

Sustainability as a Strategy in the Chinese Automotive Industry: Managing Legitimacy Demands when Expanding to the EU

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Sustainability refers the capacity to endure both environmentally and economically. In this paper, we take a look at both aspects of sustainability as we analyze the effects that new environmental sustainability standards, and compliance with those standards have on the Chinese automotive industry. We sought to understand if these new regulations provide an opportunity to enhance the success of Chinese automotive MNCs as they seek to expand to the European Union.

In this analysis, we drew upon institution-based theory to understand the way Chinese automotive MNCs could leverage environmental compliance domestically as a competitive advantage when looking to expand internationally. Through investigating both formal and informal institutions within China and the European Union, we were able to identify overlapping environmental regulations. We then conducted interviews with credible sources to gain insight into how companies could leverage sustainability as a strategy to establish and maintain legitimacy in the European automotive industry. Through our research and qualitative analysis, we were able to develop three strategies that Chinese automotive MNCs could utilize to manage legitimacy demands when expanding into the EU.

INTRODUCTION

On June 1, 2017, President Donald Trump announced the United States' decision to withdraw from the Paris Agreement; and while expected, the impact of losing a leader in the fight against climate change was far-reaching. The United States' departure from a worldwide effort in response to the growing challenge of climate change left an enormous gap, putting extreme pressure on other nations to fill the void. China has since stepped up, and is using the United States' withdrawal as an opportunity to take on a principal role in the fight against climate change, positioning itself to become a worldwide leader both economically and environmentally. The Chinese government has since taken action to develop an eco-friendlier environment by instituting new compliance regulations, and multinational corporations (MNCs) in China have followed suit.

The purpose of this paper is to provide insight into potential strategies that Chinese automotive MNCs specifically can deploy to leverage stricter environmental compliance expectations domestically, to enhance their ability to expand into markets within the European Union. Utilizing an institution-based

view, we analyze growing trends in the automotive industry, as a result of social influence that demands environmental compliance; and will highlight ways that Chinese automotive MNCs can turn a potential short-term disadvantage into a long-term strategic advantage.

LITERATURE REVIEW

Institution-based Theory

Institution-based theory is “concerned with the institutional pressures an organization faces in its environment, from other organizations and from pressures of being an organization” (as cited by Tokaranyaset, 2013). The theory also suggests that “an organization’s structure and actions are affected by its social environment” (Rottig, 2016, pg. 3), which consists of “surrounding society, such as federal and local governments, regulatory authorities, customers, suppliers, the media, the financial community, the general public and other organizations” (3). Institution-based theory analyzes a firm’s compliance with social institutions to determine the success of their organization in a market. ‘Institutions are defined as “the rules of the game in a society (which constitute) humanly devised constraints that shape human interaction”’ (as cited by Rottig, 2016). As defined by institution-based theory, firms must comply with two types of institutions - formal and informal - to establish and maintain legitimacy in a foreign market.

Formal and Informal Institutions

Comprised of “formal laws, rules and regulations established by a government and regulatory authorities” (Rottig, 2016, pg. 3), “formal institutions are openly codified...(and) established and communicated through channels that are widely accepted as official” (as cited by Torniainen and Saastamoinen, 2007, pg. 491, content in brackets supplied). On the other hand, “informal institutions are socially shared rules, usually unwritten, that are created, communicated, and enforced outside of officially sanctioned channels” (Torniainen, and Saastamoinen, 2007, pg. 491). While formal institutions govern by direct coercion through the state mechanism, informal institutions govern by consensual control and voluntary compliance in the community. These informal institutions prove to be a useful mechanism to maintain law and order, and effective governance in rural or distant areas; highlighting the way informal institutions improve the effectiveness of formal institutions (Chan, Xu, and Gao, 2015, pg. 1)

Legitimacy

Legitimacy is referred to as “the acceptance, approval and support of an organization by its social environment and constitutes the key productive resources of firms” (Rottig, 2016, pg. 3), and is a critical concept in ensuring the success of an MNC in a foreign environment. Legitimacy highlights that “organizational survival and success does not depend on the quality and quantity of economic output, but rather on conformity to acceptable rules, norms, values and beliefs”, and “unless MNCs understand and correctly interpret the formal regulatory and informal normative and cultural rules of a formal institutional environment, they are unlikely to become successful in that market” (3).

