



China through the Telescope

A Southwestern perspective on Contemporary China

3rd Seminar, 26 February 2016

Joint Venture Experiences in Chongqing's Automotive Industry

Experts Roundtable

China is now the world's biggest automobile market, both in terms of production and of consumption. Chongqing started producing cars, trucks, motorcycles and components more than 50 years ago in 1965. Ever since, the automotive sector has formed one of the city's backbone industries, contributing to a large share of the GNP. Chongqing's automotive sector covers the whole supply chain, ranging from raw materials, components, and spare parts to advanced R&D facilities and the production of finished products. To present, numerous foreign companies have established in the municipality joint ventures with local partners and engaged in different fields related to the automotive sector.

Prof He Yansong, Dean of the College of Automotive Engineering of Chongqing University, introduced the mission of Chongqing Automotive Collaborative Innovation Centre, highlighting the importance of its foreign collaborations. To discuss the drivers for the establishment of Chongqing-based joint ventures, as well as their specificities within the local market, the GGII was pleased to welcome Mr Maurizio Giansiracusa, Deputy-CEO of Saic Iveco Hongyan, and Mr Karel Novak, Director of Purchase Department of Saic Fiat Powertrain Hongyan, who shared in-sights of the two Chinese-Italian joint venture companies. Among the participants, representatives of the Consulate General of Italy in Chongqing, Chang'An Automobile, International Technology Transfer Network, Green Growth Group. The roundtable was chaired by Mr Paolo Bazzoni, Board member and Chongqing delegate for the China-Italy Chamber of Commerce.

Professor Meng Weidong, Vice-president of Chongqing University, opened the seminar underlying the prominent contribution of Chongqing to China's national automotive industry, and the competitive advantage it possesses thanks to R&D and innovation research capabilities. Professor Meng stressed the importance of further improving communication and interconnection between the university realm and the companies working in the sector.

Chongqing Automotive Collaborative Innovation Centre

Prof He Yansong offered an overview of the Chongqing Automotive Collaborative Innovation Centre (CACIC) of Chongqing University. Composed of 11 members, the two key actors cooperating with CACIC are *Chang'an Automobile* – a Chinese automobile manufacturer headquartered in Chongqing, and a state-owned enterprise – and the *China Automotive Engineering Research Institute (CAERI)* – a state institute with R&D capabilities and test facilities. Among others, entities collaborating with the CACIC on a regular basis are: *Chongqing Tsingshan Industrial*, specialised in auto transmissions, *Chaoli Hi-Tech*, heating and air conditioning systems, *Bright Industrial*, for electric motors, *LJ Capital*, a capital investment company, *Chongqing University of Posts and Telecommunications*, for smart materials and smart telecommunications, *Chongqing University of Technology* and its *School of Automotive*, in relation with detection systems.



The mission of the centre is to expand the international competitiveness of a self-owned brand. Being the automotive industry in China the largest in the world, the related market is huge – Professor He explained – therefore the CACIC aims at possessing an own brand, in order to support Chongqing's manufacturing base and, at the same time, induce the development of Chinese brands in the automotive sector. More specifically, the CACIC focuses on making Chang'an a world

class company, on becoming a world class knowledge provider, a world class technology provider for the car industry, as well as a light weight material supplier. As a centre, its ambition is to become a well-known innovation and education institute.

In the centre, 14 different teams cover the areas of material, design, key parts, and services. Key laboratories of the CACIC develop research on transmission system, automotive electronics, light weight structure, high performance transmission system, hit managements, motor and control, magnesium , detection, and manufacture. With R&D funds provided for a third by Chongqing University and for two thirds by private companies, the CACIC boasts the first class innovation prize in 2014 for the electric control of the car.

In terms of education, three different programmes are offered to students pursuing automotive engineering curricula, with the possibility of studying at Michigan University and at the Antwerp Institute for Logistics. The centre also has a collaboration with Cincinnati University and has hosted

several international experts to give lectures. As a conclusion, Professor He suggested that cooperation with Italian Universities should be boosted.

