in the development of firms. The most fundamental reason that led to Lego's ten-year recession was not at the product level, but at the strategic level.

Lego's successful innovation has given us a lot of enlightenment, but also a lot of reflection. Clarify innovation goals, formulate innovation strategies, manage innovation boundaries, set up scientific innovation processes, and achieve outstanding innovation to promote enterprise development.

8. Conclusion

This project presented a pedagogical study on Lego, which aimed to promote a better understanding of innovation strategy. It introduced the different innovation strategies adopted by Lego Group in different development stages, from the initial single exploratory innovation or exploitative innovation mode to the later ambidextrous organization. It showed that the impact of innovation on the development of firms will not always be positive, and that unrealistic innovations can hinder the development of firms.

The goal of the project was to provide a pedagogical case study so that its audience - management students - can not only have the opportunity to increase their understanding of the Lego Group, but also have the opportunity to practice and use strategic management concepts and frameworks to help them in their future academic activities or career careers. To do so, we introduced the development history of the Lego Group from its inception to the present day, reviewed the literature on the strategic management framework, and then put forward relevant case study questions and used the management theory to answer them.

Lego has been deeply rooted in the hearts of the people in western society and greatly promoted the innovation of several generations. If it was not for the imagination and curiosity Lego planted in people's childhood, the world would lack a lot of innovation. At a deeper level, Lego's greatest social value is to teach people how to innovate, make innovation a part of people's life, become a habit, and integrate this way of thinking into the whole work and social operation.

Therefore, the inspiration of the whole paper is that innovation is very important, innovation is reflected in all aspects of our life, and appropriate innovation can promote the development of society. Secondly, the combination of theory and practice can help students better understand the content in the textbook. Through this pedagogical case study, students majoring in management can better understand the theoretical knowledge, and help them adapt to these management tools more quickly and apply them to real cases, which will have an important impact on their academic and work development in the future.

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