

Goeconomic Cooperation Driven by FDI: Case Studies of the ASEAN Free Trade Area and the China-Europe Railway Express

Weida Tian

NOIC Academy, Markham, Ontario, L3S 2H4, Canada

ABSTRACT

This paper aims to explore how two typical models of regional economic cooperation—institutional cooperation represented by the ASEAN Free Trade Area (AFTA) and functional cooperation represented by the China-Europe Railway Express (CRE)—influence FDI flows through different mechanisms, and to analyze their goeconomic effects and challenges. The research employs literature review, case study analysis, and comparative analysis to systematically review relevant theories and empirical studies, providing a deep examination of the development processes, operational mechanisms, and FDI characteristics of the two cooperation models. The main findings are: First, institutional cooperation reduces institutional transaction costs through rule integration, primarily attracting market-seeking and resource-seeking FDI, and promotes regional production network integration; functional cooperation reduces physical transportation costs through infrastructure connectivity, primarily attracting efficiency-seeking and strategic asset-seeking FDI, and improves cross-border supply chain efficiency. Second, the two models are complementary within China's "Dual Circulation" strategy: the ASEAN Free Trade Area facilitates industrial transfer and enhances internal circulation within the region, while the China-Europe Railway Express expands Eurasian markets and strengthens external circulation. Third, a two-way promotion mechanism exists between FDI and goeconomic cooperation, but both face common challenges such as geopolitical risks, operational sustainability, and inclusive development. The study argues that institutional and functional cooperation jointly optimize China's positioning in global value chains, balancing its dual role as an FDI recipient and an outward investor. To address challenges, a "institution + function" dual-driven cooperation model should be constructed, FDI layout should be optimized, and risk prevention and control systems should be strengthened to achieve high-quality and sustainable regional economic cooperation.

KEYWORDS

FDI; Goeconomics; ASEAN Free Trade Area (AFTA); China-Europe Railway Express (CRE)

1 Introduction

The current FDI landscape is undergoing profound restructuring. Geopolitical tensions, supply chain reorganization, and the green transition are driving new trends in FDI, such as "friend-shoring" and industrial concentration. Global FDI increased nominally but actually decreased by 11%, with significant regional divergence. Research indicates that the ASEAN Free Trade Area represents an "institutional cooperation" model, promoting FDI flows and regional production network integration through rule integration; while the China-Europe Railway Express represents a "functional cooperation" model, reducing logistics costs and attracting efficiency-seeking FDI through infrastructure connectivity; the two models exhibit complementary effects in promoting regional economic integration. However, challenges such as geopolitical risks, supply chain restructuring pressures, and fragmentation of cooperation mechanisms remain significant. This paper proposes policy recommendations, including building a "institution + function" dual-driven cooperation model and establishing regional risk early warning mechanisms, which can provide references for future regional economic cooperation.

2 Literature review

Clausing, using modern econometric methods, conducted an empirical study on the US-Canada Free Trade Agreement, verifying that under regional trade agreements, tariff reductions lead to both trade creation and trade diversion effects ^[1]. The technology spillover effects of FDI are among the most frequently discussed and controversial aspects. The two-way FDI technology spillover effects can bring greater impetus to China, with technology spillovers from two-way FDI with developed countries promoting China's economic growth, primarily achieved through technological progress. According to New Economic Geography, factors such as trade costs, technology spillovers, agglomeration economies of scale, and historical FDI significantly influence the location choice of foreign direct investment. Established manufacturing sectors with foreign capital agglomeration will continue to maintain high investment intensity ^[2].

Goeconomics, as an interdisciplinary field between international relations and economics, focuses on how states use economic means to achieve geopolitical goals. Recently, goeconomic research by Wigell has focused on issues such as infrastructure connectivity, standard-setting, and the projection of economic influence ^[3]. In FDI research, the goeconomic perspective emphasizes the shaping role of national strategies and policy interventions on investment flows. For example, Meunier and Nicolaïdis found that the US CHIPS and Science Act and the EU's Global Gateway initiative both reflect the intention to achieve geopolitical goals through industrial policy and investment guidance ^[4].

These policies not only affect the scale of FDI but also alter its geographical distribution and sectoral composition.

As an important part of facilities connectivity under the Belt and Road Initiative (BRI), and a land transport route for China-Europe trade, the operation of the China-Europe Railway Express may have a positive correlation with FDI inflows in central and western China ^[2]. Cities connected by the China-Europe Railway Express have experienced economic development. Liu Xiaolan et al., through empirical analysis of multiple cities, found that the impact of the China-Europe Railway Express on the development of new economic growth drivers is heterogeneous across different regions, cities, and resources. The underlying reason may be positively correlated with local infrastructure development ^[5]. Wu Xinsheng and Liang Qi found that the China-Europe Railway Express, as a crucial carrier of the BRI, enhances supply chain integration between China and ASEAN, promotes regional FDI flows, and fosters regional value chain integration by shortening transportation times and reducing logistics costs, significantly improving trade efficiency between China and countries along the route ^[6].

