

Internationalization of the Automotive Industry by Extending IOL³ model: A Case Study of Geely Automobile

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Abstract

Chinese companies have been heavily expanding their businesses globally during recent decades. In the literature, studies examine the dynamics behind their expansion strategies and build multinational Chinese companies called 'dragon multinationals.' Pointing out the shortcomings of the ownership-location-internalization (OLI) paradigm to explain the internationalization of these dragon multinationals, the linkage-leverage-learning (LLL) model was introduced by Mathews (2006). It was extended to the inward linkages-outward linkages-leverage-learning (IOL3) model by Lu et al. (2017). This paper aims to investigate forwarded linkages to understand how these linkages are utilized during further expansions of Chinese multinational companies (MNCs) in developing countries. Inward linkages that Geely gained through earlier acquisitions were studied through secondary sources. Then, Geely's latest acquisition of Proton was examined to identify forwarded linkages. Interviews were conducted with the management of Proton and its suppliers to define sources of know-how transferred to Proton and classify them as direct and indirect forwarded linkages.

Keywords: Linkage-leverage-learning model, inward linkage, outward linkage, direct forwarded linkage, Geely Automobile

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1. Introduction

Outward foreign direct investment (OFDI) has become an essential tool for Chinese companies to expand and further develop their businesses overseas (Fetscherin & Beuttenmuller, 2012). By 2015, Chinese MNCs had become the largest overseas investors among developing countries, reaching an OFDI value of USD128 billion (Boakye-Gyas & Li, 2019; UNCTAD, 2016). Many researchers have been studying how Chinese state-owned enterprises (SOEs) and MNCs expand their businesses overseas and their expected gains (Buckley et al., 2007; Parmentola, 2011; Zhang & Daly, 2011; Sharma & Kaur, 2013; Rugman et al., 2016; Lattemann et al., 2017; Lu et al., 2017; Oliveira et al., 2017; Wei & Nguyen, 2017; Becker-Ritterspach et al., 2019; Ren et al., 2019; Rottig & Oliveira, 2019). It has been claimed that theories of internationalization of Western MNCs cannot be applied to Chinese MNCs since their primary motives for the global expansion are strategic asset-seeking, absorbing foreign technology, and creating networks and alliances rather than standard market-oriented and natural resource-oriented expansion (Mathews, 2006; Alon et al., 2011; Deng, 2012). Acquiring foreign innovative technologies and brands is considered a shortcut for Chinese MNCs to become global players (Fetscherin & Beuttenmuller, 2012).

Geely has evolved into one of these Chinese MNCs. The company is China's most significant car-maker and has become a global player during the recent decade through several acquisitions. The acquisition of Volvo by Geely in 2009 was a big step toward this target. In 2017, Geely also acquired Proton, Malaysia's national carmaker, struggling since 2005 after the Malaysian government committed to reducing import tariffs under the ASEAN Free Trade Area agreement (Tong et al., 2012). Coming from a non-automotive background, Geely started manufacturing automobiles in 1977 by introducing the Haoqing, a reverse-engineered car based on the Charade model of First Auto Works (Balcet et al., 2012).

Reverse engineering and product architecture innovation were the main ways to acquire, assimilate and imitate technology for Geely back then. Over time, the company developed the full technical capability to produce cars from design to assembly, including developing its own engines. From the beginning, Geely had put high importance on R&D activities to survive in the competitive automotive market. Geely Automobile Research School, the Engine Research School, and several R&D centers have been established to master most of the key technologies crucial to a carmaker, including knowledge about engines, powertrains, interior and exterior equipment, and ancillary power systems (Chen et al., 2015). Geely also invited experts from foreign companies and institutes to share experience and provide training while sending employees abroad to receive professional training. The company was the first Chinese car-maker that independently researched automobile transmissions (Chen et al., 2015). By September 2009, Geely had acquired more than 1,200 patents, including 30 patents granted internationally (Chen et al., 2015). By

2010, annual sales of Geely reached 416,000 cars that were assembled at 8 locations in China (Balcer et al., 2012).

