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Survival Strategies of Small Business

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ABSTRACT

In Taiwan, small and medium-sized enterprises (henceforth, SMEs) account for the majority in the market. However, according to the statistics of the Small and Medium Enterprise Administration, Ministry of Economic Affairs, in 2018, 48.85% of SMEs are operating less than 10 years, and 51.15% of SMEs are operating more than 10 years; Among them, those who have less than five years in the year account for about 30% of the total number of SMEs. Besides their innate conditions, which have less resource, the environment of the market is much more influential. Facing the threat of environmental change and lack of resources, I am curious about how small business can survive? What are the survival strategies of small business?

In the past literature, many researches focus on the industrial structure and the economy. While previous studies focus on big companies' strategies, this study focus on small firms' strategies. I interviewed several boss and managers in small firms, including screw industry, mold industry, and scissors industry. I found five survival strategies of small business: (1) reducing cost is a basic element of enterprise; (2) increasing entry barriers makes the new industrial joiners have difficulty; (3) re-invent business makes enterprises develop to higher level and increases revenue; (4) the establish of industry clusters makes enterprises have different developments, and (5) internationalization is to increases the amount of customers.

Keywords: Small Business, Survival Strategy

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INTRODUCTION

Background

In the early stage, Taiwan was dominated by agriculture. After the end of World War II, under the colonization of Japan, Taiwan began to be based on agriculture and light manufacturing. In the early period, the grain industry was mainly exported. In 1960, the light industry developed rapidly and heavy industry began to develop. After The First Oil Crisis (1973), Taiwan's agricultural GDP fell by half and manufacturing increased twice. During this period, Taiwan's economic growth rate was as high as 10.45%, which was called an "economic miracle." After that, the proportion of agriculture slowed down, and the manufacturing industry developed steadily and began to flourish in the 1980s. In 1980, the proportion of GDP in the manufacturing industry reached its highest level, and it began to gradually decrease in the later period, entering the post-industrial period. After 2000, although the proportion of manufacturing industry has been declining year by year, the proportion of heavy industry and technology-intensive industries in the total output value of manufacturing industries has increased significantly.[1] This shows that Taiwan's industrial structure is constantly upgrading. The upgrading of manufacturing is also reflected in the products exported; the proportion of high-labor-intensive products has declined, while the proportion of high-capital and high-tech intensive products has increased significantly.

Taiwan's traditional industries based on manufacturing and processing, and manufacturing is the mainstream of Taiwan's industry. Before the 1990s, manufacturing industry was the principle of Taiwan's economic development. From the early import-substitution to the satisfaction of domestic demand, the subsequent export

[1] 莊奕琦、林祖嘉,"台灣產業結構變化分析與因應策略：『去工業化與空洞化之剖析』."

promotion led to the rapid growth of Taiwan's economy, and even become the economic development model of emerging countries. However, as the people's focus of the industry is gradually towards to electronic information industry, and encounters low-cost competition from Chinese and Southeast Asian manufacturers, the traditional industry is gradually shrinking, and many factories have also shifted their production lines to other countries to reduce costs.

According to the White Paper on SMEs of the Ministry of Economic Affairs in 2018, there are 146,600 SMEs in Taiwan, accounting for 97.64% of the national enterprises. Although the sales of SMEs are still lower than the sales of large enterprises (SMEs account for about 29.59% of total sales), in terms of the employment population, it is still influential to Taiwan's economy.[2] The number of employment population in SMEs reached 8.65 million, accounting for 78.41% of the country employment population.[3] Therefore, the survival rate of small businesses have a direct impact on people; if the survival ratio goes down, it will cause unemployment problem to the country, which will affect income and may result in economic recession.

SMEs have multiple internal deficiencies, such as the lack of corporate capital, professionals, and resources, combined with the impact of the external economic market; it will threaten the operation of SMEs. In terms of survival rate, in 2018, 48.85% of SMEs are operating less than 10 years, and 51.15% of SMEs are operating more than 10 years; Among them, those who have less than five years in the year account for about 30% of the total number of SMEs.

[2] "中小企業家數-按行業類別分," (2016); "中小企業家數-按行業類別分," (2017); "中小企業家數-按行業類別分," (2018).
[3] *2019 中小企業白皮書* 2019.

Therefore, the survival of SMEs in Taiwan is very important to the economy and the people. This study will explore the survival strategies of SMEs.

Motivation

As mentioned in the background, SMEs have closed down in 10 years accounting for the half of total. In addition to the problem of corporate bankruptcy, the problem of offshoring is also a major concern. The prices of production factors have deeply affected the development of enterprises in Taiwan's manufacturing industry. Since the 1990s, due to the appreciation of the New Taiwan dollar, land and wages rise, the manufacturing costs have been unable to compete with other developing countries. Emerging countries not only have land, low wages, huge potential market, but also have geographical location, making them become the first choice for companies to move overseas. Since 2010, the overseas production ratio has exceeded 50%, and it has gradually increased. This shows the seriousness of the problem of offshoring. Many companies move to overseas to develop, which is not conducive to many small businesses, which will make small businesses easily to close down, so it is necessary to explore the survival strategies of small businesses.

In the past, many literatures devoted to the study of economic systems and industrial structures. Many of them analyzed the business model of large enterprises or how to succeed; and also analyzed the difficulties and problems encountered by SMEs. Less analysis of the business strategy of small enterprises, this study focuses on small businesses that still survive in Taiwan today, analyzing their survival methods and business strategies.

Research Purpose

Based on the above research motivation, this study has the following two research purposes:

1. Exploring the difficulties in the economic market that small businesses encountered in Taiwan currently.

2. Analyzing the survival strategies of small businesses in Taiwan.

Research Questions

1. What are the difficulties that Taiwan's small businesses encounter in the economic market currently?

2. What are the survival strategies for the of small businesses in Taiwan?

Contribution

In this study, I know that the low survival rate of small businesses can be divided into two major parts: the internal operation problems and the threats that caused by the external environment. For many small businesses, internal operational issues include the lack of resources, such as capital, equipment, skilled-labor, etc., which will make them more vulnerable to competition when competing with other large companies. However, the threat posed by the economic market, as described in the geese-shaped theory, will gradually shift to other countries that are more suitable and can create greater benefits as the times change and market conditions change. The problem of many industries in Taiwan is serious, which not only affects the economy of the entire country, but also causes the growing of unemployment problem.

Therefore, today's small businesses which want to survive in Taiwan must carefully consider the following five strategies.

(1.) Reducing costs; the biggest reason for Taiwan's offshoring today is because it cannot compete with other developing countries. For enterprises, if they want to produce the same products, it is better that have the lower costs, the greater the profit for the company. However, because the countries in Southwestern Asia

have lower labor cost than Taiwan, Taiwanese enterprises cannot compete with them. If they do not move to other countries, they may end up in bankruptcy.

(2.) Raising entry barriers; each operator encounters many difficulties when entering a new industry. Therefore, new entrants must find ways to overcome these difficulties; on the contrary, existing firms must increase the difficulties of entry barriers and make it impossible for new entrants to overcome.

(3.) Re-invent business; if companies cannot reduce costs to create revenue, they need to develop or improve products and make them different from those in the past. The level of products is heightening and change into the products with greater added value.

(4.) Industry clusters; sometimes the cooperation between competitors is also very important. Companies in some industries do their own specialized parts, and cooperate with other companies in the concept of professional specialized division.

(5.) Internationalization; the target of enterprise is to grow continually. In addition to selling goods to other countries, the one of the goals that many enterprises to pursue is making the company internationalization. It can expand the size of the enterprise, so the enterprise will have a larger ability to face the competition from other enterprises and the various threats in the economic market.

Limits

Because of the researcher's personal connections and time constraints, it is impossible to interview many enterprises in various industries, only do the in-depth interviews in three different enterprises.

Delimits

In order to make the data more complete, I collected some actual cases from magazines and journals to collect more information.

LITERATURE REVIEW

The Situation of Small and Medium-sized Enterprises in Taiwan

According to the statistics of the Small and Medium Enterprises Department of the Ministry of Economic Affairs, SMEs account for about 97% of Taiwan's entrepreneurs; SME workers account for 77%, which is enough to see SMEs still play a key role in Taiwan's economic development. As for the size of SMEs, it is based on the standard of employing 200 employees.[4] For SMEs, the investment is small and easy to diversify risks, and the flexibility is large. The business and market can be changed at any time, but the employees lack training, and the quality is different. As far as the competitiveness of enterprises is concerned, the scale is originally only one of many influencing factors, and there are many enterprises with a small scale but strong competitiveness.[5] As far as most SMEs are concerned, due to the lack of overall resources, they are often in the stage of business growth. The demand for various types of management resources is more urgent and requires more external resources to assist. SMEs are one of the main driving forces for economic growth and progress, in order to reduce the operational difficulties faced by SMEs in the stage of entrepreneurship and rapid growth, in addition to the special assistance and business guidance provided by governments around the world. To maintain the growth of SMEs' operations, companies must develop strategies.[6]

[4] Margi Levy and Philip Powell, "Information Systems Strategy for Small and Medium Sized Enterprises: An Organisational Perspective," *The Journal of Strategic Information Systems* 9, no. 1 (2000).

[5] Carol Yeh-Yun Lin, "Success Factors of Small-and Medium-Sized Enterprises in Taiwan: An Analysis of Cases," *Journal of small business management* 36, no. 4 (1998); 張保昌, "中小企業的市場導向和經營績效的關係研究," *文大商管學報* 19, no. 2 (2014).

