

China's mechanical and electrical products export strategy under the small profit era

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Abstract—With the weakening of traditional competitive advantage and international industrial transfer, China's mechanical and electrical products export is facing greater pressure, thus the mechanical and electrical industry must speed up the adjustment of competitive strategy, timely follow the trend of transformation and upgrading, and seek new profit and competitive advantage. Based on the analysis of factors that restrict our mechanical and electrical products export, this article takes advantage of the successful experience of Weichai power to provide concrete countermeasures and suggestions about how China's mechanical and electrical industry maintains export earnings growth under the small profit era.

Keywords- *mechanical and electrical industry; export strategy; Small profit era; Weichai power*

I. INTRODUCTION

Since China's accession to WTO, mechanical and electronic industry has developed rapidly with a rapid growth made in export. But in recent years, with the rising of labor cost and exchange rate, competitive advantage of China's mechanical and electrical products has weakened gradually and the export growth has fallen. How companies will do to survive in a complex international market environment, to keep profit growth become an urgent problem for the mechanical and electrical industry in China.

II. CURRENT SITUATION ON EXPORT FOR CHINA'S MECHANICAL AND ELECTRICAL PRODUCTS

In recent years, the mechanical and electrical products export trade has developed rapidly in our country, always as the leadership, by the end of 2014; it has been at the top seat for twenty years and over half of the national foreign trade exports. Thus, mechanical and electrical products in China's foreign trade is in dominance, make a significant contribution in China's trade surplus and foreign exchange reserves, directly affects the overall performance of China's export trade.

Table 1 national foreign trade and exports value of mechanical and electronic products (2009-2014)

Year	national foreign trade export value (\$)	mechanical and electronic products export value(\$)	percent (%)
2009	12016.6	7131.1	59.3
2010	15779.3	9334.3	59.2
2011	18986.0	10855.9	57.2
2012	20489.3	11794.2	57.6
2013	18986.0	12600	57
2014	23400	13100	56

Note: the data from the customs information network with the ministry of commerce website

From the point of trade way, mechanical and electronic products focused on processing trade exports, but it accounts were coming down. See from long-term, our country mechanical and electrical products export trade is given priority to with the processing trade, with China's industrial development's labor cost rising, the percent of mechanical and electrical products export trade declined since 2005, especially since 2009, its growth began to slower than mechanical and electrical products export growth. In 2011, China's exports of mechanical and electronic products amounts for \$1.0856 trillion, including processing trade exports of \$652.3 billion, over 60% of the total cost of the mechanical and electrical exports, and fell 3.2 percentage points compared with 2010; In 2012, the ratio fell to 55%.

Asia, Europe and North America are three major export markets of China's mechanical and electrical products. In 2010, the top five export markets of China's mechanical and electrical products are European Union, the United States, Hong Kong, the association of south-east Asian nations and Japan, exports which accounted for the proportion of total exports of mechanical and electronic products reached 71.8%. In recent years, with the steady growth in traditional export markets, our country's mechanical and electrical products was continuously expanding in emerging markets to realize the diversification of the export market at the same time.

III. RESTRICTION FACTORS ABOUT CHINA'S MECHANICAL AND ELECTRICAL PRODUCTS EXPORT

In recent years, our country's mechanical and electrical industry coordinated development, export growth rapidly, international market share keep increasing. Results have been obtained and at the same time, we should also note that the situation of mechanical and electronic exports products in China becoming serious, a series of internal and external factors would restrict the international market development of mechanical and electrical products in our country.

A. *The problems existing in the industry itself*

1) *unreasonable export products structure*

China's electromechanical industry rely on abundant labor resources, with price and cost advantage in the international market, take up the international market for many years through price competition, many products have been considered by international consumer as cheap goods. Although with the development of economy, the overall industry also constantly optimize the product structure, however, the traditional extensive export model to win by price and number did not fundamentally change, the product still belongs to the low class, it is hard to meet the requirements of high-tech and high value-added of developed countries, and resulting countries and regions' high land export product is limited.