Environmental protection is a key priority for both the European Union and its citizens. A survey commissioned by the European Parliament revealed that “67 percent of (Europeans) would like the EU to do more on environmental protection” (EU affairs, 2016). Both the government and citizens of the European Union place a large emphasis on environmental affairs, and with the understanding of formal and informal institutions, it is relevant to draw upon institution-based theory to help identify potential long-term advantages that Chinese automotive MNCs could witness in the EU markets as a result of their own domestic environmental compliance.

METHODOLOGY

The methodology utilized in this paper is a combination of research, and phone interviews with executives within the automotive industry. The aim of the research was to identify formal institutions implemented by the Chinese government and the European Commission; whereas the interviews with

executives supported our process of developing strategies that Chinese automotive MNCs could deploy to establish and maintain legitimacy in the European auto industry. We developed a set of interview questions derived from an institution-based view; and while the questions related to research findings, they were modified depending on the tone and quality of the conversation, and the nature of the interviewee's role in the automotive industry. Communication surrounding the premise and nature of the research was conducted via email, and expectations were established prior to the phone interview. This qualitative analysis provided insight into actions that Chinese automotive MNCs could take to increase chances of success as they pursue expansion into markets within the EU.

FINDINGS

Formal Institutions Governing the Automotive Industry in the European Union

Following participation in the Kyoto Protocol and in Copenhagen in 2009, the European Commission continues to be a champion for the fight against climate change, with a large emphasis on the protection of air quality. Accordingly, the formal institutions enforced by the European Commission surrounding protection of air quality continue to be one of the most stringent today. In an effort to promote eco-friendly methods of transportation, several key European Union members have announced bans for gasoline and diesel vehicles. For example, the French government has announced a ban in sales of gasoline and diesel vehicles by 2040, forcing car manufacturers to only manufacture and sell electric and hybrid vehicles (Petroff, 2017). Paris has already begun establishing car-free zones, car-free days, and penalties for drivers who enter city limits in vehicles that are more than twenty years old (Love, 2017). Policy makers in Norway have also proposed prohibiting the sale of new gasoline and diesel vehicles beginning in 2025 (Morris, 2016).

Besides proposed bans on gasoline and diesel vehicles, the International Council on Clean Transportation enforces newly-updated Euro 6 Vehicle Emission Standards on vehicles manufactured and used within countries in the European Union. Euro 6 places strict limits on emissions from both gasoline and diesel-powered light-duty vehicles, and requires technological upgrades to be made to several engine models. Moreover, as part of this policy, the European Commission has room to develop and enforce two additional requirements for newly manufactured vehicles, as well as give regulating agencies greater power to conduct both routine checks and targeted inspections (Williams and Minjares, 2016, p.g. 1-12). In compliance with Euro 6 and other emission standards that the European Commission has in place, auto manufacturers looking to manufacture or sell vehicles in countries within the European Union would have to adhere closely to these regulations, in order to establish and maintain legitimacy within these markets.

Formal Institutions Governing the Automotive Industry in China

As the Chinese government continues its efforts to tackle climate change, several formal institutions have been implemented pertaining to car manufacturers, compelling them to make changes to go green. First, the Chinese government has announced plans to ban the manufacturing and sale of gasoline and diesel vehicles, mirroring regulations that the United Kingdom and France plan to enforce (France-Press, 2017). While there is currently no definite date for the proposed ban to be enforced, the Chinese government has introduced policies and made recommendations for Chinese automotive MNCs to begin making the necessary changes.

On April 1, 2018, the Chinese Ministry of Industry and Information Technology (MIIT) launched the New Energy Vehicle (NEV) policy to promote the sale and use of new energy vehicles. Driven by NEV credits, the policy assigns each NEV a "specific number of credits depending on metrics including electric range, energy efficiency, and rated power of fuel cell systems" (International Council on Clean Transportation, 2018, pg. 1). The policy imposes annual requirements for NEV credits on Chinese car manufacturers, targeting 10 percent of vehicle sales by 2019, and 12 percent in 2020 (5). Local governments have also played a role in furthering these changes, as policy makers in Beijing recently called for "one out of every five cars sold in China to run on alternative fuel by 2025" (Bradsher, 2017). Even though the Chinese government has yet to select an exact date for the impending ban, Chinese

automotive MNCs have already taken steps in the right direction. For example, in response to these impending regulations, Geely-owned Swedish auto manufacturer Volvo has begun manufacturing vehicles fitted with electric motors, and has plans to have every Volvo produced after 2019 equipped with electric motors (Kodaka, 2017, pg. 2-3). BYD Company Chairman Wang Chuanfu also announced that all vehicles manufactured by BYD would range from electric cars to hybrids by 2030 (Stanway, 2017).