[6] 蔡渭水 and 鐘聖偉, "中小企業國際化策略類型及影響因素之研究," *中原學報* 25, no. 2 (1997).

The Dilemma of Small and Medium-sized Enterprises

As far as the competitiveness of enterprises is concerned, the scale is originally only one of many influencing factors, and there are many enterprises with small scale but strong competitiveness.[7] As far as most SMEs are concerned, due to the lack of overall resources, they are often in the stage of business growth. The demand for various types of management resources is more urgent, and they need more external resources assist them. The dilemma faced by SMEs mentioned in the past literature can be divided into five parts: research and design (R&D), production, sales, service and export. The biggest dilemma for R&D is the funding problem. Compared with large enterprises, small businesses are indeed having less fund, which may cause obstacles to development. The problem with production is that the productivity per capita (sales/employee) of SMEs has not been able to break through and the productivity is less than one-ninth of that of large companies. The dilemma in sales is in operating net profit. Although the number of SMEs far exceeds that of large enterprises, the annual total net profit is still smaller than that of large enterprises. The dilemma of the service is part of the average salary, and the average salary of SMEs is still less than 80% of that of large enterprises. Then there was the issue of export contribution, and the export sales of SMEs continued to decline. The difficulties encountered by these SMEs are caused by many factors. There are still many problems encountered by SMEs. For example, the problems of business inheritance, most SME bosses inherit the company to their own children, but it should be consider of their own willingness and ability problems, sometimes it will cause the crisis of SMEs. Enterprise transformation and innovation research and development capabilities are also one of the problems. Enterprises need to transform, not only need

[7] Ru-Ching Hsu, Diana Lawson, and Ting-Peng Liang, "Factors Affecting Knowledge Management Adoption of Taiwan Small and Medium-Sized Enterprises," *International Journal of Management and Enterprise Development* 4, no. 1 (2007).

more professional technology, but also to find the right professionals; in many cases, professionals in specific fields are easily headhunted by large enterprises. Other companies will lose the opportunity to have professionals. The funding crisis is a problem that every company will face; SMEs will be more likely to have funding problems because of their capital.[8] However, SMEs will also have problems in international market expansion; compared with large enterprises, SMEs will not have the opportunity to expand abroad, because many cooperators will have more confidence in internationally renowned large enterprises and believe that large enterprises will have more guaranteed to cooperate with them. To maintain the growth of SMEs' operations, companies must develop strategies.

The Flying Geese Model

The flying geese (FG) model was proposed by the Japanese scholar Akamatsu Kaname in 1935. Refers to the process of a certain industry, which has been prosperous and declining along with offshoring in different countries, and the process of different industries in one of the countries has prospered and declined.[9] Economics scholars studied the economic and industrial structure changes of East Asian countries after the war, and believed that East Asian countries are the economic development type of the FG model: Japan is the wild head, following by the Four Asian Tigers, and then China and Southeast Asian countries. In the former countries, an industry was first developed. When the technology is mature and the factors of production are changed, the technology will be move to the next position country to produce. The industrial structure of the previous countries will be upgraded to another new level. Take the apparel industry for example, in the 1950s and 1960s, Japan was known as

[8] Tze-Wei Fu, Mei-Chiu Ke, and Yen-Sheng Huang, "Capital Growth, Financing Source and Profitability of Small Businesses: Evidence from Taiwan Small Enterprises," *Small Business Economics* 18, no. 4 (2002).

[9] David W Edgington and Roger Hayter, "Foreign Direct Investment and the Flying Geese Model: Japanese Electronics Firms in Asia-Pacific," *Environment and Planning A* 32, no. 2 (2000).

the king of apparel industry in the world. After the 1960s, it gradually moved to Taiwan to develop and prosper. After the 1970s, Taiwan's apparel industry was on the skids, then move to the back position country.[10]

How Can Small and Medium-sized Enterprises Solve the Problems

The past literature mentioned that it is necessary to reinvigorate the economic development of SMEs in Taiwan to solve the problems that face today in Taiwan. To revitalize domestic demand-oriented SMEs, Taiwan's SMEs account for the majority of people's livelihood services, but these companies have many problems with technology, labor, capital, professional, and equipment.[11] As long as the industry can raise the national income, then everyone's ability of consumption will become greater, which will also raise the country's domestic demand and make the entire business cycle more prosperous. This can also be achieved through government policies or subsidies.

The Importance of Enterprises Planning Strategies

No matter how big or small a company is, the basic premise must be to survive and grow. In a modern and volatile environment, a company wants to have a future. In addition to using its resources, it is necessary to borrow external resources to assist enterprises.[12] SMEs cover many different industries. Each industry has its industry life cycle. Every SME should be able to understand its position in the life cycle of the

[10] Kiyoshi Kojima, "The "Flying Geese" Model of Asian Economic Development: Origin, Theoretical Extensions, and Regional Policy Implications," *Journal of Asian Economics* 11, no. 4 (2000).

[11] Wai-Sum Siu, Wenchang Fang, and Tingling Lin, "Strategic Marketing Practices and the Performance of Chinese Small and Medium-Sized Enterprises (Smes) in Taiwan," *Entrepreneurship & Regional Development* 16, no. 2 (2004).

[12] G Ian Burke and Denise G Jarratt, "The Influence of Information and Advice on Competitive Strategy Definition in Small-and Medium-Sized Enterprises," *Qualitative Market Research: An International Journal* 7, no. 2 (2004); Nicholas O'Regan and Abby Ghobadian, "Effective Strategic Planning in Small and Medium Sized Firms," *Management decision* 40, no. 7 (2002).

industry. The cycle period is very short. When to enter and when to quit, it is entirely up to themselves to make judgments and decisions.[13]

[13] Siu et al., "Strategic Marketing Practices and the Performance of Chinese Small and Medium-Sized Enterprises (Smes) in Taiwan."

METHODOLOGY

Research Process

This paper is a qualitative study. The research method is to collect secondary data first, and to understand the background of the research from past academic journals and papers; and the research results and theories in the past literature.

Then, through the in-depth interviews[14] to collect primary data, the interview content is organized into transcripts, Finally, the interview data is compiled and theoretically analyzed to summarize the general direction of the five small business survival strategies.

Data Collection

In-depth interviews were conducted with several small Taiwanese companies to understand their current industry conditions, the difficulties they encountered, and how companies had developed strategies to overcome these dilemmas. The research object of this research is small business in Taiwan, which still alive now. The study interviewed three small companies in the middle of Taiwan; the head of the quality management department in the screw factory in Lukang, Changhua, the owner of the mold factory in Huatan, Changhua, and the owner of scissors factory in Xiushui, Changhua. Interviews are approximately 40 minutes to an hour and were organized into a total of 32 pages of transcripts.

Data Analysis

The researchers used an in-depth interview process to develop an understanding of the difficulties that small businesses encountered and to identify survival strategies of them. Three cases based, comprising transcript, and archival material constituted the analysis base. Following the procedure (質性研究方法：訪談模式與實施步驟分

[14] 林金定, 嚴嘉楓, and 陳美花, "質性研究方法: 訪談模式與實施步驟分析," *身心障礙研究季刊* 3, no. 2 (2005).

析，林金定、嚴嘉楓、陳美花，2005，身心障礙研究季刊), developed the concepts. The concepts were grouped into five categories of survival strategies.

CASES AND RESEARCH FINDINGS

Iron and Steel Industry Structure

According to the material, the steel industry can be divided into two categories. One is “carbon steel”, and another one is “stainless steel and alloy steel”. The upstream companies mainly supply raw materials such as coal, iron ore and scrap steel. They also supply billet steel and stainless steel which are refined from those raw materials. The middle reach makes the steel plate, steel coil, reinforcing steel, iron or steel wire, and steel bar by the process of cold rolling and hot rolling. It also makes various types of shape steels and angle steels. Downstream companies are the use of midstream products in a wide range of processed products. The industrial chain of the steel industry presents a regular triangle, which is a pattern with a narrow upper and a width lower. The number of upstream manufacturers is small and the types and number of downstream manufacturers are more.[15]

The raw materials of upstream are billet steel and stainless billet steel, which need to be manufactured through steelmaking procedures. The steelmaking method can be divided into two types: one is blast furnace steelmaking, and another is electric furnace steelmaking. The main raw materials of blast furnace steelmaking are iron ore sand and coking coal, and the main raw material of electric furnace steelmaking is scrap steel. Currently, only China Steel company is a steelwork that has been operating consistent work. Raw materials for blast furnace steelmaking and electric furnace steelmaking all need to rely on imports. Therefore, the shortage of international scrap steel raw materials will affect the price of scrap steel, once the price of raw materials about upstream manufacturers rises, the cost of the middle

[15] *金屬工業研究中心; 台經院產經資料庫.*

reaches and downstream manufacturers of the steel industry will also increase.[16] However, China is currently the world's largest steel producer and the largest consumer of iron ore, so the demand in China will affect the profitability of the global iron ore factories.

About the products in the middle reach that in the carbon steel sort are cold and hot rolled steel plate and steel coil, reinforcing steel, bar steel and iron or steel wire rod. And in the stainless steel sort are cold and hot rolled stainless steel plate and stainless steel coil, stainless steel bar, and wire, stainless shape steel, as well as the cutting and tube industry. The main purpose of hot-rolled steel coils is the raw materials of cold-rolled steel coils, and can also be used for pipe products such as steel pipes, containers, etc.; hot-rolled steel coils are re-processed into cold-rolled steel coils, which can be mainly used for pipe making, bicycles and components, steam locomotives and components, clad products, etc.

