

Research on Competition Strategy of M Company's Automobile Air Conditioning*

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Abstract—Starting from the internal and external environment of M company, this paper firstly analyzes the external macro environment and industrial environment of M company's automotive air conditioning products by virtue of PEST analysis, Porter's "five-force model" analysis and external environmental assessment matrix (EFE), and sums up the opportunities and threats faced by M company's automotive air-conditioning products. Secondly, this paper adopts the core competitiveness analysis method and internal environmental assessment matrix (IFE) and finds out the internal advantages and disadvantages of the M company's passenger car air-conditioning products; on this basis, an alternative product competition strategy was developed by using the SWOT tool's analytical framework. Finally, a competitive strategy for the differentiation of M company's automotive air conditioners was developed.

Keywords—M company; automotive air conditioning; environmental analysis; competitive strategy

I. INTRODUCTION

Automobile air conditioning refers to a device that adjusts the air in the car compartment or in the cab to meet passengers' and passengers' requirements for comfort, such as temperature, humidity, flow rate and cleanliness. The emergence of automotive air conditioners has contributed to a substantial increase in car sales. Automotive air conditioners provide functions such as heating, cooling, defrosting, defogging, humidity control, and air filtration to reduce the ride fatigue of passengers and drivers and improve driving safety. Therefore, automobile air conditioners have become the main means to improve the ride comfort of automobiles, and have gradually become the most popular items in automobile accessories. As a result, automobile air conditioners have become one of the key selling points of automobile competition. In today's world, companies that are always green are strategically oriented.

Since its establishment, M Company has grown from scratch, from weak to strong, and has experienced a period from slow start to high speed and low level development. In

order to develop the company at a higher level, the company must solve various problems that lead to low-level development of the company, and transform the business concept as soon as possible, further expand the living space, consolidate the existing market, and further seize the external quality market. To this end, the company must plan, formulate, implement, evaluate product competition strategies, strive to improve market competitiveness and product competitiveness, enhance core competitiveness, gain competitive advantage, and strive for industry leadership.

II. ANALYSIS OF THE EXTERNAL ENVIRONMENT OF M COMPANY

The external environment of the enterprise consists of the macro environment and the industry environment (as shown in "Fig. 1"). The external environment influences and restricts the survival and development of the enterprise. Enterprises must fully and objectively understand the external environment that is vital to the development of the enterprise, understand its current situation and development trends, actively adapt to changes in the external environment, and take advantage of the favorable opportunities of the external environment to avoid threats from the external environment and maximize the use of the enterprise so as to obtain the healthy development of the company.

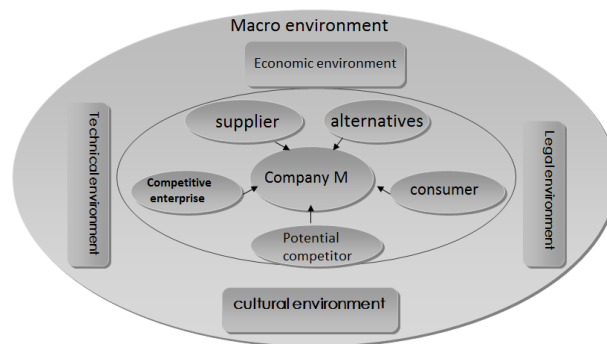


Fig. 1. Environmental analysis hierarchy.

A. Macro Environment Analysis-PEST Analysis

The impact of the macro environment on the direction and strategy of the company is indirect. Understanding the

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development and changes of a number of relevant factors in the macro environment is conducive to a broader vision and a larger pattern in the process of formulating the strategy. At the same time, understand the business ecological environment in which the company is located, so that the corporate strategy has vitality.

The macro environment facing M Company includes political environment, economic environment, technical environment and social environment. The analysis of the enterprise's macro environment is also known as PEST analysis. "Fig. 2" is a macro environmental analysis chart of M company. When conducting PEST analysis, different industries and enterprises can select different specific contents for analysis according to their own characteristics and business needs.

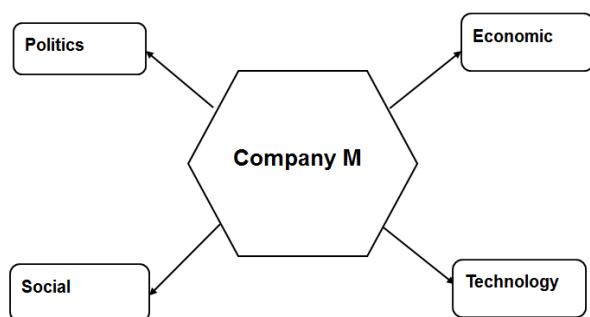


Fig. 2. M company macro environmental analysis.

