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Policy Recommendations for the High-quality Development of Export-oriented Industries in Zhejiang Province

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Abstract: Based on Zhejiang Province's leapfrogging development in foreign trade exports (rising from the 4th to the 2nd nationwide in export volume), this study analyzes the key pathways for its transition from a major foreign trade province to a strong open economy. By stimulating the vitality of the private sector, optimizing trade structures, diversifying market expansion, and strengthening cross-border e-commerce, Zhejiang has achieved resilient growth. The paper systematically examines the current opportunities and challenges facing Zhejiang's foreign trade sector and proposes four high-quality development strategies: Expanding Infrastructure Investment, Building a Globally Connected Trade Network; Enhancing the Business Environment, Strengthening Policy Support for Enterprise Globalization; Implementing Innovation-Driven Development, Breaking Trade Barriers Through Technological Breakthroughs; Engaging in International Rule-Making, Shifting from "Follower" to "Leader". The research results provide solutions with both theoretical value and practical significance for the high-quality development of extroverted enterprises in Zhejiang Province.

Key words: Export-oriented industry; High-quality development; Zhejiang Province; Policy recommendation

1 Introduction

Over more than four decades after the reform and opening-up, Zhejiang Province has achieved remarkable progress in economic and social development, giving rise to a robust open economy. In 2004, Xi Jinping, the then Party Secretary of Zhejiang Province, set forth a strategic objective of transforming Zhejiang from a "major trading province" into a "major open province". This vision provided a clear roadmap for advancing Zhejiang's development in the new century.

Guided by this long-term strategy, Zhejiang has achieved a historic transformation from a major province in foreign trade to a leading province in comprehensive opening-up, and further toward a globally competitive open economy. The export volume of Zhejiang province has increased 9.6-fold, from USD 58.16 billion to USD 558 billion from 2004

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(Zhejiang Provincial Bureau of Statistics, 2005) to 2024 (Zhejiang Provincial Bureau of Statistics, 2025a), representing an average annual growth rate of 11.2%. Meanwhile, Zhejiang's GDP rose from RMB 1.12 trillion to RMB 9.0 trillion, with the per capita GDP increased an 8-fold, reaching RMB 135,600. This transformation has given rise to the so-called "Zhejiang Model" of high-quality development driven by high-level opening-up. In recent years, despite facing structural adjustments in the global trade system and mounting geopolitical tensions, Zhejiang maintained a 15.9% share of China's total exports as of August 2025, ranking second nationwide for 32 consecutive months (China National Radio Zhejiang, 2025). However, as global economic reconfiguration accelerates, Zhejiang's export-oriented enterprises are encountering unprecedented challenges.

From the perspective of local governance, a key question emerges: how can the regional authority most effectively support and promote the high-quality development of leading export-oriented industries and enterprises? To address this question, this study reviewed the policy evolution and practical experiences in Zhejiang's opening-up process. Conducted an in-depth investigation of the current situation of Zhejiang's foreign trade, and analyzed both the opportunities and challenges it is facing. The paper then proposes feasible policy recommendations to enhance export competitiveness and strengthen trade resilience of Zhejiang, based on Zhejiang's unique development context and best practices.

2 Evolution of Zhejiangs Opening-Up

Over more than forty years of reform, Zhejiang has demonstrated a pioneering spirit characterized by "overcoming institutional barriers through reform and breaking developmental constraints through openness". This approach has enabled the province to transform from a resource-scarce region to an economic powerhouse, and from a major foreign trade province to a strong open economy. Zhejiang then became both a forerunner of reform and a strategic "bridgehead" of China's opening to the world.

Behind this achievement lies a gradual yet systematic progression from port-based opening to strategic upgrading and finally to institutional opening-up. Specifically, the province's transformation can be traced through three key milestones: the opening of Ningbo Port in 1978, the implementation of the "Eight-Eight Strategy" in 2003, and the comprehensive deepening of high-level opening-up in the new era beginning in 2018. Together, these stages have shaped a distinctive open economic system with Zhejiang characteristics.

2.1 Port Opening: The Starting Point of Zhejiang's Opening-up

On December 4, 1978, the State Council approved Zhejiang Province's proposal to open Ningbo Port, marking the official beginning of Zhejiang's Opening-up. Ningbo Port started a series of major upgrades, including the construction of the 10,000-ton-class terminal at Zhenhai Port in 1978 and the 100,000-ton-class ore transshipment terminal at Beilun Port in 1982. A small regional riverside port with an annual throughput of only 2.14 million tons gradually became an estuary port, and ultimately one of the most important deep-sea ports in China. In 1989, Ningbo Port was designated as one of four key international deep-water transshipment ports on the Chinese mainland by the central government, entering a period of rapid development. By 2000, its cargo throughput exceeded 100 million tons, making it the third Chinese port to reach this milestone. In September 2015, the Ningbo-Zhoushan Port Group Co., Ltd. was officially established. By 2017, total throughput had surpassed one billion tons, and by 2021, Ningbo-Zhoushan Port became the world's third-largest container port—following Shanghai and Singapore—with annual handling exceeding 30 million TEUs.

In 2024, Ningbo-Zhoushan Port achieved a cargo throughput of 1.377 billion tons and maintained its position as the world's busiest port for 16 consecutive years. Its container throughput reached 39.3 million TEUs, ranking among the top globally in both growth rate and net increase. According to the World-Class Port Comprehensive Evaluation Report (2025), Ningbo-Zhoushan Port has, for the first time, entered the ranks of world-leading ports, following only Singapore and Shanghai, owing to its highly efficient coastline utilization, expanding port-industry clustered effects, and comprehensive maritime service capabilities.

Ports, serving as the core strategic platform of Zhejiang's open economy, have seen their strategic value extend beyond traditional logistics hub functions. They now act as catalysts for industrial upgrading, demonstration zones for institutional innovation, and connectors for land-sea coordination. Within a 50-kilometer radius centered on the Ningbo-Zhoushan Port, a coastal industrial cluster worth hundreds of billions of yuan has emerged, focusing on green petrochemicals, high-end steel, and clean energy.

