



Dual Cycle Boosts Regional Industrial Upgrading the Suzhou Experience as an Example

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Abstract. In the context of the “double-cycle” pattern, Suzhou is a typical representative of the outer-cycle economy. Firstly, Suzhou has seized the opportunity to build up technological research and development and to promote interaction and cooperation between regions. Secondly, it has continued to promote key core technological innovations and prioritised the cultivation of new growth poles in the regional economy to feed technological development. Thirdly, it continues to improve policies such as technology subsidies and talent incentives in order to promote the marketisation of technical talent and foster the willingness of talent to develop together with the city. The city has made remarkable achievements in economic development. This paper is an interpretation of the new breakthroughs achieved by Suzhou’s industries in the context of the “double cycle”, summarising the Suzhou experience in the transformation and upgrading of Suzhou’s industries, and providing a model for future industrial upgrading in the Yangtze River Delta region with Suzhou’s characteristics.

Keywords: Double cycle · Regional economy · Industrial upgrading · Suzhou

1 Introduction

Since its accession to the WTO in 2001, China has been deeply involved in the international division of labour and has gradually formed a development model with “two ends out”. However, in recent years, the division of labour in global value chains has suffered an unprecedented impact due to Western trade protectionism, the global “pandemic” and the Russia-Ukraine conflict. In this regard, the seventh meeting of the Central Finance and Economics Commission in 2020 proposed for the first time to “build a new development pattern in which the major domestic cycle is the mainstay and both domestic and international cycles are mutually reinforcing”, and the 20th Party Congress report in 2022 also mentioned “building a unified national market, deepening the reform of factor markets and building a high-standard market system”. Build a high-standard market system”. The “double-cycle” development pattern has long been included in major national strategic decisions.

2 Review of the Literature

The concept of a new double-cycle development model has been proposed for a relatively short period of time and is still being explored in theory. As the central theme of China's development strategy in the new era, scholars at home and abroad have discussed the "double cycle" from different perspectives as follows.

2.1 A Study on the Double and Inner Circle of the Economy

(T. Cooper, 1999), starting from the industrial process, states that the circular economy refers to the idea that goods produced in the production process that have no value after consumption should be used in the production and processing of other products, and that all resources can be involved in the whole production process, thus forming a "circular economy" [1]. (Liusi et al., 2020) suggest that in an environment where China's demographic dividend is gradually disappearing, the new pneumonia epidemic continues to spread, and trade uncertainties with the United States and other countries are increasing, foreign trade demand is declining and industrial demand is shrinking, with overcapacity and ineffective supply in some industries, forcing China to focus more on the role of domestic demand [2]. Under the increasingly uncertain and unstable international political and economic situation, it is important to build on the national strategy and rely on the advantages of China's huge market scale and diversified consumer market to form a double-loop internal market force [3], balancing higher quality supply and more dynamic domestic demand at a higher level (Xuesong Dai, 2021). The new development pattern based on the internal circulation is a major revision of the long-standing development strategy implemented in the past under the conditions of a dramatic change in the domestic and international development environment [4] and is a strategy for strengthening the country with a long-term perspective, rather than a stopgap measure (Wu Xuangong, 2021).

2.2 The Relationship Between the Double Cycle and Industrial Upgrading

The "diamond model" proposed by Michael Porter [5] believes that a country's ability to provide a more complete range of related and supporting industries is the key to winning a competitive advantage. (Li Xuzhang, 2020) pointed out that science and technology is an important factor in maintaining the stability and development of the global industrial chain, and that it is necessary to continuously enhance the capacity of science and technology innovation and accelerate the level of key core technologies [6]. At the same time, make good use of China's institutional advantages, establish a system that can promote core technology research and development, fill the gaps in China's core technology, and better improve the internal circulation industry chain under the double-loop development pattern [7] to add momentum to sustainable development (Li Mang, 2020); on the other hand, the double-loop requires enterprises to make good use of both domestic and international channels to promote the circulation of resources in domestic and international circulation, keep the double-loop On the other hand, the double cycle requires enterprises to make good use of both domestic and international channels to promote the circulation of resources at home and abroad, keep the double

cycle smooth, optimize the business environment by effectively integrating domestic and international resources and “reducing taxes and fees”, so as to achieve a virtuous cycle of improving resource utilization and reducing production costs, enhancing enterprises’ competitive advantages, expanding market share, increasing capital accumulation and increasing innovation [8].

