



Jaguar Land Rover Manufacturing Hub Site Selection and Investment Strategy Report

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Abstract. Jaguar Land Rover is a luxury automotive multinational known throughout the world. This report applies Porter's diamond framework and analyses both the institutional Environment and ownership advantage aspects to deduce which of the four countries - Indonesia, Malaysia, Thailand, and Vietnam - Jaguar Land Rover should establish a manufacturing hub. Also, whether the company should acquire an existing plant in that country or establish a greenfield investment.

Keywords: Jaguar Land Rover · Porter's diamond · institutional Environment · ownership advantage · acquire · greenfield

1 Introduction

In this section, the author will use Porter's diamond model to provide a brief analysis of the implementability which Jaguar Land Rover's investments in four different countries. Porter's diamond model examines why a particular industry in a nation is competitive globally. The specific elements of the model's analysis are described below.

2 Factor Conditions

The factor conditions will be analyzed in two main aspects: basic factors and advanced factors. The basic factors analysis includes Geographical position, natural resources, and non-skilled workers. Jaguar Land Rover's sales are directed worldwide, so individual manufacturing plants must export their vehicles abroad through ports. Regarding ports, Indonesia and Malaysia are island states in Southeast Asia with well-developed port shipping operations [1]. The top five ports in South East Asia have the Port of Klang and Tanjung Pelepas in Malaysia, the Port of Tanjung Priok in Indonesia, and the Port of Laem Chabang in Thailand. There is no port of Vienna on the list [15].

Moreover, automobile manufacturing cannot be separated from steel, which is supported by mineral resources. More importantly, the development of the new energy automobile industry cannot be separated from natural resources such as rare earths, magnesium, and graphite. Malaysia is known as the "tin country" of the globe and is rich in mineral resources, particularly tin deposits.

For the non-skilled workers, Thailand has plenty and low-cost automotive manufacturing workforce. Around 700,000 people are employed in Thailand's automotive sector, which includes the automotive supply sector [7]. However, Malaysia and Indonesia need help in terms of labor. According to Bernama, Malaysia's auto sector is suffering from a severe labor shortage that might negatively impact the country's auto manufacturing ecosystem if it is not resolved soon [11]. Indonesia's workforce is plentiful, young, and relatively cheap, but the recent sharp increase in the minimum wage has increased production costs [3].

The advanced factors analysis includes infrastructure and skilled labor. The cars produced by the factory have to be transported everywhere, which means the country's infrastructure is essential, especially the road facilities. According to the IMD World Competitiveness center's infrastructure rankings for 2022, Malaysia, Thailand, and Indonesia are ranked 37th, 44th, and 52nd, respectively, with Vietnam lagging in the rankings [6].

Additionally, the author will introduce regional clusters. A cluster is a geographical concentration of industries related to knowledge, skills, inputs, demand, and other linkages [4]. The Thai government has attached great importance to automotive clusters and has brought many developer groups, such as WHA, to establish many successful automotive clusters. Positive externalities are regionally constrained, and Jaguar Land Rover will benefit from knowledge spillover if the company chooses to locate its production hub in a cluster. The reason is that the cluster offers many employment and development opportunities, which magnetizes relevant talent in the auto field. Moreover, many people with a wide range of professional skills in the cluster area have experience working in similar auto companies. This advantage enables companies to find the right people at a lower cost and reduce labor costs.

Overall, Vietnam is lagging behind in infrastructure. Indonesian labor is no longer cheap. Malaysia has the advantage of infrastructure and natural resources but has a labor shortage in the automotive industry. Thailand has plenty of unskilled workers. Also, the car cluster has brought in skilled people for Jaguar Land Rover to hire. Therefore, Thailand is the best country for Factor conditions.

3 Demand Conditions

Demand Conditions refer to the size of home demand. Porter has also described in his location competitiveness study that sophisticated and demanding customers pressure firms to be competitive. From January 2022 to June 2022, Indonesia sold 475,321 cars, while Thailand is the runner-up with 457,622 units. With head-to-head between Indonesia and Thailand, Indonesia won almost every month except for May. Malaysia came third place, followed by Vietnam [19].

Thailand's sophisticated customers and cutting-edge market trends will give Jaguar Land Rover better opportunities for innovation. Consumer research in Thailand shows that 37% of potential buyers are willing to consider an electric vehicle as their next car [14]. In addition, according to an article published by the Board of Investment of Thailand, an all-electric Mercedes EQS will roll off the production line in Bangkok by the end of 2022, marking another milestone in Thailand's remarkable journey from a

traditional car manufacturing hub to a regional leader in electric vehicle (EV) production [20]. Jaguar Land Rover's strategic plans for electric vehicles are analyzed further in the Firm strategy, structure and rivalry section.

