Exploring the Economic Resilience of Export-Oriented Manufacturing Regions: Performance, Mechanisms and Dark Sides in Kunshan, China

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With the deepening of economic globalization and regional integration, the movement of various elements between nations has become increasingly intense and complex. While the global economy has demonstrated a heightened interconnectedness among different parts of the world, the aggregate economic growth has also shown increased volatility and instability when facing uncertain shocks and disturbances. Particularly, the global financial crisis in 2008 has driven the interface between the realistic goal of navigating through shocks and the theory of resilience. Thus, the notion of regional economic resilience (RER) has quickly become a new buzzword. Despite resilience becoming a fashionable notion in regional studies and economic geography, it has received many critiques. After two decades of academic discussion and theory development, most of the critiques of RER have been addressed, although some are still controversial with varied opinions, such as the notion of resilience has the risk of becoming a fuzzy concept, undermining its application prospects, and the conceptual framework for regional resilience needs to be further developed to provide a systematic and dynamic understanding of regional economies. It allows for the maximization of the value of the RER notion in the dynamics of global development, which is characterized by increasing volatility and global connectivity. That is, it recognizes the role of shocks and the responses of regional economies to shocks in shaping regional uneven development.

Despite the conceptual controversies surrounding RER, this study embraces its analytical value and applies it to explore how Chinese export-oriented manufacturing regions (EOMRs) respond to and adapt through various crises. First, by seizing the opportunity of industrial restructuring in developed countries and undertaking international industrial transfer, many EOMRs have emerged across the country, becoming important nodes in global production networks. These regions have generally exhibited a high degree of trade openness and outward orientation, often significantly surpassing other types of regions such as resource-based or inward-oriented industrial regions. While this export-oriented growth model has brought access to international markets and rapid development opportunities, it has also led to increased systemic exposure and vulnerability. The high level of global integration can amplify the transmission and diffusion of external shocks, making EOMRs more susceptible to crises due to structural and functional rigidities, thereby reducing their adaptive capacity to external perturbations. However, there is still limited knowledge about what has happened to Chinese EOMRs since 2000. In particular, it remains unclear how resilient they are in terms of short-term recoverability and long-term adaptability, and why different EOMRs have responded differently to various crises. Addressing these empirical gaps forms an important part of the research aims of this study.

Second, based on a critical review of the RER literature, when exploring the key determinants behind the uneven RER, scholars pay much attention to 'meso' industrial structure, they discussed a lot about the role of “specialization versus diversification” and “related variety versus unrelated variety” in shaping resilience. However, we still have very little knowledge of 'micro' human agency and 'macro' economics, politics, policies and institutions. And the argument that industrial structure matters has been challenged. As top-down structural factors, multi-scalar policy arrangements, institutional contexts, and financial environments constitute the macro-structures and settings within which adaptive agents exist and operate. These factors interact and co-evolve with bottom-up, autonomous, and consensus-based actions and decisions formed by regionally embedded agents. Clarifying this interaction is a crucial step toward understanding the underlying causes of resilience performance.

Third, RER is a recursive process. Resilience not only shapes the evolution of regional economic trajectories but is also reshaped during the responses of regional economic systems to external shocks, forming a continuous process of adjustment and evolution. The pre-crisis regional development path is shaped by a combination of factors, including the agency of regional economic actors under multi-scalar policy arrangements and institutional contexts, existing resource endowments, industrial structure, labor market conditions, local knowledge, innovation capacity, productivity/competitiveness, and leadership. When multiple crises occur, these inherent and inherited features may, on the one hand, become sources of vulnerability. On the other hand, the responses undertaken by regional economies during crises, as mobilizable and cultivable capacities, enable regions to resist external shocks, recover (bounce back), and even advance beyond previous trajectories (bounce forward). These dual dynamics jointly influence the existing regional development paths and shape the trajectory and direction of regional economic performance during crisis periods, potentially contributing to path transformation. Thus, this study aims to examine whether the disruptions caused by crises and the regional responses and resilience performance have played a critical role in shaping the long-term growth paths of regions.

Fourth, under a long-standing development model reliant on manufacturing exports, the differentiated local adaptation paths and adaptive capacities exhibited by EOMRs in response to both internal pressures for industrial upgrading and multiple external crises reflect critical dimensions of unequal regional development and inter-region inequality. First, certain regions possess stronger industrial development capabilities largely because they were able to secure key resources, attract investment, and host major projects earlier than others. As a result, a substantial share of development opportunities becomes concentrated in these regions, limiting the growth potential of others. Understanding how resilience is achieved within broader spatial relational contexts is therefore essential for explaining the uneven resilience of places. It raises the question of whether a region’s strong resilience is, in part, achieved by absorbing resources that might otherwise have supported growth elsewhere, leaving other regions stagnant or in decline. Second, disparities in resilience capacities may further lead to unequal access to employment opportunities, wage levels, and household incomes across regions, thereby exacerbating interregional inequality. Additionally, as EOMRs shift from low-cost, labor-intensive production to more technology-intensive and advanced manufacturing modes, automation-driven innovations may lead to job losses among low-skilled workers and consequently contribute to rising social inequality within regions. This raises the question of whether high economic resilience has been achieved at the expense of increasing intra-region inequality. When a region demonstrates strong economic resilience, it is necessary to ask who actually benefits from it and who becomes more vulnerable in the process.