However, despite intensive efforts and huge investments put forward by Geely, the company was still lagging behind its foreign rivals in the market. The brand was known for affordable low-end cars with relatively poor safety and quality levels. Geely was able to sell cheaper cars, mainly due to reverse engineering, architectural product changes, and inhouse production of many components through vertical integration (Chen et al., 2015). This low-cost/low-price advantage enabled the success of Geely as a local carmaker. However, Geely realized that it would not be possible to keep a competitive edge by building cheap cars in the long term. The company changed its strategy in 2004, starting production of higher segment cars. The company began building its overseas offices in 2002, mainly in developing countries, and managed to export 19,000 cars by 2009 (Chen et al., 2015). By 2011, the company had already built a network of 500 retailer distributors and 600 service stations, and 50 distributors in 45 countries (Drauz, 2013). Geely became the largest shareholder of Manganese Bronze Holdings in 2006, which was the company's first internationalization move. In 2009, semi-complete knocked down (SKD) and completely knocked down (CKD) assembly plants were established in Ukraine, Russia, and Indonesia (Fetscherin & Beuttenmuller, 2012).

This study aims to investigate further the know-how that Chinese MNCs have acquired through their acquisitions in developed countries and how they utilize this know-how during expansion in developing countries. We have analyzed Geely Auto and its acquisitions as a case study in this pursuit. We have investigated inward linkages Geely gained mainly through earlier acquisitions of Volvo and Drive-Train Systems International (DSI). Then, we studied how these inward linkages were forwarded to Proton by Geely through its latest acquisition. To clarify the sources of these linkages, we classify them as direct and indirect forwarded linkages. Direct forwarded linkages (DFL) are defined as resources or know-how that have been provided directly from the acquirer (Geely) to the acquiree (Proton). Indirect forwarded linkages (IFL) are defined as resources or know-how that have been gained by the acquirer as inward linkages through partnerships in the past and transferred to the new acquiree (Proton) after the acquisition (see Figure 1).

2. Literature Review

According to Johanson and Wiedersheim-Paul (1975), companies initially grow in the local market before expanding overseas. Afterward, internationalization occurs as a result of multiple incremental steps. Dunning (1981) developed the OLI (or eclectic) paradigm arguing that three kinds of advantage: ownership (O), location (L), and internalization (I), would help companies obtain a competitive edge in their international production and expansion.