In addition to the proposed ban, there has also been an updated standard governing emission limits and manufacturer testing. Developed in 2017, China 6 is a new regulation adapted from the European Union's and the United States' best practices and will be enforced mid-2020. Broken into two major parts, the new China 6 standards increase the stringency on emissions limits for pollutants, with emission standards matching that of the European Union. The updated standards also give regulating agencies greater power to enforce compliance on car manufacturers. Manufacturers will be required to provide reports of tests at different mileages, emission-control parts, and maintenance of emission-control parts to regulatory agencies. These agencies will also be granted the authority to run emission tests from vehicle prototypes and conduct random tests on manufactured vehicles (He and Yang, 2017, pg. 1-13). These new regulations have unintentionally begun to equip Chinese automotive MNCs with the ability to comply with formal EU environmental institutions, making expansion to the auto industry in the EU easier.

Aside from targeting car manufacturers, the Chinese government has also created programs to incentivize citizens to purchase electric vehicles, and to urge citizens to make more eco-conscious transportation decisions. As seen in Table 1, comparable programs are available in major cities within countries in the EU.

**TABLE 1
INCENTIVIZING ELECTRIC VEHICLE PURCHASES**

	Local Governments				
	China	Amsterdam	Paris	Barcelona	Oslo
Subsidy per Electric Vehicle Purchase	~US\$15,000	~US\$6,150	~US\$4,915 – \$8,601	25% off purchase price (~US\$7,373)	Exempt from 25% value added tax and purchase tax
Benefits from Electric Vehicles	<ul style="list-style-type: none"> - No wait time - Get differentiated license plate at no cost 	<ul style="list-style-type: none"> - No wait time for parking permits - Exempt from registration tax and annual circulation tax - Free parking in select parking garages 	<ul style="list-style-type: none"> - Reduced parking fees and toll prices - Exempt from road and registration taxes - Access to bus lanes 	<ul style="list-style-type: none"> - Reduced road tax of up to 75 percent - Free parking in select areas 	<ul style="list-style-type: none"> - Exempt from non-recurring car-related fees - Exempt from road tax - No parking fees or toll payments - Access to bus and taxi lanes

SOURCES: Clover, C. (2017, October 23). Subsidies help China sell the most electric cars. *Financial Times*.; Amsterdam Roundtables Foundation (2017). *Electric vehicles in Europe: Gearing up for a new phase* (p. 17, Rep.). McKinsey & Company.

The similarities in actions taken by the Chinese government and by governments of countries within the EU would ultimately allow Chinese automotive MNCs to better establish and maintain legitimacy in the European automotive industry.

Informal Institutions

As the Chinese government pushes for environmentally friendlier practices, the Chinese nationals have responded favorably and have adopted a greener lifestyle. With the promotion of electric vehicles, Chinese car manufacturer BYD Company sells more electric vehicles than Tesla. Additionally, the Chinese car market has seen increases in electric and hybrid vehicle sales, with 507,000 new energy vehicles sold in 2016. In 2017, the sale of electric vehicles in China rose 65 percent, to 409,000 total vehicles sold (Rapoza, 2017). The demand for Chinese-made electric vehicles is thriving, and in the attempt to go green, locals have made the shift towards purchasing new energy vehicles. This favorable trend is mirrored by EU giant, Germany, where more than 39,000 electric vehicles were sold within the country from January to September 2017, indicating a 106 percent growth from the same period in the previous year. Known as one of the eco-friendliest people in the world, Germans have also indicated a growing preference for new energy vehicles, highlighting potential for Chinese automotive MNCs to enter into countries within the EU and establish legitimacy in the eyes of the locals. Norwegians have also adopted a similar trend, where approximately one-third of all vehicles sold in the country in 2017 were fully electric or hybrid vehicles. Electric and hybrid vehicle sales are anticipated to soar to 40 percent in 2018 (Vaughan, 2017). Recognized as an extremely environmentally-conscious country, the surge in interest in purchasing new energy vehicles in Norway reveal an avenue for environmentally compliant Chinese automotive MNCs to penetrate the European market. Interest in new energy vehicles will continue to grow; and as revealed in a survey conducted by Nissan Motor Group, 76 percent of 2,500 European millennials surveyed “see switching to an eco-friendly car as the single best action to drive a more sustainable future” (Retinaud and Edwards, 2016). The impending ban imposed by the Chinese government has also driven change in Chinese consumers’ purchasing habits. Chinese Nationals are more inclined to purchase electric vehicles, knowing that there are plans for gasoline cars to be phased out. Despite a larger initial cash outlay, Chinese Nationals find that the operating costs associated with electric cars are approximately 20 percent of the cost of purchasing gasoline (Bradsher, 2017). The regulations enforced by the Chinese government has caused a change in the way consumers make automotive purchasing decisions, reflecting the way formal institutions extend to enforce change in informal institutions.