3 Case analysis

3.1 ASEAN Free Trade Area: A paradigm of institutional cooperation

3.1.1 Development history and mechanism characteristics

The ASEAN Free Trade Area (AFTA) was established in 1992 as a vital bridge and link for regional economic integration within ASEAN. After implementing a series of preferential policies, primarily the Common Effective Preferential Tariff (CEPT) scheme, member states gradually reduced internal tariff levels. By 2010, six member states had achieved 0-5% tariff levels covering nearly 100% of goods ^[7]. Simultaneously, the scope of cooperation expanded from initial goods trade to include trade in services liberalization, investment facilitation, and balanced regional development. The China-ASEAN Free Trade Area (CAFTA) negotiations officially commenced in 2002, resulting in a certain degree of regional economic integration effect, providing a relatively comprehensive and sound institutional guarantee for establishing more stable and robust economic relations between China and other Southeast Asian countries.

3.1.2 FDI flow characteristics and geoeconomic effects

Through the ASEAN Comprehensive Investment Agreement (ACIA) and the Framework Agreement on the ASEAN Investment Area (AIA), ASEAN has created a relatively stable and transparent institutional environment for foreign enterprises. Furthermore, initiatives like the "Initiative for ASEAN Integration" aim to narrow the development gap among member states, thereby enhancing market predictability and maintaining strong investment attractiveness within the region. ASEAN is a hotspot for attracting foreign investment. Last year, ASEAN received USD 225 billion in FDI, accounting for about one-fifth of the total inflows to developing economies globally, all considered high-quality investment. The most active sectors include electronics, automobiles, and the digital economy. For instance, Samsung has invested over USD 18 billion in Vietnam, and Intel's investment in Malaysia exceeds USD 7 billion. FDI flows within AFTA exhibit strong geographical and sectoral concentration, forming a regional division of labor: "Singapore—R&D and financial hub; Malaysia and Thailand—high-tech manufacturing bases; Vietnam and Indonesia—labor-intensive manufacturing bases." This has effectively enhanced ASEAN's position in global industrial chains. For China, examples include Huawei's 5G construction in Thailand and SAIC's production base in Indonesia.

3.2 China-Europe Railway Express: An innovation in functional cooperation

3.2.1 Development history and operational mechanism

The China-Europe Railway Express (CRE) was launched in March 2011. It operates through three main corridors: the Western Corridor (primary route) via Alashankou/Horgos (Xinjiang) → Kazakhstan → Russia → Europe; the Central Corridor via Erenhot (Inner Mongolia) → Mongolia → Russia → Europe; and the Eastern Corridor via Manzhouli → Russia → Europe. It covers over 70 cities in China and more than 200 cities in 25 European countries. The cargo transported is diverse: westbound (China → Europe) includes electronics, auto parts, and general merchandise; eastbound (Europe → China) includes automobiles, machinery equipment, luxury goods, maternal and infant products, and timber.

The CRE provides a land transport solution that is faster than sea transport and cheaper than air transport. It is a transcontinental connectivity infrastructure project that facilitates China-Europe trade. FDI creates cargo sources for the trains, and the stable operation of the trains, in turn, attracts more FDI to locate in cities along the route, forming a virtuous cycle that deepens geoeconomic cooperation.

3.2.2 FDI flow characteristics and geoeconomic effects

By reducing logistics costs and time, the CRE influences the location choice of FDI. The CRE reduces transportation time from inland China to Europe by two-thirds compared to sea transport, at a cost only one-fifth of air freight. This logistical advantage attracts efficiency-seeking FDI to inland Chinese cities, such as BMW's engine factory in Shenyang and Philips' medical equipment production base in Chengdu. The operation of the CRE provides these enterprises with stable export

channels and supply chain security, thus forming a "FDI — Cargo Source — Train Operation — More FDI" virtuous cycle.

From a geoeconomic perspective, the CRE breaks the long-standing dependence on maritime routes, enhances connectivity within Eurasia, and significantly elevates the status of China's inland regions in the overall opening-up pattern. Especially against the backdrop of the Russia-Ukraine conflict disrupting traditional transport routes, the importance of the CRE has become more pronounced, contributing to promoting China's regional coordinated development and expanding the influence of the Belt and Road Initiative^[8].

4 Comparative analysis

The ASEAN Free Trade Area and the China-Europe Railway Express represent two different models of regional cooperation, with significant differences in mechanism design, pathways of influence, and policy tools (as shown in Table 1).

Table 1 Comparison between ASEAN free trade area and china-europe railway express

Comparison Dimension	ASEAN FTA (Institutional Cooperation)	China-Europe Railway Express (Functional Cooperation)
Cooperation Basis	Rule Integration	Infrastructure Connectivity
Main Mechanisms	Tariff reduction, investment protection, rules of origin	Transport organization, customs facilitation, multimodal transport
Pathway of Influence	Reduces institutional transaction costs	Reduces physical transportation costs
FDI Type Attracted	Market-seeking, Resource-seeking	Efficiency-seeking, Strategic asset-seeking
Geographic Focus	Southeast Asian regional integration	Cross-regional connectivity across Eurasia
Time Horizon	Long-term institution building	Medium-term facility optimization
Typical Case	Samsung Electronics Vietnam	BMW Production Base Shenyang

Geographically, the former covers FDI primarily within Southeast Asia ; due to the smaller geographical scope, enterprises can utilize regional production networks to allocate resources. The latter covers FDI flows connected to the CRE route spanning parts of Asia and most of Europe, covering a larger area where enterprises are more sensitive to transportation costs and time. In terms of sectoral distribution, AFTA attracts more FDI in traditional manufacturing (e.g., electronics, automobiles, textiles) and modern services (e.g., digital economy, financial services). The CRE, meanwhile, attracts more FDI in high-end manufacturing, logistics services, cross-border e-commerce, etc.

