

Belt and Road: A New Journey for Foreign Investment

—A Case Study of the Internationalization Strategy of BYD

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Abstract—Recently, under the impetus of the “Belt and Road” Initiative, BYD Company Limited (“BYD”) has sped up the process of internationalization. As it mastered the core technology of power batteries, which is the most important part of the new electric vehicles, and has mature conditions for large-scale production, this laid the technical foundation for BYD. And it also made BYD a leader in the new energy field and the global rechargeable battery industry. Currently, BYD occupies 13% of the global new energy vehicle market share. BYD New Energy has established sales networks in more than 240 cities in more than 50 countries and regions, providing green and environmental solutions for urban public transportation. This paper takes BYD as a research case. On the basis of an overview of BYD company, this article first proposes related theories of internationalization strategy. Next, BYD’s investment in the “Belt and Road” countries, the opportunities and threats in the process of internationalization were discussed. Then, the feasible path and countermeasures of BYD were put forward. Finally, the success and benefit, problems and future directions of BYD was summed up.

Keywords—*Belt and Road; internationalization strategy; BYD*

I. INTRODUCTION

Since the 21st century, the explosive growth of China's automobile production and sales has become a powerful driving force for the continuous development of the automotive industry in China. With the continuous development of independent automobile brands in China, Chinese companies have also begun to constantly try to enter the international market. BYD Company Limited (“BYD”) and Geely are outstanding representatives. Since 300 cars first exported out of the country in 2003, BYD has begun its march to overseas markets. Regardless of whether it is export sales or growth rate, BYD Auto is a leader in China's autonomous car brands. Therefore, analyzing and studying internationalization road of

BYD can provide references for other automobile companies in China.

Recently, the growth rate of the global auto market has gradually slowed down, and the growth rate of the operating income of China's auto companies has been declining. At the same time, due to the weak competitiveness of China's autonomous vehicles, it has been difficult at the international market. Under this economic environment, how Chinese auto companies seize the historic opportunities of the “Belt and Road” Initiative and “Going Out” strategy, actively participate in the globalization process, and develop an international road conducive to the healthy and sustainable development of China's auto industry is worthy of in-depth research.

II. BYD COMPANY PROFILE

BYD Company Limited (“BYD”), as one of the Top 500 Chinese Enterprises, specializes in four industries including IT, automobile, new energy and rail transit. Its shares are listed on both Hong Kong and Shenzhen Stock Exchange. Founded in February 1995, BYD started out with rechargeable battery business, and entered the automobile industry in 2003. In the meantime, it began to set foot on new energy industry. After 21 years’ development, by October 2016, BYD has 220,000 employees and 29 production bases across the world, with a total coverage of over 18 million sq m.

BYD has achieved comprehensive development by firmly adhering to its technology-based and innovation-oriented development concept and a development mode of vertical integration and integrated innovation. As one of the world’s most competitive suppliers for EMS and ODM in IT field, BYD principally engages in rechargeable battery business, handset and computer components and assembly services, providing one-stop services including design, manufacturing, testing and assembly. Main customers of the business include

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Apple, Samsung, MicroSoft, Dell, Toshiba, HP, Huawei, Lenovo, ZTE and other industry leaders globally.

Currently, BYD is the world's only automaker that simultaneously masters the technologies of batteries, electronic motor, electronic control, charging infrastructure, and automobile production. Since it launched the world's first electric vehicle without reliance on professional charging systems in 2008, BYD has been keeping up innovations. Followed by the 7+4 Strategy (BYD Overseas "Go-To-Market Strategy"), BYD's vehicle product mix covers seven conventional fields and four specialized fields. Seven conventional fields include private vehicles, battery electric taxis, battery electric buses, battery electric coaches, logistics vehicles, construction vehicles and waste management vehicles; while the four specialized fields refer to warehouse, ports, airports and mining operations. With high product quality and innovative operating mode, BYD's new energy vehicles received wide acceptance from customers both at home and abroad and accounted for 11 per cent of the world's market share in 2015, ranking the first in the world's overall sale of new energy vehicles. By the end of October 2016, BYD's new energy vehicles have been sold to 210 cities across 50 countries and regions in 6 continents around the world.

In the field of new energy, BYD has launched various products including solar energy stations, energy storage stations, electric forklifts and LED, providing new energy solutions integrating the generation, storage and utilization of electricity. In addition, BYD has won another world's first: the first new energy enterprise to win a special award from UN's Powering the Future We Want project.