As the core area of the Zhejiang Pilot Free Trade Zone since its establishment in 2017, the Ningbo-Zhoushan Port has generated 252 institutional innovations covering bulk commodity storage, transportation, processing, trade, transaction, and maritime services, as detailed in Table 1. Through the Hangyong Canal and the Beijing-Hangzhou Grand Canal, the Ningbo-Zhoushan Port connects with the Jiaxing Inland Port (with river-sea combined transport volume exceeding 80 million tons in 2023) and the Huzhou Port (ranking eighth nationally in inland cargo throughput), facilitating export-oriented development for industries such as textiles in northern Zhejiang and hardware in central Zhejiang.

Table 1 Institutional innovation achievements in the core area of the Zhejiang pilot free trade zone

Innovation Area	Amount of Achievements	Nationally Pioneering Cases	Economic Performances
Storage and Transportation	58	The "One Vessel, Multiple Supply" Model for Bonded Fuel Oil	Annual bunkering volume surged from 1.06 million metric tons in 2017 to 6.53 million metric tons.
Manufacturing	42	Pilot Program for Granting Crude Oil Import Licenses to Non-State-Owned Enterprises	It has driven the annual output value of the Yushan base to exceed 200 billion RMB.
Trade Convenience	67	Warehouse Receipt Pledge Financing System for Oil and Gas	The annual financing scale surpasses 80 billion RMB.
Trading Platform	35	The "Zhoushan Price" Index by Zhejiang International Oil and Gas Trading Center	The cumulative transaction value has reached 1.2 trillion RMB.
Maritime Services	50	Operational Standards for International Ship-to-Ship LNG Bunkering	Its annual bunkering volume accounts for 85% of the national total.

2.2 Strategic Upgrading: From a "Major Foreign Trade Province" to a "Major Open Province"

In 2003, Zhejiang's economy stood at a critical juncture in its development trajectory. After more than two decades of rapid growth as one of China's pioneering regions of reform and opening-up, the province began to face diminishing first-mover advantages and increasingly binding resource constraints. As a small land-based province, Zhejiang's traditional growth model had reached its limits. Meanwhile, China's accession to the World Trade Organization created new opportunities for global integration, yet also exposed structural weaknesses in Zhejiang's openness—such as the limited scale of foreign investment utilization, the suboptimal export structure, and a strict business environment that required further improvement.

To cope with this situation, Xi Jinping, then Secretary of the Zhejiang Provincial Party Committee, proposed the "Eight-Eight Strategy" (Bābā Zhànlüè). This landmark policy emphasized: "Leveraging Zhejiang's geographical advantages to proactively align with Shanghai and actively participate in the integrated development of the Yangtze River Delta, while continuously elevating the level of both domestic and international openness." Xi also introduced the forward-looking concept of "developing Zhejiang with a national perspective and developing Zhejiang beyond Zhejiang", providing a strategic framework for overcoming structural bottlenecks and expanding the province's global reach.

One month after the 2004 Provincial Conference of Opening-Up, the Zhejiang Provincial Committee and Government issued the *Several Opinions on Further Expanding Openness*, which formally articulated the goal of transforming Zhejiang from a "major trading province" into a "major open province". Since then, Zhejiang has embraced a more outward-oriented development model—actively aligning with Shanghai, participating in the revitalization of China's central and western regions, and engaging in the rejuvenation of old industrial bases in the northeast. The province pursued a dual-track strategy of "bringing in"(inward foreign investment) and "going out"(global investment), thereby embedding itself more deeply within global economic networks.

A growing number of Zhejiang enterprises participated in the "Go West" initiative, contributing to regional development while discovering new commercial opportunities. In parallel, Zhejiang played a vital role in advancing economic integration within the Yangtze River Delta, facilitating cross-regional cooperation, and improving the allocation and mobility of resources. Meanwhile, Zhejiang's private entrepreneurs - historically renowned for their entrepreneurial dynamism—expanded from small-scale trade and contract manufacturing to large-scale investments and global mergers and acquisitions. Companies such as Alibaba, Geely, and Wanxiang emerged as world-class multinational enterprises. As a result, the share of exports contributed by private enterprises rose dramatically—from 30.1% in 2002 to 76.9% in 2017 (Zhejiang Provincial Bureau of Statistics, 2018)—forming a globally networked system of "private economy + global Zhejiang entrepreneurs".

Following the pilot implementation of the market procurement trade mechanism in Yiwu, the city adopted a set of localized foreign trade facilitation measures that led to an exponential rise in exports. Yiwu's market procurement exports grew from RMB 82.71 billion in 2013 to RMB 388.37 billion in 2023, representing a 369.6% increase, and consistently accounting for more than 75% of the city's total exports (Zhejiang Provincial Taxation Bureau, 2024).

In March 2015, China's first comprehensive pilot zone for cross-border e-commerce was officially established in Hangzhou. This milestone marked a crucial step from policy experimentation to institutional innovation in China's cross-border digital trade and initiated Hangzhou's transformation from a traditional export-oriented city into a global e-commerce hub. Over the past decade, the total import and export volume of the pilot zone has exceeded RMB 200 billion, with exports surpassing RMB 150 billion and an average annual growth rate exceeding 30%. This transformation has enabled over 65,000 enterprises to integrate into global value chains, reaching more than 200 countries and regions worldwide (CCTV News, 2025).

2.3 Positioning in the New Era: High-Level Openness and the "Belt and Road" Hub

The year 2018 marked both the 40th anniversary of China's reform and opening-up and the fifth anniversary of the Belt and Road Initiative (BRI). In that year, Zhejiang convened the Provincial Conference on Opening-Up, articulating a comprehensive vision for high-level openness in the new era. The province proposed building a new pattern of alldimensional openness under the overarching framework of the BRI, centered on three coordinated initiatives - “one zone, one port, and one network”: the Pilot Free Trade Zone (FTZ), the Ningbo-Zhoushan Port, and the Digital Trade Network. In September 2023, during an inspection tour in Zhejiang, President Xi Jinping delivered an important directive emphasizing that reforms must be “conceived from a national perspective and a global vision,” and that Zhejiang should “steadily expand institutional openness in rules, regulations, management, and standards”. This statement clarified the province’s strategic orientation in the new development stage: to advance from physical and policy-level openness toward institutional and rule-based openness.