2.3 Short Summary

In summary, I believe that the double cycle is nothing more than and who cycle, the cycle of what the problem, and ultimately bring new opportunities for China’s economic development of high quality. First of all, under the background of the double-cycle policy, local governments have a major opportunity in the layout of industrial investment. Secondly, in the process of international cooperation, it can promote the interaction between domestic resources and international resources by continuously acquiring relevant innovation resources from abroad, and enhance our innovation capacity [9]. In addition, digital technology will also promote industrial upgrading, digital infrastructure and digital consumption. This will be followed by industrial upgrading, which will drive green development and new development opportunities arising from the resolution of structural contradictions in past economic development models. Therefore, RCEP partners, ASEAN, the EU and countries along the “Belt and Road” will be important recycling targets for China. And from the original goods cycle, we will shift to more services, digital economy and e-commerce cycles. The domestic cycle will drive the international cycle, and the international cycle will deepen the domestic cycle, giving new impetus to the Chinese economy and the world economy.

3 New Breakthroughs in Suzhou’s Industrial Upgrading

As the first city in China to rapidly develop an export-oriented economy by introducing foreign investment to drive the export processing industry, Suzhou was once a typical representative of our foreign circular economy model. Since the beginning of the century, Suzhou’s foreign trade dependency has been over 100%, and the proportion of foreign-owned enterprises in Suzhou’s total industrial output has been around 2/3 for a long time, making foreign investment and foreign trade an important part of Suzhou’s economy. However, in the last two years, under the double blow of the global economic downturn and the global “pandemic”, Suzhou’s industrial base has not been weakened but, on the contrary, has shown a strong vitality [10]. Today, Suzhou’s industrial output will exceed RMB 4 trillion by 2021, up 17.2% year-on-year, surpassing Shanghai and falling just short of Shenzhen, while its GDP will grow by 8.7% year-on-year to RMB 2.27 trillion in 2021. Despite the changing domestic and international environment and the decline or even withdrawal of foreign investment inflows, Suzhou has still achieved remarkable economic success, providing a regional model for China, especially the eastern region, to achieve a transformation of its economic model.

3.1 Smooth Inter-regional Circulation

First, promulgate and implement the Suzhou Action Plan of the Outline of the Yangtze River Delta Regional Integrated Development Plan, actively connect with Shanghai’s

science and technology innovation resources, and accelerate the construction of the Xiangcheng Innovation Complex of the Yangtze River Delta National Technology Innovation Centre, the Suzhou Research Institute of the Chinese Academy of Sciences, the Advanced Functional Fibre Innovation Centre, and the Yangtze River Delta Transformation Centre for Advanced Technology Achievements. Secondly, relying on the newly opened Yangtze River Delta Park for the transformation of technological achievements this year, Suzhou (Xiangcheng) Digital Economy Innovation Industrial Park in Shanghai Hongqiao has given full play to the carrier role of other platforms, cooperated with the construction of the industry-linked innovation community, strengthened the innovation collaboration between regional industries, and created a new pattern of collaborative development of Suzhou's industries; finally, Suzhou has provided special support for top talents (teams) in order to promote the flow of talents, with one-person-one-policy and uncapped support. A number of liveable and workable talent communities will be laid out, and 100,000 sets of talent flats and up to 8 million housing subsidies will be provided within three years. At the same time, project funding of up to 50 million and 10 million RMB will be given to the introduction of major innovation teams and leading innovation and entrepreneurship talents. A package of service initiatives is provided around young talents' job-seeking and employment, internship, innovation and entrepreneurship, and the whole life cycle, greatly promoting the integration of talents into Suzhou and their love for Suzhou.

