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Internationalization and Competitive Dynamics of Electric Vehicles in Southeast Asia

Linxi Han
Claro M. Recto Academy of Advanced Studies, Lyceum of the Philippines University Manila, Manila, Philippines
Email: xxxi20250317@163.com

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Abstract

Against the backdrop of global automotive electrification, Southeast Asia (ASEAN) has emerged as a core growth market for electric vehicles (EVs). This paper conducts a management-oriented systematic review to explore the internationalization strategies and competitive dynamics of EV firms in ASEAN. Grounded in the OLI paradigm, institutional theory and the Uppsala model, it synthesizes key internationalization approaches including regional integration, localization and strategic partnerships, and analyzes competitive interactions between global and local players driven by cost advantages, technological disruption, policy instruments and value chain restructuring. The review identifies critical research gaps including insufficient cross-national comparative research, limited long-term performance analysis, and inadequate attention to digitalization and institutional entrepreneurship. It further proposes a future research agenda to advance international business theories and managerial practices.

Keywords

Electric Vehicles; Internationalization; Competitive Dynamics; ASEAN

1. Introduction

The global automotive industry is undergoing a profound transition toward electrification, driven by concerns over climate change, energy security, and technological innovation. As developed markets approach saturation, emerging economies, particularly those in Southeast Asia (ASEAN), have become increasingly pivotal to the growth trajectory of the electric vehicle (EV) industry. ASEAN, consisting of ten member states with diverse economic development levels, institutional contexts, and consumer preferences, offers substantial market potential for EVs, supported by rising disposable incomes, urbanization, and regional efforts to promote sustainable mobility (Lin et al., 2025; Huang et al., 2023). Against this backdrop, multinational enterprises (MNEs) from major EV-producing countries (e.g., China, Japan, South Korea, and Western nations) have accelerated

their internationalization efforts in ASEAN, while local firms are also striving to carve out a niche in this evolving market. This has given rise to complex competitive dynamics, shaped by institutional differences, resource asymmetries, and strategic interactions between global and local players.

From a management perspective, the internationalization of EV firms in ASEAN and the resulting competitive dynamics present a rich context for exploring core theories in international business (IB) and strategic management. Internationalization strategies, market entry modes, and competitive behavior in emerging markets are inherently shaped by institutional environments, which in ASEAN are characterized by heterogeneity, institutional voids, and ongoing transitions (Koch, 2022; Luiz, 2026). For EV MNEs, navigating these institutional complexities while competing with local firms, who often possess better knowledge of local markets and networks, requires nuanced strategic choices that have yet to be fully synthesized in the academic literature.

Despite the growing scholarly attention to EV development in emerging markets, existing research on ASEAN's EV sector remains fragmented. Most studies focus on specific countries (e.g., Thailand, Indonesia) or narrow aspects of the industry (e.g., policy incentives, infrastructure constraints), with limited integration of management theories to explain internationalization patterns and competitive dynamics (Setiyo et al., 2025; Lahadalia et al., 2024). Moreover, few systematic reviews have been conducted to synthesize the existing literature from a management-oriented perspective, leaving a gap in our understanding of how EV firms both global and local formulate strategies to compete and grow in ASEAN.

To address this gap, this study conducts a systematic review of the literature on EV internationalization and competitive dynamics in ASEAN, with a focus on management-related themes.

2. Theoretical Foundation

The internationalization of EV firms in ASEAN can be contextualized within core international business theories, including the eclectic paradigm (Dunning, 2015), institutional theory (DiMaggio & Powell, 1983), and the Uppsala model (Johanson & Vahlne, 2009). The eclectic paradigm, or OLI framework, posits that firms internationalize based on three advantages: ownership (O), location (L), and internalization (I). For EV MNEs, ownership advantages include technological capabilities (e.g., battery technology, electric drivetrains), brand reputation, and economies of scale. Location advantages in ASEAN include growing market demand, favorable policy incentives, and access to regional supply chains (Dunning & Lundan, 2008; Shadikhodjaev, 2023). Internalization advantages arise from the need to protect proprietary technologies and coordinate global operations, particularly in a market with varying institutional standards.