The Yangtze River Delta region hosts the largest concentration of export-oriented manufacturing counties, making it an ideal area for examining the performance and determinants of economic resilience in this specific type of region. At the same time, Jiangsu Province provides a representative context for investigating the transformative resilience of EOMRs. As one of China's most economically developed provinces, Jiangsu has consistently maintained a predominant numerical advantage in the number of counties represented in the national top 100 counties rankings. Its county-level economies are characterized by a manufacturing-centered structure, outward-oriented development, and a strong reliance on industrial parks as growth engines. Within China's macro context, the emergence of transformative resilience relies on a combination of economic foundation, institutional support and governance capacity, and is typically observed in regions with higher levels of economic development. These regions possess greater capabilities, resources, and institutional incentives to engage proactively in intelligent, green, and low-carbon transformation.

In 1998, Kunshan focused on textiles, electronic and telecommunication equipment manufacturing, chemical raw materials and chemical products manufacturing, apparel and other fiber products manufacturing. By 2015, the share of textiles and textile and apparel industries had significantly declined, and traditional textile-related sectors had dropped out of the top ten pillar industries. Kunshan exhibited a trend of shifting from low-end labor-intensive industries to capital- and technology-intensive sectors such as electronic information, equipment manufacturing, and materials industries. It also developed local action plans to actively build advanced manufacturing hubs with international competitiveness and to cultivate strategic emerging industries in response to the changes in the global economic landscape and the trend of technological revolution and industrial change. Intellectualization and digitization of the manufacturing sector have been the focus of Kunshan. At the same time, Kunshan is heavily dependent on foreign investment. Kunshan has one of the highest concentrations of Taiwanese investment on the Chinese mainland, making it a key node for cross-strait economic and cultural exchanges. In 2024, Taiwanese enterprises contributed 30% of Kunshan's GDP and 40% of its total industrial output. The heavy reliance on foreign capital and deep integration into global production networks have been key drivers of industrialization and economic growth, but it also constitutes potential sources of risk in the face of external demand fluctuations and supply chain disruptions. Moreover, its economic security and stability are closely linked to the geopolitical environment.

Preliminary findings highlight that Kunshan's local government has demonstrated strong agency in actively bargaining upward for resources, alongside an expanding development authority and a growing capacity for policy experimentation. Kunshan's long-term development experience shows that, under conditions of high institutional uncertainty, the local government effectively reduced the risks associated with policy innovation through a series of opportunistic initiatives. These included the implicit breakthrough of self-financed development zone construction in 1984, the strategic use of central government opening-up policies to formalize the development zone in the 1990s, and the subsequent approval of the Export Processing Zone in 2000 and the Kunshan Pilot Zone in 2012. At each critical historical juncture, Kunshan responded sensitively to national reform trends, gradually embedding local policy innovations into the national policy agenda. Through this process, it broke through the institutional ceiling typically faced by county-level governments and acquired new development authority, exemplifying a form of local institutional entrepreneurship.

At the same time, the local government has placed strong emphasis on cultivating a favorable business environment, adopting a dual strategy of external investment attraction and internal firm cultivation. Existing firms have been encouraged to enter new development trajectories, while emerging industries have been deliberately aligned with the region's existing industrial base to form an interactive and mutually reinforcing industrial ecosystem. However, the governance logic of 'grasping the large and letting go of the small' also reveals that, when shocks occur, the interests of certain types of firms are systematically prioritized. In the early stages of industrial development, preferential policies such as the "two exemptions and three reductions" tax scheme for foreign-invested enterprises were introduced to attract Taiwanese and foreign capital. During this period, domestic firms were largely marginalized, leading many de facto domestic firms to repackage themselves as foreign-invested firms in order to access preferential treatment.

Following the Zhongrong explosion incident, a critical event that reshaped the behavioral logic of local cadres and accelerated policy attention to industrial safety and environmental regulation, the previously lenient regulatory approach toward Taiwanese-invested firms, which had been adopted to retain investors and encourage reinvestment and expansion, was gradually tightened. In the aftermath of this incident, the local government also began to shift toward a more universalist policy orientation aimed at promoting fair competition between domestic and foreign firms. Nevertheless, another dark side of strong economic resilience subsequently emerged. A small group of large firms, specifically the 13 leading firms and 100 key firms identified by the local government, has consistently remained at the center of official attention. High-output and high-tax-contributing firms, regardless of ownership structure or sector, receive intensive government support. Problems are reported upward rapidly, responses are swift, and coordination is proactive, with some lead firm executives directly linked to the mayor. In contrast, small and medium-sized firms widely report that they are largely unable to benefit from government response measures during periods of shock, with their survival relying primarily on their own capacities. This governance pattern has contributed to the formation of a highly concentrated, single-core industrial structure. In the early stages, such a structure leveraged the strong order-acquisition capabilities and supply-chain coordination functions of lead firms to drive rapid local industrial growth and firm expansion. However, it has also generated high vulnerability to shocks originating from the strategic decisions of these lead firms, such as order reductions or relocation.