Kondratiev Wave: Into the Business Cycle

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Chapter 1

Economic transformation and industrial choice

The Chinese economy in 2006 and in the coming years will inevitably be shaped by two fundamental logics: cycles and transformation. Transformation is a basic characteristic of the adjustment period, so it may well be the essence of the cyclical adjustment period. Based on our research on urbanization and industrialization, China is entering a transitional phase of mid-to-late industrialization, which is actually the period of transformation in economic growth mode mentioned in the "Eleventh Five-Year Plan". The transformation and transitional characteristics of the economy will begin to emerge in early 2006, leading to changes in investment philosophies and profit models.

How should we describe the full picture of China's economic transformation period? Solid conclusions may not yet be drawn from China's current economic trend and the "Eleventh Five-Year Plan". The process of industrialization in different countries should have similarities, which is actually the core issue of developmental economics research. We do not intend to study the causes and inevitability of industrialization here. Instead, we aim to explore the relevance to modern China's development by examining the commonalities in structural changes and characteristics at various stages of industrialized countries. We hope to analyze issues such as leading industry replacement, industrial upgrading, and changes in industrial organization by examining some structural changes during the industrialization transformation period, thereby achieving a meso-level panoramic depiction of the transformation period.

The study of economic transformation is a perspective from afar to nearby. Short-term industrial changes will also be specifically reflected in cyclical changes. Fortunately, we have some conclusions about industry changes during the cycle from peak to trough, and our research on industry rotation during the cycle has been proven effective by the market, which we need to uphold. On this basis, we will combine some meso-level conclusions of the transformation period with short-term cycles to derive specific theories of industrial choice.

Meso-level research is just one step in strategic research. The securities market, as a virtual economy, has its characteristics. We realize that the starting point of the prosperity of China's virtual economy is imminent, but the stock market has not yet deeply experienced this due to institutional reasons. Thus, the second step in strategy is to complete the research on the relationship between the virtual economy and the real economy and the independence of the virtual economy. Although the essence of the economic transformation period is economic recession, which will greatly inhibit the prosperity of the stock market, we believe that market activity can be expected as the

starting point of the prosperity of China's virtual economy.

As already indicated, our report will mainly answer two questions. The first is the issue of industrial choice during the industrialization transformation period. We strive to answer hot topics, but more importantly, basic configuration issues. We believe this is more important and feasible for investment. The other issue is to answer the market trend question, which is our goal here.

Chapter 2

Principles of Industrial Choice During Economic Transformation Period

The change in industrial choices will not be sudden. Industry will develop in a diversified manner, but it will inevitably be linked to previous leading sectors. In the process of the economy moving towards mature sectors, which sector will become the dominant one depends not only on technological conditions but also on the nature of resource endowment, the nature of the take-off stage, and the forces that drive the take-off. — Rostow

Our research objective has been clear from the beginning. The current economic cycle in China is an adjustment period following the severe expansion of fixed asset investment. The intense expansion of fixed asset investment is a common characteristic of industrialized countries in the take-off stage of industrialization. Since the take-off period of industrialization generally spans 20 years, during the intense expansion of fixed asset investment, there will also be several distinct cycles, which are mid-term cycles. Juglar, in his book "Commercial Panics and Their Periodical Recurrence in France, England, and the United States", studied the changes in industrial equipment investment in countries like Britain, France, and the United States, and discovered a 9-10 year cyclical fluctuation. Therefore, the Juglar cycle is also known as the equipment investment cycle. This investment-based cycle becomes very apparent during the rapid growth phase of industrialization.

Based on research into the economic cycles of China following the reform and opening-up, China has experienced two 9-year mid-cycles since 1981. If the current economic cycle is considered to have started in 1999, after five years of ascent, the economic cycle already reached its peak in the first quarter of 2004. After five consecutive quarters of decline, it indicates that 2004 marks the peak of this mid-cycle. Of course, this peak might have a symbolic significance for the entire process of industrialization in China.

Based on our study of international industrialization experiences, although we cannot deny that China might again experience an investment-led boom, the peak of China's investment growth rate likely occurred in 2004. Looking at the history of industrialized countries, international experience shows that once per capita GDP reaches $1,000 – the pre-takeoff stage as described by Rostow – the investment rate will remain high for a period of about 4 to 5 years.

