

IMPLEMENTATION OF A CHINESE LED MARKET IN CANADA

Hu Chao Hua, Huai Xiang Yu, Li Long Qiang, Li Shichun, Li Zhiqiang, Lu Liuliu, Miao Liang Jun

ABSTRACT

This papers report on the feasibility and profitability of exporting LED into the Canadian market. There is a great market opportunity for Chinese enterprise to export with profitability, despite the costs of delivery, given the capacity of Canadian market.

Key-words: LED, market, exportation

1. INTRODUCTION OF THE LED COMPANY

At present, This China LED lighting company has 4 manufacturing bases, 2 international standardization research and development centers and national recognized laboratories, 38 operation centers, more than 3,800 brand stores. Overseas, it has established a product development center in line with European standards, and has set up operating institutions in more than 40 countries and regions. Now this LED company intend to export and distribute China LED light to Canada

2. CANADA LED LIGHT MARKETING ANALYSIS

The lighting industry continues to develop, through the introduction of efficient technology and perfect product design, to provide more efficient lighting system for mankind. From the first electric light invented by Edison to today's low-energy and high-efficiency lighting system, the lighting industry has made great progress in the past century, and the lighting industry will have a greater impact and contribution to the future development of Canada. Although Canada is a highly developed capitalist country, its development level is relatively low in some production fields involving basic daily necessities. The Canadian LED lighting market presents the following characteristics:

2.1 Current market status

Canadian market lamps and lanterns with less brands and types with the relatively higher price, simple product function and less installation service. Though the investigation for the Home Depot and Data Tellit which have a high market share in Canada, it shows that the lamps sold in the store are mainly of the following types:

First is the traditional chandelier, which is expensive. A five-piece traditional chandelier costs 499 Canadian dollars. The profit margin is more than 50% compared with the factory price.

Second is contemporary droplight, absorb dome light, shoot light, Simple type with expensive price. Products are still relatively rare, not very personalized.

Third, the main product categories in Canada are LED bulbs, the price is relatively high. However, it is expected that the price will continue to go down in 2020, and there will be fewer intelligent LED lamps. If the strategy changed from the red sea competition strategy to blue sea competition strategy, intelligent LED lighting is an important opportunity and trend.

In addition, in terms of sales channels, Canada is still a very traditional way of sales. It mainly relies on offline channels, such as exhibition halls, while online sales channels are relatively backward. In terms of installation services, due to the sparsely populated area in Canada, installation services are also provided sparsely, which cannot fully meet the needs of people in various regions and mainly rely on DIY culture.

2.2 Government Policy

The government is actively advocating energy conservation because of rising electricity prices. The Canadian government has now passed the limit energy efficiency standards for light fixtures. For example, the Canadian government passed the green energy act in 2009. In addition, in 2014, the Canadian government revised the

minimum energy efficiency standards for 40W, 60W, 75W and 100W light bulbs. With the support of government policies, the trend of Canadian LED lamps replacing traditional lamps has become inevitable.

2.3 Culture and the life of concept

Canadian give priority to family concept, and long winter time, many children, big house, and Canadian stays longer time in the family. In addition to the aging society and Party culture, people are willing to invest more money and time to decorate their home environment. In terms of the lighting market, there is a huge space in the North American home decoration market. However, the existing products cannot meet the personalized needs, so new blood is urgently needed.

2.4 LED lighting market pattern

According to the monthly monitoring report on the export of LED lighting products in China for 2017-2018 released by GGII, the total export of LED lighting products in China in 2018 was about \$21.042 billion USD. Below graph shows China's LED lighting exports in 2018 (billion)



Figure 1 : total LED export Market per month

According to the LED research institute of high-tech industry and research (GGII), the total number of Chinese LED lighting product export enterprises in 2018 is about 15,000 (including trading companies and manufacturers). Among them, the top 10 enterprises export a total of \$2.479 billion, accounting for 12% of the total exports.