DISCUSSION

New environmental regulations enforced by the Chinese government have unintentionally placed Chinese automotive MNCs in a better position for success during foreign expansion into the European auto industry. By adhering to environmental compliance domestically, Chinese automotive MNCs are able to better establish and maintain legitimacy in the host country of choice. As these MNCs embark on foreign expansion efforts, there are several strategies that could aid in managing legitimacy demands.

Develop Strategic Alliances with Automotive Manufacturers in the EU

By complying with stricter environmental standards domestically, Chinese automotive MNCs would ultimately become more attractive to other organizations within the same industry in the European Union. Accordingly, these Chinese automotive MNCs could then take advantage of strategic alliances with organizations in the targeted host country to penetrate the foreign market segment. Developing strategic alliances with automotive manufacturers in the EU would allow Chinese automotive MNCs to “ensure endorsement and receptiveness by government, suppliers, or customers” (Dacin, Oliver and Roy, 2007, pg. 174). By leveraging the credibility of the automotive manufacturers in the EU, Chinese automotive MNCs would then be in a significantly stronger position to establish and maintain legitimacy.

Shuichu Yang, Strategic Marketing Developer at Geely Global, shared, “The advantage of partnerships is that you can leverage the resources of the partner, the knowledge of the local market, human resources, (and) the network sector” (Yang, S., Phone interview, March 16, 2018, content in brackets supplied). By forming a strategic alliance with a firm that has already established credibility within the targeted foreign market, MNCs would be able to leverage the responsiveness of the local organization, while taking advantage of the relationships that the local firms had already developed. Local organizations would also have greater knowledge of domestic environmental regulations, which would make the process of entering a new market much simpler for Chinese MNCs. In doing so, Chinese MNCs would have greater success in obtaining legitimacy within the target market due to a greater chance of acceptance from the general public and the local media. Yang also stressed the importance of finding the right alliances – To target organizations in host countries who have an established relationship with the local government, so as to be able to become legitimized in the eyes of government agencies as well (Yang). Developing strategic alliances with automotive manufacturers that have intimate ties with the European Commission would also help Chinese MNCs establish greater credibility with the local governments in the targeted foreign market.

Embrace Technological Shifts and Innovate to Fill a Market Void

Over the last two decades, China has evolved to become a rapidly-growing “science and technology (S&T) powerhouse” (Veugelers, 2017, pg. 2). The advancement in science and innovation in China has caused it to become “increasingly prominent in industries that intensively use scientific and technological knowledge” (2), and the EU needs to “take steps to engage more with China if it is to not miss out in the future multipolar science and technology world” (1). Chinese automotive MNCs have the potential to develop ground-breaking technology; and paired with the stricter environmental standards enforced upon them by the Chinese government, these MNCs could provide the auto industry in the EU with technology that is both cutting-edge and environmentally sustainable.

This presents an opportunity for Chinese automotive MNCs to bring revolutionary auto products, that previously might not have been environmentally compliant, into the EU to cater to consumers who do not have access to these products within their own countries. Ed Matjejcic, President of automotive parts recycler and distributor, MCI Core, in St. Louis, Missouri, USA, discussed the importance of being a pioneer of innovative practices in a highly saturated market. Since its inception in 1992, MCI Core has exploited its core competency of producing high-end products in an otherwise sub-par after-market. Chinese automotive MNCs could utilize a similar method, to leverage sustainability as a strategy and become a pioneer of innovation and environmental sustainability in the automotive industry within the EU. This would allow them to cater to the market in the EU, and fulfill a growing consumer demand for environmentally conscious products. In doing so, these Chinese automotive MNCs would then be able to become legitimized in the eyes of major constituents in the EU.

