China's appropriate catch-up strategy
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Abstract: The development of a country with a large developing country has a greater degree of limitations in its comparative advantage. Over-reliance on comparative advantage will cause China to fall into a "comparative advantage trap." If a comprehensive catch-up strategy is implemented, it will be oversold because of over-selling, leading to economic stagnant. In order to achieve the complementary advantages and disadvantages of the two, the appropriate catch-up strategy was proposed. This paper mainly discusses the appropriate catch-up strategy from the theoretical connotation and mechanism of action to guide China's success in crossing the “middle income trap”.

1. Introduction and review
Since the reform and opening-up, the rapid growth of China's economy has benefited a lot from the implementation of the comparative advantage strategy, but sticking to the comparative advantage will fall into the "comparative advantage trap". The comprehensive catch-up strategy will hinder economic development, The appropriate catch-up strategy is the correct strategy for China's economic development.

Taking the comparative advantage strategy proposed by Lin Yifu as the representative, they believe that the fundamental reason for China's rapid economic development since the reform and opening-up is to implement a comparative advantage strategy. In this regard, many scholars have raised objections and believe that if we fully follow the comparative advantage strategy, China will fall into the "comparative advantage trap." Yang Rudai and Yao Yang (2008) \[1\] proposed that the limited catch-up of product technology in developing countries has a significant positive impact on the growth rate of a country's economy. Stephen Redding (1999) believes that the government's appropriate protection and support for industries with promising prospects can increase the welfare of a country. \[2\] Research shows that as a big country, China must carry out an appropriate catch-up strategy to achieve sustainable development.

2. Comparative Advantage Strategy: Advantages and Traps
The comparative advantage strategy is specifically described as follows: “The most competitive technical structure of a country is determined by the factor endowment structure (capital relative to labor and the abundance of natural resources)”, “The fundamental difference between developing and developed countries lies in the difference in factor endowment structure.” \[3\] Therefore, the backward countries can only catch up with developed countries if they upgrade the factor endowment. The comparative advantage strategy ignores the difference between big powers and smaller nations. The dilemma of adhering to the comparative advantage is as follows: First, Loss development opportunities of potential industries. As shown in Figure 1, Krugman's "Learning by Doing". \[4\] L is the national learning curve for a certain industry. If the cumulative production is Q1, the corresponding unit cost is C1. L1 is another national learning curve with low input costs (such as low wages) but lack of experience. The initial cost C0 is higher than C1. Under free trade, although the latter has potential low cost, as long as the former country enters the industry early enough, the latter country will eventually be unable to enter the market. However, if the latter country properly subsidizes and protects the industry, the product will eventually have a competitive advantage. Second, due to the of capital specificity, Industrial upgrading is difficult. \[5\] This is the
reason of the rapid development of China after more than 30 years, and most industries are still in the low-end. Trade conditions have deteriorated. Third, Facing international political dilemma. Developed countries have adopted anti-dumping measures such as anti-dumping measures against cheap goods of developing countries, and restricted the export of high-end technical equipment to prevent the formation of a competitive landscape.

3. Comprehensive catch-up strategy: advantages and pitfalls

A comprehensive catch-up strategy is to transcend the comparative advantage of the country, invest in the development of advanced technology and emerging industries, equivalent to a future investment behavior. In today's world, the key to a country's economic development lies in industrial upgrading and innovation. Catching up strategy is the necessary way to achieve the path. However, if a country implements comprehensive catch-up, it will also bring the country into trouble. First, the development of industries that do not currently have advantages will inevitably require the government to invest large amounts of capital and subsidize, it will have a high cost. And it will increase market intervention, due to information delay, this excessive intervention will lead to distortion of resource allocation. Second, target industry of comprehensive catch-up strategy is the industry that deviates from the comparative advantage, the development cycle is long, and the income is limited, if only develop advanced industries will cause economic stagnation.