1) *Political and legal environmental factors faced by M company:* Encouraging self-owned brand carports. In July 2011, the Ministry of Commerce issued the "Opinions on Promoting the Sustainable and Healthy Development of Mechanical and Electrical Products Exports during the Twelfth Five-Year Plan", encouraging 100 companies in 25 key industries to establish a sound overseas marketing network and after-sales service. System; call for continued efforts to build a U base for automobiles and parts; improve the export order of automobiles and motorcycles. [1] From January to November 2014, the cumulative export volume of China's automobiles was 810,400, accounting for about 4% of the production of self-owned brands. With the rapid development of China's automobile industry, in recent years, China's domestically produced vehicles have been exporting with good value for money.

2) *Economic environment factors faced by M company:* First, the rise of various financial instruments will further promote automobile consumption. The convenience of buying a car loan now makes it a trend for consumers to buy a car by mortgage. In order to seize customer resources, different brands of automakers have cooperated with banks to make profits, and launched a zero down payment, or even a zero-interest rate marketing strategy, so that it is no longer a luxury to buy a car. Second, consumer car costs have increased. On the one hand, it is the requirement for energy saving and consumption reduction. The state has introduced a series of current restrictions on discharge policies, mainly

to raise the fuel tax. The unit tax on gasoline consumption tax is raised by 12 Yuan/liter; the diesel consumption tax is raised by 0.14 Yuan. On the other hand, there is a change in international oil prices. In addition, the increase in vehicle maintenance costs caused by labor costs, and the fact that urban congestion makes consumers tend to invest in insurance for automobiles to avoid property losses caused by traffic accidents. To some extent, the cost of using the car has increased.

3) *Social environment factors faced by M company:* Lifestyle and spending habits: as China's economy is stable and long, the average disposable income increases, and the change in the propensity to change changes the way of life and consumption habits of the Chinese people. Instead of saving the money in their hands, they rationally take out part of it. Used for improvement in consumption and living standards. This has driven the consumption of cars by Chinese people to a certain extent. In addition, the attitude of the Chinese people towards quality changes. The Chinese people are no longer the products of the backward quality of the economy that are limited to the consumption economy. The people whose living standards have risen sharply are more urgent to improve their quality of life, the quality of the cars and their accessories. There is a strong demand for comfort.

Social responsibility: on the one hand, the state strongly advocates energy conservation, emission reduction and low carbon environmental protection. On the other hand, it is also the people's public understanding, and environmental protection is closely related to everyone. Frequent drinking water quality problems, excessive indoor air PM2.5, and increased smog weather are alarm bells for environmental concerns, making people's awareness of energy conservation and environmental protection reluctant, and their awareness of the use of public resources is enhanced. To a certain extent, this guides the manufacturers of automobiles to the direction of energy conservation and environmental protection.

4) *Technical environmental factors faced by M company:* Technological developments in the field of automotive air conditioning: the automotive air conditioning industry is inextricably linked to the development of the automotive industry. The current national policy for the development of the automotive industry is low carbon and environmental protection. The technical development of low-carbon energy-saving focuses on the application of new fuels, the development of effective engines and the reduction of energy consumption of some auxiliary systems. The energy consumption reduction of automotive air-conditioning systems is the focus of the development of technology in the automotive air-conditioning industry for a long time to come. In addition, whether the refrigerant used in automotive air conditioning systems is environmentally friendly is also an important factor affecting the environmental protection requirements of automobiles. The vigorous development of environmentally friendly refrigerants will also be an

important direction for the development of automotive air conditioning industry. [2]Environmentally-friendly vehicles adopt new power system technology, and their automotive air-conditioning systems also need to be adjusted accordingly. For new and environmentally-friendly vehicles, such as electric, hybrid, fuel cells and other low-emission vehicles, they are far-powered. Less than traditional power vehicles, the power that can be supplied to air-conditioning systems is extremely limited; having a set of energy-efficient, reliable air-conditioning systems is critical to market development. [3]

B. Industry Environment Analysis — Analysis of “Five Force Models”

1) *Existing competitors in the industry*: The main competitors of M's automotive air-conditioning products include Guangzhou Xueba Refrigeration Equipment Engineering Co., Ltd., Ningbo Juke Automation Technology Co., Ltd., and Liujiang County Chengyu Auto Parts Operation Department. Through the analysis of representative competitors, M company has a large gap with the industry leaders, and the advantages are not obvious.

