

# Case Study of Competitive Strategy of AC Power Cord Industry

Chin-Chiuan Lin<sup>\*1</sup>, Chiu-Lung Chan<sup>2</sup>, Chang-Jiang Lee<sup>3</sup>, Yi-Chang Chen<sup>4</sup>

<sup>\*1</sup> Professor of Department of Business Administration, Kun Shan University, Tainan, Taiwan, R.O.C.

<sup>2</sup> Manager of Marketing Department, I-S Limited Co., Taoyuan City, Taiwan, R.O.C.

<sup>3</sup> Associate Professor of Department of Business Administration, Kun Shan University, Tainan, Taiwan, R.O.C.

<sup>4</sup> Assistant Professor of Department of Business Administration, Kun Shan University, Tainan, Taiwan, R.O.C.

## ABSTRACT

The present study aimed to formulate the competitive strategy of AC power cord industry for the case company in Taiwan. The external and internal environments were analyzed firstly. Secondly, focus group was introduced to perform the problem analysis and validation, also develop feasible strategies. Thirdly, expert interview was conducted to confirm the feasible strategies. Finally, the competitive strategies for the case company were formulated. After above procedures, the present study formulated two competitive strategies (multimarket penetration and product expansion) for the case company.

**Keywords:** Competitive Strategy, AC Power Cord, Multimarket Penetration, Product Expansion

## I. INTRODUCTION

AC power cord is an important element which connected to a power outlet and a variety of computer, communication, and consumer (3C) products, the main function of the AC power cord is transmission power. Since the quality of the AC power cord affect the power transmission reliability and safety, therefore, the AC power cord is a very important component with 3C products.

Recent years, the Tablet PC is using DC power cord to transmit power that directly affects the sales of AC power cord. Furthermore, economic recession has become more serious since 2013. Therefore, the sales amount of AC power cord decline significantly. The major purpose of the present study was to formulate useful competitive strategy for the case company to expand market share in Taiwan.

## II. RESEARCH METHOD

Figure 1 shows the research structure of present study. The present study firstly conducted SWOT (Strength,

Weakness, Opportunity, and Threaten) analysis which includes external and internal environment analysis of the business. Secondly, focus group was conducted to analyse and validate the problems. Thirdly, focus group was also conducted to develop feasible strategies. Fourthly, expert in-depth interview was conducted to identify the developed feasible strategies by focus group. Finally, the competitive strategies of the case company were formulated.



**Figure 1 :** Research Structure

### III. LITERATURE REVIEW

#### A. Focus Group

Focus group is under-used in social research, although it has a long history in market research (Morgan, 1988). Morgan (1996) indicated that over the past several decades, focus group has reemerged as a popular technique for gathering qualitative data, both among sociologists and across a wide range of academic and applied research areas. Morgan (1996) also pointed out that the advantages of focus group can be maximized through careful attention to research design issues at both the project and the group level. Stewart & Shamdasani (2014) proposed the procedures of focus group includes: elaboration research problem, confirm sampling frame, determine host and the focus group moderator, development interview outline, recruiting focus group participants and designing the interview guides, conducting the focus group, analyzing focus group data, and writing reports. Therefore, the present study employed focus group method to perform the problem analysis and validation, also develop feasible strategies.

#### B. Expert Interview

The expert interview as a method of qualitative empirical research, designed to explore expert knowledge, has been developed considerably since the early 1990s (Meuser & Nagel, 2009). Expert interviews are a good example of the way in which the everyday practice of social research and theoretical consideration of this practice do not always run parallel to one another (Bogner & Menz, 2009). Therefore, the present study employed expert interview to verify the developed feasible strategies.

#### C. SWOT

SWOT (strength, weakness, opportunity, and threat) analysis is a powerful tool to assess the business environment and their owned position (Channon, 1989). Generally, the strengths of the business generally includes: core skills, excellent financial condition, good consumer perceptions, high market share, high productivity, high quality of products and services, low production costs, excellent research and develop (R&D) capabilities, highly innovative capabilities, excellent top management team, proprietary technologies, sufficient channel, good political relations, and others. When analyzed the SWOT of the environment, the business can clearly defined their faced problems. Therefore, the

business can perform variety of elaboration feasible strategies.