Penetrate the Foreign Market Through Acquisitions

The more stringent environmental regulations enforced upon Chinese automotive MNCs by the Chinese government, would place these MNCs in a better light in the eyes of the EU. Thriving Chinese automotive MNCs would then be in the forefront to acquire struggling European car manufacturers. This would serve as a great method for Chinese automotive MNCs to penetrate the target market, and ultimately create a mutually beneficial relationship. The Chinese MNC would be able to take advantage of the credibility of the European car manufacturer’s brand name and image, while also leveraging any technical capabilities of the local organization. At the same time, the struggling European car manufacturer might be able to turn things around with the help of a strong foreign entity. This would help enhance the legitimacy of Chinese MNCs as they would be able to gather more support from government agencies and financial institutions. Additionally, the process of rebuilding a European car manufacturer would help solidify the Chinese MNCs’ position in the eyes of the general public and the local media.

Haoyu Xia, International Business Division Manager at Geely Global, discussed the benefits that Geely has reaped from its acquisition of Volvo in 2010. While Volvo now serves as a subsidiary of Geely

Global, Geely had preserved the integrity of Volvo, allowing the company to continue manufacturing and operating in a way that was familiar to both employees and consumers. At the same time, the acquisition also gave Geely rights to Volvo's technical know-how five years after the acquisition. (Xia, H., Phone interview, April 5, 2018). By allowing Swedish Volvo to continue its processes, Geely was able to appeal to the employees of Volvo, while continuing to serve European customers in the way to which they were accustomed. This allowed Geely to establish legitimacy within the European auto industry, while simultaneously securing cutting-edge technology and manufacturing practices moving forward. This would aid Geely in its efforts to adhere to environmental regulations, strengthening its legitimacy with government agencies and financial institutions. Additionally, it has also helped turn Volvo around, further cementing its position in the eyes of the members of the European auto industry.

CONCLUSION

In conclusion, stricter environmental regulations enforced by the Chinese government on Chinese automotive MNCs present an excellent opportunity for these MNCs to leverage sustainability as a strategy in their foreign expansion efforts. The updated emission standards as proposed by China 6 exceed that of Euro 6, placing Chinese automotive MNCs in a strong position for establishing and maintaining legitimacy within the EU. Additionally, the Chinese government and local governments within the EU have displayed efforts to achieve similar goals, including the prohibition of gasoline and diesel vehicles in the future, highlighting the way Chinese automotive MNCs could take advantage of the formal institutions both domestically and internationally to support expansion into the EU. Finally, both Chinese Nationals and citizens of the EU have demonstrated complementary attitudes towards environmentally-sustainable lifestyles, bringing attention to the potential availability of market space for Chinese automotive MNCs in the EU should they comply with their own domestic standards. Thus, Chinese automotive MNCs stand to benefit from new environmental regulations and standards put forth by the Chinese government, and could utilize sustainability as a strategy to manage legitimacy demands when expanding to the EU.

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APPENDIX A

Biography of Interviewee

Interviewee: Shuichu Yang

Company: Geely Global in Zhejiang, China

Position: Strategic Marketing Developer

Yang has been the strategic marketing developer for Geely Global for more than two years. Yang is primarily involved in identifying and staying abreast with market trends within the auto industry, and helps Geely develop corporate marketing strategies. Prior to his time at Geely, Yang was the Product Planning Director at competing automotive MNC, PSA Peugeot Citroen, in Shanghai, China, and focused on market analysis, advancement of business strategies and product development. Through his experience in market research, marketing and communication, Yang has extensive knowledge in the way Geely and other automotive MNCs can engage in environmentally sustainable practices to enhance economic sustainability.

Interview Transcript

Hi Mr. Yang, thank you for your time! I know we spoke previously about my research, but to reiterate: I am conducting research on the Chinese automotive industry. Since the United States withdrew from the Paris Agreement, China has stepped up and taken a leading role in the global fight against climate change. I wanted to dive into any actions Geely has taken with regard to environmental issues.

Yes! I have been doing market analysis with Geely for almost three years, so I hope I can answer your questions. Geely definitely finds environmental issues important, and we always stay up to date with any important updates and current affairs.

Since the US withdrew from the Paris Agreement, China has stepped up and taken on a leading role in the fight against climate change. As such, the government has implemented a lot of new rules regulating businesses in various areas, like emissions, pollution, etc. Has the new regulations affected business processes? Regarding policy, has Geely implemented any new policies or rules, whether it comes to car manufacturing or promotion, advertising; have there been any changes since the new rules came into place?

Yes, actually this is consistent with our projection of the future. We are preparing for this direction. In 2016, we promoted Blue Action... Geely Blue Action. We stated that we will go into new energy car businesses, and in 2020, we want to be a car company where 90% of the cars we sell have electric solutions. For sure, we will be consistent with the regulations in terms of emissions, in terms of (inaudible), average fuel consumption; we will be consistent and we will do more. We are changing with the regulations; but at the same time, you could say that it is an acceleration of our actions that we have already taken.