In summary, Indonesia has the most significant home country automotive market; Thailand has a cutting-edge consumer and market. These are the two countries with the best demand conditions.

4 Firm Strategy, Structure, and Rivalry

Firm strategy, structure and rivalry influence how businesses are organized and the nature of the domestic rivalry. The previous paragraph mentioned that Jaguar Land Rover had launched an electric vehicle strategy, requiring the country to have relevant developments in the electric vehicle industry. Jaguar Land Rover's new strategic vision is to transition to an electric-first business, achieving net zero carbon emissions from its supply chain, products, services, and operations by 2039 [8]. The author will further analyze in the Related and supporting industry section what EV industry resources are available in these four countries to support Jaguar Land Rover's new strategic transformation.

A highly competitive environment tends to stimulate companies to outperform other companies because intense domestic competition generates pressure to innovate, reduce costs and invest in upgrading advanced functions. The Southeast Asian country that produces the most motor vehicles in 2021 is Thailand, with over 1.6 million motor vehicles. Indonesia closely follows this with 1.1 million units. In contrast, Malaysia and Vietnam be significantly behind in 2021 with 481,650 and 163,270 motor vehicles, respectively [10]. Also, many of the world's leading car manufacturers, such as Ford, Honda, Toyota, and BMW, have built plants in Thailand [16]. Therefore, Thailand has the most competitive automotive manufacturing industry compared to the other three countries.

5 Related and Supporting Industry

Related and supporting industry refers to the presence of internationally competitive suppliers and related and supporting industries in the country. Domestic suppliers are an integral part of the innovation and upgrading process in the automotive industry. Indonesia, Malaysia, Thailand, and Vietnam are the four top automotive producers in Southeast Asia. So, all of these four countries have a large number of well-established upstream suppliers of motor vehicles. It is therefore shifting the analysis from motor vehicles to electric vehicles, also in line with Jaguar Land Rover's new strategy for electric vehicles.

Joko "Jokowi" Widodo, the president of Indonesia, recently urged his nation to establish an "industrial ecosystem for lithium batteries." In anticipation of a rise in demand for nickel in the battery supply chain, the government outlawed nickel exports in 2020. Indonesia also opened its first electric vehicle battery production facility in Central Java, which includes both upstream and downstream elements of battery production. Thai national oil and gas conglomerate PTT Group opened a battery plant in 2021. The

US-based Evlomo Inc. has also announced plans to set up a battery plant in Thailand to increase battery production capacity [12].

The coexistence of such ‘similar’ industries may lead to technological interdependence, thus forming clusters [18]. The automotive industry cluster can strengthen information exchange and communication between upstream and downstream enterprises in the industry chain. Fully use technological innovation and the spillover effect of intangible resources, and realize the scale effect and agglomeration effect to reduce production and transaction costs. As analyzed in the Factor conditions section, Thailand has many excellent developers who have set up Clusters such as the WHA Group. The WHA Group has recently started developing automotive clusters in its flagship WHA Eastern Coastal Industrial Estates 1 and 2 and the Eastern Coastal Industrial Estate (Rayong). These form the most critical automotive clusters in Thailand, with investors including Ford, Mazda, Great Wall Motors, Suzuki, SAIC’s MG English brand, and 277 car manufacturers worldwide [21].

The analysis shows that Indonesia has the best upstream suppliers and Thailand has the most suitable Cluster for Jaguar Land Rover. Therefore, these two countries have the best related and supporting industry.

6 Institution Environment

The institutional Environment is an external macro-governance factor that can affect all economic agents within its scope of existence. It will also affect the interests of Jaguar Land Rover. In this section, the author will analyze political and Economic systems.

From the aspect of the political system, Jaguar Land Rover is a multinational company that grew up in the UK and had a stable institutional environment. However, when the company goes to an emerging market, it is likely to find that the business practices that work well in the home market and other advanced economies translate poorly when it expands to an emerging market because the systems in emerging markets are changing rapidly. For example, Thailand is a constitutional monarchy with a long history of political unrest, alternating between unsteady civilian administrations and military dictatorships. Thailand has had approximately 20 coups since the country’s constitutional monarchy was established in 1932 [9]. In a long line of military coups, the most recent one was in 2014 [17].

From the economic aspect, Thailand seeks to strengthen its economic systems to increase its competitive advantage. For example, the government stated in February 2022 that excise taxes on imported electric cars would be reduced from 8% to 2%. In Malaysia, owners of electric vehicles will be free from road tax [5]. In contrast, Indonesia applies domestic automotive standards, which are different from international standards and can potentially lead to setting Technical Barriers to Trade (TBT) and non-tariff barriers (NTB). These will impact bilateral trade and add unnecessary burdens to manufacturers and producers [3].