There is a wide variety of downstream applications, including all kinds of metal products, machinery and equipment, transportation tools, molds, screw nuts, steel wire cables and various steels required for industrial facilities and construction projects, such as stainless steel pipe fittings and micro connectors. Components, construction hardware parts, lock, etc.

Downstream Manufacturers of the Steel Industry

1. Screw industry

The rise of the Taiwanese screw industry was after World War II. In the initial stage, it was mainly in domestic sales. During the Vietnam War, the US aid assigns to purchase in Taiwan, then gave a new opportunity for the development of the screw industry. At the same time, the government promotes the Ten Major Construction

[16] 吳俊賢、林可薇, "台灣金屬產業之研發聯盟策略:型態、時期與成效."

Projects; it increased the demand for steel products and then brings up today's flourish.[17]

It also called the fastener industry; it is not just a screw with a thread, but a component that can combine various parts. Currently, Taiwan's screw industry has high skill and has more than 1,700 factories, of which Kaohsiung and Tainan account for the largest proportion. Most of the factories are located in Kaohsiung County and Tainan County, which are the main brands for the production of screws and screw caps (important brands, including Chun Yu, Ju Heng, Lu Zhu Xin Yi, and Jin He.).[18] Taiwan's screw industry is mainly small and medium-sized enterprises, with about 80% of exports. It is an export-oriented industry. Therefore, global commodity control and liberalization have a very important impact on the screw industry.

The amount of screw used can be used as an indicator of the degree of industrialization in a country. However, the screw demand market is not big enough in Taiwan. To maintain competitive advantage, domestic industrialists are gradually moving towards high-grade products and high value-added screw fasteners, and the export ratio has increased year by year. However, ordinary products and low value-added products have developed overseas, and most of them are in Southeast Asia and China. The screw industry is facing the competition in quality and price in China, Germany, and the United States, and the production and sales activities are confronted with great challenges.

At first, the Taiwanese screw industry was a typical low-capital, low-labor power small and medium enterprise (SME), which could be an industry composed of small businesses. The rise in raw material costs and the product competition in developing countries is one of the main reasons for the profitability of the industry. Afterward,

[17] 葉惠忠、劉和財, "台灣螺絲扣件產業成功關鍵因素之探討."
[18] "金屬製品製造業-螺絲業."

because of the skillful technology, Taiwan's screw industry has developed high-priced precision screws and developed special-purpose screws, such as vehicles, aerospace, medical equipment, rails, steel structures, and green energy. Under this circumstance, the main difficulty is not the problem of rising raw materials, but the main problem of access.

15 years ago, Taiwan was once the champion of the world's screw export. In the early 2000s, China overtook Taiwan for the first time and became the world's first exporter of screws. Later, China, Germany, and the United States threatened Taiwan with price and quality. Once Taiwan's ranking fell to fourth place. After some hard work, now return to the top three.

There are nearly 1,800 screw traders in Taiwan, most of which are small and medium-sized enterprises. They are less resistant to the entire environment. Because of their small size, they will hard to survive when they are threatened by the environment. The United States is the largest market for Taiwan's screw export. The US-China trade war in 2018 has been fierce, and the overall value of Taiwan's exports has declined. However, only the export value and unit price of the screw industry are growing against the trend; ostensibly the screw industry has achieved good results in the US-China trade war, but behind this, the crisis of industry is still following. To survive, the screw industry has an upgrade strategy, and the upgrade strategy can be divided into two major patterns: the first one is mergers and acquisitions (M&A) and the other is high-valued.

Generally, M&A is not prevalent in Taiwanese companies, and even many companies which have billions of revenues are afraid to try it, but in the screw enterprise, this is one of the ways to survive; however, it can be divided into two categories, overseas M&A and domestic M&A, brands, and access are the essential.

The main reason why they are keen on transnational overseas M&A is because they have encountered many difficulties in the process of transformation and upgrading to enter the international market. Most of the time, it is not because the quality or technology is not good enough, but because there is no brand power and trust relationship. Screw components can be said to be the necessary parts for the manufacturing industry. They are important but small. Everyone needs it, but they will only purchase them from some brand-name manufacturers. It is too hard for every customer to consider that there also have many manufacturers in Taiwan, and have high quality. For example, the German automotive screw factory, ESKA, was acquired by Hengyao. Originally, it is the distributor who supplied the screws to some automakers, and then it becomes a direct supplier to the world's top ten automakers. And obtain some special screw technology such as track and wind power. The advantage of doing business directly with the factory is that expanding revenue, it also can shorten the information gap, improve the ability of the company to grasp the market. It can find problems or observe the market reaction, and promptly improve themselves. In the period when there is no acquisition, from the factory to the importer and exporter, and to the original equipment manufacturer (OEM), every enterprise in the middle will hide some key information, which greatly lengthens the time of information transmission. In the past, it was possible that even did not know where the masters of the car factory to use the screws, but now they have the first-hand information to know the performance, specifications, dimensions, and functions of each customer. However, the management after the acquisition is also very important, such as Hengyao company to manage this German company in a soft and high-pressure way, but the high pressure is not like Spartan management, but clear specifications and let employees know their company’s culture and strict

compliance; they emphasize teamwork, and if there are employees who are unwilling to share their resources, they will be fired. They manage German company only for money, human resource, and the annual business direction, and will not be involved in the daily operation of management, fully authorized them to manage themselves, because the company's people will be the people who know their company's business; if the company does not very need to be rectified, the enterprises are only want to buy the technologies or cut into new markets, then the minimum management is the best management method. There is another kind of merger and acquisition of domestic upstream and downstream enterprises. The advantage is that there will have a concept of integration. Knowing what problems will face, it can avoid or improve from the upstream enterprises when they are manufacturing, and also, it can save a lot of time and money.

The second upgrade strategy of the industry is high-valued. High-valued is to increase the added value of the products so that the unit price can be increased. Generally, the areas of upgrading and transformation are automobiles, aerospace, medical equipment, rails, steel buildings, and green energy. The most striking area of these upgrade strategies is the transformation into the field of medical equipment to produce artificial roots. The manufacturing process of artificial roots is similar to that of screws, but it can increase the unit price of screws by thousands of times. Therefore, it has become one of the transformation directions of the industry. However, it is not easy to transform into an artificial roots area. It is said that it is difficult, although the appearance looks very similar, the professional knowledge and technical equipment is different, which also makes many enterprises who want to transform into this field to retreat. Hung Chun is one of the few successful cases in the transformation of the traditional screw industry into the artificial roots and has developed its brand. The

biggest difficulty they face is how to get into the professional field of medicine. In the absence of a medical background, they cannot find many relevant professionals to discuss and do the research together. At that time, the manager of Hung Chun visited more than 100 dentists and professors to understand the requirements of the clinician for the design of the roots, and then to find a master's degree in medical science. They spent money, and finally developing the first artificial root that made in Taiwan in a few years. It can be seen that the first condition for high-valued is to find professionals in related fields to develop more advanced and professional products. Another successful case is San-Yang, the world's largest nut factory. During the Financial Crisis, when many high-tech industries laid off their employees, San-Yang had added many opening of management trainee with at least 20% higher salary than usual. Then successfully introduce many engineers with a master's degree from elsewhere. These professionals can research and continue to develop many products that allow the screw industry to escape the traditional market and help the industry transform. The next step after product development is marketing. It is also a very important key point to sell the products. How to opening brands and channels is another problem. In the beginning, from distributors, medicals to patients, few people are willing to use the artificial roots, which are made in Taiwan, most of them want to use foreign ones. In brand promotion and channel, it can only rely on time to prove themselves. For example, foreign distributors often have to observe for about five to six years to determine the company’s quality and credibility and further discuss the cooperation. However, after reaching out to more international sellers, that it is not enough to make the product and sell it, it is important to achieve perfect yield and service. Today, the production lines of many factories are already fully automated. If

the screw lock is broken, it must be get rid of the problem after the completely processed, it will cause a lot of waste.

The first screw factory in Taiwan is Chunyu in Kaohsiung. It develops its industry clusters with the Gangshan district in Kaohsiung as the south and the Guiren district in Tainan as the north. The business owners are relative, friend or mentorship. This kind of "family-like" relationship prevents them from having price war, they hold the principle of sharing information, customers and technology.

There are hundreds of kinds of screw products, and there are many changes in the factories of upstream and downstream. No one can do it all by itself, and it is not cost-effective for SMEs to make excessive investment for unstable orders. Therefore, the entrepreneurs in the screw industry have reached a consensus that each of them have specialization and them cooperation with each other. This will avoid competing with each other and reduce the risks of both enterprises. They help each other, discuss and communicate with each other, become indispensable comrades.

2. Mold industry

Mold is an important part of the manufacturing industry, and most of them are distributed in the middle and north of Taiwan. It has high industrial relevance and is one of the important guarantees for industrial upgrading and technological progress. A mold is a processing tool that processes raw materials and gives them a complete configuration and precise dimensions. It is mainly used for the components which are efficient and mass production in industrial products.

In the mold making process, the most important thing is the accurate size and mold on-time test. Especially in the current trend, products improve with the days, mastery of time is more important. Nowadays, there are more and more requirements for mold making, because the function of the product has increased, and the

complexity is also enhanced. It is getting more and more difficulties in the mold making process.[19]

Mold making is a technology-intensive and high-tech industry. It can't be fully automated to produce. It has a lot of patterns but a very small amount in order, so it cannot help to produce it in a production line. So in each different molds with different products, how to arrange the processing and how to adjust the amount of processing are? However, the most effective method is the division of labor and cooperation of various departments and a coordinated process planning.