I know that Geely is looking to form a partnership and build a car with Volvo; and I was wondering if you had insight into how automotive firms in China are strategizing to expand into countries in the European Union?

I think it is part of globalization, no doubt that Chinese car makers will go abroad. The benefits that the Chinese car companies are creating in terms of emissions – China is getting stricter, so the technology that Chinese car companies use are more and more advanced, so we should allow the benefits to be spread across other markets. The cars that Geely will launch with Volvo in Europe is part of our strategy. For Volvo, it's an extension of their portfolio. For Geely Group, it's consistent with our globalization strategy and vision. If we go more in-depth about the Chinese car industry, I think that it is natural that the Chinese car makers would want to go abroad as international car companies. 60% of the cars in China are international brands, and only 40% of the market are covered by Chinese brands. I would say the

internationalization of the Chinese market is part of global strategy, and is quite natural for Chinese companies.

For a car manufacturer that is looking to expand within the European Union, how do you think they should approach it? In your opinion, what are the benefits or disadvantages towards expansion into the EU?

I think the way varies, depending on the knowledge and opportunity of each company at the moment of the decision. Some companies will look for partnerships; some companies may go through it alone. The advantage of partnerships is that you can leverage the resources of the partner, the knowledge of the local market, human resources, network...maybe even manufacturing. If you don't have a lot of knowledge about the market or a lot of resources, it would be a way to share the risk and to share the benefits. The disadvantage of this approach is of course is higher costs and definitely a lot of compromise. You need to share the profit! It's not totally a good thing. Actually, you might not be in a good position to promote your brand and the new technology that you're using. To stand alone, it's contrary to the first approach. Standing alone is a huge risk; it's a disadvantage. You need a lot of resources, you need to take on all the risk, you need more time to get to know the market, the government... The advantage is of course that you can master your business and you can get all the benefits. You can promote your brand and expect to build a sustainable business...like the Japanese car makers in the United States. Actually, a good benefit for them is to build the business and to become a part of the landscape...Like Ford in Europe. It depends. I think it depends on the policies of the local government. Some governments encourage building of partnerships – In China, the government encourages partnership if you want to be in the car business. You have to consider a lot of different elements.

If you had to give a recommendation for a Chinese car manufacturer that wanted to expand into a foreign market, what strategy would you have for that company?

I think if you don't have a lot of experience in globalization, to start, I think it's good to find a partner locally. This is a safer option. You might not be in the position to recover from big risks. Since the car business is so capital driven, I think you need to get local support from a partner who has knowledge, and a very good understanding of the government, then they will help you too.

APPENDIX B

Biography of Interviewee

Interviewee: Ed Matjejcic

Company: MCI Cores in St. Louis, Missouri, USA

Position: President

With more than thirty years of experience in the remanufacturing automotive industry, Matjejcic formed MCI Cores in 1992 with the intention of building high-end products for consumers who might only have access to second-rate auto parts. As one of the largest automotive recycling firms in the United States, MCI Cores recycles automotive parts (hardware and software), so as to be able to reduce the use and waste of resources, to build new parts for vehicles. With prior experience working with manufacturers and factories in Europe, Matjejcic has extensive knowledge in environmental compliance across countries, and in accordance to original equipment manufacturers' (OEMs) and regulatory agencies' standards.

Interview Transcript

This research is targeting how automotive manufacturers in China can use sustainability as a strategy to become more accepted and recognized within the European Union as the companies decide to take on foreign expansion; and since MCI Cores has a subsidiary in Europe, do you have any insight into navigating government regulations within the EU regarding trade or foreign ventures?

No, what I mainly did with the affiliation... I did get rid of that location in Trelleborg, Sweden... but what I mainly did was use that ability and presence over there to send stuff from Europe to the United States. What I really try to do now, is to try to use more product from salvage yards or recycling here within the States; to try and keep more business within the United States, instead of going overseas. Especially in the after-market business, there is so much business coming from China, and what have you, that we're trying to have companies here do more with the products that are in the salvage yards and recycling them into the communities.

How does your company view environmental concerns? What is your company's attitude towards changing trends in environmental issues?

That's exactly what we do. What we do right now is that we would rather reuse products, and recertify products to be used, rather than to keep using our natural resources to make new products. For one, we're throwing stuff away that could be reused! So, we're very much into modern technology, hybrid batteries... again, all I'm doing is reusing parts that come off of automotive vehicles.

