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The Driving Mechanism and Implementation Path of New Quality Productivity for the High-quality Industrial Development in the Guangdong-Hong Kong-Macao Greater Bay Area

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Abstract: The Guangdong Hong Kong Macao Greater Bay Area is currently in a critical period of high-quality industrial development, and urgently needs to develop new quality productivity to stimulate new growth potential. New quality productivity involves multiple production factors such as technology, data, labor, and capital, which work together to drive high-quality industrial development in the Guangdong Hong Kong Macao Greater Bay Area. We should strengthen technological innovation, leverage the role of data, attach importance to talent cultivation and introduction, and enhance financial empowerment, taking multiple measures to provide strong support for the high-quality development of industries in the Guangdong Hong Kong Macao Greater Bay Area.

Keywords: New Quality Productivity; High Quality Development; Guangdong-Hong Kong-Macao Greater Bay Area; Driving Mechanism; Implementation Path.

1. Introduction

In January 2024, General Secretary Xi Jinping delivered an important speech during the 11th collective study session of the 20th Political Bureau of the CPC Central Committee, providing a systematic exposition on the theoretical essence and developmental requirements of new-quality productive forces. Xi emphasized that new-quality productive forces represent a comprehensive integration of technological innovation, digital transformation, and optimized labor factors, marking a new phase in China's modernization and serving as the core driving force for high-quality economic development. Advancing these forces requires achieving revolutionary technological breakthroughs, generating a multitude of original and disruptive innovations, and attaining high-level self-reliance and strength in science and technology. The directive to "vigorously promote the development of a modern industrial system and accelerate the growth of new-quality productive forces" has become a clear national strategy. Amid the currents of globalization and regional economic integration, this strategy not only enables China to seize opportunities presented by technological revolutions and industrial transformations but also constitutes a pivotal measure for addressing profound changes in the global political and economic landscape.

The Guangdong-Hong Kong-Macao Greater Bay Area, with its exceptional geographical location, concentration of talent, and open economic system, has emerged as a globally recognized hub for development [1]. Facing the challenges and opportunities of the new era, the region is at a critical juncture for high-quality industrial development and urgently requires the infusion of new-quality productive forces to unlock fresh growth potential. The cultivation and advancement of these forces hold profound theoretical and practical significance for optimizing the regional economic structure, enhancing industrial chain competitiveness, and achieving sustainable development.

2. Current Status of Industrial Development in the Guangdong-Hong Kong-Macao Greater Bay Area

2.1. The Greater Bay Area has a Solid Foundation for high-quality Industrial Development

The Guangdong-Hong Kong-Macao Greater Bay Area, with its open economic system and robust developmental vitality, has become a pivotal cornerstone of the nation's modernization strategy. The "Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area" clarifies its pivotal role as a world-class urban cluster and an international center for scientific and technological innovation, as well as its exemplary function in the Belt and Road Initiative and in deepening cooperation between the China’s mainland and Hong Kong and Macao. In 2023, the GDP of the Greater Bay Area reached 14 trillion yuan, accounting for 11% of the national GDP, with Shenzhen and Guangzhou leading at over 3 trillion yuan each, followed closely by Hong Kong, Foshan, and Dongguan, all exceeding one trillion yuan. By the end of 2022, the population of the Greater Bay Area stood at 86.4397 million, representing approximately 5.99% of China's total population. Its abundant employment opportunities and superior business environment provide talent and market support for driving high-quality industrial development through new forms of productivity.