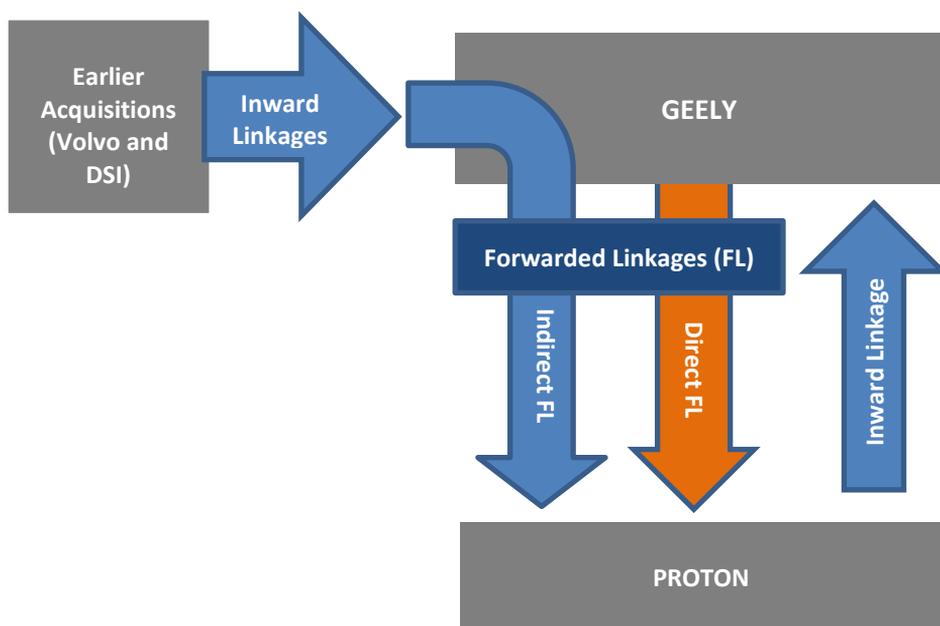


Figure 1. Inward and forwarded linkages in Geely's acquisitions

The OLI framework suggests that an MNC exists because it possesses superior resources to those owned by domestic competitors. The ownership advantage (or company-specific advantage) refers to the competitive advantages exclusive to the companies seeking FDI. The location advantage (or the country-specific advantages) describes the location-specific attractions of the alternative countries, which comprise advantageous factors of the host country. The internalization advantage is about how companies have engaged in foreign market entry mode, such as production or product licensing, depending on the motivation of the FDI. However, the OLI framework ignores the possibility of a company creating a competitive advantage by expanding abroad to access a resource that is otherwise not available (Mathews, 2006). According to the resource-based view (Wernerfelt, 1984), MNCs compete for not only by-products but also for their assets and resources. Companies have a competitive advantage if their resources are valuable and rare, non-imitable and non-transferable (Andersson and Wang, 2011). During recent decades, the content of competitive assets has also changed over time, from pure production-capability related assets (i.e., patent and technology) to more institutionally related assets (i.e., brands, corporate cultures, and human capital) becoming more knowledge-intensive (Bhatia & Khurana, 2021; Dunning & Lundan, 2008). According to Mathews (2002), latecomer companies are attracted to exclusive assets and resources, easy to copy and easy to transfer. Latecomer MNCs usually have fewer assets and resources, especially during their initial stages. Therefore, dominating

internationalization theories such as the OLI paradigm do not fully apply to Chinese MNCs. Mathews (2002) introduced 'dragon multinationals' as latecomer and newcomer MNCs, particularly from the Asia Pacific. He defined them by three characteristics: rapid internationalization, adaptive organizational innovation instead of technological innovation, and strategic innovation to turn their latecomer status to advantage (Mathews, 2006). Chinese companies have been heavily expanding their businesses globally during recent decades among these 'dragon multinationals.' Chinese OFDI has been supported heavily by the government to leap to a developed country level from a developing one (Oliveira et al., 2017). Mathews (2006) reviewed the internationalization strategies of dragon multinationals, compared their expansion model with the OLI paradigm, and suggested the LLL model as an alternative. In the LLL model, dragon multinationals are presented as not having company-specific advantages in technology or managerial resources. Therefore, seeking strategic assets to gain competitiveness becomes their primary goal of internationalization. According to the LLL model, the best and the fastest way to access these assets is to connect with and make use of technology-rich companies through various forms of collaborative partnerships (linkage); leverage such linkages to overcome resource barriers (leverage) and build an organizational process of learning through repeated application of linkage and leverage (learning). Mathews and Snow (1998) studied the 'fast food business model' of Acer and its cellular organizational structure, an interlinked group of companies closely interacting and supporting each other. They claimed that the company became a global IT player using market leverage and partnership strategies to expand in overseas markets. Lu et al. (2017) expanded the LLL model and defined the IOL3 framework to analyze the unique expansion of the Chinese MNCs. They argued that the LLL model had focused mainly on outward linkages of 'dragon multinationals,' which is to access global resources for their accelerated internationalization but had not paid the necessary attention to inward linkages that can provide these companies with the initial resources base. Inward linkages are defined as linkages that offer access to global resources in the home market of these MNCs, whereas linkages that offer access to global resources outside the home country are called outward linkages. Lu et al. (2017) studied extensions of inward linkages in the expansion efforts of Haier, a Chinese consumer electronics and home appliances company, and Huawei. Haier managed to leverage its design and manufacturing capabilities first through original equipment manufacturing (OEM) contracts and later through joint ventures (JVs) with local companies before its internationalization (Duysters et al., 2009). Huawei relied even more heavily on inward linkages for accessing global resources and leveraging such resources for expanding overseas (Lu et al., 2017). The foreign MNCs operating in China provided Huawei with initial access to foreign technologies and market knowledge (Fan, 2011). To build a competitive advantage, Chinese companies have used mergers and acquisitions (M&As) to acquire strategic assets (Gugler & Boie, 2009).

