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BOTTLENECKS IN CHINA'S ECONOMIC GROWTH: ANALYZING THE POSSIBILITY OF THE MIDDLE-INCOME TRAP

This article aims to explore the main bottlenecks of China's economic growth, analyze whether there is a risk of falling into the middle-income trap, and propose corresponding policy recommendations. Firstly, the theory and definitions related to the middle-income trap are reviewed. Secondly, the successes and failures of middle-income countries globally are analyzed to draw lessons. Subsequently, China's actual development situation is assessed. Finally, policy recommendations to avoid the middle-income trap are proposed.

Keywords: Economic Growth Model; Middle-Income Trap; Gross Domestic Product (GDP); Independent Innovation; Deepening Reform.

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УЗКИЕ МЕСТА В ЭКОНОМИЧЕСКОМ РОСТЕ КИТАЯ: АНАЛИЗ ВОЗМОЖНОСТИ ВОЗНИКНОВЕНИЯ ЛОВУШКИ СРЕДНЕГО ДОХОДА

Целью данной статьи является исследование основных узких мест экономического роста Китая, анализ риска попадания в ловушку среднего дохода и предложение соответствующих рекомендаций по политике. Во-первых, рассматриваются теория и определения, связанные с ловушкой среднего дохода. Во-вторых, анализируются успехи и неудачи стран со средним доходом во всем мире для извлечения уроков. Затем оценивается фактическая ситуация развития Китая. Наконец, предлагаются рекомендации по политике, чтобы избежать ловушки среднего дохода.

Ключевые слова: модель экономического роста; ловушка среднего дохода; валовой внутренний продукт (ВВП); независимые инновации; углубление реформ.

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I. INTRODUCTION

Since the initiation of reforms and opening-up in 1978, China's economy has not only maintained long-term stability in its growth rate but has also achieved remarkable accomplishments in structural adjustment, industrial upgrading, and technological innovation. The data in the chart below, sourced from the China Statistical Yearbook, reflects the situation of China's Gross National Income (GNI) and Gross Domestic Product (GDP) from 1978 to 2023.

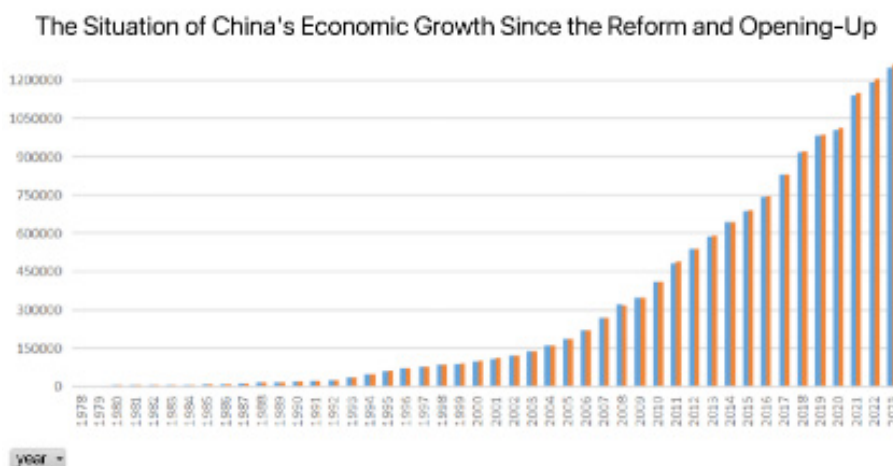


Fig. 1. The situation of China's economic growth since the reform and opening-up.

As illustrated in the chart, except for the slowdown in economic growth in 2020 due to the impact of the global COVID-19 pandemic, China's economy has consistently experienced rapid growth. The country's GDP has surged from 367.87 billion yuan in 1978 to 126.05821 trillion yuan. Although China's economy has transitioned from a phase of high-speed growth to one of high-quality development, recent years have seen the emergence of bottlenecks such as overcapacity, insufficient effective demand, external environmental uncertainties, rising unemployment rates, and an aging population. Consequently, the question of whether China will fall into the middle-income trap and how to overcome it has become a topic worthy of exploration.