2) *The threat of new entrants*: The difference between automotive air-conditioning products is very small, and the replacement cost of each car air-conditioning product is almost zero, which will increase the difficulty for new entrants to enter. In addition, the auto main vehicle manufacturer's identification process for auto air conditioner manufacturers is complicated and long. If there is no big quality problem, the auto air conditioner manufacturer will not be easily replaced, and the entry barrier of new entrants will also be increased.

3) *The threat of alternative producers*: For the car empty, there is basically no substitute at present, the only thing worth considering is the alternative risk of the original traditional structural air conditioner that may be generated by new car air conditioners such as energy-saving air conditioners, new material air conditioners, and new energy air conditioners.

4) *The bargaining power of the supplier*: The profit margin of the automotive air-conditioning industry has been compressed, and the cost of control has become a key factor for the survival of automotive air-conditioning companies. The most important part of cost control is the cost of raw materials. Can it win the competition with suppliers? The key to success: the bargaining power of M company and raw material suppliers is uneven, and different bargaining methods should be adopted for different suppliers. For bulk raw materials, bulk bargaining can be used to increase bargaining power. For more versatile accessories, multi-suppliers can be used at the same time, and the bidding method can be used to obtain the best price. For parts such as compressors with low usage and high profit margin, try to buy at a lower price.

5) *The buyer's bargaining power*: The buyer of Company M is the OEM. The requirements of the automaker for the automotive air-conditioning product M company are that the product performance is reliable and the price is low. The end user provides timely maintenance when the vehicle air conditioner produces a failure.

C. External Environmental Evaluation Analysis — EFE Matrix

After analyzing the general environment and industry environment of M company, the external environmental factor evaluation matrix of M company can be established. The external factor evaluation matrix analyzes and evaluates key external factors of the company. The main elements are: opportunity factors, threat factors, weights, ratings, and the weighted and total scores formed on this basis. [4]

Steps to establish M's external factor evaluation matrix (see “Table I”): First, list the key strategic factors in M's external environment, namely to identify the main opportunities and threats, for a total of 12 items. Second, give each factor a certain weight, ranging from 0 (not important) to 1 (very important), and make the sum of all factors weighted to 1. The size of the weight means the extent to which this factor affects the business. Again, the rating values 1, 2, 3, and 4 represent the major threats, general threats, general opportunities, and major opportunities of Company M. Then, the weight of each factor is multiplied by the corresponding score value to obtain a weighted score for each factor. Finally, the weighted scores of all factors are summed to obtain a comprehensive weighted average score of M's external environmental opportunities and threats.

TABLE I. M COMPANY'S EXTERNAL FACTOR EVALUATION MATRIX

Key external factors		Weights	score	Weighted score
Threat	Export trade barrier	0.05	2	0.1
	Raw material price fluctuations	0.1	1	0.1
	Technology update	0.15	1	0.15
	Fuel price rise	0.05	2	0.1
	Government promotes green travel	0.05	2	0.1
opportunity	The automotive industry is developing rapidly	0.1	3	0.3
	Transportation industry is developing rapidly	0.06	3	0.18
	Individuals' demands for environmental protection have increased	0.04	3	0.12
	Car loan emerging financial convenience	0.1	4	0.4
	The state promotes the market share of self-owned brand cars	0.15	4	0.6
	The state subsidizes new energy vehicles	0.05	3	0.15
	People improve the comfort of car air conditioning	0.1	4	0.4
Total weighted score		1		2.7

The external environment has a total weighting score of 4.0, a minimum of 1.0, and an average total weighted score of 2.5. As can be seen from the above table, the total weighted score of the external factor evaluation matrix of M company is 2.7 points. M company's total weighted score is higher than 2.5, indicating that M company can better use the opportunities in the external environment to avoid threats.

III. M COMPANY'S INTERNAL ENVIRONMENT ANALYSIS

The internal environment of an enterprise is an internal factor that can be controlled by an enterprise. It is the basis of business management and the starting point, basis and condition of strategic management. The internal environment of an enterprise generally includes managers, organizations, internal resource conditions, and corporate culture.