2.2. Building a Modern Industrial System for the Guangdong-Hong Kong-Macao Greater Bay Area

The Guangdong-Hong Kong-Macao Greater Bay Area is significantly enhancing its international competitiveness in high-end manufacturing and technological innovation by establishing a modern industrial system. Centered around Hong Kong, Shenzhen, and Guangzhou, the region is driving financial system innovation and digital infrastructure development, providing technological support for economic digital transformation while advancing intelligent manufacturing and green development[1]. New-quality productive forces, serving as a new engine for industrial growth in the Greater Bay Area, accelerate the intelligent transformation of industries and the upgrading of traditional sectors. The national innovation-driven development strategy offers solid support for the region's industrial transformation and high-quality economic growth. During regional integration, the free flow and optimal allocation of resources, talent, and technology have strengthened the Greater Bay Area's influence in global economic governance. The digital economy holds a central position in the region's industrial development, with its thriving digital ecosystem fostering an open and integrated industrial landscape that drives the transformation of manufacturing value chains. Concurrently, the Greater Bay Area prioritizes green and low-carbon development, adjusting its industrial structure, building a clean energy system, and promoting sustainable urban-rural transportation[2]. To leverage the driving force of new-quality productive forces, the region must focus on overcoming critical "bottleneck" technologies, enhancing supply chain stability, improving specialized industrial park infrastructure and network systems, strengthening professional service institutions for cluster enterprises, optimizing sales and distribution networks, and refining industry-academia-research collaboration mechanisms. These measures will collectively propel the Greater Bay Area's industrial upgrading and high-quality economic development.

3. The Driving Mechanism of New Quality Productivity in Empowering High-Quality Industrial Development in the Guangdong-Hong Kong-Macao Greater Bay Area

The new-type productive forces encompass multiple production factors—including technology, data, labor, and capital—that are interconnected and mutually influential, playing a pivotal role in regional development. These forces encompass dimensions such as specialized talent, technological innovation, digitalization, intelligentization, infrastructure, green development, and financial empowerment. Specifically, specialized talent supports technological innovation, which drives digitalization and intelligentization; these advancements enhance infrastructure, which in turn facilitates green development; and green development, coupled with financial empowerment, mutually reinforce each other, collectively propelling the development of the Guangdong-Hong Kong-Macao Greater Bay Area. Industrial transformation and upgrading involve new manufacturing models, innovative services, and emerging business formats[3]. New manufacturing gives rise to new services, and together they foster new business models that synergistically drive industrial upgrading. High-quality development is measured by economic growth, social welfare, ecological sustainability, innovation, coordinated development, and openness—all of which interact to elevate the region's industrial standards. To achieve this goal, an innovation-driven development strategy is implemented through comprehensive measures, leveraging the new-type productive forces to accelerate industrial transformation and ultimately foster high-quality development across the Guangdong-Hong Kong-Macao region.

3.1. Innovation-driven by Science and Technology

Technological innovation serves as the core driving force for enhancing the development of new-quality productive forces. While increasing R&D investment, it is essential to raise the proportion of such investment to encourage and support the growth of high-tech enterprises. Cultivating and attracting talent provides robust human capital support for technological innovation, enabling professionals to play a pivotal role in advancing scientific and technological progress. This approach not only boosts the number of patents and improves output quality but also promotes digital and intelligent development, thereby further elevating new-quality productive forces.

3.2. Data as a Driving Force

Data plays a pivotal role in the development of new-quality productive forces. Promoting data marketization and enhancing data collection, organization, and analysis will improve data quality and usability. By facilitating the widespread adoption of digital payments, increasing the penetration rate of digital devices, and expanding information network coverage, we can achieve efficient data circulation and sharing. This, in turn, optimizes production processes, boosts productivity, and drives industrial digital transformation, providing robust support for the advancement of new-quality productive forces.

3.3. Drive by Talent Factors

Talent is the key element in advancing new-quality productive forces. Building on the optimization of the educational environment and improvement of educational quality, more high-caliber professionals should be cultivated as the primary objective, enabling the formulation of more attractive talent policies. While attracting top-tier talent to contribute to the development of the Guangdong-Hong Kong-Macao Greater Bay Area, emphasis must be placed on enhancing both the quantity and quality of skilled workers, intensifying vocational training programs, and elevating laborers' competencies to meet the demands of new-quality productive forces. Regarding talent development, continuous efforts should focus on optimizing the educational ecosystem, improving educational standards, and steadily accumulating and enhancing the pool of high-caliber professionals—thereby providing sustained momentum for technological innovation and fostering the sustained growth of new-quality productive forces.

3.4. Capital as a Driving Force

Financial empowerment plays a pivotal role in advancing new-quality productive forces. It is essential to expand the

scale of financial markets and broaden the coverage of financial services to empower the real economy; enhance the application of financial technology to improve the efficiency and security of financial operations; foster market synergy through financial empowerment to promote industrial and innovation collaboration, thereby optimizing resource allocation; and simultaneously establish a green finance mechanism grounded in sustainable development to provide enduring financial support for the growth of new-quality productive forces.

