

Local Upgrading in the Global Tire Value Chain: A Thai Producer Beyond Oligopoly

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1. Purpose

This research investigates how a Thai local tire manufacturer has upgraded within the global value chain (GVC) of automotive tires, a safety-critical component whose importance does not diminish with electrification or new forms of mobility. Building on a quantitative analysis of tire trade statistics for 2012–2022, the study first shows how the global tire GVC has shifted from a traditional oligopoly dominated by advanced economies toward a more multipolar structure with rapid upgrading in several Global South countries, notably Thailand.

Within this broader structural change, the central question is whether Thailand's remarkable rise in tire trade rankings primarily reflects international horizontal expansion of incumbent global manufacturers, or whether local firms themselves are emerging as significant global exporters in their own right. The field survey and case study of a Thai local tire producer address this question by examining the firm's export orientation, technological upgrading, product portfolio, and positioning vis-à-vis global brands and low-cost Chinese suppliers.

The study thus aims to clarify the developmental trajectory and global role of local firms in a safety-critical component industry under conditions of electrification, sustainability demands, and intensified competition along the GVC.

2. Methodology

The research adopts a mixed-methods design combining long-term trade data analysis with focused firm-level fieldwork in Thailand. First, UN Comtrade statistics for new pneumatic passenger car tires (HS401110) and bus/truck tires (HS401120) are used for the period 2012–2022 to compute global rankings, market shares, and a Global Competitiveness Index ($GCI = (\text{export} - \text{import}) / (\text{export} + \text{import})$) for approximately 150 participating countries. These indicators allow us to differentiate “export-type,” “balanced,” and “import-type” countries and to track how Thailand's position has evolved across both passenger and commercial tire segments.

Second, drawing on this macro foundation, a field survey was conducted in February 2026 at a major Thai local tire producer, Otani, including factory visits and semi-structured interviews with management. The case study reconstructs the firm's historical evolution from a small tractor-tire producer to a diversified manufacturer of truck/bus and passenger car radial tires, and documents its current production capacity, product range, export destinations, and quality-control practices. Particular attention is paid to how the firm has accessed technology (e.g., via equipment from Germany and China and engineering know-how from multinational partners), upgraded from bias to radial tires, and positioned itself in a four-segment domestic market structure that ranges from top global brands to low-priced Chinese imports.

The empirical focus on a single, export-oriented local firm is complemented by a review of secondary information on other Thai local manufacturers to situate the case within the broader local-firm population. This design enables us to link macro-level GVC reconfiguration to micro-level firm strategies and capabilities.

3. Preliminary results

The trade data analysis confirms a significant restructuring of the global tire GVC over 2012–2022, with Thailand moving into the top tier of exporting countries in both passenger and commercial tire segments. In passenger car tires, Thailand rose from 7th to 3rd place in global trade value, while in bus and truck tires it advanced from 7th to 2nd, with Thailand classified as a so-called “export-type” country alongside China and a small group of other major producers. Overall, this shift indicates that the earlier oligopolistic configuration—dominated by the home countries of the largest global tire firms—has been eroded by new export hubs in the Global South.

The Otani case study reveals that at least some Thai local firms have become highly export-oriented players rather than purely domestic followers. By 2026, Otani, a family-owned company founded in 1986, employs around 2,400 workers, generates annual sales of about 8 billion baht, and holds roughly 10% of the domestic market, while an estimated 70–80% of its sales volume is exported. Its export destinations span the United States (around 30% of exports), ASEAN neighbors such as Vietnam and Malaysia, China, Europe, the Middle East, and Latin America, with a focus on the aftermarket segment and selected OEM contracts.

Technologically, the firm has successfully upgraded from bias tractor tires to radial truck/bus and passenger car tires, now covering sizes from 13 to 24 inches and speed ratings up to VR and ZR, thus serving EVs, small passenger cars, SUVs, and sports cars. Production facilities incorporate imported high-precision tread-forming machines, laser-based centering, and X-ray inspection, achieving low defect rates (around 1%) and takt times of roughly one tire every ten seconds, allowing the firm to position itself above low-price Chinese competitors while remaining below the top global brands in price.

4. Significance and implications

Practically, the findings demonstrate that even in a safety-critical component industry historically dominated by a few global majors, local firms in the Global South can emerge as export-oriented producers with substantial global reach. The Otani case suggests that upgrading trajectories can be built on incremental learning from OEM relationships, strategic adoption of affordable foreign equipment, and careful market segmentation—particularly by targeting the global aftermarket while selectively engaging in OEM supply. For policymakers, Thailand’s experience highlights how industrial policy, infrastructure, and an automotive cluster strategy (“Detroit of the East”) can provide a platform on which capable local firms leverage GVC opportunities rather than remaining marginal subcontractors.

Theoretically, the study refines existing development and GVC theories that often treat the rise of Global South export hubs as an outcome of multinational firms’ production relocation alone. By combining long-term trade-based GVC analysis with firm-level field evidence, the research shows that Thailand’s ascent in tire exports is not only a reflection of global companies’ network optimization but also of local capital’s capacity to move from an “import-excess” stage toward an “export-type” stage within an industry characterized by high safety, quality, and technological requirements. This has broader implications for debates on industrial upgrading, suggesting that local firms in strategic component sectors can occupy intermediate price–quality segments and thereby contribute to de-oligopolization and multi-polarization in global industries under the pressures of electrification and sustainability.

"tire industry", "global value chains", "local firm upgrading", "Thailand", "export-oriented production", "electrification", "sustainability", "automotive components", "industrial policy", "Global South"