As its name - Build Your Dreams - suggests, BYD's mission is to build the green dreams of all humanity by enhancing the environment and making the world sustainable with its self-owned technology. To fulfill the dreams, BYD spares no effort to explore solutions to sustainable development. BYD is striving to electrify all urban public transportation systems, contribute to building low-carbon cities, and bring low-carbon lifestyle to the people.

III. THEORETICAL FOUNDATION

There are different classification criteria for the theory of enterprise internationalization. Anderson [1] put forward a typical representative of the classification, dividing international business theory into two kinds of categories (economic and process). Research on the economic internationalization is based on mainstream economics. It is assumed that the managers of enterprises are rational economic people. Based on the market information they have acquired, they make the most favorable choices in the international operation of enterprises. The process theory is based on the organization theory. The managers of the company are also transformed to the actors, and make more satisfactory decisions on the premise of incomplete information.

A. Economic Theory of Internationalization

Hymer [2] was the founder of corporate foreign investment research and established the famous theory of special advantages in foreign investment. This theory takes the

incomplete competition of the market as the premise, and considers that the specific advantage is the additional cost incurred by the enterprise to solve the overseas investment and the necessary means to conduct overseas operations. The reason why the specific advantage of the enterprise arises is precisely because of the imperfection of the market.

Vernon [3] created the product life cycle theory: the product has to go through four stages. The first is the formation stage, then the growth stage that is gradually accepted by the market, and then is the mature stage of reaching steady state, and finally the recession stage that is gradually eliminated by the market. Differences in the technical level of different countries can cause periodic differences between products in different countries. This difference is the most direct manifestation of the difference in the competitive position of the same product in different markets, which drives the continuous change of international operations.

Buckly and Casson [4] studied the intermediate products in the business process and put forward the internalization theory. They believe that intermediate products will play an increasingly important role with the development of enterprises, but the imperfections of the intermediate product market will lead to higher transaction costs. Therefore, companies will continue to internalize the transaction of intermediate products in order to reduce costs. This transnationalization is the internationalization of enterprises.

Based on the above two theories, Dimming [5] put forward the eclectic theory of production by introducing location factors, and provided theoretical support for the choice of three kinds of international business activities in the internationalization of export trade, technology transfer and overseas investment. He believes that which of the three methods companies should adopt in their international operations depends on their competitiveness in terms of ownership advantages, internalization advantages, and locational advantages.

B. Process Theory of Internationalization

Since the 1970s, the focus of scholars' research has gradually shifted from the driving factors of large-scale transnational corporations' internationalized operations to the development of small and medium-sized enterprises as multinational corporations. In the aspect of process theory, Johanson and Vahlne [6] proposed two models of international management, namely the Uppsala model and the international model associated with innovation. They believe that the level of company's perception of the market determines the internationalization process of the company. Therefore, internationalized operations can be seen as the process of continuous learning of market knowledge through multiple channels, gradual adjustment of psychological differences with target markets, and continuous increase of international participation.

Bilkey and Tesar [7] proposed a new model based on Rogers' innovation diffusion theory. They viewed the internationalized business process as a series of management innovations within the company. According to the model, internationalization is the process in which companies learn

new ideas or innovate. Enterprises that are internationalized generally develop along the internationalized learning curve.

Since the end of the 20th century, the number of companies operating internationally in various countries has increased rapidly, and the internationalization process has accelerated significantly. Johanson and Mattson [8] explained this phenomenon by constructing a corporate internationalization network model, which regards enterprise internationalization as the process of establishing and developing a relational network between a company and other foreign peers.

IV. BYD INVESTMENT IN THE “BELT AND ROAD”

Since the “Belt and Road” initiative was proposed in 2013, the pace of globalization of BYD has begun to accelerate significantly. In recent years, BYD has set up factories in Asia-Pacific countries, and investment has also been fully spread. The electric bus plant of BYD in Hungary was opened on April 4, 2017 in the northern city of Komarom. At this point, the first electric vehicle factory invested and built by BYD in Europe was officially completed and put into production. The total investment of the plant is expected to be 20 million euros by 2018, and the total number of employees will reach 300 people. On May 8, 2017, BYD announced that it will invest in the construction of a pure electric bus plant in Ecuador. This is the second electric bus plant that it plans to establish in South America. It is also the fifth overseas bus plant built by BYD following the United States, Brazil, Hungary, and France.

Up to now, BYD has 220,000 employees worldwide and owns 33 domestic and foreign industrial parks. Among the countries that set up sales, R&D centers or production bases, Singapore, Malaysia, Thailand, Syria, Iraq, India, and Egypt are countries along the “Belt and Road”.

