PREFACE

Martin Schröder, Fusanori Iwasaki, and Hideo Kobayashi

This section will outline the motivation behind the research and the framework for the subsequent chapters of this volume. First, the topic should be addressed. It should be highlighted that the Association of Southeast Asian Nations (ASEAN) may not be immediately associated with electric vehicles (EVs). A significant amount of the academic literature on EVs covers developed countries and China, which heavily supports EVs, specifically battery electric vehicles, to change the automotive industry and secure a leading position for domestic firms. In the case of China, it is evident that the government supports EVs to leapfrog the national automotive industry beyond internal combustion engine vehicle technology (Wang and Kimble, 2011; Wan et al., 2015), which, despite the success of some Chinese firms, is still by and large dominated by firms Europe, Japan, the Republic of Korea, and the United States. Smitka (2016) labels China's automotive industry as a 'success despite policy' because passenger car production, especially, remains dependent on the technology provided by foreign joint venture partners or suppliers. From this perspective, leapfrogging towards electromobility may be China's only realistic option to become independent from and compete against incumbent carmakers.

Addressing the question of how EVs affect developing countries aside from China is rather uncommon. Masiero et al. (2017) investigated the question of how Brazil may participate in the EV supply chain. Their findings suggest that even large, developing countries such as Brazil have limited potential to participate in the EV supply chain. Transnational original equipment manufacturers and suppliers may utilise raw materials and rely on emerging countries for developing software that controls EV components, which are both rather low value-added processes inside the EV supply chain.

Whilst little research has been conducted on emerging countries except China, the existing literature nevertheless suggests that these countries need to actively engage in new technology through policies if they do not wish to be relegated to the minor roles of providing unprocessed raw materials and qualified, yet inexpensive, white-collar workers.

By focussing on ASEAN Member States' automotive policy with special attention to EV support, this volume seeks to fill the void in the scholarly research on EV production and sales in emerging countries. The diversity of the ASEAN Member States in terms of population, geographic size, wealth, and industrial development offers the opportunity to highlight different challenges for countries with differing characteristics in the transition towards electromobility.

Simultaneously, this diversity also means that there is only a limited number of ASEAN Member States that currently engage or even just seek to engage in EV production. Therefore, some of the contributions on individual countries do not discuss EV-related issues but highlight the country-specific challenges in developing the automotive industry.

First, Schröder and Iwasaki provide an overview of the automotive policies of ASEAN Member States with special emphasis on EV-related policies and, wherever applicable, the carmaker stances, and contrast the cases with the rather well-studied case of China. They conclude that the main difference between China and ASEAN is that the former is clearly seeking to build a domestic EV industry and

global industry leadership and (a subgroup of) the latter is merely seeking to maintain the individual countries' positions within foreign-dominated value chains. Their analysis suggests that ASEAN countries may be divided into four distinct groups that have vastly different stances towards electromobility. The first group consists of the three main automobile-producing countries in the region, i.e. Thailand, Indonesia, and Malaysia. These three countries have started to actively promote EV production, seemingly mostly motivated by either defending or extending their role as production bases. The second group consists of minor production locations, i.e. the Philippines and Viet Nam. Whilst both countries support EV production in principle, they have so far not formulated consistent policies towards this aim. The third group consists of Brunei Darussalam and Singapore. These two small nations are rather cautious towards electromobility, yet the underlying reasons differ significantly. The final group consists of Cambodia, the Lao PDR, and Myanmar. These three nations basically have no observable stance towards EVs. Since they are all least developed countries and are still in the pre-motorisation stage, this stance cannot be surprising as EVs are still significantly more expensive than conventional internal combustion engine vehicles. Hence, the diversity of approaches towards electromobility in ASEAN is rooted in the different stages of economic and automobile industry development as well as policy orientations.

Schröder then analyses Thailand's EV policy against the background of the so-called 'product champion approach', which was employed to promote specific kinds of vehicles for production in Thailand. His analysis first questions whether the label of product champion is appropriate for the second iteration of this policy, i.e. when small passenger cars were promoted. He shows that while policy coincided with increased production and the export of passenger cars, export growth actually occurred in passenger cars that fall outside the target vehicle type. Thus, he concludes that the label is not fitting as small passenger cars are not a dominant export like one-tonne pickup trucks, the original product champion. Second, comparative analysis of product champion policy measures finds that EV promotion suffers from an explicit production target. While former policies balanced support against high production targets, EV policy basically only supports investors without demanding targets. Thus, it is concluded that the product champion approach – like other targeting policies – is useful for catching up but is inappropriate for promoting innovative technology. Therefore, it is concluded that the product champion approach may be feasible as a policy tool to promote standard technology but lacks viability to support more innovative technology, meaning that policymakers must understand the limitations of existing policy tools instead of continuing to follow recipes that worked in the past.

Anazawa discusses Malaysia's automotive industry from a largely historical perspective. He traces the historical development from the birth of the industry during the import substitution era, through the state-led development push with the creation of the national carmakers Proton and Perodua, and the lack of development, especially concerning the former and its associated supplier base. Finally, he discusses the evolution of industrial policy, observing that policy largely failed to achieve established goals. Interestingly, failure does not seem to be accompanied by changing policy or the setting of more moderate goals, but policy aims seem to become even more demanding.

Kobayashi, Ishioka, and Schröder utilise a unique data source to investigate supplier activity in Viet Nam from the perspective of production processes conducted by supplier firms. They find that local supplier firms are concentrated in press, machining, and metal moulding operations but are more weakly represented in production processes that require deepened know-how. Conversely, foreign firms are strongly engaged in assembly operations, suggesting that foreign firms tend to utilise Viet Nam as a source of inexpensive labour. They follow up by outlining a potential development scenario

for the local supplier industry, which hinges on the idea of upgrading the most capable motorcycle suppliers into automobile parts makers.

References

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