

Research on China's Textile and Garment Industry Based on Sustainable Development Take Hong Kong Esquel as an Example

Tianyi Li, Gang Fang, and Yue Liu
Beijing Institute of Fashion Technology, Beijing, China
Email: 570224058@qq.com, 20130018@bift.edu.cn

Abstract—At present, China's textile and garment industry is experiencing the transformation from high-energy consumption, low-added value, labor-intensive industrial model to low-energy consumption, high-added value, technology-intensive industrial model. This paper analyzes the environmental pollution and other challenges faced by China's textile and garment industry in the process of production and operation. Based on the analysis on the situation after joining SAC, we can find that there is a wide gap between China's textile and garment enterprises and other international enterprises in sustainable development. At the same time, the development of Chinese textile and garment enterprises is not balanced. Mainland enterprises have less investment in sustainable development than Hong Kong enterprises. Then this paper analyzes the sustainability model of one of the most successful enterprises in Hong Kong, this model can be summarized into three levels: corporate culture level, strategic level and action level. Finally, this paper provides suggestions for the sustainable development of Chinese textile and garment enterprises from the government, enterprises and consumers aspects.

Index Terms—sustainable development, textile and garment industry, the sustainable apparel coalition, CITI Index

I. INTRODUCTION

Textile and garment industry is one of the earliest developed industries in China, and it is also a pillar industry closely related to the national life. This industry takes the lead in fashion design, and integrates garment processing, commerce and trade into a complicated urban industry [1]. Japanese scholar Akamatsu have pointed out that the development process of a country's textile and garment industry can be summarized by the goose model, that is, the industrial development has roughly gone through four stages: import, local production, export development, export growth.

There are three obvious shifts in the global textile and garment industry: the first from Britain to Europe, the United States and Japan; the second to South Korea, Taiwan, and Hong Kong; the third to mainland of China, India and Pakistan [2]. At present, the global textile and garment industry is undergoing the fourth industrial

transfer, the low-end processing of industrial chains to Ethiopia, Bangladesh, Cambodia and other countries in the early industrialization of the transfer.

At present, China is in transition from Chinese manufacturing to Chinese design. In the past, the competitiveness of China's textile and garment industry mainly came from low-price product and low-price labor force. Nowadays, with the development of productive forces, the process of industrialization and the rise of textile industry in new developing countries, China has less competitive advantage of low cost. Therefore, China's textile and garment industry should focus on the brand strategy of high-added value. However, due to the long-term dominance of European and American countries in the textile and garment industry, China's upgrading is facing enormous competitive pressure. At present, the competitiveness of international textile and garment enterprises has not been limited to good technology, design, technology, management. Social responsibility and the concept of sustainable development have become an important factor in measuring international textile and garment enterprises. At the same time, the 13th People's Congress jointly put forward the human destiny, demonstrating the determination and sense of responsibility of China. In the future, it will be the advantage of Chinese enterprises to seek common values based on the common meaning of mankind. Therefore, this paper explores the upgrading of China's textile and garment industry from the perspective of sustainable development.

II. ANALYSIS OF THE SITUATION

A. Definition of Sustainable Development

Sustainable development was first presented at the United Nations Symposium on the Human Environment held in Stockholm in 1972, and since then countries have devoted themselves to studying the definition of sustainable development. In the 1987 report of the World Commission on Environment and Development, Our Common Future, sustainable development was defined as "development that meets the needs of contemporaries and does not jeopardize the ability of future generations to meet their needs." [3] This definition has been widely recognized internationally. The three goals of sustainable

development have been established: the protection of environmental resources, the efficiency of economic development, and social equity and justice.

The concept of sustainable development in China was first put forward by economist Cheng Fuku in an article published in 1968. In March 1993, the Ninth Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Outline of Vision 2010 set sustainable development as one of China's important strategic objectives. The 16th National Congress of the Communist Party of China put forward the idea of putting sustainable development in a very prominent position, which shows China's determination in sustainable development and the sense of responsibility of the big country.

B. Challenges

In 2016, the export volume of clothing and accessories in China amounted to US \$1 trillion and 43 billion 798 million, with an import volume of US \$42 billion 816 million [4]. However, China's textile and garment industry is still in the transition stage from labor-intensive and extensive resources production and export to technology-intensive and deep-processing production and export. At present, China's textile and garment industry is facing three major challenges in environmental protection and sustainable development: excessive consumption of energy, environmental pollution in production process, use and waste of consumption process [5]. Textile industry is an energy-consuming industry, which consumes a large number of water resources, coal and fossil raw materials in the whole production process. In the production process, different textile processes will cause different degrees of pollution to the environment. Among them, the production process of raw materials will aggravate environmental pollution, such as sewage discharge and harmful gas emissions. In the process of textile printing and dyeing, a large number of harmful waste gases and residues and noise pollution will cause harmful effects on the environment. In the process of consumption, the improper use of consumers, the weak concept of environmental protection, waste and pollution also restrict the sustainable development of China's textile and garment industry.