Since the 2020 expansion of the Zhejiang Pilot Free Trade Zone (FTZ) to include Ningbo, Hangzhou, and the Jinyi (Jinhua–Yiwu) Zone, the spatial layout of the FTZ has evolved from a single-point breakthrough in Zhoushan to a multi-polar, coastal–inland linkage structure. The FTZ has been tasked with five functional roles: (1)Building a resource allocation base for bulk commodities centered on oil and gas; (2)Developing a new international trade hub; (3)Establishing an international shipping and logistics center; (4)Serving as a demonstration zone for digital economy development; (5)Creating a cluster of advanced manufacturing industries.

Despite occupying less than one-fourth of Zhejiang’s total land area, the FTZ contributes 19.2% of the province’s total foreign trade, 17.6% of actual utilized foreign capital, and 8.9% of fiscal revenue. From 2020 to 2024, the province’s total import and export volume grew from approximately RMB 480 billion to over RMB 1 trillion, while both total trade and foreign investment doubled. Trade between Zhejiang and the Belt and Road countries and regions has expanded steadily, with their share of Zhejiang’s total trade increasing from 33.2% in 2020 to 36.9% in 2024. These countries have also become the province’s largest markets for overseas engineering and infrastructure contracting. Currently, Ningbo-Zhoushan Port maintains trade and shipping links with more than 600 ports in over 200 countries and regions worldwide, and all of the world’s top 20 container shipping companies operate there. Among its over 300 shipping routes, more than 130 are Belt and Road routes, making the port a key maritime node in global logistics networks.

Digital trade has emerged as a critical engine for stabilizing Zhejiang’s foreign trade volume, optimizing its export structure, and enhancing its growth momentum. In 2024, the province’s cross-border e-commerce exports across all categories exceeded RMB 350 billion, up 10% year-on-year, accounting for 9.2% of total provincial exports. Digital trade has also played an increasingly significant role in buffering against international trade frictions and promoting the integration of domestic and foreign trade flows.

Currently, Zhejiang is home to over 6 million domestic Zhejiang entrepreneurs and 2 million overseas Zhejiang merchants, whose global networks extend across more than 180 countries and regions. This dynamic “sweet potato economy” model, with its deep roots in Zhejiang and sprawling vines around the world, has enabled enterprises to “go global” while embedding themselves in global markets. As a result, Zhejiang has formed a multi-layered pattern of “Provincial Zhejiang”, “National Zhejiang”, and “Global Zhejiang”, achieving a transformation from “trading globally” in goods circulation to “operating globally” in factor allocation.

Table 2 Distinctive achievements of Zhejiang pilot free trade zone sub-areas

Sub-Area	Core Industry	Representative Achievements (2024)
Ningbo	International shipping hub	Container throughput exceeded 35 million TEUs, ranking among the top three globally.
Hangzhou	Digital trade	Cross-border e-commerce imports and exports accounted for 21% of the national total.
Jinyi (Jinhua–Yiwu)	Free trade in small commodities	Combined “market procurement + cross-border e-commerce” exports exceeded RMB 200 billion.
Zhoushan	Oil and gas industrial chain	Bonded bunker fuel supply ranked first in China for five consecutive years.

Collectively, these three developmental stages—port-based openness, institutional innovation, and participation in global governance—illustrate Zhejiang's progressive approach to high-level opening. The province's enduring driving force lies in the synergistic integration of institutional innovation and market vitality. From the introduction of market-oriented mechanisms at Ningbo Port in 1978, to the entrepreneurial dynamism unleashed by the Eight-Eight Strategy in 2004, and the formation of a globally networked Zhejiang merchant ecosystem under the Belt and Road framework, Zhejiang has forged a distinctive evolutionary pathway toward an open economy with Chinese characteristics and global competitiveness.

3 Overall Export Performance of Zhejiang Province

Before 2011, Zhejiang consistently ranked fourth nationwide in terms of export value, trailing Guangdong, Jiangsu, and Shanghai. In 2011, Zhejiang's total exports reached USD 216.35 billion, surpassing Shanghai by USD 6.68 billion to become China's third-largest exporting province for the first time. By 2023, Zhejiang's exports had further climbed to RMB 3.57 trillion (approximately USD 499.8 billion), overtaking Jiangsu (RMB 3.4 trillion) to rank second nationally, behind only Guangdong (RMB 5.4 trillion). In 2024, the province's total exports reached RMB 3.9 trillion, an increase of 9.5% year-on-year, accounting for 15.3% of the national total. This marked the second consecutive year Zhejiang held the second position nationwide and the leading position among the major coastal provinces and cities (Zhejiang Provincial Department of Commerce, 2025).

Despite the volatile international environment, Zhejiang's foreign trade continued to expand against global headwinds. From January to August 2025, total imports and exports amounted to RMB 3.49 trillion, up 7.4% year-on-year, with both import and export values reaching record highs for the same period—ranking third and second nationwide, respectively (WeChat Public Platform, 2025). This resilient performance highlights not only the enduring dynamism of Zhejiang's private economy but also the effectiveness of its diversified market strategy and industrial upgrading.

Table 3 Export performance of major provinces in China (2021-2024)

Province/ City	2021		2022		2023		2024	
	Export Value (billion RMB)	National share (%)	Export Value (billion RMB)	National share (%)	Export Value (billion RMB)	National share (%)	Export Value (billion RMB)	National share (%)
Guangdong	5052.87	23.2	5332.34	22.3	5438.65	22.9	5891.56	23.1
Zhejiang	3012.13	13.9	3432.54	14.3	3566.55	15	3905.75	15.3
Jiangsu	3253.23	15	3481.57	14.5	3371.91	14.2	3653.13	14.4
Shandong	1758.27	8.1	2035.58	8.5	1943.02	8.2	2081.16	8.2
Shanghai	1571.87	7.2	1713.42	7.1	1737.79	7.3	1817.6	7.1
Fujian	1081.65	5	1214.05	5.1	1176.64	4.9	1238.62	4.9
Beijing	611.85	2.8	589	2.5	600	2.5	606.55	2.4

3.1 The Dominant Role of Private Enterprises

The resilience of Zhejiang's foreign trade derives largely from its flexible and adaptive business entities. Private enterprises have become the key driver sustaining export growth. Nationally, the share of private enterprises in China's total foreign trade rose from 46.6% in 2020 to 57.3% in the first half of 2025, maintaining their position as China's largest foreign trade sector for six consecutive years.