In fact, the strategic vision of BYD is not only reflected in the sales and export of its own products, but more importantly, it has created a win-win business network worldwide. Take Singapore, a country along the “Belt and Road” as an example. On February 24, 2017, the first new energy taxi fleet consisting of 100 BYD e6 pure electric vehicles was put into commercial operation. Not only does it allow citizens to enjoy the environmental protection and quiet service of electric vehicles without making reservations, but it can also save about 46,400 tons of carbon dioxide emissions every year for this “garden city” country, which is equivalent to nearly 26,000 tree plantings.

The most important way for enterprises to penetrate into overseas markets is to achieve localization, create jobs for the local people, bring economic benefits and environmental protection benefits, and truly integrate into local culture and markets, and they are recognized and accepted by the local government and people. This is also considered to be a sign of “Going Out” and “Going In” under the background of “Belt and Road” initiative.

“The Vision and Action for Promoting the Co-Construction of the Silk Road Economic Belt and the 21st Century Maritime Silk Road” jointly issued by the National Development and Reform Commission, the Ministry of

Foreign Affairs, and the Ministry of Commerce in March 2015 clearly stated that the “Belt and Road” cooperation focuses on policy communication, facility connectivity, smooth trade, financial communication and people-to-people links (referred to as “five links”). In countries along the “Belt and Road”, BYD promotes products or solutions about rail transit, electric vehicles, and energy storage. This is a large-scale infrastructure construction or a major livelihood project. It has a higher demand for the aspects of “five links” than the general products.

The “Belt and Road” initiative has played a huge role in promoting BYD’s product promotion and distribution in related countries in policy, economy, and culture, and will promote BYD’s efforts to accelerate and improve its globalization.

Many countries along the “Belt and Road” Initiative, especially in developing countries such as India, Indonesia, Mexico, and Brazil, have the characteristics of high urban population density, relative urban traffic congestion, and limited budget (higher subway costs). It is suitable for constructing straddle-type monorails with lower construction cost, shorter construction period and moderate capacity. BYD’s “cloud track” is expected to gain broad development prospects in these countries.

The development and deployment of many developing countries along the “Belt and Road” initiative not only provides BYD with market opportunities but also provides Chinese companies with the opportunity to establish their own technical standards in the international market. This may be a more valuable part. In the future, more than BYD, more Chinese companies can take the “Belt and Road” express train to help China and the countries along the “Belt and Road” weave a more mutually beneficial and cooperative network of partners.

V. OPPORTUNITIES AND THREATS OF BYD’S INTERNATIONAL OPERATION

A. Opportunities

1) National policy support for new energy vehicles

In China, with the support for new energy vehicles gradually escalating into national strategies, government agencies at all levels have also provided strong policy support for various aspects of the development of new energy vehicles. In addition to our country, many countries have also given policy support to new energy vehicles. For example, countries such as Singapore are focusing on subsidies for charging facilities and taxation systems to support the development of new energy vehicles.

2) Large domestic and foreign market demand

According to the “Analysis and Forecast of World Economic Situation” released by the Institute of World Economics and Politics of the Chinese Academy of Social Sciences in 2016, global oil prices will remain at a low level in the next 5-10 years. Low oil prices will generally lower the cost of traditional auto vehicles that use gasoline as the main fuel source. This will stimulate many potential buyers who are hesitant to resolve to purchase cars, which in turn will

contribute to the growth of sales of traditional fuel vehicles. For BYD, although its focus of development has gradually shifted to new energy vehicles, traditional fuel vehicles are still an important sector, and low oil prices will promote the sales of its traditional fuel vehicles in the global automotive market.

B. Threats

1) Increasingly competitive global automobile market

In recent years, under the background of global economic slowdown, the total automobile production and sales in the world have continued to increase, but the growth rate has gradually declined. And as countries develop public transport to curb “urban diseases” and traffic congestion, the policy of restricting the growth of private cars continues to be introduced, which will also reduce car consumption demand to some extent. In addition, most of the world’s traditional fuel vehicles are occupied by large auto companies such as Volkswagen, Toyota, Ford, Nissan, and Hyundai, which are very competitive pressures for BYD’s traditional fuel vehicles that do not have a core competitive advantage. In order to seize the new energy vehicle market, major car companies have also increased investment, in the future there will be more mature and convenient new models continue to come out. In the area of advantageous new energy vehicles, BYD’s competitive pressures are also increasing.