Molds are related to manufacturing equipment, applications, and materials being processed. With the rapid advancement of equipment and technology, the processing technology is constantly innovating, and the manufacturing technology and structure of the mold will also constantly change.[20] Regarding the influence of raw materials, companies with advanced technology have a deeper impact. Since the mold is a technology-intensive industry, the bosses paid attention to technology in the past. Many bosses practice their skills from a young age and continue for many years. Until now, some bosses still only pay attention to technology. That is, rely on their technology to make money, but they have not kept abreast of the times, it will be in an unfavorable situation in the future.

I interviewed the owner of the mold factory in Huatan Township in Changhua, which job tenure is about 30 years. He is in charge of design molds, draw design diagrams of molds, design processes, and let employees complete the molds according to the design diagrams and processes. The company is a small and medium-sized enterprise, and the number of employees is 6, and the products are

[19] Ming J Tsai, Jou-Lung Chang, and Jian-Feng Haung, "Development of an Automatic Mold Polishing System," *IEEE Transactions on automation science and engineering* 2, no. 4 (2005).

[20] Tung-Hung Lu et al., "Development of a Collaborative and Integrated Design and Manufacturing Service Platform for Injection Mold Industry," in *Proceedings of the International Conference on Product Lifecycle Management (PLM'05)* (2005).

almost domestic sales. However, they have several export sales, and then the domestic customers sold the molds after some trials. The orders are given by the stamping manufacturer; at the beginning, the customer is the one who has already be familiar with him. Afterward, he visits other people to find new customers, and then gradually increase the number through the introduction of regular customers

They do not advertise themselves in the public, and it is by word of mouth between customers. Mold is a very traditional industry, and it has regional problems. Most of the customers are factories that in nearby areas, they will not find partners in a far area. Because many things need to be discussed all the time before and during the manufacturing process, many things need to be modified (how to made the item, maybe need to modify some parts, or change the process), and it need to try the mold after finish the process. If the distance between the partners is too far, it spend take a lot of time about on unnecessary waste.

Compared with other factories in the mold industry, this company's advantages are in the design and structure of the mold (the boss is meticulous, and he is specialized in mold design), because the products he made are very complete and precise, they are more stable than other companies' products. The downside is that the technologies of making molds are difficult to pass down, because every time they encounter different situation and problems, they cannot develop a complete standard operation procedure. They need to accumulation the experience step by step.

The company's product line is narrow, only mold, and the expertise in technical skill. The target market is also limited, only the stamping industry, the process of products which use the stamping skills will need mold. Besides, because the mold industry is impossible to have large scale production, it is economies of scale. Employees are making different molds every day (it is impossible that they can be

scaled up because of the low yield), the boss design and draw the design diagrams first, and then the employees make the molds according to the design diagrams.

There are not many suppliers in the upstream and downstream of the mold industry. The most important is the material of the mold. If the screw is needed, the screw is processed first and then sent to the heat treatment. Then it will start to wire EDM (wire electrical discharge machining) before starting assembly; or use some hardware materials, such as springs, punches, or screw components. In other words, the entire supply chain will not be large and complex, and the dependence on upstream and downstream vendors is also not large.

However, the stability of business relationships is high. If the customers have any problem after the mold is done, they will return to the original factory for repair. Because the mold designer will leave some information about that mold, it can make them stay on top of the situation. Other factories do not have that information, there is no way to help. Generally speaking, unless it is a problem with their manufacturer, otherwise it will not change the suppliers easily.

In the competition between the factories in the same industry, the attacking activities of the mold industry is a rare condition. Because the mold is a technical specialization industry, and the thinking of each mold designer is not the same. If the relationship of cooperate is favorable, the customer will usually continue the cooperation. I have been attacked by hackers before, but not by the competitors that in the same industry, just random attacks. After the hacker attacked, the blackmail virus destroyed all the computer files, but it still caused some damage to the enterprise. Fortunately, because of the backup, most of the information remains. After this incident, every employee remembers to make the backup more complete (or you have to redraw it once).

The relationship between the company and its partners is related to their ability to solve problems for customers. For example, guests need saws for sawing wood. Generally, the materials for saws are pre-hardened steel. After the heat treatment, the materials are hard and difficult to manufacture those products. And the jagged area is easy to crack; how to make the mold more durable, so that the jagged will not crack so fast. It involves the grasping of the gap of the wire EDM, the selection of materials, and the structural design of the mold, and those tips are to make the things more durable. If their company's mold is better than other opponents, the customer will cooperate with them.

The boss believes that although this is a technically specialized industry, it is still necessary to keep up with the times. The first thing is the software upgrade, and then it is an upgrade of the machine. After they finished these two goals, the company become more stable and have better quality.

3. Manufacture of metal hand tools industry

Taiwan is known as the kingdom of hand tools in the world. There are approximately 630 suppliers in the metal tool and hand tool manufacturing industry. Also, the industry clusters effect is prevailing. In the central of Taiwan, like Taichung and Changhua, about 80% of hand tool suppliers (including hand tool component suppliers) gather in the middle of Taiwan to form a complete ecosystem of industrial with many years of the profound technical and industrial base.

The hand tool manufacturing industry in Taiwan is composed of small and medium-sized enterprises. Most of the early factories specialized in casting scissors that required a lot of labor costs because Taiwan's labor costs were cheap at that time, and most people were willing to do such hard work. In the later period, because of the skill of the technology and the influence of many imported scissors, the technology of

enterprise is getting better and better. At the time, the distributors import some scissors, which was introduced in Japan. The entrepreneurs started to make some scissors with better quality. Not only that many people want to buy, but the unit price of the scissors is also relatively high. Besides, the production of casting scissors requires a process of burning charcoal, which will cause environmental pollution. In recent years, the government has also promulgated many related regulations to regulate these industrial activities. However, because the knowledge level and standard of living of the public have gradually increased, the younger generation is not willing to do those works that require a lot of labor, so the casting scissors are moved to produce in the regions with low labor costs, such as China and Southeast Asia. Today's scissors industry in Taiwan is mainly made up of special scissors. It mainly produces special scissors with high technical requirements, such as hairdressing scissors, cloth scissors, kitchen scissors and so on.

Besides, if the price offered by the upstream manufacturers of steel is rising, the cost of downstream manufacturers will also rise. It cannot be said that there is no impact at all; sometimes, if the unit price increase to a certain extent, it will reduce the rate of customer's purchase, and the order will be lost. But this is the problem that can be solved. It can be roughly divided into two ways. The first one is to improve the products' quality, and the second one is to absorb these extra costs by the enterprises. There are many methods to improve quality. It can be said that" The devil is in the detail." For example, when the scissors are sent from other processing factories to start the operation. Pour out the whole box of scissors or take out the scissors one by one; these are two different attitudes toward work. Maybe the former will be faster, but it will cause many small scratches on the plastic handle. Or when rubbing the scissors, wipe 50 scissors for a clean cloth, or rub 500 scissors for a clean cloth. These

small details can change the quality of the scissors and customer perception of the seller. The second way is the methods to reduce waste or to improve their processes to reduce the defect rate to reduce costs.

Although the quality of scissors produced in Taiwan is good, the demand for itself is not large enough. Most of them are exported to other countries to survive. However, the scissors industry is almost all small and medium-sized enterprises, and the popularity in international is not high. So, how to get an export order is essential.

This time, I visited the owner of the scissors company in Xiushui township in Changhua. The company is a small and medium-sized enterprise. It was established in 1971, and its employees are about 20 people. Because Taiwan's domestic demand market is not big enough, it is mainly exported (about 5% for domestic sales and 95% for export); due to different needs in different regions, many of the products are export to Japan and Europe.

The ways to receive orders are through merchandisers and by itself. They will advertise in some magazines to attract customers, and let the potential customers notice their products. Due to the attributes of product in the magazines are different, and the magazines are divided into different industries, it is easy to find suitable magazines for customers who have the same requirements. Also, these advertising costs are lower (than TV commercials), most of the SMEs afford with these advertising costs. Magazines are divided into publishing in Taiwan and foreign countries; if they are published in Taiwan's magazines, then the main target customers are merchandisers; if they are published in foreign magazines, the purpose is to attract foreign customers(, like intermediary), and then foreign customers will directly contact the company by letter or fax. In the beginning, the company received orders through merchandisers. The main reason was that most of the employees' ability was

weak in all aspects. Therefore, they were not familiar with the work project to direct negotiation with foreign customers. Additionally, the information was less developed in the early, so most of them were received their orders through merchandisers. However, there will still have foreign customers who directly look for the company to make inquiries and ask some questions about the company. The company even hopes to gradually turn mostly to take orders by themselves. They hire trading specialist, responsible for the contact and negotiate between companies and foreign customers. But there will also have some necessary sacrifice; if a merchandiser sees that the company is taking orders on its own, it will guard against the company. It will know that the company may gradually decreases its cooperation with them. So, if there was a new order, it may be handed over to other companies. Certainly, some orders will be lost in this process. This is also a necessary process. They must rely on their efforts to establish a good reputation and consolidate the trust of foreign customers and their affirmation of products. When advertising, the company will publish different types of products in each issue, so that they can observe customer's preference in different regions, different periods, different living conditions or culture.