II. THE THEORY OF THE MIDDLE-INCOME TRAP

1. DEFINITION OF THE MIDDLE-INCOME TRAP

The concept of the "Middle-Income Trap" was first introduced in the World Bank's *East Asian Development Report (2006)*. It refers to a situation where a country, leveraging certain advantages (such as natural resources or population), achieves rapid economic growth, raising its per capita income to a certain level, but then remains stagnant at that level for an extended period [1, p. 210].

2. DELINEATION OF THE MIDDLE-INCOME TRAP

In the 1989 fiscal year, the World Bank established a classification system for countries based on per capita national income. This system categorizes countries into four income levels: low-income, lower-middle-income, upper-middle-income, and high-income. This classification helps to more accurately understand and assess the economic conditions of different countries and regions globally. Generally, low- and middle-income countries are referred to as developing countries, while high-income countries are considered developed. However, there is still no consensus on the precise definition of the middle-income trap. To date, the widely accepted view is that the middle-income trap is a phenomenon predominantly observed in middle-income countries that have experienced rapid growth. It is characterized by a slowdown in growth, which gradually evolves into a persistent and difficult-to-escape cycle, potentially leading to a vicious circle [2, p. 103].

3. EXAMINING CHINA'S ECONOMY FROM A THEORETICAL PERSPECTIVE

Structuralist economics emphasizes the importance of economic structures, positing that industrial structure, regional structure, and social structure determine economic development. Development economics, on the other hand, views technological innovation as a key driver of sustained economic growth. Over the past few decades, China's industrial structure has undergone profound changes. However, with continued economic development, challenges such as rising labor costs and difficulties in overcoming technological bottlenecks have become increasingly apparent. While China does face challenges in its economic development, such as insufficient innovation-driven growth and significant urban-rural income disparities, it is not accurate to conclude that China has already exhibited the typical characteristics of the middle-income trap.

III. THE POSSIBILITY OF CHINA FALLING INTO THE MIDDLE-INCOME TRAP

In the vast global economic landscape, some countries have successfully crossed the threshold of middle-income and entered a new era of prosperous development; while others remain trapped like ships lost in the fog, unable to break through that invisible barrier, stagnating in the middle-income trap.

1. ANALYSIS OF REASONS FOR FALLING INTO THE MIDDLE-INCOME TRAP

Some countries in Latin America and Southeast Asia have fallen into the middle-income trap. After experiencing rapid economic growth, their income levels have stagnated for several decades, and they have been unable to cross the \$15,000 mark to become developed countries.

CASE STUDY: ARGENTINA

The typical representative from the Latin American region is Argentina. In the late 1990s, Argentina's per capita GDP exceeded \$8,000, but in 2002 it dropped to just over \$2,000. By 2023, the country's per capita GDP was \$13,730.5, still not crossing the middle-income trap threshold or achieving developed status. This stagnation can be traced back to Argentina's initial strategy of import substitution during industrialization, where it failed to timely transition its development model. Even after the oil crisis in the early 1970s, it sustained a policy of "debt-driven growth", prolonging the import substitution strategy for half a century [3, p. 24].



Fig. 2. Argentina's GDP per capita curve.

CASE STUDY: MEXICO

Mexico, as another case, had a per capita GDP of \$1,000 in 1973, qualifying it as an upper-middle-income country. Fast forward fifty years to 2023, Mexico's per capita GDP was \$13,926.1, keeping it within the upper-middle-income bracket. After the debt crisis of 1982, maintaining low inflation became a key goal for successive Mexican governments. To combat inflation, the government pegged the peso to the dollar as a "nominal anchor" for its monetary policy [4, p. 50], leading to an overvaluation of the peso. This monetary misstep contributed to Mexico's entrapment in the middle-income trap.



Fig. 3. Mexico's GDP per capita curve.