Would you have any insight into how parts have evolved technologically over the years? Have you seen any technological shifts?

Oh yes, very much so. Right now, everything is moving towards more and more technology. Ten years ago, the typical car had four or five computers running the whole car; now there might be twenty to thirty computers running the average individual vehicle. You have lane departure modules, modules for stopping and braking...very soon, you're going to see driverless cars. These are elements that are becoming more and more complex, and the industry is definitely moving towards an electrical era. Complex electronics are probably the number one growth field that we see in the automotive industry.

With the changing environmental regulations and trends, how has MCI Cores adapted their best practices to utilize greener manufacturing?

Yes, we're very much green. Again, what we do is we recycle automobile parts. So everything we do is to try and optimize what is available for us, instead of making new parts again. What we do is 100 percent different than what anybody is doing in the marketplace. I think we are pioneering what we are doing; everything we do is sustainable. All these parts are available, yet, what we do is we get rid of these parts

for the metals, and we turn these metals into new parts; instead of reusing parts that are there. We also design the computers and equipment so that we carry out tests, to make sure that they meet certain specifications and regulations, before we send them out into the market again. So as far as greener manufacturing goes, there couldn't be anything more green than what we do. From our perspective, we want to use more product that is already available in our market spaces instead of throwing them away. We're taking product that matches all the needs within the market place... but let's put it this way, they're not in the correct zip code. For people to go out and market it, it has to be done in a way the people want to buy it. We used to be in a world where the men did all the repairs on cars, and women do nothing; but now, women know everything about cars, probably more than men do, because they do research on it. They look at it! We feel like if we put a product out there that doesn't use new parts, instead of using old parts, it's better for the environment. We're saving this from going to scrap yards, saving resources from being exported to China... yes, they could make it but maybe they're not as environmentally friendly. We're also trying to take growth and keep it in the area, especially with the product that's being harvested. So we'll go to salvage yards across the nation, we pull parts in, we certify them, we make them pass all OEM specifications and regulations, we then use the computers to look at the parts to tell us, "Which one of these parts are perfect parts?". Once we do that, then we can offer them into different markets – whoever needs the parts, whether it be Auto Zone or fleets. We have an alternative to making new parts.

Have you seen any changes in what consumers are demanding today? Since MCI Cores takes old metal, recycles them and builds them into better, newer parts, has there been a big shift in what consumers want?

Well, what consumers are demanding right now are simple. It is different from most after-markets or China; and when I say China, I'm not singling them out. It could be Korea, it could be India. In the past, there was an industry that designed parts to be sold into the after-market, but that's not what the typical person wants. What the typical person wants is, the same equipment that was on the car, they want to put back on the car. Let's say they have an accident; they don't want an after-market fender. They want a fender that was made and designed for that car, the one that was from the manufacturer. The world wants what they had on the car. If you went into a parts store and you wanted to buy a part, the guy would ask you, "Do you want a rebuilt part? Do you want an after-market part? Do you want a new part?" Well, the new part costs a lot. So you say, "You know what, I don't know what I want. But I want the original part!" So that's what we bring into the world. The original part that is built for that car, what is on the car when the car is sold; and that's what we see as the biggest market available – For original parts. The trust in the after-market has been severed, people don't like the idea of buying a part because the after-market is not restricted, it's not regulated; it does not have the OEM's blessing. After-market parts were not designed for that car, they were designed to be a replacement for that car. We see the world wanting original equipment.

If MCI Cores were to decide to expand internationally again, what would be the top business strategy you would utilize? How would you design your environmental compliance strategy?

That's a very difficult question...I think our environmental strategy would be to reuse versus to produce new products, for a variety of reasons. The number one reason is that it is what the OEM designed for that vehicle. It has been tested. The failures are expected, which failures are coming, which failures are inevitable. It just matches more of what the customer is going to need and want. By making the parts new, there's so many things that...well if you make a brand new part, it's going to pass all the tests. No one makes a replacement part the way new parts are made, with all the testing, fulfilling all the requirements that the new parts have to fulfill. New parts use lesser plastics; they're made with less corrosives on it because manufacturers don't want to get into losing the corrosive materials or the protective materials that they are putting on the vehicles...they want their protective materials and corrosive materials to withstand all the tests that the government does. The elements of the parts designed and built by OEMs match what the world needs, after-market parts do not. People are driving cars longer! Repairs are part of the life

cycle. I have a 2017 car that I just brought into the shop. I've got 51,000 miles on it, and my air conditioning wasn't working. I took it into the dealership and they told me it would be \$700 to repair. I have the same parts at MCI Cores that I supply to that market, and I could do it for about \$200. I could cut the costs by about 50 percent! We just feel that that's the way to go now. Now, as far as for a company's ability to supply parts to the market in an environmentally-friendly and feasible way, it is very difficult. We don't really see it yet, but those people would be our biggest competitors. We compete with the people who are trying to make the part, but we make sure that we recycle and refurbish original parts, and everyone is trying to catch up to us right now.