3. Methodology

We applied a mixed methodology to explore our research. The first methodology is a case study research method that applies to understanding a complex phenomenon (Yin, 2009). To understand the historical trajectory of Geely, we collected secondary data from various resources such as business magazines, industry reports, newspaper articles, and interviews between 2012 and 2020 in English from the internet resources and academic databases. The secondary data allow triangulation and ensure construct validity, reliability, and internal validity. We coded and grouped the data under themes such as inward linkages, forwarded linkages, and direct and indirect linkages. To establish internal validity, we matched the theme patterns from diverse resources to build a precise sequence of events to explore the case (Eisenhardt & Graebner, 2007).

The second methodology is a qualitative analysis of the interviews conducted with 8 participants from Proton management, several suppliers of Proton, and a competitor (see Table 1). It is considered more appropriate to conduct in-depth interviews rather than quantitative methods such as surveys on issues where such information is relatively low (Yin, 1994).

Table 1. List of interview participants

Order	Transcript Number	Company	Position
1	4	Supplier of Proton	Chief Executive Officer
2	5	Supplier of Proton	Chief Executive Officer
3	6	Supplier of Proton	Chief Executive Officer
4	7	Supplier of Proton	Chief Executive Officer
5	8	Competitor of Proton	Chief Operating Officer
6	1	Proton	Senior Level Executive
7	2	Proton	Senior Manager
8	3	Proton	Senior Manager

An interview set including the purpose of the study, consent form, interview questions, and demographic questions were prepared to contact the participants. The first author of this study has an earlier career experience in the Malaysian automotive parts industry. The author approached his network and invited them to conduct face-to-face interviews about pre and post conditions of Geely acquisition in Proton. Both authors participated in the interviews. The interviews were conducted face-to-face with open-ended questions ranging from 60 minutes to 90 minutes in 10 days. All interviews were recorded and then transcribed verbatim. The transcriptions were sent back to all participants via e-mail, and they were asked to check the authenticity of the transcripts. Interview transcripts were subjected to thematic analysis separately by two researchers. After completing the analysis, the researchers shared their analyses and agreed on common themes. Interview texts were re-read based on the agreed themes, and quotations supporting the themes were collected (Miles et al., 2018). Themes and related quotations from the

transcriptions were shared with four participants and asked whether there was a consistency between issues they mentioned in their interviews and themes that emerged from the analysis. All four participants stated that they agreed on the themes.

4. Analysis of linkages

4.1. Inward linkages in earlier acquisitions

Over the years, Geely has acquired several companies to improve its own technology level using existing resources (different but complementary resources) of those acquired companies (Guo et al., 2017).

The first international acquisition of Geely was Manganese Bronze Holdings, manufacturer of iconic London black taxis, in 2006. After the acquisition, a JV was established between the two companies in 2007. It started sending SKD car kits from Shanghai to England to save manufacturing costs, an attempt to make the company profitable by 2011 (Fetscherin & Beuttenmuller, 2012). Using Geely's low-cost manufacturing capabilities back in China, a cost-saving of nearly USD5,000 per car was achieved (Chen et al., 2015).

In 2009, Geely acquired DSI, an Australian company developing and manufacturing transmission systems globally (Chen et al., 2015). DSI was the second-largest producer of automatic transmission (AT) systems worldwide. After the acquisition, Geely broadened AT production to 4AT and 6AT with high torque and thus acquired a core technology for producing bigger cars (Balcet et al., 2012). Geely became the leading Chinese carmaker through this acquisition, which internalized the entire AT technology series. The company quickly equipped nearly 10 of its models with this core technology, improving the overall quality level (Balcet et al., 2012). This implementation has increased the sales figures of DSI as well, and the company started to make a profit in 2010.