Combining manufacturing and economic analysis, Thailand is politically unstable but has significant financial incentives. However, Thailand has had coups but not chaotic ones. The military is dominant, stability can be restored quickly after a coup. Therefore,

the economic and social impact is insignificant. In this trade-off, the advantages of Thailand outweigh the disadvantages, so Thailand is the best country in terms of Institutional Environment.

7 Greenfield Investment Versus Acquisition

The company's investment strategy is vital as the choice of country. The author will analyze the ownership advantages of Jaguar Land Rover with the pros and cons of acquisition versus greenfield investment to deduce which investment strategy Jaguar Land Rover should choose.

An ownership-specific advantage is a unique characteristic of a company that provides a competitive advantage over other companies [13]. Jaguar Land Rover's ownership advantages include brand recognition, design, and mechanical engineering capabilities. In order to fully maintain the ownership-specific advantages, the company operates through internalization to prevent knowledge dissipation. The company has the advantage of internalizing its design approach so that it does not outsource design to other related companies and likewise does not outsource the significant production of its vehicles. Suppose Jaguar Land Rover chooses to acquire an existing plant. The original staff and management of the plant will be partially integrated with the new company in the early stages. Therefore, there is a risk of technology leaks leading to a loss of advantage. If the company chooses to invest in Greenfield, it will have complete control and can develop the plant in the way they want. Moreover, Jaguar Land Rover's mechanical engineering capabilities relate to how the factory floor is designed, which means that acquiring another company will involve many changes to the original workshops, which will be costly.

Another advantage of greenfield investments is that Jaguar Land Rover can access the relevant benefits by contacting local authorities since some countries may offer subsidies, tax breaks, or other benefits to facilitate greenfield investments. At the same time, the disadvantages of greenfield investment are that it can take a long time to set up all the infrastructure. Also, Jaguar Land Rover is based in the UK, which presents a cross-cultural barrier to South East Asia.

The advantages of acquiring an existing company are that Because the necessary licenses, building infrastructure, and other company assets are already in place, the acquisition expenses are typically low. In addition, the critical resource existing companies have is their understanding of the local culture. However, the fatal problem is that Jaguar Land Rover's workflow and the way the company has been organized must be the same as in the UK, which will come at a considerable cost.

There are trade-offs in all of the company's decisions, but a critical advantage of a Greenfield investment is that it maintains Jaguar Land Rover's ownership advantage. The OLI model states that ownership advantage is necessary for a company to make international investments [2]. Therefore, Greenfield Investment is a better fit for Jaguar Land Rover.

8 Evaluation

In addition, the author will make three separate points:

1. Because of practical constraints, all information and resources analyzed in this report are secondary, which will reduce the report's accuracy.
2. Companies often meet with investment promotion agencies when choosing a country to invest in. Companies can also lobby countries to lower their trade standards when dealing with government authorities. This may override the analysis of the Institutional Environment in this report.
3. Companies need to be careful not only to focus on low costs and high returns but to be aware of UN SDG goals. Companies have a moral responsibility for the Environment. Also, they have to ensure that the company's suppliers are well integrated into the overall ethical organization because the negative press about the company will affect the marketing image and leave a bad impression on investors.

9 Conclusion

The author will combine the results of the Porter Diamond and Institution Environment analyses to deduce an optimal country. Firstly, Thailand has the best Factor conditions. Secondly, Indonesia and Thailand have the best Demand conditions. Thirdly, Thailand has the most significant automotive manufacturing industry. Fourthly, Indonesia has the best upstream suppliers, and Thailand has the most suitable Cluster for Jaguar Land Rover. Finally, Thailand is the best country in terms of Institutional Environment. Overall, Thailand has the most advantages, and Jaguar Land Rover could consider greenfield investment in Thailand.

References

1. Andaya, B. (2019). *Introduction to Southeast Asia*. [online] Asia Society. Available at: <https://asiasociety.org/education/introduction-southeast-asia>.
2. Batschauer da Cruz, C.B., Eliete Floriani, D. and Amal, M. (2020). The OLI Paradigm as a comprehensive model of FDI determinants: a sub-national approach. *International Journal of Emerging Markets*, ahead-of-print (ahead-of-print). doi: <https://doi.org/10.1108/ijoem-07-2019-0517>.
3. business-indonesia.org. (2021). *Automotive | Business Indonesia*. [online] Available at: <https://business-indonesia.org/automotive>.
4. Delgado, M., Porter, M.E. and Stern, S. (2014). *Defining Clusters of Related Industries*. Cambridge, Mass. National Bureau of Economic Research.
5. Fallin, D. and Lee, K. (2022). *Southeast Asia Hopes to Become the Next EV Hub*. [online] www.csis.org. Available at: <https://www.csis.org/blogs/new-perspectives-asia/southeast-asia-hopes-become-next-ev-hub>.
6. IMD (2022). *World Competitiveness Rankings - IMD*. [online] IMD business school. Available at: <https://www.imd.org/centers/world-competitiveness-center/rankings/world-competitiveness/>.