Institutional theory complements the OLI framework by emphasizing the role of

institutional environments in shaping firm behavior. ASEAN's institutional context is marked by heterogeneity across member states, including differences in regulatory frameworks, legal systems, and cultural norms, that influence EV firms' strategic choices (Peng, 2003). Institutional voids, or gaps in the institutional infrastructure (e.g., weak intellectual property protection, underdeveloped logistics), also pose challenges for EV MNEs, requiring them to develop adaptive strategies (Khanna & Palepu, 2010). For example, firms may partner with local entities to navigate regulatory complexities or invest in capacity building to address infrastructure deficits.

The Uppsala model, which describes internationalization as an incremental process of learning and commitment, is also relevant to EV firms entering ASEAN. Many EV MNEs begin with low-commitment entry modes (e.g., exports, licensing) before transitioning to higher-commitment modes (e.g., joint ventures, wholly owned subsidiaries) as they gain knowledge of local markets (Johanson & Vahlne, 2009). This incremental approach is particularly common in ASEAN, where market uncertainty and institutional complexity require firms to accumulate local knowledge over time (Chen et al., 2021).

3. Literature Synthesis

3.1. Internationalization Strategies of EV MNEs in ASEAN

Existing literature identifies several key internationalization strategies adopted by EV MNEs in ASEAN, shaped by institutional contexts, market demand, and firm-specific resources. A common strategy is regional integration, whereby MNEs leverage ASEAN's regional cooperation mechanisms (e.g., RCEP) to establish cross-border supply chains and standardize operations across member states (Prakash, 2023; Sundram, 2025). For example, Chinese EV MNEs such as BYD and NIO have established regional headquarters in Singapore to coordinate their operations across ASEAN, leveraging the country's strategic location and business-friendly environment.

Another key strategy is localization, which involves adapting product offerings, marketing strategies, and operations to local contexts. ASEAN member states have diverse consumer preferences. For example, Indonesian consumers show strong demand for larger family EVs, Malaysian buyers favour high-value, low-risk offerings, while Thai consumers prioritise good charging coverage (Adzhani et al., 2025; Hamzah et al., 2021; Techa-Erawan et al., 2024).

EV MNEs have responded by launching localized models: for instance, Toyota has introduced affordable hybrid EVs in Indonesia, while Tesla has focused on premium models in Singapore and Malaysia.

Strategic partnerships are also a common internationalization strategy, particularly for MNEs seeking to navigate institutional voids and gain local market access. Partnerships with local firms, governments, and research

institutions help MNEs address challenges such as regulatory compliance, infrastructure deficits, and cultural barriers (Abdullah et al., 2024). For example, Volkswagen has partnered with local Indonesian firms to build EV manufacturing facilities, leveraging local knowledge and government incentives for domestic production.

3.2. Competitive Dynamics Between Global and Local EV Firms

The literature on competition between global established multinational enterprises and local emerging-market multinational enterprises in the electric vehicle industry emphasizes the centrality of cost and scale advantages. Studies show that Chinese EV and battery firms exploit dense local supplier clusters, aggressive capacity expansion, and rapid manufacturing learning to achieve low unit costs while maintaining acceptable or improving quality (Zhao and Luethje, 2025). These clustered production ecosystems, which include parts suppliers, battery makers, software firms, and logistics providers, reduce transaction costs and accelerate iterative learning. Combined with state-supported finance and large-scale investments, these factors create durable cost advantages that enable Chinese firms to undercut traditional OEMs and prompt buyers and assemblers worldwide to recalibrate sourcing patterns and supply chains (Sun and Zhou, 2025).

A parallel body of research contrasts incumbents' enduring strengths in brand reputation, perceived safety, and engineering depth with the disruptive capabilities of Chinese EV makers. Legacy automakers from Germany, the United States, and Japan continue to command trust on durability and safety, but they face mounting pressure as Chinese firms close gaps in battery chemistry, vehicle-software integration, connectivity, and advanced driver-assistance systems while offering lower prices (Borucka et al., 2024). Scholars highlight that technological change is multi-dimensional: modular software and battery innovations lower barriers to entry for nontraditional manufacturers, and mass-market segments that prioritize price and features are particularly susceptible to disruption (Wong, 2024). At the same time, premium segments remain contested terrain where brand, perceived quality, and service networks still matter.