This issue can be viewed from two perspectives. Firstly, we can consider that investment-driven growth will still be an important driving force for China's economic

growth in the coming years. However, from another angle, the peak growth rate of fixed asset investment in this mid-cycle may represent a historical high point that cannot be surpassed in the future, indicating that the high-speed growth transformation period of China has already begun.

Therefore, the issue we study is to provide a panoramic description of the economic development trajectory after entering the transformation period. This panoramic description will be based on international comparisons during the industrialization process and the strategic transformation of China's industrialization. The focus of this description is to arrive at conclusions about industrial choices. Our industrial choices are also based on the fundamental logic of industrial development during industrialization. In the transformation period of industrialization, "the change in industrial choices will not be sudden. Industry will develop in a diversified manner, but it will inevitably be linked to previous leading sectors. In the process of the economy moving towards mature sectors, which sector will become the dominant one depends not only on technological conditions but also on the nature of resource endowment, the nature of the take-off stage, and the forces that drive the take-off." (Rostow, 1960). This forms the basic logical principle of our industrial choice.

Following this principle, we first start with the nature of China's take-off stage and the forces driving the takeoff, analyzing the basic direction of future industry changes in China from the perspective of the industrialization transformation period. From a short-term perspective, we combine this conclusion based on industrial transformation with the current economic cycle characteristics of China to derive a complete industrial choice trajectory.

Chapter 3

Urban Deepening and Technology Diffusion

In developmental economics theory, it's commonly believed that technological innovation is often a key driving force for economic takeoff. Rostow also posits that for the main growth sectors during economic takeoff, "In these sectors, the possibility of innovation or the use of new, profitable, or as yet undeveloped resources will result in high growth rates and drive the expansion of other sectors in the economy." Thus, although technological innovation is important, it's not the sole driving factor for the onset of industrialization. Our view is that China's current rapid growth is not driven by technological innovation, but is influenced by international background reasons. The industrialization process driven by urbanization in China also has its inevitability.

In fact, Schumpeter's theory of technological innovation was initially used to explain the relationship between technological progress and economic fluctuations. He believed that capitalist economic development generally has three different cycles: long, medium, and short cycles. The long wave cycle, lasting half a century, is rooted in far-reaching technological innovations that take a long time to realize.

We note that the first and second waves were dominated by British industrialization, with countries like the United States and France in a following position. The third wave marked the prosperity of American industrialization, and since then, the United States has maintained a leading position in innovation. The industrialization prosperity of countries like Japan and Germany roughly coincided with the fourth wave. Thus, innovations and developments in electricity and automobiles greatly propelled the industrialization of Japan and Germany. As for China's current round of industrialization, it is occurring during a long-wave decline period. Consequently, the role of technological innovation in driving China's industrialization is relatively weakened. Indeed, during this mid-cycle boom, technology introduction and imitation have had a deep impact on China's economic growth, but independent technological innovation has not made a prominent contribution.

The significance of this discussion is that, in the broader context and during the process of economic transition, we should have a correct understanding of the impact that technological innovation can have on our future economic growth. Given the historical stage of China's industrialization, our task is to complete the introduction and assimilation of technology from the first three waves of technological innovation, and to diffuse these technologies across various production sectors. Therefore, although technological innovation is more commonly associated with information technology and biotechnology, technologies more meaningful for China are those related to railway

and new material technologies. This aligns more closely with the characteristics of technological diffusion during the industrial transformation period.

Since technological innovation has limited contribution to China's current round of industrialization, "the possibility of exploiting new, profitable, or as yet undeveloped resources" (Rostow, 1960) has made real estate development a driving force for China's economic takeoff. The reason why China's current round is driven by urbanization can also be explained by developmental economics theory. Industrialization and urbanization are processes that any country must undergo in economic development, involving changes in spatial and industrial structures. Studies have shown that the correlation coefficient between industrialization and urbanization in the United States from 1820 to 1950 was 0.997, in England and Wales from 1841 to 1931 it was 0.985, and in France from 1866 to 1946 it was 0.970 (Zhou Weifu, 2002). Compared to industrialization, China's urbanization has been lagging, which is the fundamental reason why this round of industrialization is driven by urbanization.