CASE STUDY: MALAYSIA

In the Southeast Asian region, Malaysia serves as another representative. In the early 1980s, its per capita GDP already surpassed \$1,000, but it has not achieved a breakthrough after nearly four decades, with a per capita GDP of only \$11,648.7 in 2023. Malaysia's economy heavily relies on foreign trade and tourism, showing insufficient development in manufacturing, with a lack of competitiveness and resilience, struggling to overcome bottlenecks in technological innovation.



Fig. 4. Malaysia's GDP per capita curve.

2. LESSONS FROM SUCCESSFUL COUNTRIES

Many countries have successfully transcended the middle-income trap. Japan is a typical case; in 1972, its per capita GDP neared \$3,000, and by 1984, Japan had successfully broken through the \$10,000 barrier. This was due to Japan's focus on increasing residents' income and implementing the "National Income Doubling Plan", which resulted in significant wage increases for workers, activating the market and prompting firms to expand production; this created a virtuous cycle that doubled both national production and income. Japan also prioritized industrial upgrading and technological innovation, effectively transitioning its main industries from traditional sectors to high-end sectors, completing the shift from light industry to heavy industry, and then to high-tech industries.

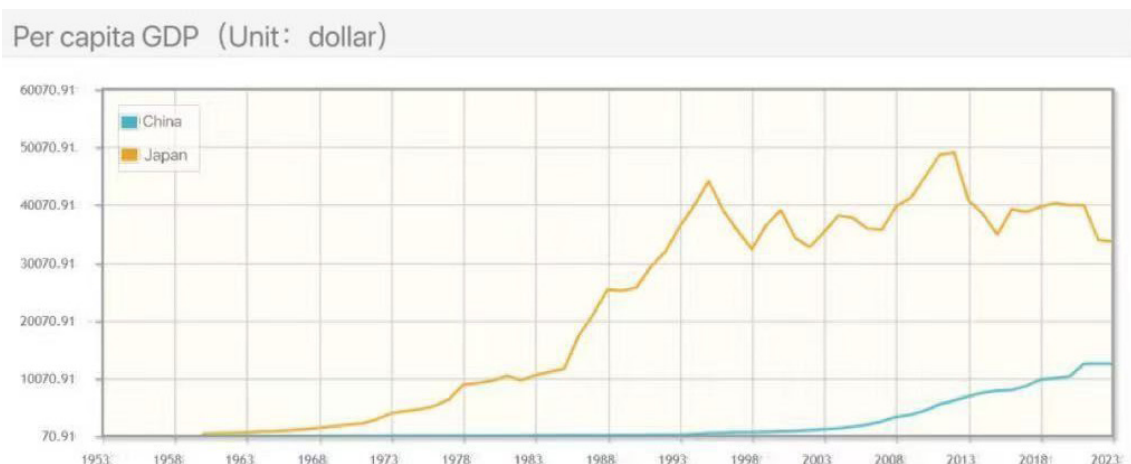


Fig. 5. Comparison of Historical GDP per Capita Data between China and Japan.

Korea serves as another exemplary case. By 1987, Korea's per capita GDP exceeded \$ 3,000, reached \$ 11,469 by 1995, and soared to \$ 28,101 by 2014, successfully entering the developed nation ranks. Korea adopted a government-led growth model, fostering large-scale investments and infrastructure development while encouraging market openness and private sector investment and consumption. For instance, many startups in Seoul's entrepreneurial hubs receive support from both the government and social capital, encouraging exploration in new fields, which enabled Korea to innovate and upgrade its industrial structure, successfully crossing the middle-income trap.



Fig. 6. Comparison of Historical GDP per Capita Data between China and Korea.

China has implemented a combination of investment-driven, consumption-driven, export-oriented, and innovation-driven economic growth models. China can learn from Korea's government-led economic growth approach, strengthening industrial policy guidance and coordinating resource allocation. Chinese state-owned enterprises play a crucial role in technological innovation, while Japan emphasizes the importance of large private enterprises like Toyota and Honda as main drivers of innovation. Adapting these valuable experiences can benefit China's economic growth.