As for the issue of power distribution in negotiations with traders, it depends on the situation. If the company’s own foreign trade capacity is low, it will rely more on merchandisers. Thus, the trader’s power will be relatively larger, and the company will have less bargaining power in the negotiation process. On the contrary, if the company holds the patent right of the product or is brand-oriented, it may have larger bargaining power with the merchandiser. But if the price of the product is too high, not conform to the customer's needs or expectations, the unsalable product will cause other problems.

In addition to the basic competitive relationship, the relationship between the company and its competitor will still have some cooperative relationships. In terms of competition, it is the same industry makes the same product, which will compete with each other and have the price war (who can produce the highest yield products at the most suitable price). On the other hand, some companies or brands are mainly high-quality products; they will be willing to pay a higher price to buy products. In terms of cooperation, after reaching an agreement, they help each other to introduce or sell products that their company does not produce, but this situation is relatively small, the competition between the industries still accounts for the majority.

Compared with other competitors, the company's advantage is that the boss has a good understanding of the basic concepts and structure of the mold and he has continuous get the training. He can also draw the design diagrams to design new molds. In some respects, this is very dominant. For example, generally, a mold can grind a blade. However, the boss painted a design diagram of complex version, he asked the mold factory to make it, and did some micro-processing after taking back from the mold, this mold can simultaneously grind three blades. It greatly increases the speed of the process; it is also those competitors cannot do it.

In the competitive relationship, it is inevitable to suffer from competitors' attacks. For example, the company's website has been hacked by a person who steals internal company data from other guest quotes. As a result, all customers who find the company and are willing to work with the company are intercepted and collected into somewhere by the hackers. This has also caused the company to be almost no one ever asked for a period, no one has sent a message to inquire, or to discuss cooperation matters. Later, I started from the telecommunications company and found that someone deliberately broke into the company website. In addition to the company

to change the password regularly, the company also changed a more rigorous website background locking system, through more complex passwords, and also through the pass back code action, to enter the background of the website. While this may not completely prevent more serious hackers from entering, it can only be careful and pay attention to the situation of the website.

If upstream manufacturers raise the prices, it will cause the company's costs to increase, which will certainly have an impact. This is similar to the increase in salary and the increase in labor costs. There are two solutions: the first one is to increase the unit price of the finished product, but if it is increased to a certain extent, if it exceeds the acceptable range of the customer, it will cause the orders to be lost, and the loss may be more serious. The second way is to reduce unnecessary expenses as much as possible. For example, improving the process to reduce waste and train some abilities of the staff (training employees the abilities to repair the machine and eliminate problems, it can reduce the cost of maintenance machines).

In the early days, low-cost scissors were mainly used (low-cost and mass production), With the improvement of living standards, policy changing in Taiwan, and threatened by other countries which have lower labor cost, the company cannot continue to survive in the low-priced market. Therefore, the current target market of the company is to transfer to the high-valued, scissors with higher production quality requirements and higher unit price (for example tool scissors, hair clippers, etc...). In the company's current operation, the most important part of the cost is the labor cost. Compared with the early stage, the higher the quality and the value higher the requirements for labor. It belongs to the category economy but hopes to develop towards economies of scope. Hopes it can be manufactured in large quantities with several specialized products, which can reduce costs and increase profits.

The company's product line is very wide because it is usually done with more original equipment manufacturers (OEM). The general situation is: customers will have some ideas, and discuss with the company, like what products they want to use, or what special functions or requirements are needed, After the consultation, the company will design the products according to their professionalism and experience. It is the company's design of new products to the market, not necessarily the customer has demanded or wants, if the customers in the market do not want to buy those products, then the time and cost of designing new products, can be said that it falls on the deaf ears. Therefore, the proportion of the company's design will be relatively small.

In the scissors industry, the ability to vertically integrate is weak. Because it belongs to small and medium-sized enterprises, the scale of the industrial economy is small. If the output does not reach a certain output, it is hard to achieve vertical integration, most of them are outsourcing. The degree of dependence between upstream and downstream is high. However, information exchange will not be so completely circulated, because there will have some commercial secret between companies, they will be afraid that some trade secrets will be learned by others.

Enterprises have encountered many difficulties in reform or transformation. The first is in terms of money. After the second generation of the company took over, it is preparing for the enterprise upgrade and transformation. As a result, the company has encountered a great financial crisis. The company once had no customers, no orders, and no turnover. The next year, it was just in the face of the Financial Crisis, the economic market and the company's situation were worse. Fortunately, there was an order from Japan when the circumstance was bad. At that time, Japan dispatches people to do company evaluation, and negotiated with the company about the content

and requirements of the order; they wanted to know the professionalism of the boss and the execution of the company's various plans. The company relied on this order to survive the crisis, regain its foothold and move toward high-valued. After transformation, the communication of employees' problem is also a major difficulty for the company. The old employees left by the first generation of bosses are accustomed to the management of the company before; as long as the speed is good, the more you do, the more you earn. With more money, they don't care too much about quality issues. Therefore, after the company's transformation, employees often have a lot of complaints when they cooperate with the new regulations on quality management. This also needs a period of the run-in. Then, employees will know that they should abreast of modern developments. This is also a point that customers' value, and the problems of quality management in the later period are much better. A major difficulty in enterprise transformation is the technical problem. It is no longer possible to produce products in the same way as before. Therefore, the boss has found many professionals. If they encounter problems, they will be consulted, and increase the basic skills.

Many companies have set up factories in Southeast Asian countries to reduce labor costs, but the company does not have this plan at present. Because this must be done in a situation where all aspects are well prepared. The company is a small and medium-sized enterprise; its economic conditions are not superior. If you set up factories in other places, you should not only worry about the problem of building factories and buying equipment, but also the new factories to hire managers and employees. Besides, there must be a certain amount of orders, otherwise, it may take one or two years to build the new factory, but there is no order, or the customer cannot wait to transfer to other factories to place orders.

The methods of looking for partners is to keep under observation, find suitable partners, communicate and discuss which processes may be needed for the products to cooperate, or what problems may be encountered and how to solve them. First, try to grind, use the simple and original method to manufacture the product manually. If the product is feasible to manufacture, or if both sides have no problem, it will start mass production in the production line. On the other hand, if the partner can't cooperate, or the quality of the product is not satisfactory, the cooperation will be terminated, and they will find other suitable manufacturers to cooperate.

The boss believes that the part in the company that needs to improve is the management of employees and the quality of employees. In today's era, quality and creativity are much more important, good employee quality management and high employee quality can create greater profits for the company.

Textile Industry Structure

The upstream of the textile industry chain is a petrochemical raw material. After manufactured into artificial fiber such as nylon fiber, polyester fiber, rayon fiber, carbon fiber. Then spun into yarn, and be weaved into cloth. After that, by the process of bleaching, dyeing and printing, coating, and finishing, tailoring, and sewing into ready-made- clothes products or other textile products.[21]

The textile manufacturing process can be divided into four stages: fiber, textile, dyeing, and finishing, apparel/home textile products. The textile can be further divided into two steps: spinning and fabricate. Spinning is converted from roving to fine yarn. After being sent to the factory, the yarn is inserted into the operating shaft of the textile machine, and then the textile machine pulls the yarn up and sends it to the textile machine. The next step is the fabricating step. The shuttle keeps shuttled

[21] Wen-Hsien Chen, "Manufacturing Strategies of Network-Based Small Firms: Observations on the Textile Industry in Taiwan," *Journal of Small Business Management* 37, no. 2 (1999).

back and forth in the textile machine, and finally becomes a piece of cloth. The cloth fabric (including cotton, wool, synthetic fiber, etc.) is sorted into boxes and sent to downstream manufacturers for processing in the latter stage.

In addition to natural cotton, wool, silk, and hemp, the upstream raw materials of the textile industry also include plasticized raw materials. Currently, in addition to Taiwanese manufacturers, some domestic textile industry raw materials are imported from overseas, especially natural fibers.

The fluctuation of international crude oil prices will affect the price of raw materials in the upstream of textiles. The rise in oil prices will increase the cost of chemical fiber raw materials. After the upstream factory raises the price, it will drive the price of the textured yarn factory to rise. As for the upstream raw material price increase, for the textile industry, they must absorb the order at the beginning of the period. However, with the addition of new orders or new bargaining by the cloth factory, the price will increase, too. The cost of chemical fiber raw materials is rising, and the cloth factory will have more orders. It is hoped that the cheaper textured yarn will be obtained before the price increase. As long as the crude oil price rise, it will drive the products of downstream textiles have the space to increase. Therefore, if the upstream manufacturers increase the price, it will also trigger the rising tide of downstream products such as nylon granules and nylon textured yarn.

In the middle reaches of the textile industry are artificial fiber products, natural fiber products, chemical auxiliaries, and yarns and fabrics that woven from the above materials. Natural fibers are divided into plant fibers and animal fibers. Plant fibers are cotton, hemp, jute, ramie, etc. Animal fibers include wool, rabbit hair, silk, camel hair, etc. Due to the limited production of natural fibers in Taiwan and the unstable production sources of natural fibers, artificial methods are used to produce materials

with stable, inexpensive and natural fiber properties, such as rayon, acetate fiber, etc. The artificial fiber is mixed with the natural fiber, and after some special processing and finishing, the finished cloth can exhibit the characteristics of no shrinkage, no wrinkle, easy washing, and quick-drying, and increase the comfort when wearing.