The acquisition of Volvo by Geely in 2009 was one of the largest M&A cases in the automotive industry (Gao, 2015; Balcet et al., 2012). It was the largest acquisition ever of a global carmaker by a Chinese company (Fetscherin & Beuttenmuller, 2012). This was a significant move by Geely to transform its core competitiveness from cost to technology and quality. Volvo has been perceived as a premium brand by customers offering safe, reliable, and good-quality cars. Having access to Volvo's core technology would put Geely in a position to build a better image and improve the quality level of its own cars as well. Geely provided Volvo with the independence to implement its strategy and instead focused on long-term strategic objectives such as technical cooperation and technology transfer (Jianyong & Zhimei, 2012). Geely hoped to benefit mainly from Volvo's advanced safety, quality, and environmental technologies in this deal. Volvo-Geely Dialogue and Cooperation Committee (DCC) was formed to facilitate the best use of Volvo's cutting-edge technology in safety. In order to show that quality control is taken seriously, DCC required all the new Geely

cars to pass tests from independent testing centers with standards specified by the New Car Assessment Program (Chen et al., 2015).

The key infrastructure to facilitate cooperation between Geely Auto and Volvo is CEVT (China Euro Vehicle Technology), an independent research and development center formed. Soon, CEVT started to research and develop cross-brand, inter-organizational C-segment vehicles based on a state-of-the-art modular vehicle platform called Compact Modular Architecture (CMA) (Petti et al., 2019). By merging the technology of Volvo and the cost advantages of Geely, CEVT's vision is to strengthen the long-term competitiveness of Geely and Volvo through the development of world-class vehicle architectures and new technologies (Yakob et al., 2018). Through CEVT, Geely targets synergies in product quality, brand image, and cost advantages to provide the company with competitive advantages in technology, quality, and branding (Geely Annual Report, 2013 and 2014). Geely also developed its own BMA platform, modular architecture for B-segment compact cars, utilizing the knowledge gained through the development of the CMA platform with Volvo. Geely's BMA platform allows a high rate of commonality with shared parts and components, reaching 70% among BMA-based vehicles, reducing the time needed for vehicle development and component testing as well as lowering costs (Geely, 2018). Geely has adopted the CMA platform for its brands in China and launched Xingyue, a Coupe SUV, in 2019, which ranked the highest in J.D. Power 2020 China Initial Quality Study (IQS) in the midsize SUV segment (J.D. Power, 2020). The company plans to launch Preface, another CMA-based vehicle (upper-medium sedan), in the fourth quarter of 2020 (Geely, 2020a). Geely recently announced that there are currently nearly 20 models with a cumulative sales volume surpassing 600,000 units developed based on the CMA platform (Geely, 2020a).

In addition, with Geely's support, Volvo introduced a new modular Volvo Engine Architecture (VEA) for three- and four-cylinder engines in 2013 (Möller et al., 2014). Geely also utilizes this engine technology in its cars. The 1.5TD engine, used in the latest Geely models such as Binyue, was born based on this technology. It was jointly developed by CEVT in Sweden, and Geely Research Institute in China jointly developed this latest engine technology (Geely, 2020b). Geely's 1.5TD engine is paired with the 7-speed dual-clutch transmission (1.5TD+7DCT powertrain system), which is installed in more than 1.6 million cars sold in over 21 countries (including the Volvo XC40 model) and received the China Automotive Industry Science and Technology Award in 2020 (Geely, 2020e).

4.2. Inward linkages in Proton acquisition

In June 2017, Geely made another international acquisition for further expansion by buying a 49.9% stake in Malaysia's loss-making car-maker Proton, which also owned Lotus Cars (Bloomberg, 2017). As part of this deal, Geely also bought a 51% stake in Lotus, a manufacturer of sports cars and racing cars known for their lightweight and fine handling. Through the Proton acquisition, Geely plans to gain access not only to

the Malaysian market but to other ASEAN markets as well, which it had failed to enter before (Shirouzu, 2018). Using Proton's available network in the region and offering better products, Geely aims to sell Proton cars in the ASEAN market. Proton's sales and service network in Malaysia would also enable Geely to bring Volvo cars to Malaysia.