2) Objective existence of transnational business risks

The external environment and its changes in the international operations affect the company in many ways, creating a special risk for the transnational operation of the company. BYD Automobile is mainly exposed to political risks. Because political risks are highly unpredictable and uncontrollable, they pose the greatest threat to the international operations of companies. For BYD Auto, the Middle East, where traditional fuel vehicles are exported, has always been one of the most volatile political regions in the world. Religious conflicts, ethnic conflicts, and the changing international environment have complicated the situation in the region, and have also made the political risks faced by operations in the region more and more complicated and diversified.

VI. THE FEASIBLE PATH AND COUNTERMEASURES OF BYD’S “GOING OUT”

A. The Feasible Path

At present, there are indications that, in order to improve the leadership in the new energy field and move toward high-end brands, BYD President Wang Chuanfu is gradually giving up the establishment of more than 20 years of vertical integration system to rebuild the supply chain. Even in the area of new energy vehicles, it has been recognized by consumers in countries along the “Belt and Road”, but its new energy vehicles for export and overseas production are mainly used as taxis and bus passenger transport vehicles, and still not making a big breakthrough in the passenger car market. In a comprehensive view, the internal advantages of BYD Auto's internationalization guarantee its foothold in the international market, but at the same time internal disadvantages also

restrict its further development. The current top priority for BYD is to make up for internal weaknesses as soon as possible, and prompt the disadvantages to continue to transform into advantages.

B. Countermeasures

1) Continuously enhance brand image

The most important factors affecting brand image are product quality and corporate commitment to social responsibility. In order to save production costs in the early stages of development, China's autonomous auto industry has largely followed the non-patented technology of other car companies. It has caused the negative impact of the low level and quality of autonomous vehicles in China. Even though the car companies represented by BYD are currently catching up and achieving a lot of breakthroughs on the technical level, the deeply entrenched negative image makes it difficult for China's auto brands to obtain brand premiums. In the global industrial division of labor, it is often the enterprises that possess the high-end core technologies or intellectual property that can obtain the greatest benefits. Therefore, if BYD wants to seek greater development in the increasingly fiercely competitive international automotive market, the most important thing is to continuously increase R&D, improve its technical level, and continuously improve product quality with the most stringent management standards.

In addition, BYD should also actively participate in social welfare activities while sales reach the global new energy market. Only when the company has the core competitiveness of products and shoulder more social responsibilities at the same time can it win the trust and affirmation of more consumers in the international market, and ultimately go further on the road of internationalized operation. BYD should use its own practical actions to interpret the brand image and international vision of an ever-growing company, and to show the world a car enterprise with powerful strength and strong social responsibility.

2) Improve overseas marketing network and after-sales service

BYD is now in the initial stage of the implementation of the internationalization strategy. It still needs a lot of financial support to establish a complete overseas marketing network. This is a crucial step for companies that implement internationalized business strategies to enter overseas markets, and must be formed through long-term investment and strict management of large amounts of funds. BYD should fully understand the importance of marketing networks to enhance corporate awareness and market share. Although financial strength is not strong, it must increase investment to improve the marketing network of various markets as soon as possible, and lay a solid foundation for international business strategies.

Nowadays, the competition in the global automotive market has changed dramatically, and quality and service competition have gradually replaced simple price competition. Therefore, high-quality after-sales service is particularly important for the survival of car companies. When BYD establishes and perfects its overseas marketing network, it must fully recognize the importance of after-sales service and

provide professional and timely after-sales services for its overseas customers.

3) *Grasping international key markets*

Since the implementation of the international business strategy, BYD has achieved outstanding results in both traditional fuel vehicles and new energy vehicles. On the whole, BYD's overseas markets are almost global. Its new energy vehicle export markets cover Europe and Asia-Pacific regions, and the traditional fuel vehicle export markets include Asia, the Middle East, and the Commonwealth of Independent States.

However, overseas markets spread over 6 continents worldwide are a double-edged sword for BYD. On the one hand, the favorable aspect is to increase the brand's global popularity and lay a foundation for the brand premium capability in the later period. On the another hand, as a young enterprise established for only 20 years, BYD Auto is far behind the established auto giants in terms of capital strength, capacity management, quality control, and marketing channels. Blind pursuit of participation in the breadth of the market, while ignoring the depth of the market, it is easy to cause problems such as insufficient capacity, imperfect sales channels and after-sales services. Once it leaves a negative impact on consumers, it will be a fatal blow to the company. Therefore, BYD should focus on key markets to minimize the impact of capital shortages. This is also a common practice for many international car companies.

VII. LESSONS LEARNED FROM BYD'S "GOING OUT"

After years of continuous development, BYD Auto has the advantages of implementing international strategies. Its success mainly focuses on the new energy technologies, the entire industrial chain, the overall market strategic layout and cost control capability. And its failures include low brand value, weaker overall corporate strength, and low product quality.