Due to the shortage of natural fibers in Taiwan, the proportion of artificial fibers produced is as high as 85%. The domestic fiber series products are mainly polyamide (nylon) and polyester products. In addition to nylon yarn and nylon textured yarn, nylon granules can also be used to produce engineering plastics for automotive components; Polyester products can be used in a wide range of applications, in addition to textiles, polyester yarns, polyester-cotton, and polyester textured yarn, as well as polyester granules and polyester membranes. Polyester granules are mainly used to make PET bottles, and polyester membranes can be used for industrial, photovoltaic and packaging membranes; the use of nylon yarn is cloth, leather cloth, umbrella cloth, webbing, lining, swimsuit, underwear, ski wear, military backpack, etc. Because natural fiber has no obvious growth, and artificial fiber has changed its consumption habits in the United States, and this influence also expands to Asia and then change the consumption habits of Asia. The textile industry will increase the production of artificial fiber in the future.

Taiwan's textile industry was once called the sunset industry, and it has experienced a whirlwind of ups and downs.[22] Fortunately, under the transformation of a few enterprises, it is developing towards the refinement and differentiation and has gradually stepped out of a new path. With the trend of sports is popular, the importance of functional textiles is getting higher and higher. Taiwanese manufacturers have established a functional textile industry value chain. It is one of

[22] Ibid.

the important supply chains of world-renowned clothing brands. The textiles have also been developed into functional fabrics such as windproof, waterproof, breathable, quick-drying, anti-pilling ball, elastic fit, and the effect of lightweight and insulation. And the current high-tech industry is seeking to integrate with the textile industry to develop wearable products and smart clothing, showing that Taiwanese manufacturers have a strong competitive advantage; Functionality and high-quality fabrics are the hallmarks of Taiwanese textiles. Environmentally friendly fabrics are another new trend today. In particular, in recent years, the European high-end market has high requirements for environmental protection. Therefore, the Taiwan factory has re-examined its raw materials and strives to obtain international agency certification. The dyes should also be changed into natural plant dyeing, etc. so that Taiwan's environmentally-friendly apparel market can be divided with China’s market.

Taiwan's spinning industry adopts a global layout strategy, in addition to actively exploring the export market, and gradually expanding its production base to overseas, reducing production costs in response to international competition. Taiwanese manufacturers are actively developing high-value functional products and attracting international buyers with leading technology and stable quality. Recently, Taiwan has developed a variety of functional textile materials, such as antibacterial, deodorant, fireproof, UV resistant, environmentally friendly, elastic, warm and cold insulation; 3D stereo yarn which have extensibility, not stained, keep the color bright, and can perspire rapidly; Bamboo charcoal fiber with functions of deodorizing moisture absorption and mold removal. They also develop new materials such as recycled bottle environmental protection yarn with energy-saving and environmental protection concept and won the favor of internationally renowned sports brands.

Dyeing and finishing, apparel industry and other home fabrics are downstream of the textile industry. Dyeing and finishing is the most energy-consuming and water-consuming part of the textile industry, but dyeing and finishing also provide an important part of the differentiation and added value of fabric products. To reach the international requirements for environmental protection, the dyeing and finishing industry has recently focused on improving dyeing and finishing technology, developing low-carbon or environmentally-friendly green products to achieve energy saving and carbon reduction, and producing products that comply with international environmental regulations.

The apparel and home fabric industry is among the middle and lower reaches of the textile industry, with the highest processing level and additional value. However, due to insufficient labor, rising wages and the rise of emerging countries, (such as Indonesia, Turkey, Brazil, China, Vietnam, etc.). Recently, Taiwan has gradually adjusted its industrial structure to shift production to marketing, and directly invest in overseas markets, and to strengthen product design capabilities, and unique design styles or functionalities, such as warm, fast-drying, breathable, nanometer technology, biomaterial technology, environmental technology, sterilization effect, anti-electromagnetic wave etc.

Since the Recession of Taiwan, Taiwan’s textile industry has developed for more than 50 years. In the early days of the Recession of Taiwan, the economic policy was sent by the central government to coordinate planning. Regarding the economic environment in the early days of the Recession of Taiwan, the Kuomintang government decided to prioritize the textile industry, fertilizer, and electric industry. In response to the needs of Taiwan's people's livelihood at that time, the textile industry was chosen as a priority for the development of the industry, that is, it is

hoped that the development of the textile industry will drive the development of other related industries. With such a great opportunity, the textile industry has continued to develop in Taiwan.

Downstream Manufacturers of the Textile Industry

The downstream industries of the textile industry include dyeing and finishing, apparel and other home textiles. The scope of Taiwan's textile industry is about 7500 manufacturers, accounting for 95% of SMEs; about 210,000 employees, 18% of which are foreign workers, and the annual production value is over NT$600 billion. Taiwan's textile industry is mainly export-oriented, and each process can use its raw materials, and each market can have its own. It can also through strategic, alliances; some processes can integrate to develop appropriate products

During the Japanese Colonial Period, Taiwan had a textile factory. After the Recession of Taiwan, the government received the factory and established the mining company. In the early of the recession, textile machinery and equipment were damaged by the war and the production was stopped, so the primary task was rehabilitation. Due to the rapid development of the textile industry, only rely on a small domestic market cannot support the continued growth of the textile industry, so they must seek foreign markets. Although the government implemented many measures to encourage exports in the early 1950s, it was still not ideal. In 1958, the government adopted a large depreciation of the New Taiwan dollar against the US dollar, and it just happened to meet the fourth recovery period of the US post-war economy, which led to a substantial increase in textile exports that year. Although the United States began to impose restrictions on Taiwan's cotton textile imports in 1962, the rapid development of artificial fiber textiles replaced the status of cotton fabrics, which led to the continuous increase of China's textile exports. In the 1970s, the textile industry had created very

glorious achievements in export trade. It was an important industry when Taiwan's economy began to develop, creating a large number of employment opportunities and driving the development of other related industries. In the early 1970s, the textile industry grew stronger and stronger, developing into a complete industrial system covering yarns, cloth, apparel and miscellaneous, and coherently in the middle and lower reaches. The export value accounted for 30% of the total export value. It produces threaten in major importing countries. So suffer a wide range of discriminatory restrictions. Advanced countries have expanded their quotas for textile import quotas in, Taiwan and domestic wages have risen, slowing textile production. Then, as Taiwan began to vigorously promote the development of strategic industries such as machinery and electronics, the textile industry produced additional value, the number of employed people and the value of exports, which declined after 1987.

In the face of the global market's innovation and the threat of textile products such as South Korea, China, India, etc., Taiwanese manufacturers cannot compete with other countries with low-cost strategies, and can only rely on the technological advantages of diversified functional fibers. Specialization in the field of functional, such as professional sportswear, clothing and home textiles that emphasize environmental adaptability. Recently, Taiwan's textile industry has gradually transformed. In addition to traditional yarn, cloth, artificial fiber, and ready-to-wear, its finished products also include non-woven fabrics for special functions, special fabrics for industrial use, fabrics for building materials and furniture, etc. In recent years, the chemical fiber industry and the finished fabric industry have been actively moving towards industrial upgrading, and the textile industry has been transformed into a textile industry with a high-tech positioning. As for the downstream apparel industry, it is actively establishing a computerized production and sales network to upgrade. In addition to

wearing and home textiles, Taiwan's textile industry is now widely used in science and technology textiles in the fields of civil engineering, construction, transportation, aerospace, medical, environmental protection and protection, making Taiwan's textile industry have a broad space for development. Like smart clothes, it is a good opportunity for the transformation industry. It is a product with a fiber cost more than dollars but an additional value of several dozen times. Nanwei is a pioneer in this field in Taiwan. But it needs to overcome many difficulties to put electronic technology into textiles. First, there must be cross-domain thinking. People who professional in textiles don't understand electronics and vice versa. The first wear clothing as the main body, and secondly, they must directly face the core technology of smart clothing: conductive materials. With the self-supplied conductive material, it is necessary to conform to the imagination of consumers who wear clothes and washable as much as possible.

Currently, Taiwanese manufacturers are already one of the important supply chains for European and American international brands. Affected by the popularity of sports and the rise of environmental protection, there is a great demand for functional outdoor apparel products in the European and American markets. Xing Cai is the first coffee yarn manufacturer in the world to mix recycled coffee grounds into fabrics and develop high-performance coffee yarn. This coffee yarn not only has the same effect as coffee, deodorant, moisture absorption and quick-drying but also can protects against ultraviolet rays. The sports jacket made of this material is not only rainproof and windproof, but its raw material composition is even more than 92% recycled bottle and coffee grounds. The textile industry's production capacity for high-performance fabrics has been snapped up by European and North American brands for the past 15 years, as these materials can be used in ski suits, sports jackets, and firefighters' protective gear. Also, to be more in line with environmental standards, they decided to start from the

dyeing and finishing plant and start from the environmentally friendly process. At first, they wanted to find a dyeing and finishing factory in the middle reach. However, because the order was too small, and the process required the purchase of more expensive drugs, it was rejected after obtaining a series of certifications; Later, they decided to open a dyeing and finishing factory to make the products more quality-guaranteed. If the product standard threshold is higher, other competitors are difficult to enter this professional field.