Policy is treated in the literature as a strategic instrument that reshapes competitive dynamics rather than a neutral backdrop. Home-country subsidies, tax incentives, and favorable procurement can accelerate EMNE growth, while host-country measures such as tariffs, local-content requirements, and "de-risking" initiatives alter entry costs and location decisions (Borucka et al., 2024). Recent policy responses in regions like Europe illustrate the turn toward active measures aimed at preserving domestic capabilities or steering foreign investment into local production. Scholars note that such policies have

multi-dimensional effects: they influence firm localization strategies, encourage near-shoring or dual-sourcing, and change bargaining power among firms and states. Policy uncertainty and shifting subsidy regimes further complicate strategic planning and tend to favor firms with diversified market access and operational flexibility.

Chinese EMNEs are increasingly enveloping the global value chains of developed-market multinational enterprises by becoming indispensable battery and electric-vehicle suppliers and partners. Through deeper integration into component supply, production networks, and aftermarket services, these firms gain bargaining power while still cooperating with DMNEs on technology transfers and market access (Zhao and Luethje, 2025). That dual role, both collaborator and essential supplier, reshapes negotiations, contracting terms, and the balance of influence across the automotive value chain.

At the regional level, competition plays out in specific national markets such as Thailand, where Chinese, Japanese, and Korean automakers vie on price, manufacturing scale, and the formation of "green coalitions" centered on charging infrastructure, renewable energy, and incentive schemes (Li et al., 2025; Deng and Xiao, 2025). Local industrial policies, ranging from tariffs and subsidies to infrastructure investment and regulatory standards, strongly shape which firms and coalitions succeed, turning regional arenas into decisive battlegrounds for market share and technological influence.

4. Research Gaps

Despite the growing body of literature on electric vehicle (EV) internationalization and competitive dynamics in Southeast Asia (ASEAN), several critical research gaps remain under-explored. First, existing studies remain fragmented and country-specific, lacking comparative cross-national analyses that systematically link institutional heterogeneity, policy frameworks, and cultural differences across ASEAN member states to firms' strategic choices and performance outcomes. Second, while localization, strategic partnerships, and regional integration are recognized as key entry strategies, there is insufficient theoretical and empirical integration to explain how these strategies interact with institutional voids, digital transformation, and regional cooperation mechanisms such as RCEP to shape long-term competitive advantage. Third, most research focuses on either multinational enterprises or local firms in isolation, with limited attention to the co-evolution of global–local competition and collaboration, especially how Chinese EV multinationals reshape global value chains and bargaining power alongside traditional OEMs. Fourth, the literature lacks longitudinal studies on the sustained performance impacts of entry modes, partnership governance, and policy shifts, as well as micro-level analyses of consumer adoption behaviors and cross-cultural marketing adaptation.

5. Future Research Agenda

Based on the identified research gaps, this review proposes a future research agenda to advance management theory and practice in the context of EV internationalization and competitive dynamics in ASEAN.

First, future research should undertake rigorous cross-national comparative analyses across ASEAN member states to address the current fragmentation of single-country studies. Such comparative work should systematically explore how institutional heterogeneity, divergent policy frameworks, cultural differences, and uneven economic development across the region jointly shape EV firms' internationalization strategies, localization decisions, and competitive performance. By building a unified comparative framework that connects institutional contexts to strategic choices and market outcomes, scholars can move beyond narrow case studies and generate more generalizable insights for the entire ASEAN EV market.

Second, there is a critical need to develop an integrated theoretical and empirical analysis of the interactive relationships among regional integration, firm strategies, institutional voids, and digital transformation. Existing research often examines localization, strategic partnerships, and regional cooperation mechanisms such as RCEP in isolation; future studies should combine the OLI paradigm, institutional theory, and the Uppsala model with digitalization perspectives to explain how these factors collectively drive long-term competitive advantage for both global and local EV players in ASEAN. This integrated approach will clarify how firms adapt to institutional complexities while leveraging regional cooperation and digital tools to sustain growth.

Third, future research should investigate the co-evolution of global–local competition and collaboration, especially the restructuring of global automotive value chains driven by Chinese EV multinationals. Most current literature focuses on global MNEs or local firms separately, so further work is needed to analyze the dynamic interactions between traditional OEMs, Chinese emerging MNEs, and local ASEAN firms, including their dual roles as collaborators and competitors. This line of inquiry will reveal how emerging-market MNEs reshape bargaining power, value chain governance, and strategic interdependencies within ASEAN's rapidly evolving EV industry.

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