Enterprise strategic management is to enable enterprises to achieve a dynamic balance between the internal environment, external environment and strategic goals in a complex and ever-changing internal and external environment. To this end, by analyzing and fully understanding the internal environment of the enterprise, it is helpful to grasp the history and current situation of the enterprise, clarify the advantages and disadvantages of the enterprise, enable the enterprise to better adapt to and influence the external environment, and then fully and effectively use its own resources to foster strengths and avoid weaknesses, to build the core competitiveness of the company and create a long-term competitive advantage.

A. Competitive Ability Analysis

1) *Operational capabilities*: The ability of an enterprise to operate is the ability of an enterprise to profit from its own assets. The operational capability analysis should focus on the analysis of the company's asset output rate, asset income rate and asset turnover rate. Compared with the industry, M company's asset output rate and asset income rate are higher, asset turnover rate is lower than the industry average, and operating capacity is better than the line.

2) *Quality management capabilities*: M company's total quality management system is under construction. Existing quality management remains at the stage of relying on proficiency and experience. This also limits the possibility of M company becoming a primary supplier of many major car manufacturers. The company urgently needs training and certification of the quality management system.

3) *Research and development capabilities*: Since the company's founding, M company's managers have paid great attention to the investment and construction of R&D personnel and technical equipment. The company has 17 undergraduate and refrigeration personnel in refrigeration and air-conditioning, 2 employees in the company, and 3 experts with many years of experience in designing and developing radiators. The artificial environment experimental testing center for automobile air-conditioning products built by M company has the most advanced testing

and experimental technology in China and provides hardware support for product research and development.

B. Internal Environmental Evaluation Analysis — IFE Matrix

Based on the analysis of the internal competitiveness of M company, the internal environment factor evaluation matrix of M company is established. The internal factor evaluation matrix comprehensively analyzes internal environmental factors, comprehensively evaluates the main advantages and disadvantages of various functional areas within the enterprise, and determines the competitive position of enterprises to help enterprises to produce and operate decision-makers to formulate effective strategies.

Steps to establish M's external factor evaluation matrix (see "Table II"): First, list the key factors in internal environmental analysis and select 11 internal environmental factors of M company. Second, use a rating of 1-10 (1 weakest, 10 strongest) to score each factor. Again, each factor is weighted with a range of values from 0 (not important) to 1 (very important). The weight scale indicates the relative size of each factor's influence on the success or failure of the enterprise in the industry. The sum of ownership weight is equal to 1. Then, multiply each factor weight by its score to get a weighted score for each factor. Finally, the weighted scores of all factors are used to obtain the total weighted score of the firm.

TABLE II. M COMPANY'S INTERNAL FACTOR EVALUATION MATRIX

Key Internal factors		Weights	score	Weighted score
Disadvantage	Business management	0.05	4	0.2
	Business scale	0.1	3	0.3
	Enterprise culture	0.1	5	0.5
	Quality Control	0.1	4	0.4
	Financial strength	0.1	4	0.4
Advantage	QC	0.1	7	0.7
	Employee team	0.06	8	0.48
	Cost advantage	0.09	8	0.72
	Geographic location	0.1	7	0.7
	hardware equipment	0.15	9	1.35
	technique level	0.05	8	0.4
Total weighted score		1		6.15

The internal environment has a total weighted score of 10.0, a minimum of 1.0, and an average total weighted score of 5.5. As can be seen from the above table, the total weighted score of the internal factor evaluation matrix of M company is 6.15 points. M company's total weighted score is higher than the average of 5.5, indicating that M company's internal situation is in an advantage. In this case, it is easy for the company to maintain the status quo, and a more aggressive strategy should be adopted to gain a greater competitive advantage.

IV. THE DEVELOPMENT AND SELECTION OF M COMPANY'S AUTOMOTIVE AIR CONDITIONING COMPETITION STRATEGY

A. SWOT Matrix and Strategic Choice

1) *Analysis of internal advantages:* The internal advantages of M company are reflected in: rich experience in leadership support; less management level, rapid and accurate information transmission, high execution efficiency; high product quality; low labor costs for employees.

2) *Analysis of internal disadvantages:* The internal disadvantages of M company are reflected in the fact that the company is small in scale, geographical location is not dominant; financial strength is weak, financing is difficult; customer resources are limited; brand awareness is low.