3.2 Two-Way Openness

In 2021, with the approval of the State Administration of Foreign Exchange (SAFE), five capital projects, including cross-border transfer of credit assets, were carried out in Suzhou Industrial Park and Kunshan Golden Reform Zone. Foreign exchange business innovation pilot. At present, they have been fully implemented in Kunshan City, in which 47 enterprises have registered for one-off foreign debts, 5 enterprises have conducted a pilot of foreign debt facilitation quota, 9 cross-border transfers of credit assets have been realised, the integration of local and foreign currencies of multinational companies has been pioneered, Bank of Communications Overseas Chinese Digital Economy Equity Investment Fund has been landed, and the level of cross-border investment and financing facilitation has been effectively enhanced, which greatly facilitates foreign enterprises to increase their capital and The level of cross-border investment and financing facilitation has been effectively enhanced, greatly facilitating the capital increase and reinvestment of profits by foreign-funded enterprises and creating a preferred destination for foreign investment in China.

3.3 Digital Empowerment

Suzhou has gradually accelerated the "double chain integration" of the industrial and innovation chains, with industrial enterprises above the scale investing 77.65 billion yuan in R&D, and 12,764 invention patents granted to enterprises, with major innovations emerging. In addition, Suzhou has more than three-quarters of the water area of Taihu Lake and 8 of the 13 scenic spots in Taihu Lake, with unique mountain and water resources and incomparable ecological conditions. By 2021, the value added of

Suzhou's digital economy core industries will account for 15.4% of the city's GDP, and 10,634 intelligent transformation and digital transformation projects will be implemented, involving 7,153 industrial enterprises. Guidance on the full implementation of the construction of Suzhou's "Science and Innovation Circle around Taihu Lake" and "Wusong River Science and Innovation Belt" was issued to build a "Science and Innovation Circle and Belt" waterfront green corridor for the To provide quality ecological space for the development of digital economy industry innovation clusters in the "Science and Innovation Belt", and to create a poetic habitat where the charm of Jiangnan culture and modern technology meet.

3.4 Create a Highland of Innovation in Industrial Clusters

In 2021, the total output value of Suzhou's regulated industries will reach RMB 4.2 trillion, an increase of RMB 1.33 trillion over 2012, with an average annual growth rate of 4.8%. With 35 major industrial categories, 171 medium industrial categories and 505 small industrial categories, Suzhou is one of the cities with the most comprehensive industrial system in China, and has a strong ability to vertically integrate industrial chains. In the six major industries of electronics and information, equipment manufacturing, metallurgy, textiles, light industry and chemicals, there are two industries with a scale of over trillions. Suzhou is focusing on building 11 advanced manufacturing clusters with internationally advanced and domestic leading comprehensive strength, and industrial development is moving towards the middle and high end. Among them, the scale of Suzhou's artificial intelligence and related industries will reach 103.4 billion in 2021, gathering nearly 1,000 related enterprises, and the total amount of AI-related financing will be about 20 billion. In addition, a number of strategic emerging industry bases and special industry bases including biopharmaceuticals, high-end new materials, aerospace, integrated circuits, information communication and display, high-end medical devices and high-end equipment will be strengthened to build a cutting-edge industrial chain with Suzhou's advantages.

4 "Suzhou's Experience in the Context of the Double Cycle"

Firstly, the double cycle is not a closed domestic cycle, but a dynamic balance between supply and demand at a higher level in both domestic and international markets, relying on the expansion of domestic demand to connect domestic and international markets. On a global scale, most developed countries in the world rely on domestic demand and internal circulation to drive economic development. As a country with a population of more than 1.4 billion and a middle-income population of over 400 million, China has great potential for growth in per capita wealth and the release of domestic demand, and should, under new historical conditions, fully unleash the inherent potential of domestic technology, strengthen independent innovation, and continuously enhance the value of its own industrial chains and supply chains to connect with the domestic and international cycles [11].

Secondly, the foundation of a large domestic cycle lies in the construction of a large national unified market. The goal of accelerating the construction of a large national unified market is to achieve "mini-globalisation" in China's economy, so that the economic

development of all parts of the country will be characterised by a “main functional area” with complementary advantages. The regional economic pattern [12]. Suzhou, based on the international external circulation, is always attentive to the development and changes in the domestic and international markets, is always aware of the requirements of national policies, and is the first to seize the opportunity to reshape the global economic and trade landscape with the “One Road, One Belt” initiative, to build new highlands such as free trade zones and free trade ports, and to build a new system of open economy of higher level and quality.