#### D. TOWS Analysis

Weihrich (1982) also proposed TOWS to response the SWOT analysis, which includes: (1) SO strategy: maximize internal strengths and opportunities in the external environment; (2) ST strategy: maximize the internal strengths and minimize threat in the external environment, take internal strengths of organizations to overcome the external threats; (3) WO strategy: minimize internal weakness and maximize opportunities in the external environment; and (4) WT strategy: minimize the internal weakness and threat in the external environment.

### IV. EXTERNAL ENVIRONMENT ANALYSIS

#### A. Industrial Environmental Analysis

AC power cord with plug connector for the power supply set of all kinds of 3C product. The main function of the AC power cord is transmission power to 3C products and collectively referred to as the power connector. AC power cord is one of the basic traditional industries and the most widely used connectors. The upstream, midstream, and downstream of AC power industry are described below:

- (1) Upstream: the upstream includes: copper alloy metal, plating material, plastic, and other materials. Total materials cost was about 60% of the manufacturing costs.
- (2) Midstream: manufacture and assembly of cord set. Production steps including the front-end product design and mold development, stripping the middle, pressing, assembly, plastic injection molding, and after the testing period.
- (3) Downstream: the downstream customers of cord set mainly are computer & accessories, 3C products, and appliances.

#### B. Competitor Analysis

##### B.1. Contending forces analysis

Porter (1979) proposed the model of forces governing competition in an industry, after that the model became the most important thinking that affect strategic planning of a business. The contending forces analysis of the case company is described below:

- (1) Threat of new entrants: From technical perspective, the enter barrier is very low. In contrast, from technical capital perspective, business need expand the production to economies of scale and update

the production line for more efficiency to improve gross profit. The threat of new entrants is very low due to the low gross profit and high safety verification barriers. However, due to low safety verification barriers in DC power cord, the gross profit of DC power cord is lower than AC power cord. Therefore, the DC power cord companies are trying to transfer into AC power cord, such as Hotron, Copartner, and Aces.

- (2) Threat of substitute products: The threat of substitute products is very strong due to the type-C (charge power is increased to 100 watts) USB 3.1 and wireless charging are gradually replace the AC power cord of mobile devices.
- (3) Bargaining power of suppliers: The bargaining power of suppliers is very strong due to the main raw material was controlled in few suppliers and alternative raw materials development is difficult.
- (4) Bargaining power of customers: The bargaining power of customers is very strong due to the high industry competition and customer overlap increased bargaining power of customers.
- (5) Threat of existing competitors: There are more than 30 AC power cord companies in Taiwan. Case company, Longwell, Linetek, and Wellshin are the largest companies.

## B.2. Existing competitor

The companies in order to get order, usually bargain with each other, even used low price strategy in Taiwan. Though the domestic market competition result in lower profit, but often provide motive force of improvement and innovation to make the companies stronger in the international market competition. Therefore, lower cost, better quality and service, R&D of new products, and more efficient manufacture process are developed. Case company is the leading company in power cord industry in Taiwan. The number 2-4 companies of market share are Longwell, Linetek, and Wellshin, and introduced below:

- (1) Longwell: Longwell is one of the major suppliers of iPad duckhead of Apple. The revenue from Apple is more than 50% of the total revenue of Longwell. Beside, Longwell also produced AC power cord of electrical products.
- (2) Linetek: The main products of Linetek are power cables, which includes DC and AC power cables. The major clients of Linetek are power supply and adaptor companies. Since 2014, Linetek start

branched out into AC power cord of electrical products.

- (3) Wellshin: In 2002, Foxlink became the largest client and shareholder of Wellshin. After that, the power cord shipped to Macbook and iPad of Apple pass through Foxlink is rising steadily. Resent years, Wellshin set up its own brand "OpluGo" into the charging and WiFi of smart home and multifunction handheld products, also branched out into AC power cord of electrical products.

## V. INTERNAL ENVIRONMENT ANALYSIS

### A. Strategy Framework

The strategy framework was divided into two develop direction based on time span.

#### A.1. Short-term develop direction

The short-term develop direction of case company are introduced below:

- (1) Improve the quality and technical level: Continue to strengthen the recruitment and training of R&D employee and strengthen the improvement of production processes. Currently, the development of power cord is mainly to improve the product quality and manufacturing techniques to reduce the power consumption.
- (2) Computerized production control: Shorten delivery time and rapid delivery is an inevitable trend due to rapid changes in the market. Small amount and diversity of orders have significantly affected the production pattern. Therefore, fast and smooth processing of documents and efficient control the production process are rely the computer to master the online information and delivery.
- (3) Expand production facilities: Due to the continent rising of labor wages and tax-related laws, most products production in the China has been unfavorable economic benefits for foreign investors. Therefore, expand new production facilities to another areas become an important issue.
- (4) Marketing strategy: The low gross profit products were transferred to overseas facilities or outsourcing to meet international marketing segment of production and market.