3. ASSESSING THE POSSIBILITY OF CHINA FALLING INTO THE MIDDLE-INCOME TRAP

Looking at China's economy, the three major industries have undergone significant transformations since the reform and opening-up era, experiencing remarkable growth especially in the industrial and service sectors. These sectors have expanded not only in scale but also in quality and efficiency, becoming the main engines driving economic growth.

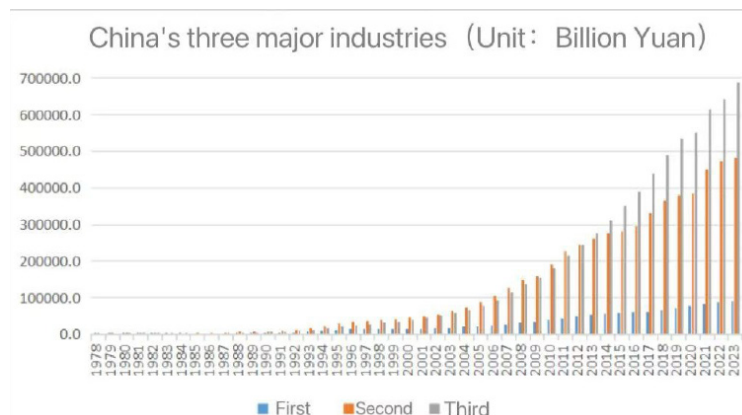


Fig. 7. China's three major industries.

From the perspective of GDP composition, agriculture, as China's largest industry, has seen a continuous decline from 27.7% in 1978 to 7.1% in 2023. The industrial sector has experienced a slight decline as well, while the service sector's contribution has significantly risen from 24.6% in 1978 to 54.6% in 2023, contributing 60.2% to GDP. The trend in industrial structure shows that by 2019, the ratio of value added by the three sectors stood at 7.1:39:53.9, and it is projected that in the "14th Five-Year Plan" period, the shares of agriculture and manufacturing will continue to decline while services will increase. According to models, by 2025, this ratio is expected to adjust to 5:30:65, and by 2035 further to 4:26:70 [5, p. 10]. This indicates that the service sector is increasingly replacing agriculture and industry, taking a dominant position in economic development.



Fig. 8. Composition of gross domestic product

China emphasizes sustainable development, with agriculture moving towards modernization and automation. By introducing advanced technologies and management practices, the nation is improving production efficiency and product quality while ensuring food security. Increased investment in technology and human capital is accelerating industrial transformation, progressively advancing toward high-end development. In 2023, total R&D investment reached approximately 3.3 trillion yuan, accounting for 2.6% of GDP. The service sector continues to evolve through digital transformation and innovative service models to meet consumers' diverse and personalized needs, becoming a vital component of the national economy and a primary engine of growth. Thus, China's industrial structure is expected to show a gradual decline in the share of agriculture, a greater focus on green and technological development, and a continuous rise in the share of the service sector.

Additionally, China is narrowing the income gap between urban and rural residents, expanding the middle-income group, and achieving a comprehensive victory in poverty alleviation. Notably, since the 18th National Congress, supported by major national strategies such as supply-side structural reform and innovation-driven development, China's economic development has achieved significant advancement.

However, China currently faces many challenges. As of 2023, the proportion of the population aged 56 and older has reached 15.4% of the total population, with severe aging in Northeast China and a significant outflow of young labor. This has led to a heavy aging society. The long-term economic zones also experience high aging levels; although the registered population is older, an influx of young labor helps maintain a lower overall support

ratio. Conversely, provinces like Guangdong, with a lower percentage of the elderly, benefit from a significant presence of young migrant workers. Regional differences indicate that population aging may lead to labor shortages, declines in productivity, reduced innovation capabilities, and increased social security and healthcare costs. China also faces insufficient impetus for technological progress, heightened external risks, and considerable pressure for economic transformation and upgrading.