Saic Iveco Hongyan

Mr Giansiracusa introduced Saic-Iveco Hongyan Commercial Vehicle Company (SIH), a joint venture based in Chongqing, result of the agreement between two shareholders: Saic-Iveco Commercial Vehicles Investment (SI) – a holding of Saic Motors and Iveco – and Chongqing Machinery and Electric Holding (CQME) of Chongqing Municipality. Iveco is part of the Case New Holland industrial group (CNHi), which designs, manufactures and sells commercial vehicles under the brand name of Iveco. Saic Fiat Powertrain Hongyan (SFH), the other joint venture of CNHi in Chongqing, supplies the majority of the engines SIH needs.

As Mr Giansiracusa pointed out, CNH is one the biggest Italian group in China in terms of number of employees. In Chongqing, SIH designs, manufactures and sells heavy duty trucks, accounting for about 30 thousand vehicles sold per year and a sales volume of about seven billion RMB. In Chongqing, there are two main production sites: a plant in Jiangbei, producing vehicles, and a plant located in Shuangqiao, which is specialised in components, including axels. Regarding the production of the latter, the group has recently invested for the construction of a new plant for the development of new types of products.

Presently, Iveco is committed to three main operations in China: the first one in Beijing, which involves import and distribution of commercial vehicles built in Europe. A second one being developed in Nanjing, where the first joint venture of Iveco in China was established with the name Naveco, and is focused on the manufacture of light commercial vehicles, such as the Iveco Daily. The third operation is based in Chongqing and comprises two joint ventures: SIH for heavy trucks and axels, and SFH, the main SIH supplier for engines.



In 2014, the number of vehicles sold accounted for about 25 thousand units. Concerning the products realised in China, 90 percent of the total goes on the market under the brand name Hongyan, while the remaining 10 percent is exported to different regions, including Africa, Middle East, Russia, Kazakhstan, Southeast Asia, and Latin America.

Mr. Giansiracusa provided a brief overview of the Chinese automotive market and its peculiarities: it represents the largest market for commercial vehicles in the world, being two or three times the size the overall market in Europe or in the US, depending on the year. In 2014, it accounted for about 750 thousand vehicles. On the one hand, this clearly represents a good opportunity for investors – he explained – but at the same time, it has been targeted by many, condition that makes it the most competitive market worldwide. Competing in the business in China, there are currently ten companies of the size of SIH, or even much bigger, and another 10-15 smaller companies, these last ones accounting all together for about 10 percent of the whole market. In spite of a market of 750 thousand

units, in 2014 the capacity installed was of over two million units per year: these figures are explained by a fierce competition, which makes it not easy to profit in such a market.

Hongyan brand has a long heritage and good reputation in China for heavy duty trucks, having produced the first track out of Chinese industrial operations as far as 50 years ago. Established in 1965 for military applications as Sichuan Vehicle co., the company was then converted and produced its first track for civil application in 1982. In 2007, the first joint venture for heavy trucks in China was created, with the acquisition of a quote by Chongqing Municipality. Mr Giansiracusa explained the core business of SIH consists in the medium and high end products rather than low end ones, as SIH does not compete on prices. Especially famous in China, is the heavy range on-road vehicle named Genlyon, which was launched in 2009. The latest two vehicles – MH and New Genlyon – have been introduced in last year's September. The company's production capacity is at present of 40-45 thousand vehicles per year, but it can be expanded up to 80 thousand units. Moreover, regarding the latest products, at the end of 2015, SIH completed the development of new axles, for both internal purpose and to be positioned on the market.