## A.2. Middle and long-term develop direction

The middle and long-term develop direction of case company are introduced below:

- (1) Upgrade the quality and technical level: The optical fiber has high transmission capacity, fast, lightweight, and other characteristics. Therefore, the case company going to import plastic optical fiber production in the future. However, the demand of the quality of the optical fiber is more stringent. Thus, case company need to strengthen investment on research and development of manpower training, and seek high-end technology cooperation.
- (2) Accelerate the expansion of automation produce equipment: Automated production can increase productivity and quality, reduce dependence on labor, smooth production lines, reduce production cost, and increase competitiveness.
- (3) Increase overseas sales bases: For the purposes of expanding market share and disperse market risks. The case company continues to expand domestic business and increase overseas sales offices to develop international marketing network.
- (4) Maximization financial operation benefit: Maximal the financial operation benefit with prudent financial strategy and meet the company's long-term business development needs.

## B. Business Performance

Case company is the leading company in power cord industry and was set up at 1973 in Taiwan. There are more than 15 thousands employees in the world and the annual revenue was about NT\$ 10 billion. The main business are development, manufacture and sale of plugs, sockets, power cord, extension cords, wiring, communication cables, optical fiber, etc. The subsidiaries are located at China, Vietnam, and Brazil. The EPS (earned per stock) was about 3.0 during the past two decades. The products of the case company have been obtain safety certification of UL, CSA, BSMI, CCC, PSE, VDE, ASTA, ET, VDE, SEMKO, FINKO, AST, SAA, IRAM, and SABS.

## VI. PROBLEM ANALYSIS AND VALIDATION

The present study conducted focus group method to perform the problem analysis and validation. The problems were shows below:

- (1) 3C products is changing fast and the overall demand is slowdown: The AC power cord market

is very sensitive to the changing of 3C products. Sales of 3C products fell sharply in 2009 due to the global financial crisis. Since then, the demand of AC power cord has been sluggish.

- (2) The three most important economies of the world's are stagnant: Earthquake and tsunami led to Japan's economy into negative growth since 2011; Brexit (EU referendum of British leave European) lead the economy uncertainty of European; and economic slowdown obviously lead to social unrest order of American. Furthermore, the rise of populism will lead to more trade protection in the world. These factors will make the world economy and export environment worsened.
- (3) Small amount and diversity of 3C products: Consumption and fashion trends change impermanence caused small amount and diversity of 3C products. With the 3C products are lighter, thinner, shorter, and smaller; also requirement of mobility and high-speed transmission of information. Will drive the connector of optical fiber demand steady increase in the future.

## VII. FEASIBLE STRATEGY DEVELOPMENT

The present study also conducted focus group method to develop the feasible strategies.

### A. SWOT Analysis of the case Company

- (1) Strength: (a) High quality and full range of products. (b) Mature production technology and introduced enterprise resource planning system (ERP). (c) Integrated marketing and production division to reduce costs. (d) Excellent operating performance and a sound financial structure.
- (2) Weakness: (a) High labor turnover rate and labor cost is rising in China. (b) The main raw material price changes affected by the international situation. (c) The risk of exchange rate changes is rising due to political cause.
- (3) Opportunity: The needs of current 3C products continued to increase in long-term.
- (4) Threat: Industry competition intense than the past due to the price gradually down to reduce the gross profit.

### B. TOWS Matrix of the case Company

The feasible strategies were developed which integrated with TOWS method is described below:

- (1) SO analysis: The case company produced AC power cord for more than 40 years, accumulated a

lot of manufacturing experience and technology; also with complete product line, product variety, and have a variety of international safety certification. Furthermore, the case company is the leader of AC power cord manufactory regardless the production scale, production technology, or quality. Therefore, multimarket penetration and product expansion strategy are feasible for the case company.