APPENDIX C

Biography of Interviewee

Interviewee: Haoyu Xia

Company: Geely Global in Zhejiang, China

Position: International Business Division Commercial Manager

Xia has been the Commercial Manager of Geely International Business Division (GIBD) since October 2017. He is primarily involved in the global expansion of Geely and its e-mobile service, Caocao, and helps Geely develop partnerships in the field of Mobility as a service (MaaS). Prior to his time at Geely, Xia served as a business manager in the Chinese division of Groupe-Renault, where he participated in strategic negotiations with Chinese partners and local governments, conducted market research in areas of Chinese market development, and managed Chinese judiciary affairs. Additionally, Xia also has experience with foreign expansion, as he pioneered the development of a Chinese subsidiary of a French company in the Chinese health industry. With his experience in both technological and strategic areas of various industry, Xia has an insurmountable amount of knowledge in managing relationships with partners and government agencies, as well as managing legitimacy demands in growing markets.

Interview Transcript

How does Geely view environmental issues?

Geely cares a lot about the environment; I am actually working for both Geely and for GIBD, which is Geely's new energy international business division. To have a whole area dedicated to new energy and eco-friendly options...I think Geely recognizes the importance of being environmentally friendly.

Have you heard of China 6? How do you think the newly implemented regulations affect manufacturing practices? Have you noticed a change in development of gasoline vehicles?

I cannot answer your question about traditional vehicles, but our chairman Li Shufu announced a few days ago that in 2020, 90 percent of Geely's sales would come from new energy vehicles, so we are really working on that. China 6, in my eyes, is more of an opportunity, instead of a challenge of a threat. It forces Geely to make changes and to stay up to date with new energy vehicles. I suggest that you do a bit of research on Emgrand EV sales for the last three years. They are the champion among all Chinese domestic brands!

Are you aware of automotive firms in China that are strategizing for EU expansion? If so, what actions are they taking to adhere to strict European Commission environmental standards?

For our EU expansion, I cannot answer on behalf of other Chinese car makers such as BYD, etc. But, Geely is kind of exceptional for its special relationship with Volvo. It has brought us quite a lot of European elements, from the design stage to the manufacturing stage, and even in the electric technology field. I don't think Chinese car manufacturers should be too concerned about being compared to Western ones; to be honest, we started up slightly later than the Europeans, the Japanese and the Americans, but we are catching up, and we are about to prevail within the next fifteen years. This is one of the reasons I left French Renault and came back to China to join Geely. Chinese car makers are growing quicker and quicker...we have the technological skills, the resources; and Geely places a lot of importance on

innovation, so we will have the capabilities for electric technology and vehicles. I cannot really say too much, but China is moving quickly and in the right direction.

If you had recommendations for a Chinese car manufacturer that wanted to expand into countries within the EU, what would it be?

First, I would recommend only civil (or non state-run) car makers to expand. Obviously, foreign car manufacturers tend to approach state-run car manufacturers and build relationships with them in order to become a participant in the Chinese auto market...foreign car companies cannot enter into the Chinese market unless they form a partnership with a state-run company. In a way, state-run car manufacturers might not even be interested in going abroad because the domestic market is rich and steady enough. On the other hand, civil car manufacturers would be eager to gain experience and build their reputation abroad. From my personal experience and as an example, Geely has a great chance of continuing expansion into Europe because of the aid of Volvo and because of years of international M&A experience.

You mentioned the relationship between Geely and Volvo. How has that partnership helped Geely find success in international markets?

Geely acquired Volvo...I think it has been almost eight years now...and has kept the integrity of Volvo since the acquisition. They have allowed Volvo to continue its manufacturing and functioning its proper way without excessive intervention. On the other hand, we signed a contract with Ford stating that Geely has the right to Volvo's technical know-how five years after the acquisition. I cannot go into the details of the technological elements; but from the technical side, Geely can now be seen as a European or international brand, and can continue to be the bestseller in China while growing overseas. Volvo now also shares the benefits that come from Geely...It really is a mutually beneficial relationship.