Saic Fiat Powertrain Hongyan



The second speaker, Mr Novak presented Saic Fiat Powertrain Hongyan, a joint venture of Fiat Powertrain Technologies (FPT) based in Chongqing. SFH and FPT are members of the same group, taking part of CNH Industrial. The shareholders structure of the company is almost identical to the one of SIH, and in concrete operations it consists of 60 percent of CNH Industrial, 30 percent of FPT, and 10 percent of the local municipality. In practise, the company is consolidated in CNH and FPT.

The company's core mission is to localise, produce and serve both local and overseas clients of CNH Industrial and its joint ventures. A second objective is that of penetrating potential customers for Fiat Powertrain. In terms of industrial layout, the installed capacity is of 32 thousand engines per year. Regarding industrial operations, all the internal activities related to the engines' production are integrated in the company's plant, which means that, apart from the simple assembling of the engines, the company takes care of the all the most dedicated and important activities, including the head and block machining, cylinder axles, etc...

In numbers, SFH has 562 employees, the net sales in 2014 was equal to 1.7 billion RMB, and the engines sold 27 thousand. The shareholders are still investing significant amounts of capital in the development of new products, in the localisation of engines, and in enlarging the plant. Moreover additional investments have been made in last two years in order to bring new products in Chongqing.

SFH started being operative in 2008. Since that time, the company has been manufacturing various types of engines, to satisfy different clients' needs. As Mr Novak noted, today SFH is able to produce and assembly engines covering various scale of power, including light, medium and heavy duty applications. The company's first operation focused on the production of Cursor 9 engine for SIH; a

second step consisted of a light duty engine provided for Naveco. A key decision for the future of the company was choosing to localise and produce a new engine in line with North American carbon emissions. At present, SIH is a technology driven company, and the only one in China engaged in the mass production of Euro 6 emission level engines.

Mr Novak remarked the company's mission, which is to produce and localise Fiat Powertrain engines. A strong advantage SFH possesses, is that the major shareholder – Fiat Powertrain – has full size and full portfolio of the engines, so that SFH profits in bringing the products to Chongqing and localise them, getting them ready for the clients.



SFH two main clients are SIH in Chongqing and Naveco in Nanjing. Being part of CNH Industrial, a worldwide leading player in the market, SFH is also serving various sites of CHN in the world, exporting engines assembled in Chongqing, these including Tata Daewoo in Korea and Iveco in Europe. In 2014 they also supplied some clients in Latin America, where other plants are expected to be built. Of the market share, the 45 percent of the engines produced in Chongqing is for export, and – Mr Novak noted – this share is expected to increase.

Finally, the company foresees an increase on the emission level target in China, and has already fully localised the technology to assembly low emission products, such as GB5 and GB6. This is considered to become a strong advantage in the next future to compete in the local market.

Q&A session

Working within the framework of a joint venture, it is extremely important that all the partners involved share a common vision. Not only they must have coherent interests, but also a set of rules and targets needs to be clearly defined from the very first stage. In the case of SFH, a joint venture of three shareholders with the same power share, this was key to success. From the beginning, every partner knew that Iveco was in charge of providing technology and know-how, while Saic Hongyan was responsible for the scouting of resources in the local environment, and for penetrating the Chinese market.

Chongqing is an automotive hub where different players are competing. Yet, many of the qualified suppliers are not based in Chongqing or in the area of Sichuan. Southwestern China has not attracted many skilled technological supplier so far, but the trend seems to be increasingly moving toward West. Mr Novak said his company main suppliers, apart from those in the Chongqing area, are currently based in Jiangsu, Shandong, and Zhejiang province. At present, SFH is able to find the 60-70 percent of engines' key components in Sichuan, but a discrete number of high level machine suppliers are moving closer to the area. The situation is therefore encouraging for new investments, and should bring benefits for the whole industry.

The interaction between universities and private companies is fundamental. The experience between Chongqing University and Iveco, started three years ago, has proved meaningful and useful for both

the students and the company. Chang'an has a well-developed research centre in Torino, Italy, where the Polytechnic University represents another potential partner.

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