C. The Members of SAC

In 2010, the leaders of Wal-Mart and Patagonia jointly launched the Sustainable Apparel Coalition (SAC) with leading brands, manufacturers, retailers, non-governmental organizations, academic experts, and the Environmental Protection Agency of the United States. The Eco-garment indicators issued by the organization are aimed at promoting transparency in the process of garment production, assessing the impact of production activities on the ecological environment, thereby reducing the damage to the ecological environment and promoting the sustainable development of the entire industrial chain. The organization has three main components: alliances, standards, and membership.

At present, there are 235 members of the organization, of whom 23 are from China. Among them, 13 members

came from Hongkong, 4 members from Taiwan and 6 members from mainland China [6]. Therefore, we can see that China is approaching the international sustainable development organization, exploring the sustainable development of textile and garment industry under the international standards. Meanwhile, about 57% of the SAC members China has joined come from Hong Kong and about 26% from mainland China. It can be seen that the textile and clothing organizations in mainland China are less concerned about the sustainable development of the industry than in Hong Kong. As shown, about 74% of China's SAC members are manufacturers and only 9% are brands.

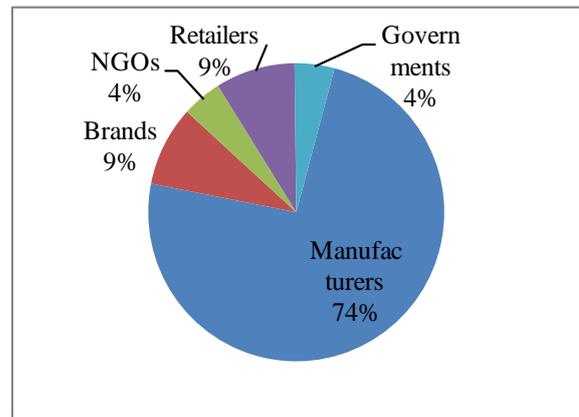


Figure 1. Chinese organizations joined in SAC in 2017.

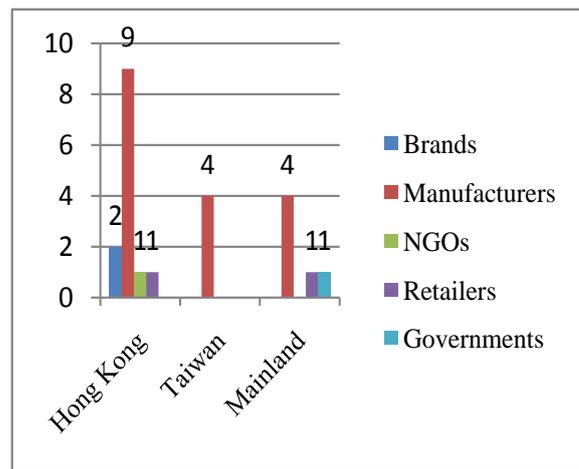


Figure 2. Regional distribution of Chinese SAC Members.

D. Corporate Information Transparency Index

CITI index of green supply chain is the first quantitative evaluation system based on the performance of brand-based supply chain environmental management in China [7]. It is developed by the Public Environmental Research Center (IPE) and the Natural Resources Conservation Association (NRDC), and is dynamically evaluated by public data such as government supervision, online monitoring and enterprise disclosure. The aim is to promote large-scale brands at home and abroad to pay attention to the environmental performance of the supply chain by means of green economy, promote green production with green procurement, and effectively

transform environmental information into large-scale pollution reduction [8].

In 2017, only four Chinese textile and clothing brands were listed in the top 100 CITI index, among which Esquel Group ranked first. The other three brands scored 40, 28 and 10.5 respectively. It can be seen that China's textile and garment enterprises on the awareness of sustainable development is relatively weak, the actual operation of enterprises on the ecological environment caused by the negative impact is greater.

The top five textile and garment enterprises in the CITI index in 2017 are LEVI'S, Esquel, Adidas, Marks & Spencer and GAP. Among them, Chinese brands scored 69, ranking second. Esquel has entered the top five SAC textile and garment enterprises for three consecutive years. From 2015, it ranks one in every year. From this ranking we can see the importance and efforts of Spillover in sustainable development. The enterprise can be used as a benchmark for China's textile and garment enterprises. Through the analysis of the sustainable development of the enterprise, more enterprises can be inspired to think about the transformation of green environmental protection.

