

The Rise of Innovation-Driven Relocation: Evidence from China's Reshoring and Re-offshoring

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This study adopts the systematic measurement framework constructed by Gao et al.(2022), which is based on the 2024 edition of ADB-MRIO, to quantify the magnitude of three primary modes of international industry relocation—offshoring, reshoring, and re-offshoring—from 2017 to 2023. Leveraging the measurement results, we employ a two-way fixed effects model to empirically analyze the key factors driving the reshoring of manufacturing from China to home countries, as well as China's re-offshoring to third countries.

Based on the findings from 2017 to 2023, the patterns of global industry relocation across nations are characterized as follows: First, re-shoring has emerged as the most dominating pattern in recent years. Second, Labor-intensive industries exhibited a stronger preference for offshoring, while capital-intensive industries favored re-shoring. Technology-intensive industries displayed a dual tendency, engaging in both re-shoring and off-shoring. Third, the world is experiencing a multi-globalization, in which distinctive features exist in different relocation patterns. For offshoring, its feature remains in relocating from high-income countries to middle- & low-income countries, especially China. For re-shoring, the opposite applies: production moves from China back to high-income countries. For re-offshoring, China is simultaneously the country with highest magnitude of the relocation-in and relocation-out.

In conclusion, China, the previous dominating destination of global industry relocation, is experiencing a noticeable production outflow, especially through the reshoring pattern that back to the home economy, and the re-offshoring pattern that transfer to the third economy. Then, what factor is triggering the production relocation out from China? This study constructs a three-dimensional indicator system based on industrial relocation theory: First, Micro-level enterprise decision factors: (1) Micro-level enterprise decision factors: labor costs (ILO monthly wage to ADB labor force ratio); (2) transport infrastructure (World Bank Logistics Performance Index). Second, Market strategy factors: (1) regional development (GDP per capita); (2) industrial agglomeration (ADB manufacturing share of output); (3) technological innovation (WIPO Global Innovation Index). Third, Macro-institutional factors: (1) government credibility (Transparency International Corruption Index); (2) trade openness (FDI net inflows to GDP ratio, World Bank).

The empirical results from the two-way fixed effects model are as follows: First, the innovation level in home country significantly increase its manufacturing reshoring from China. This effect is more pronounced when focusing on the country group with higher income. Second, the innovation capacity in destination country also promotes the manufacturing re-offshoring from China. However, this effect will be diminished when focusing on the country group with lower income. Third, labor cost is not a significant factor in either reshoring or re-offshoring, indicating that low labor costs are no longer a key determinant of industry relocation.

Empirical analysis of industry heterogeneity shows that: First, Innovation drives the re-shoring of most industries back to home countries and also re-offshoring of some capital-intensive manufacturing to third countries. Labor costs are not significant in any industry, consistent with the overall regression results. Second, capital- and technology-intensive manufacturing's relocation decisions are highly sensitive to economic development levels: they are not only more likely to be attracted by the higher economic development of the home country and reshore, but also tend to re-offshore from China to third countries with higher economic development levels for larger market scales. Third, labor-intensive manufacturing prioritizes government stability and supply chain

continuity over innovation when selecting destination countries.

The marginal contributions of this paper are manifested in two principal aspects. First, this paper displays the most recent patterns of global industry relocation, with a particular attention to China, the previous dominating destination that absorbing the global production. By applying the useful measurement framework developed by Gao et al. (2022), which is based on the 2024 edition of ADB-MRIO, the paper effectively quantifies the magnitude and direction of different industry relocation patterns across countries from 2017 to 2023. Second, our case study of China reveals that the innovation capacity has emerged as a core driver of reshoring and re-offshoring in the current era. This finding challenges the conventional consensus that cheap labor is the primary driver, offering a new theoretical perspective for understanding the dynamics of industry relocation in the context of technological globalization.