2.5 Canada LED market access requirement

It is known that China accounts for the largest proportion of LED lighting products in the world, and LED lighting products export has become the norm. However, the North American market is the largest export region of LED products in China. The regulations and market requirements for Chinese LED products to enter the export market are different according to the policies of the exporting country, and the standards for producing LED products are different. How to meet the local regulations and market requirements has always been the focus of Chinese manufacturers. In fact, all LED products exported to the North American market are required to meet the requirements of electrical safety, electromagnetic compatibility, energy efficiency, chemical testing and so on. And recently, North American market finalized relevant standard. The details are as follows:

(1) Electrical safety test: Most electrical products entering the U.S. market must meet the NRTL mark, electrical products sold in Canada or imported into Canada must be verified, and testing must be done by a laboratory accredited by the Canadian standards commission (SCC).

(2) Energy efficiency test: In terms of energy consumption requirements in the United States, LED bulbs and LED lamps have not been included in the scope of control. California requires portable LED lighting to meet the state's specific energy requirements. In general, there are six required standards: ENERGYSTAR energy efficiency certification, Lighting Facts Label energy efficiency certification, DLC energy efficiency certification, FTC energy efficiency labeling, California energy efficiency requirements, and Canada energy efficiency testing requirements.

(3) FCC/ICES test requirements: The methods of FCC Certification include Verification, Declaration of Conformity and Certification which method depends on the type of product. Canada has established mandatory electromagnetic compatibility requirements for ICES for electrical products and the standard for LED lighting products is issued which is now referred to as ICES 005I issue4.

3. SWOT ANALYSIS FOR THIS MARKETING EXPANSION DEVELOPMENT

Per analysis, the entry to Canada LED market SWOT analysis shows as below:

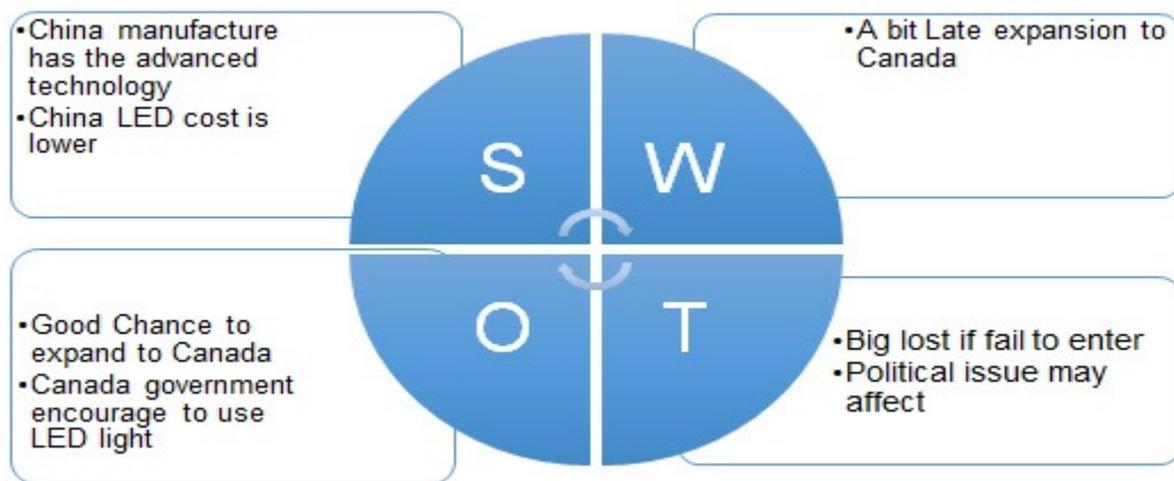


Figure 2: SWOT Analysis

3.1 Canada LED lighting marketing strength detailed analysis

- Chinese lighting products have a relative advantage in price even the entry threshold for the North American lighting market is relatively high. There are about two-thirds of North American consumers say that price is the most important factor in deciding whether to buy LED lights.
- Based on the experience of internet of things in China, use O2O and concept of Internet of things, can build a smart home entrance by intelligent lamps and lanterns, to format a network with the cooperation with the third party to create more value-added opportunities.