- (2) ST analysis: Though the price gradually down due to high industry competition intense, however, new 3C products develop very quickly, such the virtual reality (VR) and argument reality (AR). Therefore, product expansion strategy is feasible for the case company.
- (3) WO analysis: The needs of current 3C products continued to increase in long-term. Furthermore, the ASEAN is rising. Therefore, multimarket penetration is feasible for the case company.
- (4) WT analysis: The threat from low price products of China is getting more serious. The only way is accelerate the development of high gross profit products such as power cord of DC or USB to mitigate the low price products threat. Therefore, product expansion strategy is feasible for the case company.

**C. Feasible strategy**

The present study developed two feasible strategies for the case company. These two feasible strategies are introduced below:

- (1) Multimarket penetration strategy: Expand the scale of existing products can achieve the purpose of market penetration. However, due to the power cord industry competition is fierce. Product quality, delivery reliability, and flexibility had become a prerequisite for qualified suppliers. The case company focused on the power cord production of the computer industry more than 40 years. Therefore, the risk is relative low for the case company from the computer AC power cord transfer to the 3C products market. Beside, client in order to spread risk will not allow a vendor to become only source suppliers, therefore, single market penetration strategy is not appropriate.
- (2) Product expansion strategy: There will be more expansion capacity in the USB connector, especially the international mobile phone manufacturers will be unified USB connector specifications in the future. The functionality of

USB 3.1 coupled with the AC power cord and HDMI (high definition multimedia interface). In addition to increasingly stringent environmental regulations and power will become increasingly large to achieve carbon reduction requirements. The USB product applications will be increasingly widespread. Therefore, USB product will be an important direction in product expansion strategy of the case company in the future. Furthermore, the develop wireless products also is an import strategy for the case company in the near future.

**VIII. EXPERT INTERVIEW**

The present study conducted expert interview to confirm the feasible strategies which developed by focus group. The outlines of expert interview are listed below, and Table 1 listed the interviewed experts of the case company.

- (1) Compared with the competitors, what is the company's competitive advantage?
- (2) What are the barriers that entry to the AC power cord industry?
- (3) How the company managed the risk?
- (4) What are the key factors that affect the company's success?
- (5) What is the future development of the market directions?
- (6) Do you regard the multimarket penetration strategy is feasible?
- (7) Do you regard the product expansion strategy is feasible?

TABLE I  
LIST OF THE INTERVIEWED EXPERTS OF THE CASE COMPANY

Expert	Experience	Title	Interview time (hour)
Mr. Fang	40 years	General manager (GM)	1
Mr. Lai	30 years	Vice GM of R&D department	2
Mr. Huang	30 years	Vice GM of marketing department	2
Mr. Gao	20 years	Manager of finance department	2

**IX. FORMULATED COMPETITIVE STRATEGY**

The present study conducted focus group to analyze and validate the problems, to develop feasible strategies, and expert interview to confirm the feasible strategies. Two

major feasible strategies were formulated: multimarket penetration and product expansion.

## X. CONCLUSION

The present study aimed to formulate the competitive strategy for the case company in Taiwan and developed two competitive strategies (multimarket penetration and product expansion) for the case company. In summary, the present study suggests that AC power cord industry in Taiwan must increase the diversity of products line, market expansion, improve R&D capabilities, providing sound technical service support capability. Furthermore, new products develop can commercialize quickly, shorten new products development time, and rapid adjustments to technological and environmental changes are the key points for the AC power cord industry in Taiwan.

## XI. REFERENCES

- [1] Bogner, A. & Menz, W. 2009. The theory-generating expert interview: epistemological interest, forms of knowledge, interaction. In *Interviewing experts* (p.43-80). Palgrave Macmillan, UK.
- [2] Channon, D. K. 1989. SWOT analysis entry, in *Handbook of Strategic Management*.
- [3] Meuser, M. & Nagel, U. 2009. The expert interview and changes in knowledge production. In *Interviewing experts* (p.17-42). Palgrave Macmillan, UK.
- [4] Morgan, D. L. 1988. *Focus groups as qualitative research*. London: Sage.
- [5] Morgan, D. L. 1996. Focus groups. *Annual review of sociology*, 129-152.
- [6] Porter, M. E. 1979. How competitive forces shape strategy, 137-140.
- [7] Stewart, D. W. & Shamdasani, P. N. 2014. *Focus groups: Theory and practice*, 3<sup>rd</sup> editions (vol.20). Sage Publications.
- [8] Weihrich, H. 1982. The TOWS matrix- A tool for situational analysis. *Journal of Long Range Planning*, 15(2): 54-66.