As China's leading province for private entrepreneurship, Zhejiang is home to over two million Zhejiang merchants abroad, with business footprints spanning more than 180 countries and regions. In 2024, the province's total import and export volume exceeded RMB 5 trillion for the first time, accounting for 12% of the national total. The number of private enterprises with actual export performance surpassed 100,000, marking a 10% year-on-year increase (Hangzhou Customs, 2025) and contributing over 80% of the province's total exports (Zhejiang Provincial Bureau of Statistics, 2025a). In contrast, foreign-invested enterprises numbered 6375, growing modestly by 286 firms, with exports increasing by 7.8% (Hangzhou Customs, 2025). Between January and August 2025, Zhejiang had 117000 active foreign trade enterprises, up 7% year-on-year, with private firms contributing 96.3% of total export growth—demonstrating strong adaptability and growth potential in a complex global environment.

3.2 Structural Optimization in Trade Composition

Zhejiang's sustained export growth in recent years reflects a deeper structural transformation led by private enterprises. The core growth drivers include the rise of high-end manufacturing, the rapid expansion of digital trade, and the emergence of technology-enabled export competitiveness.

Over the past decade, exports of mechanical and electrical products—representing advanced manufacturing—have grown at an average annual rate of 9.58%. In 2024, such exports reached RMB 1.8 trillion, accounting for 46.2% of the province's total exports and 11.9% of the national share, an increase of 10.9% year-on-year, significantly higher than the national average of 7.5%. From January to August 2025, Zhejiang's exports of mechanical and electrical goods totaled RMB 1.31 trillion, up 9%, maintaining a 46.7% share of provincial exports.

Zhejiang currently hosts three national-level comprehensive pilot zones for cross-border e-commerce (Hangzhou, Ningbo, and Yiwu), with 642 registered cross-border enterprises providing full-chain services across payments, logistics, and fulfillment. These zones form a synergistic spatial pattern of "one core, multiple poles" encompassing Hangzhou, Ningbo, Yiwu, and Jinhua. In 2024, the province's cross-border e-commerce exports totaled RMB 214.13 billion, up 19.1% year-on-year, accounting for 5.5% of total exports and 15.3% of the national total.

Zhejiang also leads in technology-driven exports, with more than 1,000 specialized and innovative "Little Giant" enterprises engaged in foreign trade, among the highest in China. These firms possess proprietary technologies and hold distinct competitive advantages in international markets, driving the transformation of "Made in Zhejiang" to "Created in Zhejiang".

3.3 Market Diversification and Dual-Track Expansion

Zhejiang's export market structure exhibits a dual-track pattern of "stabilizing traditional markets while accelerating expansion into emerging ones". From 2020 to 2024, exports maintained an average annual growth rate of 11.6%, reflecting strong market resilience.

Despite external shocks such as the U.S.–China trade frictions since 2018, exports to traditional developed markets continued to grow. In 2024, Zhejiang's exports to the European Union and the United States reached RMB 669.2 billion and RMB 631.7 billion, up 8.8% and 12.7% (Zhejiang Provincial Bureau of Statistics, 2025a), respectively. Meanwhile, the province's export portfolio has gradually shifted, with the shares of exports to Europe and the U.S. declining. In contrast, exports to ASEAN, Latin America, the Middle East, and Africa have increased.

Between 2018 and 2024, Zhejiang's export share to the EU dropped from 22.0% to 17.1%, and to the U.S. from 19.6% to 16.2%, while exports to ASEAN rose from 9.5% to 13.0%, to Latin America from 9.4% to 11.1%, to the Middle East to 9.1%, and to Africa to 8.1% (Zhejiang Provincial Bureau of Statistics, 2025b). Notably, Zhejiang's export share to both Europe (24.4%) and North America (15.7%) remains above the national average, demonstrating a robust traditional market foundation. In contrast, its higher-than-average shares in Latin America, Africa, and Oceania highlight its growing capacity to tap emerging markets.

Table 4 Major export markets of Zhejiang in 2018 and 2024

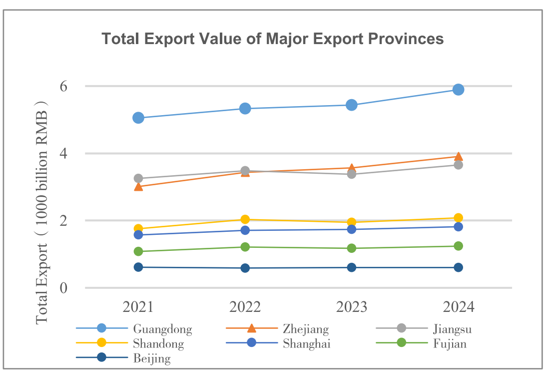
Country/Area	2018 Export Value (billion RMB)	Provincial share (%)	Year-on-year growth rate (%)	2024 Export Value (billion RMB)	Provincial share (%)	Year-on-year growth rate (%)
United States	414.86	19.6	12.2	631.68	16.2	12.7
EU	466.22	22.0	7.8	669.19	17.1	8.8
ASEAN	202.20	9.5	16.1	507.10	13.0	11.0
Latin America	198.66	9.4	13.3	432.72	11.1	13.4
Middle East	/	/	/	356.22	9.1	8.2
Africa	165.99	7.8	12.6	3164.00	8.1	2.1

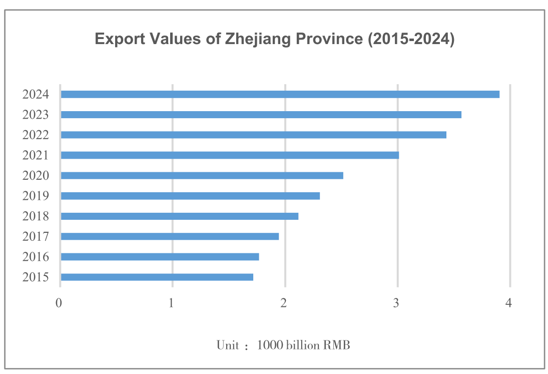
3.4 Rapid Development of Cross-Border E-Commerce

Since the establishment of China's first comprehensive pilot zone for cross-border e-commerce in Hangzhou in 2015, Zhejiang has become a national leader in digital trade. By 2022, all prefecture-level cities in the province had achieved comprehensive pilot zone coverage, the first province in China to do so.