7. International Labor Organization (2022). Thailand: ILO publishes new report analysing Japanese vehicle parts manufacturers' implementation of CSR policies in supply chains in Thailand. [online] Business & Human Rights Resource Centre. Available at: <https://www.business-humanrights.org/en/latest-news/thailand-ilo-publishes-new-report-analysing-japanese-vehicle-parts-manufacturers-implementation-of-csr-policies-in-supply-chains-in-thailand-2/>.
8. Jaguar Land Rover (2022). JAGUAR LAND ROVER PARTNERS WITH WOLFSPEED FOR SILICON CARBIDE SEMICONDUCTOR TECHNOLOGY SUPPLY FOR NEXT GENERATION ELECTRIC VEHICLES | JLR Corporate Website. [online] www.jaguarlandrover.com. Available at: <https://www.jaguarlandrover.com/news/2022/10/jaguar-land-rover-partners-wolfspeed-silicon-carbide-semiconductor-technology-supply>.
9. Johansson, A. and Engvall, A. (2022). Military Factions and Coups: Pathways to Power in Thailand.
10. Kameke, L. (2022). ASEAN: motor vehicle production by country 2018 | Statista. [online] Statista. Available at: <https://www.statista.com/statistics/583783/asean-motor-vehicle-production-by-country/>.
11. Lye, G. (2022). Malaysian automotive manufacturing industry lacking manpower, immediate solution needed - vendors - paultan.org. [online] Paul Tan's Automotive News. Available at: <https://paultan.org/2022/04/04/malaysian-automotive-manufacturing-industry-lacking-manpower/>.
12. MARK LINES (2021). Thailand: Acceleration as EV hub, increasing battery production - Mark Lines Automotive Industry Portal. [online] www.marklines.com. Available at: https://www.marklines.com/en/report/rep2224_202111.
13. Mukherjee, D. (2016). Case analysis: Tata Motors' acquisition of Jaguar Land Rover. College of Business Administration, Kent State University.
14. Nissan Motor Corporation (2018). One in three Southeast Asian consumers open to buying electric car. [online] Official Global Newsroom. Available at: <https://global.nissannews.com/en/releases/one-in-three-southeast-asian-consumers-open-to-buying-electric-car?source=nng&lang=en-US&rss> [Accessed 2 Jan. 2023].
15. Port Technology Team (2020). The 5 biggest ports in Southeast Asia. [online] Port Technology International. Available at: <https://www.porttechnology.org/news/the-5-biggest-ports-in-southeast-asia/>.
16. Research and Markets (2022a). Southeast Asia Automobile Industry Report 2022: Rising Demand of Southeast Asian Automobile Market will Prompt Global Automobile Vehicle and Parts Manufacturers to Increase Exports to the Region. [online] GlobeNewswire News Room. Available at: <https://www.globenewswire.com/en/news-release/2022/08/11/2496509/28124/en/Southeast-Asia-Automobile-Industry-Report-2022-Rising-Demand-of-Southeast-Asian-Automobile-Market-will-Prompt-Global-Automobile-Vehicle-and-Parts-Manufacturers-to-Increase-Exports-.html>.
17. Russell, M. (2022). Thailand: from coup to crisis.
18. Saylor Academy (2012). Clustering: Porter's National Diamond. [online] Github.io. Available at: https://saylordotorg.github.io/text_fundamentals-of-global-strategy/s04-03-clustering-porter-s-national-d.html.
19. Sundjojo, D. (2022). Indonesia is unstoppable to be the biggest automotive market in ASEAN. [online] www.linkedin.com. Available at: <https://www.linkedin.com/pulse/indonesia-unstoppable-biggest-automotive-market-asean-sundjojo> [Accessed 3 Jan. 2023].
20. Thailand Board of Investment (BOI) (2022). Thailand is turning into regional frontrunner in electric vehicle (EV), from luxury cars to tuk-tuks. [online] www.prnewswire.com. Available at: <https://www.prnewswire.com/in/news-releases/thailand-is-turning-into-regional-frontrunner-in-electric-vehicle-ev-from-luxury-cars-to-tuk-tuks-844441477.html>.

21. WHA Industrial Development Public Company Limited (2021). *Automotive Cluster in Thailand*. [online] www.wha-industrialestate.com. Available at: <https://www.wha-industrialestate.com/en/media-activities/company-blog/4149/automotive-cluster-in-thailand>.

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