According to the World Bank, in 1997, China's national production value reached \$105.54 billion, with a per capita income of \$860, marking its first escape from the “low-income country” status into the “middle-income country” category. However, as of now, China still remains a middle-income country with a per capita GDP of approximately \$12,700, yet to cross the \$20,000 threshold to become a developed country. Whether China may fall into the “middle-income trap” is a question vital for the nation’s future, with no absolute “yes” or “no” answer. The risks and opportunities co-exist, and the key lies in how to effectively leverage strengths and address weaknesses. If the country can accurately seize and fully utilize favorable conditions and adopt effective strategies, it will be capable of crossing the “middle-income trap”; conversely, failure to properly address challenges may result in stagnation.

IV. STRATEGIES TO AVOID THE MIDDLE-INCOME TRAP

1. NEOCLASSICAL GROWTH MODEL.

We can adopt the neoclassical growth model, also known as the Solow Growth Model, to analyze the core factors of economic growth. This model is based on a framework of neoclassical production equations, emphasizing the roles of savings, population growth, and technological advancement in driving growth, focusing on direct causes of economic growth [6, p. 30].

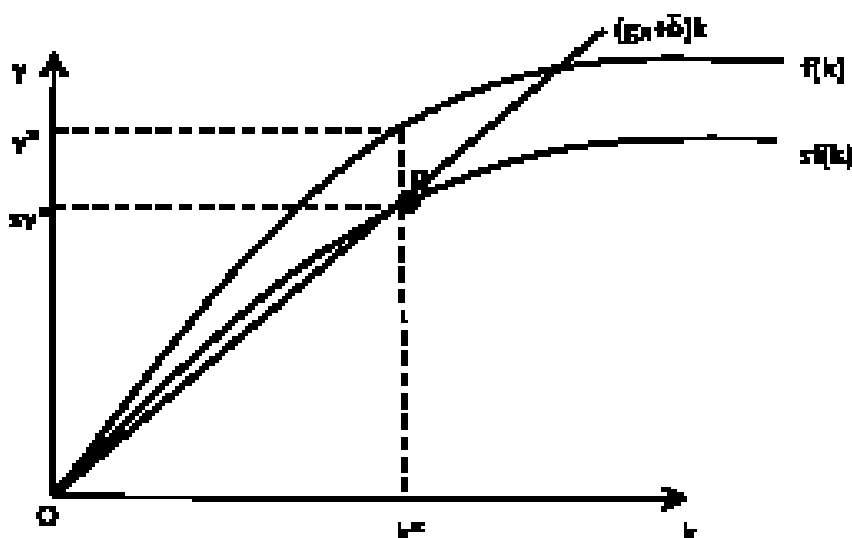


Fig. 9. Steady State in the Neoclassical Growth Model.

The basic equation of the neoclassical growth model is $sf(k) - (gN + \delta)k$, which indicates that the change in per capita capital equals per capita savings minus capital depreciation. In a no-technological-advancement scenario, the steadiness condition of the model is $sf(k) = (gN + \delta)k$. If the capital stock deviates from the steady state, over time it will tend to return to that steady state.