In successive evaluations by the Ministry of Commerce, Hangzhou and Ningbo have ranked among China's top ten cross-border e-commerce zones for three consecutive years, while Yiwu has ranked twice. The province has launched 62 industrial cluster pilot projects, covering over half of all counties and districts, and established 56 provincial-level cross-border e-commerce parks and 256 recognized export brands. Zhejiang has also fostered a robust ecosystem of platform-based enterprises and leading sellers in trading, payment, and logistics, securing its position as China's second-largest cross-border e-commerce exporter.

The province's industrial and service infrastructure for digital trade has matured rapidly. The global deployment of overseas warehouses has accelerated, with Zhejiang accounting for 33.6% of the total number and 40.3% of total warehouse area nationwide by the end of 2023, ranking first in China. This global logistics network has significantly enhanced the province's capacity for localized distribution, supply-chain integration, and last-mile delivery, reinforcing its competitiveness in the new landscape of cross-border digital trade.





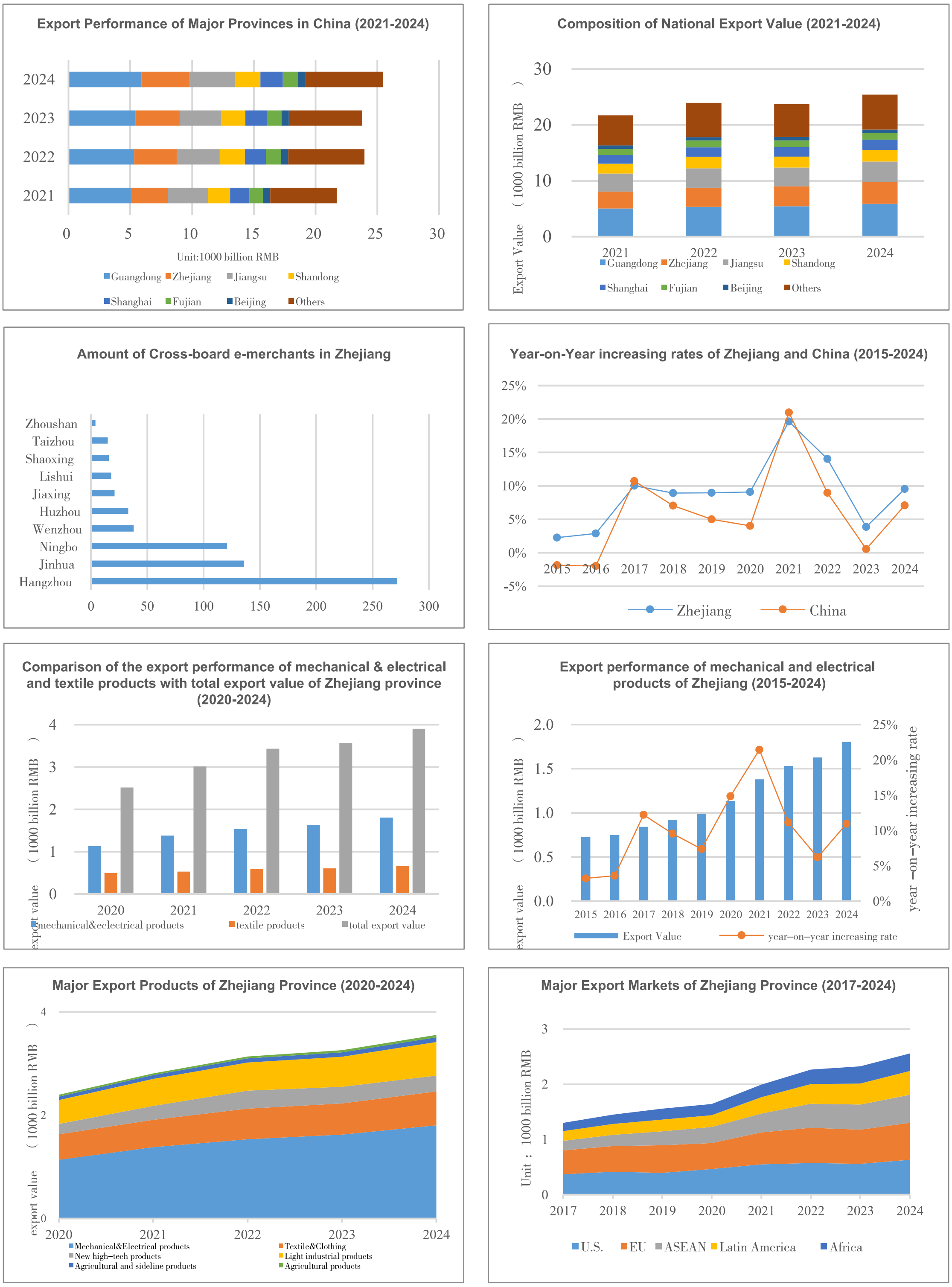


Figure 1 Export performance of Zhejiang province in recent years

4 Opportunities and Challenges

As a benchmark province for both China's private economy and foreign trade development, Zhejiang has achieved a remarkable leap in export performance—rising from fourth to second place nationwide. This achievement reflects the province's three-dimensional resilience model, driven by entrepreneurial vitality, global market expansion, and industrial upgrading. At the current historical juncture—marked by the intersection of a global technological revolution and industrial transformation—Zhejiang faces a dual reality: unprecedented strategic opportunities to break through constraints and equally formidable challenges that threaten to erode its hard-won advantages.

4.1 Opportunities

4.1.1 The Irreversible Momentum of Globalization

Economic globalization remains the defining feature of the contemporary world economy and a powerful engine for global growth. According to the World Trade Report 2024, since the establishment of the World Trade Organization (WTO) 30 years ago, international trade has played a decisive role in narrowing income disparities among economies. Between 1995 and 2023, global per capita income—adjusted for inflation—grew by approximately 65%, while that of middle- and low-income economies nearly doubled.

The United Nations Conference on Trade and Development (UNCTAD) Global Trade Update reports that in 2024, global trade reached a record USD 33 trillion. As one of the chief beneficiaries of globalization, China has emerged as the world's second-largest economy and the top manufacturing nation for 15 consecutive years, contributing roughly 30% of global economic growth annually. Countless small and medium-sized enterprises (SMEs) have leveraged international markets to achieve scale expansion and technological upgrading.