Moreover, having the Lotus brand in its portfolio, Geely would be able to build a presence in the prestigious sports car market and offer a complete product portfolio, especially in China (Bloomberg, 2017). Geely's presence in the Malaysian market would also allow the company to develop better right-hand drive models for overseas markets. Besides, the Proton acquisition is the first experience of Geely, where the company is actively responsible for the turnaround of a foreign brand.

4.3. Forwarded linkages in Proton acquisition

Mentioned inward linkages above are what Geely is expecting to achieve through the acquisition of Proton. This paper focuses on the linkages that Geely provided to Proton through this acquisition. During our interviews, it has been identified that the linkages from Geely to Proton can be divided into direct and indirect forwarded linkages. We define direct forwarded linkages as know-how or resources Geely directly provides to Proton, such as sport-utility vehicles (SUVs) that are newly added to Proton's vehicle line-up. Indirect forwarded linkages are know-how or resources acquired by Geely through earlier acquisitions (inward linkages) and then provided to Proton, such as technology improvement in the automatic transmission of Proton cars.

4.3.1. Direct forwarded linkages

Two years after the acquisition, in 2019, Proton already returned to profitability by a 56% increase in sales and started gaining back market share. Sales of Proton cars in 2019 have surpassed both Toyota and Honda, making Proton the second bestselling brand in Malaysia with a 17% market share (Azhar & Teng, 2020). Proton CEO Dr. Li Chunrong, who has been hired and sent to Proton by Geely to manage the turnaround, is already targeting to become the Malaysian market leader by 2022 (Lee & Das, 2020). According to Dr. Li's strategy, the focus will be on product development in the first 10-year period. In order to expand the product portfolio of Proton, X70 (C-segment SUV), which achieved great success in China as Geely Boyue, was selected as the first Geely model to be localized in Malaysia. It was also the first SUV model that Proton had ever built. Launched with a fully imported complete built-up (CBU) unit first in December 2018, Proton started assembling the CKD version of X70 in 2020. Afterward, Proton X50 (B-segment SUV), based on Geely Binyue in China, was launched in October 2020. Engineers from Geely in China and Proton in Malaysia developed both cars, working in cross-functional teams to make necessary changes in the car to adapt climate and road conditions of Malaysia (Proton, 2020).

In order to regain lost market share, Proton needed to adopt new technologies in its cars, not only engine and transmission technologies but also infotainment and connectivity (Participant 4). In this regard, X70 brought some key features that Proton customers have never experienced before. Both X70 and X50 are equipped with Geely Key User Interface (GKUI), an open smart ecosystem launched by Geely in China in 2018 for drivers to connect with their cars and stay connected to the world. Following its success with Geely Boyue buyers in China, GKUI was localized by Proton in Malaysia for X70. This was the first time GKUI was implemented outside of China and in the English language (Geely, 2020c). 4G online connectivity, intelligent voice command, Advanced Driving Assistance System (ADAS) with a semi-autonomous driving feature, and cabin air purification system made accessible to Malaysian customers.

Another initiative Dr. Li started immediately at Proton, besides improving sales, is to reduce Proton cars' bill of material (BOM) cost. Proton management requested its vendors to cut the cost of components by 30% (Azhar & Teng, 2020). From Dr. Li's point of view, this cost cut was necessary for Proton's survival and to achieve a reasonable level of cost for manufacturing cars. Proton vendors had to decide to be competitive and grow together with Proton (if Proton succeeded in turnaround) or stop supplying and exit doing business with Proton. To achieve this ambitious cost-cutting target, several departments in Proton, such as R&D and quality, were actively involved in cost reduction activities at suppliers to develop ideas and find out opportunities (Participant 4). During the development of X70, technical proposals from Malaysian vendors to reduce costs were welcome not only by Proton engineers but supported by Geely engineers in China as well. Since Proton X70 is a sister car of Geely Boyue, qualified Chinese tooling and fixture suppliers were also introduced to Malaysian vendors to reduce development costs through partnerships (Participant 6). This entry mode approach to the Malaysian market was also favorable for Chinese suppliers since the volume of Proton is not attractive for them to invest in the market yet (Participant 7).