Thirdly, science and technology is the first productive force. The current constraining problems in the operation of our national economy are mainly focused on the fact that some key areas are still unable to adapt to the needs of the great cycle and industrial upgrading. Therefore, based on the reality, we should establish a unified planning, management and construction of key technological innovation work to break through the “neck” technology bottleneck. A number of “application-oriented” and “specialised” enterprises, universities and research institutions, as well as investment institutions, will be encouraged to work together to promote high-quality regional economic development [13]. This will require each region to break down local protection and regional barriers, while at the same time achieve “point by point” and “intensive” development around its comparative advantages, driving the continuous upgrading of regional industrial advantages.

5 Conclusions

The new development pattern of “double cycle” has provided an important direction for the high-quality development of Suzhou’s regional economy, and the Suzhou experience has been developed in the exploration, which will provide useful inspiration for other cities in China to play a leading role in the internal cycle, promote industrial upgrading and achieve high-quality economic development. In the future, we look forward to promoting cooperation in key areas of the Yangtze River Delta integration and cooperation with countries along the “Belt and Road” in a higher quality manner, and winning more new opportunities for Suzhou’s industrial development.

References

1. Cooper T. Creating an economic infrastructure for sustainable product design[J]. *The Journal of Sustainable Product Design*, 1999, 8(8):7–17.
2. Liu Siwei, Chen Wei, Zhang Junying. Grasping opportunities and highlighting priorities in an effort to promote the formation of a new development pattern of double cycle [J]. *Hunan Social Science*, 2020 (6): 26-34.
3. Xuesong Dai. Understanding of China’s “Double Cycle” Strategic Development in the New Era[J]. *Academic Journal of Business & Management*, 2021, 3(6).
4. Wu Xiangong. New Development Goals, Development Concepts, Development Patterns and New Realm of Political Economy [J]. *Contemporary Economic Research*, 2021(1): 5-7.
5. Michael Porter: National Competitive Advantage, CITIC Press, 2011.
6. Li Xuzhang. Promoting supply chain upgrading of industrial chains with a double-loop pattern [J]. *People’s Forum*, 2020.8:92-94.

7. Li Meng. Strategic significance, main issues and policy suggestions for building a new development pattern of domestic and international double-cycle mutual promotion in the new era[J]. *Contemporary Economic Management*, 2021(1):16-25.
8. Luo Qiannan. Thinking about how to build a double cycle based on the theory of national competitive advantage[J]. *Strait Science and Industry*, 2022, 35(08):52-55.
9. Wang Hao. Research on domestic consumption expansion and upgrading in the context of economic “double cycle”[D]. Tianjin Normal University, 2022. DOI:<https://doi.org/10.27363/d.cnki.gtsfu.2022.001121>.
10. Zhang Ye. From external circulation to double circulation: the transformation of the economic model in coastal areas - the example of Suzhou region[J]. *The Economist*, 2022(08): 43-52. DOI:<https://doi.org/10.16158/j.cnki.51-1312/f.2022.08.005>.
11. Jiao Hao, Zheng Feihu, Li Qian. Promoting breakthrough innovation with the domestic grand cycle as the main body and the dual domestic and international cycles promoting each other[J]. *Secretarial work*, 2020(12):51-52.
12. Ma Wenwu, Miao Ting. The generative logic of China’s economic development dominated by the domestic grand cycle[J]. *Reform and Strategy*, 2021, 37(10):77-85. DOI:<https://doi.org/10.16331/j.cnki.issn1002-736x.2021.10.009>.
13. Wang Q, Liu YAN. Research on the impact of industrial structure upgrading on high-quality economic development: an empirical study from the perspective of “double cycle”[J]. *Journal of Liaoning University (Philosophy and Social Science Edition)*, 2021, 49(03):25-35. DOI:<https://doi.org/10.16197/j.cnki.lnupse.2021.03.004>.

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