Journal of Southeast Asian Economies Vol. 41, No. 3 (2024), pp. 195–96 *ISSN 2339-5095 print / ISSN 2339-5206 electronic*

DOI: 10.1355/ae41-3a

Introduction
The Electric Vehicle Industry in Southeast Asia

Archanun Kohpaiboon and Cassey Lee

The automotive industry is of great interest to governments in developing countries. Until the new millennium, internal combustion engine vehicles (ICEVs) dominated the industry. An ICEV comprises numerous auto parts and components involving a wide range of industries, including plastics, rubbers, glasses, metallics, engines and electronics. Thus, a well-developed automotive industry is deemed to have several desirable development outcomes. These outcomes include extensive linkages to other upstream industries, providing an industrial foundation for technological upgrading, employment generation, and foreign exchange earnings. As a result, many governments have actively intervened to develop the industry. The policy approaches taken have varied from the creation of indigenous car makers as national champions to regional car manufacturing hubs.

In the past, large-scale automotive manufacturing was concentrated in a few developed countries such as the United Kingdom, United States, Germany, France, Japan and South Korea. Since the dawn of the new millennium, a few developing countries such as Brazil, China, India, Indonesia, Thailand and Mexico have made significant strides in vehicle production. The automotive industry in these countries has brought some economic benefits in terms of foreign exchange earnings and job creation. However, their longer-term impacts have raised some concerns about the sustainability of the industry in terms of the limited participation of indigenous firms and their disadvantages amid rapid technological changes. The automotive industry has undergone another tectonic shift since the mid-2000s with the advent of large-scale production of a new generation of electric vehicles (EVs).

For developing countries where technological capability remains relatively weak, the rise of EVs has been perceived as an opportunity for technological leapfrogging that can secure a first-mover advantage through targeted industrial policies. The EV industry is also seen as providing these countries with a second chance at developing an automotive industry by learning from some of their previous mistakes in nurturing the ICEV industry. In addition, the development of the EV industry is supportive of the long-term environmental goals of these countries.

There are many challenges in developing an EV industry. Critical infrastructures, such as charging stations and more environmentally friendly electricity generation, need to be in place for the adoption of

Article received: November 2024; revised: November 2024; accepted: November 2024

Archanun Kohpaiboon is Professor in the Faculty of Economics, Thammasat University, 99 Mu 18 Khlongnueng Sub District, Khlong Luang District, Pathum Thani 12120, Thailand; email: archanun@econ.tu.ac.th

Cassey Lee is Senior Fellow and Coordinator of the Regional Economic Studies Programme at the ISEAS – Yusof Ishak Institute, 30 Heng Mui Keng Terrace, Singapore 119614; email: cassey_lee@iseas.edu.sg

EVs as environmentally friendly mainstream vehicles. This will take time and require substantial fiscal resources. The latter is particularly challenging in developing countries considering their limited fiscal space in the aftermath of the COVID-19 pandemic.

Even if governments can find the resources to support the EV industry, they must do this carefully. Direct subsidies to promote EV uptake can have adverse impacts on existing ICEV-related industries. Despite the manufacturing differences that exist between EVs and ICEVs, both are close substitute products to consumers. A range of considerations should be taken into account when formulating sensible policy responses to the rise of EVs.

This special issue is devoted to the analysis of the EV industry in Southeast Asia. Five papers were commissioned to provide insights into the current state of the EV industry and policy developments in the region. The first paper by Archanun Kohpaiboon and Wannaphong Durongkaveroj provides a broad analysis of the trade and investment trends in the EV industry globally. This paper helps to contextualize the development of the EV industry in Southeast Asia, as discussed by four country papers covering Thailand, Malaysia, Indonesia and Vietnam.

The country paper on Thailand authored by Archanun Kohpaiboon examines the policy challenges faced by the government in developing its EV industry in the presence of a mature and thriving manufacturing hub for ICEVs. Malaysia's experience in developing its EV industry is discussed by Tham Siew Yean. The paper carefully documents and discusses the implementation of trade and industrial policies that have supported the development of different segments of the EV industry in the country. The development of the EV industry in Indonesia is analysed in the paper by Siwage Dharma Negara. The paper discusses the evolution of the country's industrial policies in the automotive industry and the government's current policy priorities for the industry including those that draw upon its comparative advantage such as its rich nickel reserves. Finally, the development of the EV industry in Vietnam is examined by Pham Van Dai. The paper discusses how policies in the transport sector to support zero emission targets have supported the EV industry and the role of the private sector in the industry.

Overall, the five papers in this special issue paint a broad picture of the EV industry in the Southeast Asia region as being an industry that is still relatively nascent. There are similarities and differences in the development of the industry across the four countries. These differences arise from path-dependence (e.g., Thailand's mature ICEV manufacturing hub and Malaysia's mature electrical and electronics industry), natural resource endowments (Indonesia's rich nickel reserves), and level of development (Vietnam's motorcycle EVs). It is hoped that this special issue will contribute to the academic and policy literature on industrial policies in general and more specifically, the EV industry.