4. Implementation Pathways for High-Quality Industrial Development in the Guangdong-Hong Kong-Macao Greater Bay Area Based on New Quality Productivity

Strengthening technological innovation, leveraging the role of data, prioritizing talent cultivation and recruitment, and enhancing financial empowerment provide robust support for comprehensively advancing the development of new-quality productive forces, thereby facilitating high-quality industrial growth in the Guangdong-Hong Kong-Macao Greater Bay Area. The region's high-quality industrial development should also adopt corresponding implementation strategies tailored to these production factors [4].

4.1. Technological Innovation and Application

Increase R&D investment and allocate special funds to direct capital toward key technological sectors. In recent years, the Guangdong-Hong Kong-Macao Greater Bay Area has significantly enhanced its research and development spending, with Guangdong's R&D expenditure ranking first nationwide for seven consecutive years and reaching 441.2 billion yuan in 2022. Efforts should be made to promote industry-academia-research collaboration, establish innovation alliances, improve benefit-sharing mechanisms, and strengthen technological innovation platforms to foster new industries, business models, and growth drivers. Further intensify policy support for scientific and technological innovation, enhance intellectual property protection, and create a favorable entrepreneurial environment. Additionally, introduce relevant tax incentives and fiscal subsidies to provide robust support for innovation across multiple dimensions.

4.2. Digital and Intelligent Transformation

Formulate development strategies to advance corporate digital transformation, foster new business models, and strengthen digital infrastructure. Simultaneously, optimize traditional infrastructure, deploy new infrastructure, and accelerate the digital transformation of small and medium-sized enterprises, thereby establishing a robust digital ecosystem to adapt to the evolution of modern productive forces.

4.3. Talent Development and Recruitment

Establish a talent cultivation system with distinctive characteristics of the Guangdong-Hong Kong-Macao Greater Bay Area, integrate educational resources, and promote collaborative school-enterprise training for interdisciplinary professionals. Given the severe shortage of high-end talents in intelligent manufacturing—China's new generation of information technology professionals will face a gap of 9.5 million by 2025, while the shortage of skilled CNC machine tool and robotics experts will reach 4.5 million—it is imperative to implement customized training programs, optimize talent recruitment policies, and enhance international talent exchanges to meet industrial demands.

4.4. Financial Innovation and Support

Reforms in key financial sectors of the Guangdong-Hong Kong-Macao Greater Bay Area are deepening continuously, with relevant financial policies being consistently introduced and the cross-border payment environment steadily optimized. This momentum should be leveraged to further advance financial innovation and support measures, thereby better enabling finance to empower the real economy, strengthen capital markets, and enhance risk prevention and control.

4.5. Strengthen Industrial Synergy and Promote High-level Opening-up

Strengthen industrial synergy and clustered development, foster industrial clusters, promote the upgrading of industrial chains, avoid homogeneous competition, enhance inter-city industrial division of labor and collaboration, boost international industrial competitiveness, and facilitate the optimization and upgrading of industrial structures. Adhere to high-level openness, proactively participate as an active contributor in the Belt and Road Initiative, intensify international cooperation and technological exchanges, increase efforts to attract foreign investment, elevate the level of opening-up, expand cooperation prospects, support enterprises in their transnational operations, and thereby enhance national competitiveness [5].

5. Conclusion

The innovation-driven development strategy has provided strong support for the industrial sector in the Guangdong-Hong Kong-Macao Greater Bay Area to achieve high-quality development. As a pioneer in innovation, the Greater Bay Area boasts a robust industrial foundation and exceptional innovation capabilities, with its high-tech enterprises and patent applications ranking among the highest nationwide. New-quality productive forces, serving as the core driver for industrial transformation and upgrading in the region, encompass technological innovation, digital transformation, talent development, and financial empowerment, playing a pivotal role in optimizing the regional economic structure and enhancing industrial chain competitiveness. As a new engine for economic growth in the Greater Bay Area, new-quality productive forces propel industries toward higher quality and greater efficiency. Through sustained technological innovation and coordinated development, the region is poised to secure a more advantageous position in the global economy, becoming a demonstration zone for leading high-quality development in China and even the world economy, and a powerful embodiment of the Chinese path to modernization.

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