4. Appropriate catch-up strategy

4.1 The connotation of appropriate catch-up strategy

The appropriate catch-up strategy is a combination of the comparative advantage strategy and the comprehensive catch-up strategy. It does not unilaterally abandon either party, but achieves "walking on two legs." Specifically, the development of a country is based on the development of comparative advantage industries, and develop some potential industries with high industrial relationship and strong technology and capital spillovers by various subsidies and the advantages of economies of scale of the great powers. By this means, the national development strategy will eventually achieve technological advance and industrial upgrading.

4.2 Mechanism analysis of appropriate catch-up strategy

First of all, the "appropriate" in appropriate catch-up strategy has two meanings. First, the appropriate catch-up strategy is based on the development of comparative advantage industries. The comparative advantage industry development meets the cut-off point of cost line and the equal
production line, and the cost is minimal. The development of such industries solves the employment problem in the country, provides the driving force for participate in international competition and accumulates the necessary material and human capital for technological innovation and industrial upgrading.\(^7\) Second, the development of the catch-up industry should refer to the comparative advantage of the country, conduct a full cost-benefit analysis of the catch-up industry, and strive to maximize the return of the catch-up selection. The great powers must provide support in taxation, personnel training and facilities, and carry out certain foreign trade protection. So that potential advantage industries can take advantage of the economies of scale of large countries and the learning curve gradually grows into a competitive industry. The development of potential advantage industries simultaneously advance the development of traditional industries through technology, human capital, and demand spillovers. It will eventually achieves upgrade the overall industrial structure. Secondly, the implementation of moderate catch-up in large countries has certain advantages. First, large domestic enterprises are more likely to have large enterprises. Schumpeter believes that large enterprises are the mainstay of innovation \(^8\). Second, the distortion effect of the great powers is small as economies catch up with developed country \(^9\). Third, the huge domestic market is more attractive to foreign investors than smaller nations. In the appropriate catch-up strategy, “effective government” is the key.

**5. Moderately catch up with strategic policy recommendations**

First, Give appropriate trade protection to appropriate catch-up industry, provide software and hardware infrastructure and necessary financial support which match with the to match the appropriate catch-up industries. Second, cultivate human capital that matches the appropriate catch-up industry. Third, sticking to the combination of technology import and independent innovation. In the past three decades, China has made great progress in technology mainly due to technology import and technological imitation from developed countries” \(^10\). But independent innovation is the long-term way.

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**References**

[1] Yang Rudai, Yao Yang. Limited catch-up and economic growth [J]. *Economic Research*, 2008(8):29-41+64.

[2] Redding S. Dynamic comparative advantage and the welfare effects of trade [J]. *Oxford Economic Papers*, 1999, 51(1): 15 - 39.

[3] Lin Yifu, Cai Fang, Li Zhou. China's Miracle: Development Strategy and Economic Reform [M]. *Shanghai: Shanghai People's Publishing House*, 1994.

[4] Paul R. Krugman, Maurice Obersfeld. International Economics [M]. *Huang Weiping translated. Beijing: China Renmin University Press*, 2011.

[5] Cui Yonglie. The double-edged sword of trade and development [J]. *Reading*, 2005 (11): 42-50.

[6] Zhang Qizai, Li Hao. Does industrial policy should follow or violate comparative advantage? [J]. *Economic Management*, 2013, 35 (10): 27-37.

[7] Yu Yongding. Reconstruction of Development Economics—A Comment on Lin Yifu's New Structural Economics[J]. *Economics(Quarterly)*, 2013, 12(03):1075-1078
[8] Schumpeter. Capitalism, Socialism and Democracy [M]. Gu Zhun, translated. Beijing: The Commercial Press, 1979.

[9] Yu Weihua, Qin Botao. The Development Strategy of Big Powers and Comparative Advantages[J]. Forecast, 2006(05):1-5.

[10] Guo Xibao. A New Solution to the Mystery of China's Rapid Economic Growth——From the Perspective of Late-comer Advantages[J]. Academia Monthly, 2009, 41(02):63-71.