Although the pathways and directions of the two cooperation models differ, they play complementary roles within China's "Dual Circulation" strategy. First, they complement each other in industrial development. For instance, ASEAN undertakes the transfer of lower-end industries from China, freeing up space for domestic transformation and upgrading; the CRE facilitates high-end manufacturing and high-tech cooperation, pushing Chinese industries up the value chain. They also achieve market complementarity: AFTA helps enhance the degree of regional production networking, while the CRE helps expand the reach to distant markets, potentially forming a "Made in ASEAN + Sold in Europe" global value chain link. Southeast Asia attracts Chinese outward investment, while Europe attracts European FDI into China via the CRE. By leveraging their respective advantages, they enhance connectivity, improve China's position in global value chains, and balance China's role in the global investment landscape.

5 Challenges

5.1 Geopolitical risks

In the ASEAN direction, US-China strategic competition pressures Southeast Asian nations to "choose sides," potentially weakening ASEAN centrality and regional cooperation cohesion^[9]. In the CRE direction, the Russia-Ukraine conflict has caused disruptions or rerouting of some lines, increasing transportation time and cost. Furthermore, the EU's "de-risking" strategy towards China and policies like the Anti-Coercion Instrument could affect the atmosphere of China-EU economic and trade cooperation, subsequently impacting the development prospects of the CRE.

5.2 Economic and operational challenges

For AFTA, the varying development levels and institutional quality among member states, coupled with certain non-tariff barriers, limit the degree of regional integration. For the CRE, operations are constrained by a shortage of eastbound return cargo, leading to an imbalance in east-west transportation volumes. Additionally, challenges include lagging China-Europe railway network construction, weak border transshipment capacity, and the gauge difference between broad gauge and standard gauge railways.

Simultaneously, both cooperation models face sustainability pressures. Environmentally, rapid industrialization in ASEAN accelerates environmental pollution and resource consumption, and industrial transfer may intensify regional

development disparities and labor market segmentation. Although rail transport via the CRE is more environmentally friendly than sea or air transport, it still faces pressure for energy saving, emission reduction, and technological upgrades. Regions along the route also face issues of incoordination between industrial development and livelihood improvement. Achieving inclusive growth and sustainable development is a long-term challenge common to both cooperation models.

6 Conclusion and policy recommendations

6.1 Research conclusions

6.1.1 A two-way promotion mechanism exists between FDI and geoeconomic cooperation

AFTA represents institutional cooperation, reducing transaction costs through rule integration and primarily attracting market-seeking FDI. The CRE represents functional cooperation, reducing transportation costs through infrastructure connectivity and primarily attracting efficiency-seeking FDI. These two pathways complement each other and jointly shape regional FDI flow patterns.

6.1.2 Both cooperation models share achievements and risks.

AFTA primarily supports the "internal circulation" through industrial transfer and regional production network integration, while the CRE primarily supports the "external circulation" by expanding Eurasian markets and enhancing supply chain efficiency. Together, they optimize China's positioning in global value chains and balance China's dual role as an FDI recipient and an outward investor. Geopolitical risks, operational sustainability, and developmental inclusivity are common challenges faced by both models. Geopolitical factors like US-China strategic competition and the Russia-Ukraine conflict increase uncertainty. Operational costs, return mechanisms, and market competitiveness affect sustainability. Environmental pressures and social equity issues test developmental inclusivity.

6.2 Policy recommendations

6.2.1 Construct a "Institution + Function" dual-driven cooperation model

In the ASEAN direction, strengthen rule coordination in emerging areas like the digital and green economy, and simultaneously advance infrastructure "hard connectivity." In the CRE direction, improve trade facilitation institutional arrangements, promote "soft connectivity" such as making railway waybills function as documents of title and standardizing customs procedures, while optimizing route planning and node development.

6.2.2 Optimize FDI layout to promote sustainable development.

In the ASEAN region, guide FDI towards green industries and the digital economy to help ASEAN countries achieve industrial upgrading and low-carbon transition. Along the CRE route, develop high-value-added manufacturing and modern logistics services, avoiding low-level homogeneous competition.

6.2.3 Improve the risk prevention and control system.

Establish a geopolitical risk assessment mechanism for early warning and response to risks like regional conflicts and sanctions. Enhance the overseas investment insurance system to provide political risk coverage for enterprises. Strengthen cooperation with international organizations and participate in the formulation of multilateral investment rules.

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