2) *lack of independent innovation ability and core technology*

For a long time, processing trade occupy the dominant position in mechanical and electrical products export in our country, most enterprises lack the independent innovation ability, this situation needs to be perfected. According to statistics, only an average of 15% of the mechanical and electrical enterprises in China achieved international advanced technical standards. At present, key core technology of the mechanical and electrical industry was mastered by foreign became the major factor restrict the development of mechanical and electronic industry in China. For the mechanical and electronic industry in China, high technical content of the core parts need to be imported from foreign developed countries, it also caused weak competition of high-end product of mechanical and electronic industry in China.

3) *centralized export market*

The United States, the European Union, Japan, southeast Asia and other developed countries and regions are China's largest mechanical and electrical products export overseas markets, exports to these countries and regions account for 71.8% of the total amount of mechanical and electrical products export, the export market concentration in these countries and regions leads over reliance on these markets will bring risks to electromechanical export. Also the concentration on electromechanical export will lead world's most stringent technical requirements and the highest level of national and union of science and technology, on the one hand it will lead importer take trade barriers to protect domestic mechanical and electrical industry; on the other

hand, it will make domestic enterprises lack the ability to cope with the international market fluctuations, once drastic change shows, will produce restrictions to market export region, export enterprises will immediately get impact, the enterprise will be no backup to make up for the loss of the market, exports risk will greatly increase.

B. *External restriction factors*

1) *The price of raw materials and labor costs increase*

Because the raw materials such as metals, crude oil prices, rising labor costs and the policy change, the costs of mechanical and electronic products keep raising, the low price competition strategy makes the mechanical and electrical products export profit space is compressed repeatedly; leading corporate profits fail to achieve synchronous growth with export amounts.

2) *The trade friction caused by severe trade protectionism*

With the expansion of China's mechanical and electrical products export, the foreign trades of mechanical and electronic products enter the period of friction, mechanical and electrical industry was one of the most serious industries affected by the technical barriers. According to the general administration of quality supervision, inspection and quarantine of the statistics, since 2006, mechanical and electronic industry in China affected by the foreign technical trade measures always in the first place. The number of barriers to our country mechanical and electrical products have trend of increasing, the current EU set up the CE safety certification, double green directives VEEE and RoHs, EUP directive, and more than 100000 technical standards, Germany has also set up the VDE certification, GS certification, more than 50000 standards, the United States has many more strict technical standards and regulations.

3) *The appreciation of the RMB*

Entry WTO, the RMB becomes internationalization gradually, our country's capital market began to gradually open, since 2005, China began to implement market-based exchange rate system, single exchange rate system, to managed floating exchange rate system. Since then, RMB began to keep appreciating, the ratio turned from 8.27651 in 2005 to 6.035 in 2013.

The influence of RMB exchange rate fall on China's export is various, through price changes, the export scale and export growth all affected the export trade of mechanical and electronic products. After the appreciation of RMB, mechanical and electrical export enterprises has to raise price to ensure corporate profits. As a result, our country mechanical and electrical products in the international market price advantage will be weakened, the enterprise advantages will become less, it is not conducive to expand the export of mechanical and electronic products and increase profits.

IV. THE GROWTH EXPERIENCE OF WEICHAJ POWER POWER TO MAINTAIN EXPORT EARNINGS UNDER THE SMALL PROFIT ERA

In the fierce competition of the world economy, the small profit era of China's foreign trade comes, a lot of export enterprises get pushed, export earnings plummeted, under this big background, Weichai power can still keep the profit growth, become a focal point of the mechanical and electrical industry in China. See from the table below, we can find Weichai power retained earnings rise under the severe situation.

Table 2 Weichai power power exports and export growth calendar year

Year	Export value(\$)	Increase rate (%)
2007	9213	13.2
2008	10508	14
2009	13273	15.3
2010	16096	21.3
2011	23078	43.3
2012	32893	42.5

Note: data in the chart comes from Weichai power power annual performance report

Weichai power successful experiences is inseparable with export strategy, analysis recent experience of Weichai power can promote the development of internationalization, innovate science and technology, brand strategy development and so on are all keys making Weichai power become industry leaders.

A. *Promote internationalization and help enterprises to global*

In recent years, Weichai power used a variety of ways to explore overseas markets, expand the scale of the international market, continuously upgrade the industrial strategy, improve the global network, currently in France, USA, Germany and many other countries have industry base and network system; Weichai power further perfect enterprise globalization service in 2012, expanding the international market in the world, in Africa, South Asia, Europe, north and South America and other continents and set up offices and authorized service station, number also increased from 100 to 172, and established the Weichai power European research and development center.