Another way to make it difficult for others to enter the professional field is to establish differences as early as possible. Heming Weaving Factory is a very successful example, and it has always been known for its non-mainstream. First, it only makes natural fibers. Even if Taiwan's artificial fibers are increasingly developed, it has become a global "functioning country" and has not changed. Second, it does not mass production, does not move, so far both factories are still in Tainan. Thirdly, different from most cloth factories, which are mainly plain fabrics, it specializes in plaid fabrics with high unit price and complicated process. The average piece of warp and weft yarns will use nearly ten kinds of yarns; However, it is special to let it have almost no direct competitors in Taiwan. In 1976, Heming was founded. At first, it was mainly based on cloth sales, and then join the manufacturing and began to produce fabrics. Later, they found that the plaid fabrics were complicated in the process, almost all of them depended on imports, and the profits to produce the plaid fabric was high. There were very few such factories in Taiwan, so they simply did it themselves. The initial design team worked hard, to develop the plaid fabric, it also indirectly contributed to the product difference.

In recent years, fast fashion brands have swept the globe. They only need 14 days from design, manufacture to sales. This poses a great threat to Heming. They shorten

the delivery period from an average of 13 months to 9 months, but their products are non-basic products, it is very limited to increase production speed. Later they decided to find Google to jointly develop research. As long as you take a photo of the fabric you need for your brand, the computer will automatically compare all the "look-alike" styles in the historical database. In addition to speeding up research and development, it can also help customers' new inspiration. To assist the computer to judge, and the senior designers of Heming also joined the project team to jointly define the standard. For example, the first layer, first judged to be a grid or a stripe; The second layer determines the details of the weave, such as plain weave, silk flower, print, etc.; The third layer is further subdivided according to the type of texture, such as printing, belonging to animals, color blocks or curves, etc. Today, the development process can be shortened to two to three days.

Besides, the development of Taiwan's textile industry is also based on the type of OEM manufacturing, and become an international cooperative production and sales system with vertical integration and horizontal division of labor. For example, because the industry has a problem with the uneven distribution of raw materials in the high season and off-season. One example of Guangyue's implementation of this strategy is to establish Shanghong to vertically integrate upstream to avoid the risk of shortage of raw materials such as duck down and goose down. To solve this problem, Guangyue has expanded its product line. By purchasing a knitting factory in Vietnam, it has entered the knitwear with lower technical threshold and balanced off-season revenue.

At this stage, "tariffs" and "brands" are still two major obstacles to Taiwan's textile industry being international. Taiwan's textile industry has experienced a significant expansion of its factories and low-cost competition in China and South Korea. Currently, it has gradually created a Blue Ocean strategy product and transfer into

differentiated products. For example wearable devices, radiation protection, smart clothing concepts, and functional products with fashionable good-looking. Taiwanese factory has a high level of research and innovative design capabilities, from design to apparel manufacturing, it creates customers' loyalty, making a differentiation, and flexible customization processes, which have an important place in the market.

In recent years, due to the rapid changes in the global economic and trade environment, International regional economic integration is prevalent, especially the free trade agreements between South Korea and the European Union, the United States and China, all of them have been implemented. The decline in Taiwan's market occupancy rate in these markets, it has gradually been replaced by China and South Korea. The amount of domestic textile exports has shown negative growth in recent years.

However, in recent years, influenced by the U.S.-China trade war, China's textile and apparel industry has shown signs of decline year by year. To prevent the trade war, most of the apparel brand factory has already transferred the order first; Some orders were transferred their orders to Taiwan. Therefore, Taiwan's textile industry and upstream fabric factory became the beneficiaries of this wave of trade. In recent years, due to China's high development, resulting in high wages and environmental protection and production restrictions, the industry has moved to neighboring Southeast Asia area such as Vietnam, Indonesia, and Cambodia. To comply with the shortening strategy of international brand manufacturers' delivery time, Southeast Asian countries have accelerated the construction of upstream production lines, so Vietnam's textile export value has rushed to catch up with Taiwan. With the Taiwanese business actively developing to Southeast Asian countries, the manufacturing base will be moved

southward and gradually integrated vertically. And the control of the design, quality, and delivery of the brand factory will be improved.

Footwear Industry Structure

In the 1950s, Taiwan was lacking in capital and technology. However, it had ample and low-cost labor. With the help of self-produced plasticized raw materials in Taiwan, the output value in the 1970s was as high as 141.1 billion dollars per year. Taiwan has become the leading country in the production and supply of the world's footwear industry and its related industries, and has a reputation as a "shoemaking kingdom". It prosperous in the 1980s, especially in 1988, the number of exported shoes reached 8.43 billion pairs, and the export value reached 3.69 billion US dollars, this set a record for Taiwan's footwear exports. Currently, there are about 470 manufacturing bases in the domestic footwear manufacturers mainly distributed in the middle of Taiwan.[23] They are 320 (68%) manufacturers in Taichung and Changhua, mainly producing canvas shoes and sports shoes; There are 50 (11%) manufacturers in the southern region, gathering for women's shoes; In the northern region, there are 90 (20%) manufacturers mainly produce leather shoes and casual shoes.[24]

In the past, thanks to the flourishing development of the footwear industry, Taiwan's shoe-making machinery also set the world's largest shoe machine production, becoming the world's second-largest supplier of shoe machines, and set a record for the world's largest export of shoe machines. At that time, the proportion of internal and external sales of shoe machines was about seven to three. Today, the output value of Taiwan's shoe machines has been declining year by year, with more than 95% of them being exported. The number of shoe-making machinery manufacturers has

[23] Stella Lowder, "Globalisation of the Footwear Industry: A Simple Case of Labour?," *Tijdschrift voor economische en sociale geografie* 90, no. 1 (1999).
[24] Lu-Lin Cheng, "Sources of Success in Uncertain Markets: The Taiwanese Footwear Industry," *Economic governance and the challenge of flexibility in East Asia*, (2001).

dropped from about 100 manufacturers in the heyday to about 40 manufacturers in the present.[25]

In the past 20 years, with the rapid changes in the economic environment and manufacturing environment such as the appreciation of the Taiwan dollar and the shortage of labor, the cost of shoemaking has been rising, making the production cost of medium and low-priced shoes in the country too high. With the opening of trade in China, Southeast Asia, and other places, Taiwan is unable to compete with those cheaper labor areas, so the footwear industry is facing unprecedented pressure. In the face of such a change, the industry has to transfer production lines that require a lot of labor to overseas regions such as the mainland, Indonesia, and Vietnam. As shoe factories go overseas to set up production bases.

The footwear industry is a traditional labor-intensive industry that has had a glorious time in the 1960. In the early days of Taiwan, because of the introduction of shoe-making technology from Japan, the abundant labor and the transfer of international technology, footwear industry began mass production in the 1980s and later replaced Japan, and the export value was number one in the world. However, due to the rapid changes in the economic environment in the mid-1980s, the rapid appreciation of the New Taiwan dollar, rising wages, and labor shortages caused the footwear industry and other labor-intensive industries to be transferred to Southeast Asia, Thailand, the mainland, Vietnam and other places. Taiwan's labor advantage is no longer exist, and even talent, technology and capital are moved to countries with lower costs. At that time, China just promoted various economic reform measures and actively opened up the investment. Provide a wide range of preferential investment conditions for foreign companies with advanced technology, such as tax reductions,

[25] Brian Levy, "Transactions Costs, the Size of Firms and Industrial Policy: Lessons from a Comparative Case Study of the Footwear Industry in Korea and Taiwan," *Journal of Development economics* 34, no. 1-2 (1990).

land use fees. Under the conditions of language and various advantages, China has become the first choice for Taiwanese labor-intensive industries to move out. It has caused the westward advancement of Taiwan's first wave of labor-intensive industries. It will drive the large shift of the upstream and downstream industry keys in the footwear industry in the middle of Taiwan.

The Taiwanese businessmen who were transferred to China also faced the dilemma of the high value of the origin and the lack of work in Taiwan. In recent years, the footwear industry has become increasingly harsh in China. It has experienced the collapse of shoe enterprises caused by the Financial Crisis in 2008 and the reshuffle of shoe enterprises. In 2013, many enterprises of the footwear industry in the coastal provinces of China were a collapse. The Taiwan-funded shoe factory, which is still struggling, has already planned or moved the production base to a cheaper, well-populated Southeast Asian country such as Vietnam, Cambodia, Indonesia, and Myanmar. Since 2015, Vietnam, Cambodia, and Myanmar have gradually stepped into the problems of high wages, Chinese exclusion, strikes, and riots after the China's economic development. As a result, the Taiwanese footwear industry is once again facing the pressure of high costs. Some well-funded Taiwanese shoe companies have even moved their production bases to Bangladesh, India, Pakistan, and Africa, where wages are lower. Not only must all construction be started, but also the town should be built first, and then built the production factories.

Summary: Difficulties and Survival Strategies of Small Business

Small and medium-sized enterprises (SMEs) encounter many difficulties because of their innate conditions and the environment of the market. Because SMEs will pay less attention to the formation of strategies and the execution of strategies. They are focus on manufacturing or sales-oriented, and it will invest less time to analyze the

company's long-term strategy, which will make it difficult for companies to obtain their long-term competitive advantage. However, the lack of differentiation and innovation is also a very large shortcoming; Generally speaking, SMEs will lack the ability to develop and design, and will often sell similar products to their competitors. Thus, it will be very easy to fall into the price war, unscrupulously underprice, and if the company can not afford to sell their products at such a low price, it will not survive. In general, SMEs are not strong enough in various management systems and technology integration, and the internal system of the company may not be so subtle and clearly. SMEs will also weaker in cooperation across different departments; Although the number of employees in the enterprise is relatively small, almost everyone is independent action. For example, the production department is only responsible for manufacturing products, and the sales department is only responsible for selling products. It is not easy for each department to do its work well. Thus, it is difficult to cooperate in a group. In these enterprises, it is less in personal training. The talents of SMEs are inherently inadequate, and there are not many opportunities for organizations to give continuous training, which limits the management capacity required for organizational growth. Finally, the biggest dilemma that SMEs will encounter is the shortage of resources, such as capital, technology, talent, key technologies, investment, etc. It is not easy to compete with big companies.