3) *External opportunity analysis:* M company is a labor-intensive enterprise, and it also occupies a large number of local land and equipment and other hardware facilities. In order to reduce the unemployment rate and protect the local economy, the local government provided M company with more support in terms of tax policy convenience, which enabled M to survive and grow in the local area.

4) *External threat analysis:* The industry has high requirements for energy conservation and environmental protection; competitors are strong.

According to internal and external environmental analysis, the SWOT matrix of M's automotive air conditioning products is shown in "Table III".

TABLE III. SWOT MATRIX OF M COMPANY'S AUTOMOTIVE AIR CONDITIONING PRODUCTS

Internal environmental factors	Advantage	Disadvantage
	S1: Strong technical strength S2: Skilled technical staff	W1: Uneven distribution of clever roads W2: Low management level
External environmental factors		
Opportunity	SO strategy	WO strategy
O1: Car sales increased O2: The state encourages exports	SO1: Maintain technical advantage SO2: Increase output and export volume	WO1: Meeting market needs WO2: Management training
Threat	ST strategy	WT strategy
T1: High energy and environmental protection requirements T2: Strong competitors	ST1: Technology upgrade ST2: Improve employee skills	WT1: Multi-channel enhanced management WT2: Seize the deficiencies of competitors

B. M Company's Specific Content of Developing a Differentiated Competition Strategy for Automotive Air-conditioning Products

Differentiation strategy refers to the combination of various differentiated features, providing customers with products or services that are different from other companies, thus gaining a dominant position in the competition. [4] The core of success is to find a differentiated method to obtain

some uniqueness that is valuable to the customer. This uniqueness is difficult for the opponent to imitate and achieve, and it is guaranteed not to cause excessive price.

M company's automotive air conditioning products to develop a differentiation strategy, embodied in the following three aspects:

1) *Product differentiation:* M company's automotive air conditioning products have an advantage in the industry competition. From the perspective of automotive air-conditioning products themselves, the first thing that should be considered to improve their products is their function, material and workmanship. First of all, in order to improve the added value of automotive air-conditioning products, it is necessary to increase the investment in product research and development technology and the digging of product features, from personnel to test equipment, etc. should be targeted to strengthen. In addition, the differentiation of the design can also increase the added value of the product. M company should set up a research and development team for different customers, tailoring different automotive air-conditioning products for each model of the main car customers with different needs, and changing the current situation of poor customization in the industry.

2) *Service differentiation:* In view of the current service level of the automotive air-conditioning industry, if M Company wants to gain competitive advantage in product service differentiation, it should focus on shortening the distance of information channels that it communicates with its end customers, and actively participate in the research and development of automobile products of the main car factory. Throughout its life cycle, it explores the functions of the automotive products that consumers need and keeps track of the operation of the products after they are put on the market, providing targeted services to the final consumers, as well as providing reference and data support for the development of new products. Thereby opening up its new pattern in the automotive air conditioning industry and gaining a competitive advantage.

3) *Brand differentiation:* A successful brand means a wide range of loyal customers, a steady stream of orders and a lasting development advantage. The history of brand building is complex and long-lasting than product differentiation and service differentiation. F Company should increase its efforts in brand promotion, actively participate in various exhibitions and public welfare activities, timely publicize the culture of the company, and convey the company's concept of pursuing its quality to customers. Over time, it will bring a steady stream of orders to the company income.

V. CONCLUSION

Due to the acceleration of global economic integration and global informationization, the competition among enterprises has changed from static competition in the past to dynamic competition. M company must actively respond to

environmental changes and do the following work: First, M company should establish a competitive intelligence system of the company around its own competitive strategy. Dynamic monitoring of the competitive environment ensures the adaptability, adequacy and effectiveness of the competitive strategy. Secondly, M Company should establish a systematic strategic management system to enable the company to carry out strategic management work in a hierarchical, planned and purposeful manner. Thirdly, to establish a risk warning and rapid response mechanism, M Company should actively identify the strategic environment, the risks of strategic assumptions and the limitations of the strategy itself, and prepare a dynamic action plan or emergency plan to deal with risks to ensure the accuracy and rapid response of the forecast. . Finally, establish a learning organization company, construct a knowledge system with both humanities and technology, and enable the information flow and knowledge flow in the organization to realize the continuous innovation and accumulation of knowledge of individuals and organizations through acquisition, integration, update and sharing. Improve the ability of enterprises to make rapid decisions and achieve dynamic adaptability to changes in the environment.

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