2. FACTORS INFLUENCING GROWTH RATE OF PER CAPITA OUTPUT.

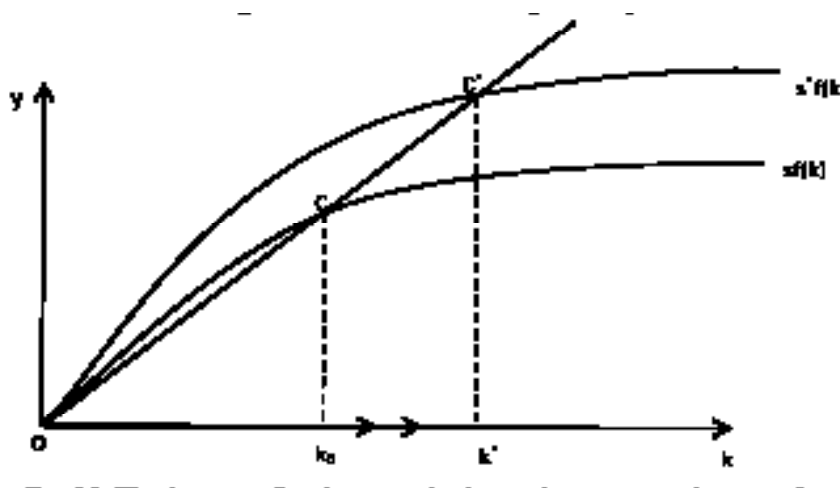


Fig. 10. The impact of an increase in the savings rate on the growth rate of per capita output.

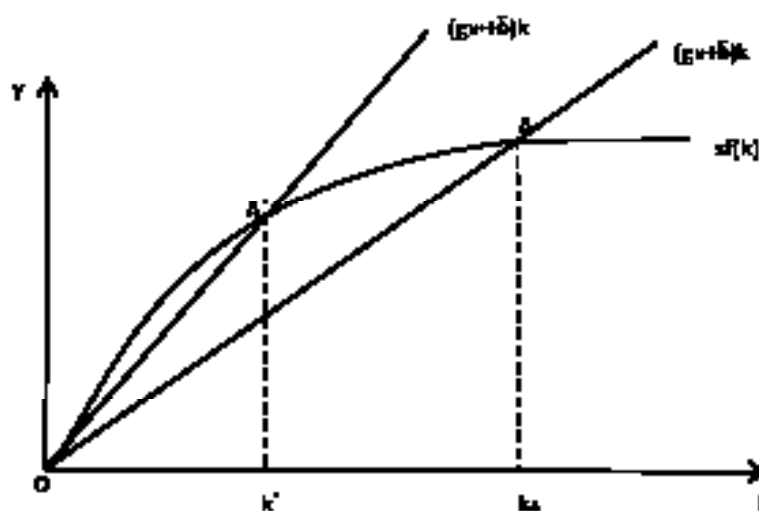


Fig. 11. The impact of population growth on the growth rate of per capita output.

Analysis indicates that an increase in savings rate does not affect the steady-state growth rate but can raise the steady-state level of income. In countries with higher population growth rates, there will typically be lower steady-state levels of per capita capital, leading to lower per capita income levels. Thus, once an economy reaches a steady state, the growth rate of per capita output depends solely on the pace of technological advancement.

3. RECOMMENDATIONS TO PROMOTE CHINA'S ECONOMIC DEVELOPMENT.

Using the neoclassical growth model to analyze China's economy, we note that during the initial phase of reform and opening up, the capital was relatively scarce. High savings rates converted substantial amounts of funds into investments, leading to a continual increase in capital stock and a rise in per capita capital, fueling rapid economic growth. However, as the capital stock accumulates, the law of diminishing marginal returns on capital begins to take effect, indicating that solely relying on capital accumulation cannot sustain long-term economic growth. Technological advancement emerges as the key to sustained economic

growth. While past advancements primarily stemmed from importing foreign technology, the narrowing gap with the world's technology frontiers now makes home-grown innovation the core driver of China's continued economic growth.

Consequently, China should vigorously implement an innovation-driven development strategy. Innovation is the primary driver of development, not only promoting the optimization and upgrading of industrial structure but also encouraging enterprises to increase R&D investment, raising the proportion of R&D investment to sales revenue, supporting the establishment of R&D institutions, engaging in technology innovation activities, and strengthening collaboration with universities and research institutions to enhance competitiveness. Furthermore, the government should increase its R&D investment target as a proportion of GDP, guiding social capital towards technological innovation sectors.

President Xi has emphasized the need to build a high-level socialist market economic system. This involves upholding and perfecting the socialist basic economic system, unwaveringly consolidating and developing the public economy while encouraging and guiding the growth of the non-public economy. Moreover, deepening the reform of state-owned enterprises and optimizing the layout and structure of the state economy are critical tasks aimed at empowering state capital and enterprises, enhancing their core competitiveness, and cultivating a conducive environment for the development of private enterprises [7, p. 1].