3.2 Canada LED lighting marketing opportunity analysis

Canada is a highly developed capitalist country. It has the world's leading level in some of the areas, however, its level of development is relatively low in some production areas involving basic household goods. Per analysis, Canada LED marketing has the following characters:

- Less variety of lamps and lanterns, higher price, single product function and less installation service.
- The electricity price keeps rising, and the government is actively advocating energy conservation, With the support of government policies, the trend of Canadian LED lamps replacing traditional lamps has become inevitable.
- Canada pays attention to family concept, household market space is huge, especially for the smart home
- Other area such as fishing area, agriculture area, industry area and public area has huge requirement too

3.3 Canada LED lighting marketing weakness analysis

- a) The company is new entry to Canada LED marketing, there are plenty existed competitor and potential competitor.
- b) Has to share the market share with strong competitors from very little share.
- c) Has to look for possible local or international cooperation to set up own marketing distribution system for Canada market
- d) Shall have enough financial support before can have the profit in Canada market.
- e) The research and development level of core technologies, especially the manufacturing level of chips, lags shows behind of developed countries. Many Chinese LED lighting products fail to meet the increasingly stringent export certification standards.

3.4 Canada LED lighting marketing threaten analysis

- a) The company shall afford the lost if fail to enter Canada market.
- b) Unstable Political risk. Shall have the proper risk analysis and mitigation plan in case there is political issue between China and Canada. A trade dispute between the U.S. and China has drawn Canada into the fray, with the arrest in Vancouver of Meng Wanzhou, the daughter of huawei chairman ren zhengfei and chief financial officer, at the request of the U.S. government. China was quick to respond that political friction could lead to trade disputes.
- c) The impact of trade barriers on export business is always existed. In recent years, developed countries such as the United States, the European Union and Japan have successively issued directives and bills on LED lighting technology and quality. The existence of non-tariff trade barriers, to a certain extent, affects the LED lighting enterprises to control production costs, restricting the development of foreign trade business.

4. PROJECT OBJECTIVE

4.1 Practical and theoretical significance

To develop Canada market is not only to increase the company sales value with the proper profit but also to spread the company brand reputation in Canada and North of America. The same time also can assist Canada to save power and reduce the pollution of the climate.

4.2 Desired sales value

2% market share with 148M US dollars yearly sales value at year five with 20% progressive increase in the first five years. Based on the analysis, LED lighting market size was valued around USD 16 billion in 2014 and is expected to grow at CAGR of over 28% from 2016 to 2023. In Q3,2018, China exported a total of 14.9 billion US dollars of LED lighting products mainly by 10 LED companies to Canada around 0.185 Billion US dollars, we are expecting to be top 5 of these 10 companies, target to be 2% of the total value which is about 148M US dollars yearly in 5 years gradually.

4.3 To explore company's reputation

Try to be top 5 LED brand name in Canada within five years. The company shall establish its own brand in the Canadian market, continuously innovated its technology in the process of market promotion and maintenance, and develop and launch new products to meet the needs of the Canadian market. Meanwhile, the establishment of dealers will promote the common development of local supply chain and promote employment. Therefore the reputation of the company can be established and spread all over the Canada, and expect to be top 5 LED brand name in Canada.

4.4 Project risk analysis

There is proper risks for this LED light distribution to Canada, major risk are listed as below:

No.	Risk	% Probability	Impact	Mitigation measures
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1	Market analysis is not accurate	Low	May fail to enter Canada market, or can not meet expected market share	Arrange third party consultancy for market investigation compare with company internal investigation
2	The company LED light could not get Mandatory certification: IC and sales certification such as UL, CSA, CUL and DLC certification	Low	May not enter Canada market	Get the necessary certification first below significant investment to Canada
3	No enough financial support	Low	May withdraw from Canada market	Look for financial support from others
4	May not operate properly	Middle	Affect the market share and profit	Rely on local agent/ distribution management

Table X: risks and litigation

5. PARTNERS CONNECTION

There are various possible ways to secure local partners such as:

- a) May ask the Canada friends to introduce the reliable local companies as partner.
- b) We may look for the on-line shop based on the model from Alibaba either through Alibaba or set up JV with local company to develop Canada on line distribution channel since shop and retailer is the main distribution channel in Canada now.
- c) Attend the exhibition such as IIDEX CANADA to know more companies and personnel's for Canada market
- d) Through international platforms' to look for partners.