TABLE I. TOP FIVE BRANDS OF CITI INDEX IN TEXTILE INDUSTRY

| No. | Brands | Scores(100) |
|-----|-----------------|-------------|
| 1 | LEVI'S | 76.5 |
| 2 | Esquel | 69 |
| 3 | Adidas | 68.5 |
| 4 | Marks & Spencer | 64 |
| 5 | GAP | 61 |

TABLE II. CHINESE TEXTILE BRANDS RANKING IN CITI TOP 100

| No. | Brands | Scores(100) |
|-----|---------|-------------|
| 4 | Esquel | 69 |
| 28 | Esprit | 40 |
| 44 | Li Ning | 28 |
| 82 | Youngor | 10.5 |

III. ESQUEL CASE ANALYSIS

Founded in 1978, Esquel is a vertically integrated cotton and Garment Group. Their business covers cotton planting, spinning, weaving, dyeing and finishing, garment making, accessories, packaging and retail, providing one-stop shirt services, is the world's largest cotton shirt manufacturer and exporter. Esquel is located in Hongkong and has 57000 employees in 11 countries and regions. In 2017, the group's annual turnover exceeded \$1.3 billion, ranking first in China's total cotton woven shirt export for seven consecutive years. Under the leadership of Ms. Yang Minde, Chairwoman of the Group, Esquel has expanded its business worldwide, with

production bases in China, Malaysia, Mauritius, Sri Lanka and Vietnam, and sales networks in the United States, Europe, Japan and mainland China. The Group supplies over 100 million shirts annually to world-renowned fashion brands such as Ralph Lauren, Tommy Hilfiger, Nike, Hugo Boss, Lacoste, Bestseller, Muji, Anta and Seven Wolves [9].

At the beginning of their founding, they believed that their goal was to produce well. But with the development of enterprises, they find that they can do more. Later, they set the goals of the enterprise as bringing some differences to the world, including employees, communities, and the environment. In 2017, the brand passed seven certifications and received three awards. Through this table, we can see the outstanding contribution of Esquel to the global textile and apparel supply chain.

TABLE III. ESQUEL CERTIFICATES & AWARDS

| Year | Certificates | Year | Awards |
|------|---|------|---|
| 2017 | 5+ Years Caring Company | 2017 | Foshan Patent Tycoon |
| 2017 | Global Recycle Standards | 2017 | Gold Supplier Award |
| 2017 | Global Organic Textile Standard | 2017 | HR Innovation Awards |
| 2017 | Member and Licensee | 2016 | Excellence in Training & Development |
| 2017 | Organic Content Standard | 2016 | Nike Material Sustainability Index Award |
| 2017 | Platinum/Gold Certificate of Compliance | 2015 | Asia Best Employer Band Awards |
| 2017 | Sustainable Textile Production | 2015 | Best in Class Corporate Social Responsibility Award |

Esquel summed up their corporate culture as 5E, Ethics, Environment, Exploration, Excellence and Education. Ethics means they want to be a good citizen and a good employer. At the same time, they are committed to environmental protection, environmental protection and care for resources in the production process. Third, they are committed to pioneering and innovating, focusing on innovation and development. Fourth, in the process of running, we should uphold the principle of pursuing excellence, optimize organizational functions and reduce waste of resources. Fifth, be good at learning and learn from experience in the course of business operation.

The sustainable development of the enterprise can be summarized into three levels, first of all, the level of corporate culture, 5E concept. Secondly, for the strategic level, that is, the enterprise from the PEOPLE, PLANET, RODUCTION, COMMUNITY four aspects of the implementation of sustainable development goals. The third level is the action level. According to four different dimensions, enterprises carry out different activities to

fulfill their responsibilities of sustainable development. In terms of the environment, it has adopted technological innovation and optimized management. In the manufacturing process, we can reduce energy waste, water pollution and greenhouse gas CO₂ emissions. The company has launched a carpool APP to reduce CO₂ emissions from employees' driving. In terms of products, Esquel pays attention to the source of products and the quality of cotton; technical innovation is integrated into the whole production and processing process to implement the concept of sustainable development. At the same time, Esquel focuses on the treatment and growth of employees. Pay attention to the health, safety and job satisfaction of employees. In the community, the company pays attention to corporate social responsibility, setting up funds to help children grow up and promote green ideas.

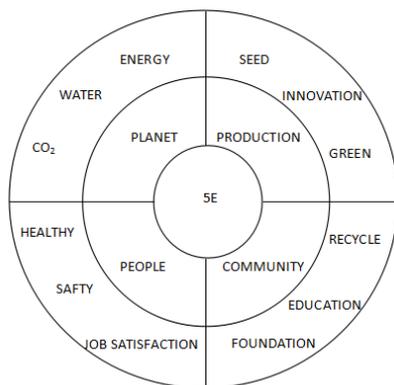


Figure 3. Esquel sustainable development internal mode.