For Zhejiang—China's most dynamic province in private-sector entrepreneurship—the accelerating process of global economic integration presents a pivotal opportunity: to deepen its participation in global industrial division, cultivate new sources of competitiveness, and sustain long-term growth through structural innovation and institutional openness.

4.1.2 New Trends Converging into Development Momentum

The global economy is undergoing profound adjustment and accelerated transformation. Simultaneously, the rise of emerging markets, digital trade, and services trade is generating new opportunities for sustainable external growth in China.

First, the rapid emergence of new markets offers strong growth potential. Data from China's General Administration of Customs show that during the first eight months of 2025, China's total exports reached RMB 17.61 trillion, up 6.9% year-on-year. Exports to ASEAN, Africa, South Asia, and Central Asia grew by 15.8%, 25.9%, 10.8%, and 13.9%, respectively. Zhejiang mirrored this trend, recording double-digit export growth to most major emerging markets, signaling that these economies are becoming strategic engines for the province's external trade expansion.

Second, digital trade—by enabling the cross-border digital delivery of goods and services—has broken traditional temporal and spatial constraints, demonstrating remarkable resilience and scalability. According to the Development Research Center of the State Council (2025 Digital Trade Development and Cooperation Report), global digital services trade expanded by 64.7% between 2019 and 2024, reaching USD 4.64 trillion, while conventional trade in goods and services remained volatile due to the pandemic, trade tensions, and geopolitical risks.

Third, the ongoing optimization of China's trade structure enhances the nation's competitiveness within global value chains. Over the past decade, general trade has grown faster than processing trade, now accounting for over 60% of total exports—a sign of stronger domestic value-chain control and a shift from assembly-based manufacturing to R&D-driven brand exports.

During the first seven months of 2025, general trade accounted for 76.4% of Zhejiang's exports, more than ten percentage points higher than the national average. Meanwhile, upgraded processing trade grew faster than overall trade, indicating that Zhejiang's position within global value chains is steadily ascending—from low-value assembly to high-value design, innovation, and services.

Within this global restructuring, Zhejiang's central challenge—and opportunity—is to achieve a qualitative leap from "factor embedding" to "value control" by expanding into emerging markets, leveraging digital trade governance, and upgrading its service trade capabilities.

4.1.3 The Imperative of Green Transformation

With climate change and sustainable development at the forefront of the global agenda, green and low-carbon development has become both a strategic necessity and a competitive frontier in international cooperation. As President Xi Jinping has emphasized, "Promoting green and low-carbon development is the direction of global trends and the general course of human progress; the green economy has become the commanding height of global industrial competition".

Recent years have seen a profound transformation in traditional production models once driven by low-cost factor inputs. The shift toward green, intelligent, and high-end manufacturing is creating new growth drivers worldwide. In 2024, China's exports of mechanical and electrical products reached RMB 15.12 trillion (+8.7%), accounting for 59.4% of total exports. Exports of high-end equipment grew by more than 40%, while integrated circuits (RMB 1.14 trillion) and new energy vehicles (6.407 million units) became key contributors to export growth.

This transition marks not only a turning point in bilateral trade relationships but also a strategic opportunity for Chinese manufacturing—including Zhejiang's—to participate in global competition through green, low-carbon transformation. For Zhejiang, accelerating the upgrading of traditional industries, achieving breakthroughs in high-end manufacturing, and strengthening innovation-driven growth will be essential to maintaining competitiveness amid global supply chain restructuring.

4.1.4 Innovation as the Fundamental Driver

China's manufacturing competitiveness in global markets is underpinned by its comprehensive industrial ecosystem and sustained innovation capacity. In 2024, China's R&D expenditure intensity reached 2.68%, surpassing the EU average (2.11%) and approaching the OECD average (2.73%), ranking 12th globally in innovation input. The country's Global Innovation Index position rose to 11th, making it one of the fastest-improving economies in innovation capacity over the past decade (National Development and Reform Commission, 2025).

A representative example is Keqiao District in Shaoxing, Zhejiang—a national textile manufacturing hub with over 8,000 enterprises and export coverage across 206 countries and regions. The local textile cluster integrates the entire industrial chain: upstream polyester and chemical fiber production, midstream weaving and dyeing (accounting for 40% of national and 60% of provincial capacity), and downstream garment and home textile manufacturing, complemented by creative design and service trade. Through technological upgrading, process optimization, and digital transformation, Keqiao has evolved from a cost-based industry to a technology-driven innovation hub, offering a global model for sustainable textile transformation.

As a leading frontier of China's manufacturing and innovation ecosystem, Zhejiang's long-term growth hinges on sustained investment in R&D and systemic innovation. Building a comprehensive innovation infrastructure will be pivotal for the province's transition from a "manufacturing power" to an "innovation-driven economy", enabling it to contribute meaningfully to global innovation governance.

4.2 Challenges

4.2.1 Weak Global Demand

The global economy is slowing amid rising trade barriers and policy uncertainty. According to the World Bank's Global Economic Prospects (June 2025), world GDP growth is projected at 2.3%, the lowest since the 2008 financial crisis, signaling that the 2020s may become the weakest decade for growth since the 1960s. Nearly 70% of economies have faced downward revisions to growth forecasts—the U.S. from 2.3% to 1.4%, the Eurozone and Japan to 0.7% each.

The World Bank also forecasts global trade volume growth of 1.8% in 2025 and 2.4% in 2026, both sharply revised downward. The new round of U.S. tariffs in early 2025 has triggered chain reactions across global supply networks, dampening corporate confidence—42% of global exporters now report pessimism about future demand. For Zhejiang's exporters, sluggish demand, escalating costs, and geopolitical risks have created a "tight squeeze", making the transition from crisis response to resilient growth increasingly challenging.

4.2.2 The Resurgence of Trade Protectionism

The global rise in protectionism, combined with trends of "friend-shoring", "near-shoring," and even "re-shoring" of supply chains, has complicated international operations for export-oriented firms. Unilateral and coercive policies by certain economies have disrupted the rules-based multilateral trade system, undermining trade liberalization and investment facilitation.