To provide better service to its customers before and after sales, Proton asked dealers to upgrade their showrooms to at least 3S and 4S standards (Participant 2). Previously, more than 70% of Proton dealers were making only sales of cars (1S) without spare parts sales or aftersales service (Azhar & Teng, 2020). Dealers who were unable to meet Proton's demand to invest around USD1 million to upgrade their sales-only centers had left the brand (Lee and Das, 2020). The launch of Proton X70 was used as an opportunity to improve the dealers since Proton management wanted to provide a better customer experience supporting the high confidence in X70 as a product (Participant 1). Geely had the experience of building a comprehensive dealership and sales network across China to ensure customer satisfaction. Geely was also the first OEM operating 24 hours call center in China (Drauz, 2013). This move, together with Geely's Enterprise Resource Planning (ERP) collecting, analyzing, and monitoring market customer patterns, shows how much

importance Geely was putting into customer satisfaction back at home. Proton studied the difficulties of dealers and offered assistance to them during their showroom upgrade (Participant 2). Proton also changed the payment terms of car purchases by dealers and their commission structure. For the first time in Proton's history, dealers asked to pay cash, but in return, they were offered a much more attractive commission so that dealers keep loyal to the brand instead of switching to other brands (Participant 1). By July 2020, there were more than 124 3S and 4S centers (Azhar & Teng, 2020).

The mindset of the Proton sales force has changed as well. In the past, instead of reaching out to customers, Proton salespeople mainly were waiting for customers to come and buy a car (Participant 1). This mindset of not having enough concern for customer satisfaction was probably coming from earlier days of Proton when the company still belonged to the Malaysian government (Participant 8). However, nowadays, Proton's sales and marketing activities are much more aggressive and are following recent trends such as the usage of social media, online booking, etc. (Participant 2). Some of these new initiatives are coming from experiences of Geely that are already being implemented in the Chinese market, such as engaging with social media reporters and bloggers for marketing purposes (Participant 2). Geely was the first Chinese carmaker to sell cars online in 2010 on Taobao, the largest online shopping mall in China (Chen et al., 2015). It was a clear indication that the company understood and followed the latest market trends in China.

4.3.2. Indirect forwarded linkages

Before the acquisition, Proton was losing market share not only due to its limited product range but also because of outdated technologies such as engine and transmission technologies (Participant 5). Geely already has the engine technology meeting European environmental standards after years of collaboration with Volvo through CEVT and has a much better transmission technology thanks to the know-how acquired from the earlier acquisition of DSI. These technologies are already implemented in Proton's newly launched X70 and X50. Some of the engine components used in these cars are common parts with Volvo cars (Participant 5). Geely's 1.5TD engine, based on Volvo's VEA, houses Proton X50's 1.5T and 1.5 TGD engines. Proton X50 is based on Geely Binyue, developed on Geely's BMA platform combining Volvo's technology in the CMA platform and Geely's capability in cost competitiveness.

In addition, both Proton X50 and X70 are equipped with the 7DCT, a transmission technology co-developed by Geely and Volvo. 7DCT technology is recognized for its high performance with good fuel efficiency (Geely, 2020e). Earlier Proton models have also benefited from these new technologies from Geely. For years, Proton Saga, the brand's best-selling car, has been upgraded with an improved AT transmission (Participant 4).