Some detailed arrangement may as follows:

5.1 Set up office, stores and recruit necessary team members in selected city in Canada

Urban geographical location, economic development status, social situation, culture, facilities, transportation and other situations shall be taken into the considerations to select the cities or places suitable for the establishment of offices or marketing agencies. For example, Toronto, Welland and Vancouver are all suitable for setting up offices or marketing agencies. Considering the convenience of logistics and transportation, the degree of urban development and the sales situation of LED lighting products in Canada, priority should be given to the developed port cities in Canada as the preliminary selected cities. Based on the current port cities in Canada, Vancouver, a relatively developed port in Canada, can be selected as the agent and the technical support center in Canada.

5.2 Retailers arrangement and set up

At present, according to the trend of Canadian government and consumer demand, we have to look for foreign trade import companies or local LED wholesalers and distributors to cooperate. To set up national agents in Vancouver, Canada. Partners shall have LED export experience /LED distribution experience and existing business, and have some overseas/local LED demand customer channels.

In order to better adapt to the Canadian market, the company exports LED lamps equipped with bilingual (English and French) instructions and warranty, and set up a technical and engineering support team in Vancouver, the establishment of technical services and after-sales maintenance center, to provide a better user experience for Canadian enterprises and families

The Canadian government for the LED support deepened gradually, based on that if the company can provide high-quality, cost-effective products for export it will have great advantage, the best way for LED to open the Canada market is to work with the local government and the local official LED trade company, such not only can take advantage of the products to open the market, but also can quickly obtain good relations with local government. And we can use local media resources, newspapers, television, outdoor media advertising in the process of product promotion, cooperate with distribution outlets for sales promotion.

6. LOGISTICS ARRANGEMENT

6.1 Export and import arrangement (self or agent)

As mentioned above, sales and promotion are carried out through local agent companies in Canada. Therefore, for the same logistics arrangement, if we want to enter the market as soon as possible, agency is the best way to develop fastest in short time. According to the survey in Canada, 57% of consumers are interested in extending delivery time to reduce freight costs.

In the process of pursuing unique products and competitive prices, Canadian consumers have changed their consumption behaviors. Eighty-three percent of Canadian consumers buy from retailers, which means they need competitive prices and prioritized logistics. While shoppers still find value in in-store purchases, higher prices and frequent shortages at brick-and-mortar stores have prompted Canadians to turn to online shopping, which they do more than any other demographic in the survey. Also online shopping returns are more convenient than physical stores. LED export enterprises choose local agents to sell LED products through the combination of offline and online channels.

6.2 Local transportation

Vancouver is a port city and the most important port and economic center of Canada. From China to Vancouver, the shipping method with relatively low logistics cost is usually adopted. In China, we contact professional international freight companies to handle all export procedures, including booking cargo space, receiving cargo, loading container, export, customs declaration, Canadian customs clearance and delivery. The goods are delivered once a week. Usually the shipping date is about 15 days. The freight company will clear the customs and deliver the goods to the Vancouver agency.

The transportation situation from Vancouver to other places is also very convenient. There are many air freight and railway freight lines in Vancouver, so a local comprehensive transportation service company can be responsible for the transportation and distribution of goods, and export lamps can be delivered to Toronto, Montreal and other cities.

7. REFERENCES

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APPENDIX : MARKET AND COMPANY STATISTICS

1. LED Company Statistics

1.1. Headquartered in first tier city, China, the company was founded in 2000, is a professional R&D, production and sales of Internet of things intelligent products and solutions, LED light source, LED lighting high-tech enterprises. The company has sales subsidiaries in the United States, Britain and Germany, offices in Japan, Australia and the united Arab emirates, Four R&D centers in xiamen, shenzhen, Taipei and Atlanta, Two design centers in xiamen and tainan, two manufacturing based in Zhangzhou city, Fujian province China and suining city, Sichuan Province,China with nearly 10,000 employees.

1.2. The company has a research and development team consisting of five full-time professors and more than one hundred undergraduates. The company has invested more than 200 million Chinese yuan in research and development, mainly engaged in research and development of application software, semiconductor lighting and integrated circuits. The company has the close cooperation and technical exchanges with universities, the international well-known enterprise and energy agency Etc such as fudan university, zhejiang university, sun yat-sen university, xiamen university, Pakistan's national science and technology committee and Egypt's energy and commerce committee. The company also introduced the world advanced automatic photoelectric color test, spectrum analysis instrument. Has reached the domestic advanced level on hardware. Till now has undertaken the task of national torch plan projects, such as more than 10 national, provincial and municipal science and technology projects, innovation fund projects etc, the group owns 78 national patents.