The sustainable development mode of Esquel can be divided into two aspects: internal and external. There are two main forces outside the enterprise. Firstly, through the auditing of SAC and other international environmental protection organizations, the production process of the enterprise will be more transparent and the learning of other excellent enterprises will be promoted. At the same time, the information disclosed also helped Esquel win the trust of investors and partners to some extent. Within the enterprise, the leadership lays down the enterprise culture, passes the sustainable development idea to the staff through the strategic layer, the action layer, strengthens the staff's sense of belonging and honor, is advantageous to the formation good enterprise and the staff relations. It can be seen that the advantage of the model lies in promoting sustainable development from those aspects.

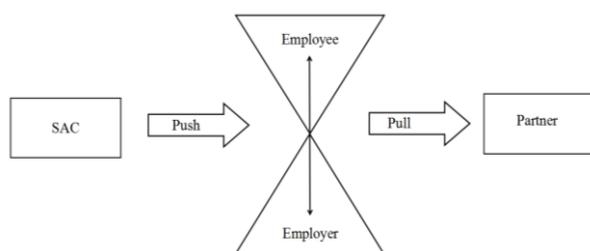


Figure 4. Esquel sustainable development mode.

IV. CONCLUSION AND SUGGESTION

At present, China's textile and garment industry is experiencing the transformation from high energy consumption, low added value, labor-intensive industrial model to low energy consumption, high added value, technology-intensive industrial model. China's role in the international textile and clothing chain has brought opportunities for the development of textile and clothing enterprises [10]. At the same time, the growth of enterprises also faces many challenges. Among them, the sustainable development of production and operation chain is a must for enterprises to overcome. At present, the sustainable development of Chinese textile and garment enterprises has a certain gap compared with international standards. Therefore, the sustainable development of China's textile and garment industry needs joint efforts.

The government should introduce corresponding policies and industry standards to encourage the sustainable development of textile and garment enterprises [11]. At the same time, we should put forward rectification requirements and intensify supervision for enterprises with high pollution and high energy consumption. Textile and apparel enterprises should actively join the international sustainable development organization, through testing to understand their own development deficiencies, learn from outstanding corporate cash experience [12]. At the same time, enterprises should deeply understand the importance of sustainable development, in the formulation of corporate culture and strategic objectives, sustainable development into the important objectives of enterprise development. In the process of enterprise operation, in view of its own characteristics, to find a green operation means suitable for the enterprise. At the same time, government departments and non-profit organizations should increase publicity on the concept of sustainable development. Strengthen consumer's concern and recognition for environmental protection and sustainable development. Thus forming a government-led, enterprises actively involved, consumer recognition of the textile and clothing industry sustainable development closed-loop.

ACKNOWLEDGEMENT

Supported by: The project in the fund of Beijing Social Science of China (No.14JGB028); The project of the education & teaching reform at Beijing Institute of Fashion Technology (No. ZDJG-1807); The construction program of innovation team at Beijing Institute of Fashion Technology (No. BIFTTD201901)

REFERENCES

- [1] China Garment Association, 2015-2016 *China Garment Industry Development Report*, 1st ed., People's Publishing House, Beijing, 2016.
- [2] A. Lu and S. L. Hao, *Histology of Garment Industry*, 1st ed., China Textile & Apparel Press, Beijing, 2013.
- [3] L. Jing, "Analysis on the Higg index of the sustainable apparel coalition," *Advanced Textile Technology*, pp. 1-6, April 2018.
- [4] Information. [Online]. Available: <http://www.stats.gov.cn/>

- [5] W. Rong, C. Ying, "Ecological thinking of sustainable development of textile and garment industry," *Sustainable Development*, pp. 52-56, July, 2003.
- [6] Apparelcoalition [Online]. Available: <https://apparelcoalition.org/>
- [7] G. Yan, "Connotation analysis on sustainable development strategy of garment enterprises- case study on world famous jeans brand LS&CO," *Strategy*, pp. 111-113, June 2016.
- [8] L. Min, "Literature review on green supply chain and sustainable development of textile and apparel industry in China," *Contemporary Economics*, pp. 24-25, March 2017.
- [9] Esquel. [Online]. Available: <http://www.esquel.com/en/>
- [10] Y. Zhao. "Strategic measures for the sustainable development of circular economy and international trade," *Economics Research*, pp. 121, October 2018.
- [11] Z. Guanghao, "Management and countermeasures of textile and apparel green supply chain in China," *Textile Journals*, pp. 153-160, October 2012.
- [12] Jung E. Ha-Brookshire, *Global Sourcing in the Textile and Apparel Industry*, second ed., Bloomsbury Academic USA, New York, 2017.

Tianyi Li, female, graduate student of Business School of Beijing Institute of Fashion Technology.

Gang Fang, male, professor of Business School of Beijing Institute of Fashion Technology, corresponding author;

Yue Liu, male, graduate student of Business School of Beijing Institute of Fashion Technology