Quality has always been one of the biggest challenges of Proton. Customers perceived the quality of cars produced by Perodua, the domestic rival of Proton, to be of higher quality than Proton cars. They were willing to pay a premium for similar models made by Perodua (Tong et al., 2012). Geely brought new quality standards to Proton, which are much higher than earlier Proton quality standards (Participant 3). A recent Proton Quality Assurance System Audit (QASA) has been introduced after benchmarking Volvo Global Customer Product Audit (GCPA) quality standards to identify gaps and weaknesses of the previous Proton quality standards (Participant 4). Following the new QASA, Proton started to assess its suppliers based on three areas: technology capability (TCA), manufacturing process (MPA), and quality system (QSA). Based on the first supplier audits in 2018, only 19% of Proton's vendors had reached acceptable levels (A, AB, and B) in TCA, 56% in MPA, and 56% in QSA (Nordin, 2018). These results showed an evident lack of R&D capability in Proton's vendors (Participant 5). Proton started implementing a step-by-step supplier improvement (PSI) program among vendors to build up necessary capabilities and improve their processes targeting to bring vendors to a level to get at least an overall score of 80% from QASA by 2020 (Nordin, 2018).

5. Conclusion

Chinese MNEs have been implementing international expansion strategies as a way to acquire strategic assets, absorb foreign technology and create networks. In this paper, we studied the linkages that Chinese MNCs have acquired through their acquisitions in developed countries and how they utilize those linkages during expansion in developing countries by analyzing Geely as a case study. Geely followed the same footsteps of 'dragon multinationals' to become a global player in the automotive industry. The Geely brand was known for affordable low-end cars with low-quality standards for long years. The company used reverse engineering and product architecture innovation to assimilate and imitate technology. As an active learner, Geely sent employees abroad for technology training and invited experts to its headquarters as well. Recently, Geely has become China's most significant car-maker and a multinational player in the automotive industry after several successful global acquisitions. In 2019, domestic sales of Geely had reached 1.4 million vehicles, and the company plans to enter new market segments with six new models in 2020 (Geely, 2020d). The company keeps investing heavily in technology. According to Geely's annual report, 6% of revenues in 2019 were invested in R&D by its holding company.

Acquisitions of DSI and Volvo provided Geely with a high motivation to absorb technology, internalize it and link this accumulated knowledge to new collaborators. We investigated inward linkages that Geely gained from these acquisitions. Then, we studied how these inward linkages were forwarded to Proton, Geely's latest acquisition, in terms of directly forwarded linkages (DFL) and indirect forward linkages (IFL). We summarized our findings from the conducted interviews and the secondary sources as presented in Table 2.

Table 2. Forwarded linkages from Geely to Proton

Forwarded Linkage	DFL	IFL	Original Source	Remarks
SUV product line	√		Geely	Proton X70 & X50 (Geely Boyue & Binyue)
Connected car technology	√		Geely	Geely Key User Interface (GKUI)
Manufacturing cost improvement	√		Geely	Manganese Bronze Holdings experience
Dealership upgrades	√		Geely	
Sales channel innovations	√		Geely	
Engine technology		√	Volvo	1.5TD engine
Transmission technology		√	DSI Volvo	Automatic transmission 7-speed DCT
CMA platform		√	Volvo	Geely BMA platform (Proton X50)
Quality assurance system (QASA)		√	Volvo	Global Customer Product Audit (GCPA) system

Notably, there are several essential technologies acquired by Geely from Volvo and DSI (such as 1.5TD engine and transmission technologies), internalized and then forwarded to Proton after Geely acquired the company. These technologies are critical to bringing Proton's cars to a competitive level in the Malaysian market and therefore are currently playing a crucial role for Proton to turn around successfully.

Following Geely's plan to be a truly global player in the industry, linkages acquired so far by Geely and future linkages gained through its global network in the future may be critical. Proton's case is a solid example of how these linkages play an essential role in Geely's global strategy and specifically for the ASEAN region. Geely is already asking Proton to investigate expanding its presence across the region, focusing on ASEAN markets and the Middle East, hoping to achieve 40% of sales from foreign markets by 2027 (Lee & Das, 2020).

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