According to WTO data, between October 2023 and October 2024, member economies implemented 169 new trade-restrictive measures, covering an estimated USD 887.7 billion in trade value—over USD 500 billion more than the previous year. From 2012 to 2023, Zhejiang enterprises faced 1,337 trade remedy cases from more than 40 countries and regions, involving nearly USD 40 billion, ranking among the top three provinces in terms of direct financial losses and additional costs caused by technical barriers to trade (Jin et al., 2025).

The emergence of carbon border adjustment mechanisms (CBAMs) and other environmental trade barriers is likely to reshape global supply chains, posing long-term challenges to Zhejiang's key export industries. Enhancing supply chain resilience and optimizing production networks amid regulatory uncertainty has thus become a strategic imperative for Zhejiang's exporters.

4.2.3 Growing Industrial and Market Divergence

Recent customs data reveal a widening divergence in export performance across industries, markets, and product categories. Labor-intensive exports—such as bags, apparel, footwear, plastics, furniture, and toys—remain heavily dependent on the U.S. market (over 10% share) and have suffered from new tariff measures, with export declines ranging from –9.1% to –0.2% in early 2025. By contrast, technology-intensive products such as integrated circuits

(+20.2%) and audio-visual equipment (+12%) have recorded robust growth, underscoring the urgency of upgrading to higher value-added segments.

In the textile and apparel sector, exports to the U.S. fell sharply in early 2025, while exports to non-U.S. markets rose, reflecting divergent geopolitical effects. During January–May 2025, China's total textile and apparel exports reached USD 116.67 billion (+1.0%), with Zhejiang and Jiangsu accounting for 70% of the total. However, textile exports (USD 58.48 billion, +2.5%) grew faster than apparel exports (USD 58.2 billion, –0.5%), exposing the gap between upstream material strength and downstream brand weakness.

Although Zhejiang's dyeing and finishing exports grew 7.53% year-on-year in 2024—driven by a strong fourth-quarter rebound—the growth momentum weakened in early 2025, revealing the transient nature of the "front-loading export" effect. In the long run, export dependence without brand or technology upgrading limits risk resilience and sustainable competitiveness.

5 Policy Recommendations for Promoting High-Quality Development

To effectively address external trade barriers and seize the opportunities presented by green and digital transformation, Zhejiang should pursue a coordinated strategy encompassing infrastructure enhancement, business environment optimization, innovation-driven development, and proactive participation in international rule-making. This integrated approach should combine short-term relief, medium-term transformation, and long-term empowerment to elevate the overall competitiveness of export-oriented enterprises.

5.1 Expanding Infrastructure Investment and Building a Land–Sea Integrated Trade Network

5.1.1 Strengthening Logistics Connectivity and Network Efficiency

Zhejiang is prioritizing efforts to integrate its inland waterways with the Yangtze River system, thereby expanding access for inland regions to global markets. The province aims to establish a seamless trade network stretching "from river to sea," enabling greater participation of inland industries in international trade.

Leveraging the inclusion of the "Multimodal Transport Single-Bill and Single-Container System" of Ningbo-Zhoushan Port as a national pilot program, Zhejiang should continue to enhance both domestic deep integration and global expansion. By constructing a comprehensive logistics network that connects with major domestic and international ports through "direct river–sea routes" and "multimodal logistics corridors," the province can strengthen its foundational role in the dual circulation framework—linking domestic and international markets.

Domestically, Zhejiang should accelerate the formation of an integrated logistics system encompassing coastal, riverine, and rail-based routes, connecting the Silk Road Economic Belt, the Yangtze River Economic Belt, and the Zhejiang–Jiangxi Corridor. Internationally, Ningbo-Zhoushan Port should expand its global presence through a "port + shipping + logistics" model, establishing strategic nodes across the Middle East, Southeast Asia, and Europe. Joint projects such as the "Hefei–Ningbo–Wilhelmshaven (Germany)" and "Yiwu–Ningbo–Dubai" routes—combining "express rail + express sea" logistics—can significantly reduce transit times and costs, providing more efficient, reliable transport options for exporters.

5.1.2 Promoting Coordinated Port Development

As the world's largest integrated port, Ningbo-Zhoushan Port handles 90% of Zhejiang's foreign trade cargo and 60% of its container throughput, serving as a vital bridge between China's inland regions and Belt and Road economies. Meanwhile, Jiaxing Port, leveraging its dual status as both a major inland and coastal port, connects three major coastal port areas through river–sea multimodal transportation, ranking 60th among the world's top container ports.

Zhejiang should formulate a comprehensive port development plan and a specialized container terminal plan, centered on Ningbo-Zhoushan as a strategic hub, while empowering Jiaxing, Wenzhou, Taizhou, and Yiwu to play complementary roles based on their locational advantages. Through a fully connected and vertically integrated port network, the province can foster synergies among industrial clusters, logistics, and hinterland development, and promote an integrated model of "port–industry–trade–city."

5.1.3 Accelerating Green and Low-Carbon Port Transformation

Zhejiang should advance the construction of a "Zero-Carbon Ningbo-Zhoushan Port" by focusing on short-term electrification and long-term clean energy substitution. Key initiatives include: (1)Phasing out high-emission machinery and upgrading terminal transport and storage facilities to full electrification; (2)Expanding the capacity and coverage of charging and battery-swapping stations; (3)Eliminating all diesel trucks below National IV emission standards and transitioning to clean-energy fleets; (4)Promoting the widespread use of shore power for vessels at berth; (5)Developing an integrated "wind–solar–storage–hydrogen" energy system; (6)Establishing a tiered emergency response framework for oil spill prevention; (7)Optimizing channel layouts and constructing dual-access routes to reduce navigational risks. Such measures would not only reduce carbon emissions but also strengthen Zhejiang's role as a global demonstration zone for sustainable port logistics.

5.2 Optimizing the Business Environment and Enhancing Enterprise Support for Global Expansion

5.2.1 Establishing a Tiered Enterprise Development System

Zhejiang's foreign trade enterprises are diverse in size and structure, ranging from globally established industry leaders to numerous small and medium-sized exporters. As "flagships" of Zhejiang's outward economic engagement, large export-oriented firms play an essential role in stabilizing supply chains and driving structural upgrading. The province should therefore establish a tiered cultivation framework for "leading–backbone–potential" enterprises, assigning differentiated development targets for each group: leading enterprises should focus on building global brands and expanding from single-product exports to integrated exports combining products, technology, supply chains, and culture; backbone enterprises should strengthen their specialization and risk management capacities within key industries; potential enterprises should upgrade toward specialized, sophisticated, and innovative (SSI) development models and international market integration. By reinforcing the leadership of anchor firms while nurturing the growth of SMEs, Zhejiang can build a resilient and well-structured foreign trade ecosystem.