A. *The Success and Benefit of BYD's International Operation*

1) *New energy technology*

BYD took full advantage of its large technical team and successively developed advanced technologies that are ahead of other automobile companies and successfully established technological advantages in the field of new energy vehicles. As the only enterprise group in the world that integrates research and production of automobiles and batteries, BYD has firmly mastered core technologies such as batteries, motors, and electronic controls. It completed the automobile's striding development in multiple fields such as power, safety performance and energy consumption. In terms of power batteries, the lithium iron phosphate battery developed by BYD successfully solved the worldwide problems in the reliability and service life of electric vehicle batteries. It is based on these powerful technological advantages that BYD has created a new era in the field of new energy vehicles.

2) *Whole industry chain and market strategic layout*

BYD is not only a new energy automobile manufacturer, but also a giant of the new energy industry. BYD is committed to R&D and production of energy storage batteries, solar

power stations, and LED lighting, covering a complete industrial chain from the production of new energy vehicles to their use. This laid a solid foundation for the continued expansion of new energy vehicles and energy storage products in the international market. For BYD, it has been actively involved in the construction and improvement of the downstream charging operation network for a long time, coupled with the support of the upstream industry chain. And it is currently one of the leading companies in the field of operational network construction in China.

3) *Cost control capability*

Batteries are one of the core components of new energy vehicles. As BYD has been engaged in the industry related to battery R&D since 1995, the company's technology and cost control advantages in power batteries have led it in a leading position in the global new energy field, and the rapid expansion of power battery capacity has also brought the company the economies of scale effect. In the production line, BYD Company fully utilized the advantage of lower cost of human resources in China and drastically reduced production costs. In terms of design, BYD fully utilized the "creative imitation" approach, which not only evaded legal risks, but also reduced R&D costs to a large extent. And BYD can complete its own work from design to parts manufacturing and assembly. This top-down vertical integration capability enables BYD to build an operating system and cost structure that supports target costs.

B. *The Problems of BYD's International Operation and Future Directions*

1) *The low brand value and need for improved market acceptance*

The automobile market is a typical monopolistic competitive market. The core of its competition lies in the organic combination of brands and products. Only car companies with high brand value can sell products to higher prices, gain high brand value, and increase their profitability. At present, BYD's conventional fuel vehicles still occupy some markets in China, but they are losing ground in overseas markets. An important reason is that when BYD entered the automobile industry at the beginning, it doesn't have a competitive advantage. Therefore, BYD chose the small car market and targeted at the low- and medium-level consumers, leaving consumers with the negative impression of low quality and prices. It is difficult to completely eliminate these bad effects in the short term, and it will leave a shadow on BYD's branding.

2) *Weak corporate capital strength*

The automotive industry is a typical capital-intensive industry. Whether it is the research and development of new products, the construction of marketing networks, the improvement of production lines, or the establishment of new factories, they all need the strong capital strength of enterprises to support them. In the implementation of its internationalization strategy, BYD has faced an unfavorable situation of funding shortages in its production and operations in other countries. Although BYD can obtain capital through equity financing, bond financing, etc. in the capital market, these methods will undoubtedly increase the company's open.

3) *Need for improved product quality and after-sales service*

Although BYD's new energy vehicles allow consumers to enjoy the convenience of technological development and more and more consumers begin to recognize BYD's technology, vehicle quality and after-sales service still remain in the state many years ago. This led to the situation that more mainstream middle class did not fully accept the BYD brand. Due to the continuous development of the economic level and the gradual maturity of the auto market, consumers in countries along the "Belt and Road" are paying more attention to after-sales service, vehicle quality and exhaust emissions. If BYD wants to gain a place in the automobile market in these countries, it must improve its service level and product quality.

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VIII. CONCLUSION

This report is based on the relevant theories of the company's international operation and takes BYD's internationalization strategy as its research object. By combining the "Belt and Road" initiative and the "Going Out" strategy, this article analyzes the process of BYD's external investment, ie, adopting export method for traditional fuel vehicle markets such as Asia, Africa and Latin America, and investing in factories for new energy vehicles in Europe and America. At the same time, this report studies the opportunities and problems faced by BYD's "going out", explores a feasible path and countermeasures, and summarize the lessons learned from BYD's "going out" strategy. If BYD can give full play to its competitive advantages and carefully arrange its overseas markets in the "Belt and Road" countries, it will be expected to become one of the world's top new energy automobile manufacturers. This will be a model for the rise of domestic self-owned brands in the world.

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