China should also focus on the role of the government as a guide, improving macroeconomic governance systems and enhancing the level of macroeconomic control. This entails achieving a balance between an effective market and an active government, while utilizing fiscal and monetary policies to form a coordinated macroeconomic governance system with optimized goals and reasonable segmentation.

Deepening reform is another effective means to promote economic development. Comprehensive deepening of reforms can continuously stimulate societal internal motivation and cultivate new types of productive forces. Additionally, optimizing the business environment and reducing taxes and fees are necessary steps to take. To tackle the severe issue of population aging, China can adopt measures such as raising the retirement age and improving the pension system.

Furthermore, China should strengthen international cooperation. By actively participating in international division of labor and leveraging both domestic and international markets and resources for economic development, the nation can form a comprehensive open novel framework centered around domestic circulation. Enhanced international cooperation allows for better utilization of global resources and markets, driving up export value; actively promoting the Belt and Road Initiative will also support policy communication and coordination, improve trade and investment facilitation mechanisms, deepen financial cooperation frameworks, enhance infrastructure collaboration mechanisms, and strengthen cultural exchange mechanisms in building a community with a shared future for mankind, subsequently better responding to risks and challenges.

V. CONCLUSION AND FUTURE OUTLOOK

Through this analysis, we can summarize that successfully crossing the middle-income stage relies on the collaborative effort of three key components: first, continuously promoting technological advancement, relying on innovation to drive a leap in productivity; second, working towards achieving equitable income distribution to ensure that the benefits of economic development reach the masses; and third, vigorously facilitating the optimization

and upgrading of the industrial structure, transitioning industries towards high-end, intelligent, and green pathways.

In the future, China will continue to promote high-quality economic development by increasing its investment in education and research and development, raising urbanization levels, encouraging mass entrepreneurship and innovation, and creating a conducive economic growth atmosphere. At the same time, attention should also be given to the demands of the middle-income populace by cutting taxes, deepening the reform of social security systems, and lowering living costs through the improvement of public services in education and healthcare to achieve equitable development. Internationally, we should learn from and adapt the beneficial experiences of other nations without rigidly copying them, thereby making continual self-adjustments in pursuit of rapid entry into the ranks of developed nations.

Regarding future research on whether China will fall into the middle-income trap, it may be useful to incorporate more specific industry data or micro-level enterprise analyses to provide targeted recommendations for policy-making.

REFERENCES

1. *Chen Lin, Tao Zhenzhen*. Design of National Security Education in the Intermediate Financial Accounting (I) Course: A Case Study of Shanghai Lixin University of Accounting and Finance [J]. *China Management Informatization*, 2022, 25 (09): 210–213.
2. *Dong Yiyi, Wang Junping, Song Yu*. New Advances in Research on the Middle-Income Trap[J]. *Journal of Xi'an University of Finance and Economics*, 2024, 37 (03): 103–117.
3. Editorial Department of This Journal. The Internal Logic and Future Direction of the L-Shaped Economic Trend [J]. *China Chief Financial Officer*. 2016, (05): 24–29.
4. *Wang Yu*. Pegging System, Balance of Payments Imbalance, and the Peso Crisis [J]. *Southern Finance*. 2014, (10): 50–56.
5. *Wang Yiming*. The Great Changes Unseen in a Century, High-Quality Development, and Building a New Development Pattern [J]. *Management World*. 2020, 36 (12): 1–13.
6. *Zheng Changjun*. *Macroeconomics* [M]. Wuhan University Press.: 2020.10.268.
7. *Xi Jinping*. Hold High the Great Banner of Socialism with Chinese Characteristics and Strive in Unity for the Comprehensive Construction of a Modern Socialist Country [N]. *People's Daily*. 2022–10–26(001).