Through international strategic cooperation in recent years, Weichai power has more than 3000 horsepower diesel engine with low speed; Global strategic cooperation agreement with the Italian Ferrari, since 2013, it was a partner of the Ferrari F1 team, and it is the only global partner in cooperation area; Bought German Kay company's hydraulic core technology; and joined Germany bauma2013 exhibition, display international development results in recent years.

B. *Independent innovation and enhance core competitiveness*

Experienced the impact of the financial crisis, under the pressure of leading companies in foreign countries, Weichai power focus on occupy industry core technology, based on independent research and development, and reasonable do capital acquisitions and continuously strengthen international cooperation, pursuit leading position in the technology field.

At the end of 2010, Weichai power heavy diesel engine core technology was fully recognized by the industry, new technology reached the international advanced level, the blue core technology for the manufacture of heavy duty high speed diesel engine was entirely held by China, no longer depend on foreign technology, foreign technology monopoly has broken. Built in 2012 and began the Weichai power global research & development center, introduced Weichai power independent research and development of high pressure common rail ECU system. So far, Weichai power has a total of 7 institute of high level, the key techniques of heavy high pressure common rail diesel engine are listed in the national "twelfth five-year" plan and '863 program' was approved and got special support fund 10 million Yuan.

C. *Build a well-known brand*

In the internationalization course of Weichai power, Weichai power insist not to give up their own brands, actively introduce learning foreign advanced technology, integration of global resources, combined with previous experience, broken cocoon into butterfly, create own brand, and made gratifying achievements from "made in China" to "created in China" change.

V. CHINA'S MECHANICAL AND ELECTRICAL INDUSTRY EXPORT STRATEGY

Based on understanding the current situation of the export of mechanical and electronic industry in China, aiming at the mechanical and electrical problems, and draw lessons from the successful experience of Weichai power, mechanical and electronic industry in China should rely on "twelfth five-year" 's support of national policy, in accordance with the requirements of the scientific concept of development adjustment of mechanical and electronic industry export, product structure and production mode, innovating to improve the core technology, advancing the market diversification, using a variety of ways to evade trade barriers, facilitate the export of mechanical and electrical industry expansion.

A. *Change the structure of export product structure and production method*

Mechanical and electrical products export amount not only have qualitative growth breakthrough, but also should gradually reduce the rate of labor low-end products support in the proportion of mechanical and electrical products export, the investment industry capital and technology, export product structure, improve the proportion of independent brands, dominated by processing trade of low-end value chain link to high added value and added value of

the high-end link of trade way, gradually increase the competitiveness of China's high-end products.

B. Positive innovates and improves product core technology

Some mechanical and electronic enterprises lack of scientific research in our country, lack of mechanic high-level scientific research talents, products mainly focus on processing and assembly has no technical content, so the products don't have the core competitiveness. For most of the companies, recruit and foster all kinds of scientific research personnel to form a powerful research team is imminent.

Enterprises should attach importance to blaze new trails, give full play to the talent and the power of science and technology. Pay attention to independent innovation, one is to protect the intellectual property within the industry, to prevent property disputes, to create a good environment conducive to enterprise development; The second is to intensify efforts to development the product core technology, according to the mechanical and electrical products export development key, put high risk and large, long development cycle into the special research project plan; The third is that the government must strengthen the service consciousness, to promote the development of the mechanical and electrical products export services, guide to build up cultivating industrial cluster, taking the advantages of the cluster of various advantages to create good environment for mechanical and electronic industry.

C. Actively promote market diversification, reduce the risk of export

During the period of "11th five-year plan", our country mechanical and electrical products exports 's emerging markets are growing rapidly, but due to the small base,

emerging market share is still small, traditional market still occupied the main part of the export market. To reduce the risk of export, China's mechanical and electrical products need to consolidate the traditional market on the basis of actively expand in emerging markets, especially the huge potential of developing markets, such as Latin America, Africa, South Asia, etc. improve the export proportion in emerging markets, promote market diversification.

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