5.2.2 Accelerating Cross-Border E-Commerce Development

Cross-border e-commerce (CBEC) has become China's fastest-growing trade model, with total trade volume increasing tenfold over the past five years. As the first province authorized to pilot CBEC comprehensive zones, Zhejiang holds a unique advantage in institutional innovation and market depth. Key recommendations include: (1) Encouraging traditional manufacturers and trading companies to adopt CBEC models and supporting the emergence of leading digital exporters; (2)Attracting global platform enterprises to establish regional operational hubs in Zhejiang; (3) Promoting the integration of "livestreaming + platforms + CBEC" to enhance digital marketing capacity; (4)Establishing public CBEC service centers and multi-stakeholder talent training systems involving government, academia, and industry; (5)Streamlining customs procedures through pilots such as "pre-inspection before consolidation" and reforming the "three-document system" (orders, logistics, and payments) to improve efficiency and reduce costs. Through these measures, Zhejiang can further consolidate its role as a national hub for cross-border digital trade.

5.2.3 Strengthening Financial and Policy Support

Zhejiang should integrate financial, logistical, and policy instruments to create a low-cost, high-efficiency, service-oriented environment for foreign trade. Recommendations include: (1)Expanding green finance and transition finance to support exporters' low-carbon transformation; (2)Encouraging banks and insurers to incorporate ESG performance into credit and risk management frameworks; (3)Increasing loan quotas and lowering rates for "Little Giant," "single champion," and supply-chain core enterprises; (4)Expanding the scope of export credit insurance and subsidizing short-term insurance premiums; (5)Exploring domestic trade insurance mechanisms for export-oriented industries; (6)Establishing renewable loan programs for high-tech exporters; (7)Creating a seven-party coordination mechanism involving customs, border inspection, maritime authorities, ports, railways, local governments, and enterprises to strengthen "port–corridor–industry" integration.

5.3 Implementing an Innovation-Driven Development Strategy to Overcome Trade Barriers

5.3.1 Fostering Integrated Technological Innovation

Zhejiang should build a full-chain innovation system linking basic research, applied development, and industrial transformation. This system should combine government guidance, enterprise investment, and social capital participation, forming a diversified innovation ecosystem. Key actions include: (1)Empowering enterprises as the main innovation actors; (2)Cultivating innovation-oriented entrepreneurs and engineers aligned with industrial needs; (3) Establishing a "talent → technology → project → capital → industrialization" pathway; (4)Encouraging a "problem-driven, market-evaluated" approach through the mechanism of "enterprise proposes—research institutions solve—market validates". Zhejiang should also promote pilot programs for new technologies, products, and applications, accelerating the scaling-up of signature innovations.

5.3.2 Targeting Core Technological Breakthroughs

Focusing on Zhejiang's export-competitive sectors—such as automotive components, textiles and apparel, and photovoltaic energy storage—the province should prioritize breakthroughs in key technologies, core components, and major innovative products. In the automotive sector, establish innovation consortia for intelligent and new-energy vehicle systems, localize key materials such as carbon-fiber composites and high-nickel cathode materials, and tackle "bottleneck" technologies. In the textile sector, focus on new fiber materials, functional textiles, and smart manufacturing equipment, and pursue breakthroughs in high-performance fibers (e.g., 48K+ carbon fiber, T1100/M65J-grade aramid, high-modulus polyethylene, and bio-based fibers such as PLA and lyocell). Promote green design and expand the use of colored-doped, recycled, and bio-based fibers to support emission reduction. Encourage leading firms to form innovation alliances to transition from product-based exports to solution-oriented, full-value-chain services. These efforts will strengthen Zhejiang's position in the global value chain by fostering technology-driven and environmentally sustainable competitiveness.

5.4 Participating in International Rule-Making to Evolve from a "Follower" to a "Leader"

5.4.1 Engaging in International Standards Development

Zhejiang should take a proactive role in shaping international standards for green trade and low-carbon products, leveraging platforms such as BRICS, G20, and APEC to promote cooperation in green technologies and supply-chain sustainability. Local enterprises, industry associations, and research institutions should participate in the formulation of harmonized carbon and environmental data standards, enhancing the global credibility and interoperability of Zhejiang's export products.

5.4.2 Building a Product Carbon Footprint Management System

The province should develop provincial-level standards for product carbon accounting and align them with national and international frameworks. Priority sectors include textiles and apparel, biomedicine, photovoltaics, new energy vehicles, electromechanical products, paper, furniture, and agricultural goods. Zhejiang should establish a provincial carbon footprint service platform that integrates certification, registration, issuance, and supervision, providing services in carbon accounting, labeling, disclosure, and green finance. This system would enable enterprises to reduce costs, improve efficiency, and facilitate their green and low-carbon transition.

5.4.3 Strengthening Certification and Compliance Governance

Given the diversity of international certification systems—especially regarding carbon emissions, chemical use, and pollutant control—government agencies and industry associations should enhance guidance, transparency, and compliance support. Measures include: (1)Regularly publishing updated certification standards by export destination; (2)Encouraging certification bodies to pursue mutual recognition agreements with international counterparts; (3) Implementing a credit-based supervision mechanism for certification professionals; (4)Imposing dual penalties for falsified reports and ensuring strict confidentiality of export certification data. Through these initiatives, Zhejiang can strengthen the integrity and reliability of its international trade certification ecosystem.

6 Conclusion

Over the course of its development, Zhejiang Province has undergone three distinct phases of transformation—from labor-cost-driven growth, to the rise of cross-border e-commerce, to the integration of digital trade and advanced manufacturing. Looking forward, Zhejiang's high-quality development of export-oriented enterprises should continue to follow a four-pillar strategy of investment expansion, institutional innovation, technological empowerment, and global rule participation.

This approach will not only enable Zhejiang to navigate short-term external shocks but also build long-term, green, and innovation-based competitiveness. More broadly, Zhejiang's experience offers a replicable model for other regions in China—and for developing economies worldwide—seeking to achieve coordinated progress between economic growth and sustainable transformation.

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