1.3. The company is one of the ODM enterprises with the most extensive overseas sales coverage and the largest high-quality customer compared with others in the same industry in China. The products are exported to 85 countries and regions including North America, the European Union, Japan, the Middle East, ASEAN, Latin America, eastern Europe and South Korea. The company also worked closely with leading global brands and retailers to develop a localized service strategy that is customer-friendly, quickly response with higher quality service. Based on the analysis and judgment of the industry development trend and its own ability and resources, the company established the "customer-centered platform strategy with brand and resource integration as the core" and proposed three strategic transformation directions. Second, it focuses on 2C business and turns to focus on 2C and 2B business. The third, trying to be a new formed company with manufacturing products, technology and services from mainly based on products, turning to the coexistence of multiple modes of products and services.

2. Canada market and environment status

Canada is one of the richest countries in the world, as well as one of the seven western industrial countries and the ten largest trading countries in the world. In recent years, china-Canada economic and trade relations have made great progress, from a single commodity trade to all-round, cross-field and diversified trade, economic and technological cooperation. According to statistics Canada, from January to July 2017, the import and export volume of china-Canada bilateral goods was us \$40.12 billion, up 14.2%. Canadian exports to China reached us \$10.29 billion, up 19.8%, accounting for 4.3% of Canada's total exports. Canada imported \$29.83 billion from China, up 12.4 percent, accounting for 12.1 percent of Canada's total imports. As of July, China was Canada's second largest export market and second largest source of imports.

The variety of lamps and lanterns in Canadian market is few, the price is high, product function is one fold, installation service is little. The government is actively advocating energy conservation because of rising electricity prices. At present, the lighting market in Canada is lack of competition, and it is still in the leading stage of traditional retail. The O2O home decoration market has a huge space.

In December 2018, Montreal, Canada, reached a milestone when 50,000 street lamps were replaced with LED lights, a shift that also included the simultaneous deployment of a smart lighting management system. It is part of a five-year \$82 million (65 million) project to transform Montreal into an innovative city. The goal of the street light project is to replace 132,000 street lights with leds, which will be called the largest smart LED street light project in Canada. About 6,000 high pressure sodium lamps are replaced by leds every month. The city estimates that the installation of LED lights will save 60 percent of energy consumption and 55 percent of equipment maintenance costs.

From the market opportunity point of view:

- 1) The federal government of Canada banned the use of inefficient light bulbs on January 1, 2014, which is expected to promote the popularity of more efficient lighting products (such as LED lights) in Canada.
- 2) Toronto city is expected to complete the urban LED lighting transformation within 10 years, to achieve the goal of 50% energy saving, to create an LED energy-saving lighting city.
- 3) In order to save energy, the Canadian government, said the plan for some of the city community streets, street lamp to replace a new energy-saving light bulbs, by the old high pressure sodium (HPS) bulb, LED bulbs instead, preliminary estimates can save up to 55% power consumption, and lower maintenance costs, and lead to higher quality of community residents and street lighting system. As many as 80,000 LED bulbs are installed in Canada alone, the whole Canadian market is a huge business opportunity that cannot be ignored.
- 4) With the LED lighting application gradually expanded, LED biological lighting has become the key to support greenhouse cultivation production and improve revenue. LED bioluminescence in Canada is expected to generate more than \$1.1 billion in annual sales.
- 5) Under the influence of the energy crisis in the international market, the world has gradually entered the "energy-saving era". Under the dual promotion of the government and the market, LED lighting aiming at environmental protection, energy saving and emission reduction is rapidly popularized in the field of public lighting, and actively penetrated into the market of commercial lighting, office lighting and home lighting, which also drives LED to increase its share in the global lighting field and quickly enter the era of LED lighting. The United States and Canada have successfully implemented the LED subsidy policy. As long as this LED lamp product applies for the energy star certification, consumers can directly enjoy the subsidy price when they buy it.