External environment is also full of threats, such as the state of the country's economy, cultural differences, government regulations, competition between competing firms and even other countries, all of them have a very large impact. Many manufacturing industries also unable to afford that at a high cost, but it has to compete with many low-cost countries. For this reason, they leaving Taiwan to set up factories in low-cost countries like China and the countries in Southeast Asia.

Therefore, in the period that most of the pressure comes from cost, how do those small and medium-sized enterprises survive and staying in Taiwan? The following is a summary of the five key ways about SMEs to survive in Taiwan.

1. Cost reduction

   In terms of cost, Taiwanese companies will adopt some strategies to mitigate this threat when facing the threats of countries such as China, Vietnam, India, and even Turkey.

   (1.) Reduce labor costs

   For a long time, due to the advancement of culture and the rise of the standard of living, Taiwan's basic salary has continued to increase, so the labor costs of enterprises will also increase. For example, many textile companies (like Guang Viet and Hsin Cai) use automated equipment to replace manpower and do numerous and repeatability work, which can eliminate the inefficient production process and the waste of manpower.

   (2.) Reduce unnecessary expenses

   Enterprises can also reduce costs by decreasing expenses. For example, Lung Hsin scissors company trains employees with some basic professional skills, such as simple machine troubleshooting. If the machine does not have serious damage or malfunction, employees can handle these problems by themselves, it can reduce the cost of repairing the machine by maintenance staff.

   (3.) Reduce scrap and defective rates

   The third way is to inspect the production line if there is any need for improvement. In the process of production, there will inevitably have scrap. If the process can be improved to reduce scrap or even reduce the number of defective products, the cost can be reduced.

2. Increase entry barrier

The entry barrier will increase the difficulty of potential competitors entering the industry.

(1.) Personal connections

Each industry has different characteristics. In terms of the mold industry, the boss of Xing Gang mold company said that they usually rely on personal connections to receive orders. It is important that the customers' trust. That is, if the operator in some industries does not have such a degree of personal connections, it is difficult to get into that industry.

(2.) Enhancing technological skill

Firms can raise entry barriers through enhancing technological skill and developing high added value products. It depends on research and design. For example, Heming textile factory has developed a plaid fabric with complicated processes and almost no factories can make the same plaid fabric at that time.

3. Re-invent business

Enterprises need to have new products that different from previous; it can help the customers noticed them.

(1.) Product development strategy

The first way is to enter the new market to transform the industry and upgrade it into two categories: high-end products and new products. Here is an example of developing high-end products: Lung Hsin scissors company pays more attention to many small details and stricter control on the production process. Besides, to make products good to use, even the appearance, packing and cleanliness must be perfect. It can enhance the corporate image and make customers feel that the company's products are better than others. However,

the development of new products that have higher unit prices like precision screws, or the screws that have a special purpose, such as automotive, aerospace, medical equipment, rails, steel construction, and green energy. Hung Chun company is a successful example that transforms the traditional screw industry to the field of the artificial tooth root.

(2.) Buy technology

The second way is to buy technology, like the screw industry and the textile industry buying or directly establishing their own upstream and downstream companies. The main reason for the purchase is because there are many difficulties in the transformation and upgrading to enter the international market. For example, Heng Yao company purchased the professional car screw factory, which made the company directly from the dealers who originally supplied the components to the car manufacturer. Moreover, they obtained special technology such as the screw that specialized in track and wind power. The textile industry is due to the problem of uneven distribution of raw materials in the off-season, Guang Viet company directly established the down factory and vertically integrated the upstream processing firms to avoid the risk of shortage of raw materials. Besides, to solve this problem, they also balance the off-season revenue by purchasing a knitting factory in Vietnam and entering a lower-knit wear with a lower technology threshold. There is another example of buying technology in the textile industry. Because the fast-fashion brand has taken the world by storm, it poses a very big threat to the textile industry. It needs to shorten the delivery term, but the speed of production is very limited. Heming textile company later decided to develop research with Google, also, to combine artificial intelligence, accelerate the

research and development process, and it also can add new inspiration to customers.

(3.) Customized

The third way is to customize. Understand customers' needs, and produce the products that they need. Hsin Cai textile company started from the dyeing and finishing plant, to more comply with the environmental standard in customers' minds. They wanted to make the products more quality-guaranteed and meet the environmental requirements. Lung Hsin scissors company also improve the scissors function or develop new scissors according to customers' needs. The customer will have an idea to discuss with the company, what kind of product, or what special features or requirements are attached, and then the company According to the company's professional experience, they help to design the product that customer wants. If the products developed are highly special, it will also make it more difficult for competitors to make similar products to compete.

4. Industry clusters

Screw industry has industry clusters, and entrepreneurs in screw industry have a consensus that each of them has specialization and they can cooperate. This consensus can avoid competing with each other and reduce the risks of both parties. Existing firms help each other, and become indispensable comrades. However, the mold industry is the opposite, they do not have industry clusters, the orders are usually the factory in nearby area, it is the important for the designer's ability. It is a technology-specific industry. Everyone who draws the mold design diagram is not the same, so if the cooperation between the company and customer is well, they usually do not change their partner. Therefore, the mold industry

does not have much chance of industry clusters or cooperation. The biggest difference is the property of the product. If it is more tailor-made for the customer and will not be mass-produced, and the manufacturing process is relatively simple, the relationship with the upstream and downstream is small, usually facing their competitor by themselves.

5. Internationalization

(1.) Export to other countries

The way to export to other countries, take Lung Hsin scissors company for the example. First, they understand culture and behavior of consumers in each country, and increase the exposure of their products by advertising on the magazine. In each period of advertising magazines, the company will change new products. In this way, they can observe and analyze what kind of customer preferences in many different regions, so that those potential customers can be aware of this company.

(2.) Set up a subsidiary abroad

This method is to move the production line abroad, but the parent company is still in Taiwan, responsible for the sales. For example, the production line of the footwear industry has been transferred to Southeast Asia, Thailand, China, Vietnam, and other places, so that the cost of manufacturing can be reduced.

CONCLUSION AND SUGGESTION

At first, I want to do this research because Taiwan's market is mainly dominated by small and medium-sized enterprises and has a great influence on Taiwan's economy. Moreover, my father is an entrepreneur of a small business, which is a scissors company, and he inspires me to have the idea of doing this research. This research also helps the small businesses in Taiwan and those who are willing to start a new business have more direction, like what are the difficulties they will encounter or how to overcome these difficulties under this situation.

The research questions are the difficulties in the economic market that small businesses currently encounter in Taiwan, and what are the consequences of these problems? The research analyzes the survival strategies of small businesses that still exist in Taiwan today, and also finds that small businesses are vulnerable to the market because of their lack of resources. Recently, many companies have moved to other developing countries because of the cost reduction. This not only makes Taiwan sliding in to the depth of a recession, but also results in some problems such as an increase of unemployment rate, which will create a vicious cycle for the economy.

After analyzing these successful small businesses, the five survival strategies are summarized: The first part is the cost. Enterprises need to use different methods to reduce costs and increase more revenue. The purpose can be achieved in a way that reduces labor costs; as the per capita income of the Taiwanese has increased, some entrepreneurs have gradually use automated production in order to solve the problem of labor costs. It can also reduce costs by eliminating unnecessary expenses; for example, company train employees the skill of simply troubleshooting of machine, which can reduce the cost of hiring professional maintenance master. The last method to reduce costs is to decrease the amount of scrap and defective. If the enterprises can

reduce those waste, it can save time and economize reimbursement. The second part is to increase entry barriers in the industry. If the enterprise can create higher entry barriers, it can prevent new joiners and becoming competitors. Entry barriers can be divided into personal connection issues and professional issues. Some industries must rely on their personal connection to receive orders. If the operators are not strong enough in this, they may fail. Another way is to improve the technology by the original enterprises. It can increase the technical difficulty, as a result, the new entrants cannot be able to reach the same standard. The third part is re-invent business; companies can achieve this goal by transforming to high-value products, buying new technologies, and customizing. Transforming to high-value products can produce products in the areas of higher expertise. Buying technology can be mergers and acquisitions (M&A) in a way that gets the technology from another company. Of course, the subsequently operation and management is also important. The way to be customized is that companies must find methods to overcome various problems and manufacture perfect products to satisfy customers' needs. The fourth part is the industry clusters. The study finds that industry clusters can make some industries help each other and cooperate, and share companies' resources and smooth away the information gap. The fifth part is internationalization; companies can increase sales revenue by selling products abroad, or they can set up a subsidiary abroad to be responsible for production, while the parent company in Taiwan is responsible for management. It not only expands the company to other countries, but also takes advantage of the low labor costs of developing countries.

Government can utilize these five survival strategies to support the SMEs in Taiwan because the SMEs provide nearly 80% of employment opportunities. For example, the government should encourage the industry to train their own employees,

and even give incentives such as tax reductions. At the same time, it should review all the obstacles, including government regulations, taxation, and considerations for living, encountered by all SMEs bringing in foreign talents. As long as foreign talents enter Taiwan, they connect potential companies and develop potential business opportunities, which are beneficial to Taiwan's small and medium-sized enterprises, Taiwan's economy, or the future of the next generation.

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