Section 2 China's industrial development mechanisms

Above, we looked at the industrial fundamentals underlying the rapid expansion of China's manufacturing industry as broken down into five elements. It is not easy to empirically prove specifically how those elements led to industrial development. From the viewpoint of deepening the multi-faceted understanding of China's industrial development, it is useful to look at an overview of academic arguments concerning China's industrial development mechanisms. Here, we will consider China's industrial development mechanisms from three aspects, that is, (i) political-economic models, (ii) competition between local governments, and (iii) market characteristics.[208]

1. Political-economic models

While China has promoted the shift to a market economy and achieved economic growth following the launch of the reform and opening-up initiative, academic arguments have been made over China's political-economic models. China has reformed the existing planned economy based on socialism and gradually introduced a market economy system, but on the other hand, it has maintained characteristics different from the ones observed in other capitalist countries with respect to the land ownership system and the political party system. Although the modernization theory assumed that developing countries would shift to a democratic system in tandem with economic growth, no sign of such change is discernible in China for the moment. Some degree of commonality between China and a "developmentalist nation" modeled on the system of countries such as Japan, the ROK, and Taiwan during their periods of high economic growth has also been pointed out. However, what has attracted attention is that China is different from that model in that no particular ministry or agency is necessarily planning or leading economic development; rather, the country is achieving development under decentralized authorities scattered across various organizations, including local governments and SOEs.

The model that has been most frequently taken up in those academic arguments is "state capitalism." While arguments over the state capitalism model itself have been made from various viewpoints, in the context of comparative political economics, attention has focused on the role of the wide-ranging, independent powers of the state that lead economic management through institutional and financial interventions using ownership rights and other means.[209] As for policy measures taken under this model, China has come to use approaches similar in type to the ones adopted by other capitalist countries, after learning from those countries, but there are also fundamental differences. In particular, mainly in strategic sectors such as defense, energy, telecommunications, and finance, the state is considered to be exercising its strong influence selectively. In addition, as will be mentioned later, the financial value of industrial support provided by China is very large compared with the levels in other countries, although the full picture of such support is unclear.

[208] There are also arguments that cite the limits on labor's share of income in China and the resulting macro-level imbalance as structural factors of the large volumes of production and exports in the overall Chinese manufacturing industry (e.g., Pettis and Hogan (2024)). However, here, we will focus on the mechanism of development at the industry level in China.

[209] Pearson et al. (2023)

However, although we pointed out the state capitalism's characteristics, such as promoting policy implementation and adjustments through broad-ranging state ownership and powers of state and the broad impacts of governmental interventions, including industrial subsidies, on domestic and foreign markets, it is not easy to empirically prove the causal relationship between policy measures and actual industrial development. Marukawa pointed out that given the presence of enterprises receiving industrial subsidies in most industrial sectors, it is difficult to verify what additional support has been provided to the priority areas of a Five-Year Plan or whether a certain industry for which growth was already expected has achieved additional growth because of its designation as a priority area.[210] Some analyses have found that there is not necessarily consistency between the objectives of industrial policies announced by the central government and actual policy implementation.[211]

Rather, the state capitalism model tends to be described as something that complements institutional vulnerabilities related to the management of the domestic economy or be used as a reference for explaining a mobilization system to address internal and external challenges and threats. As was mentioned in Part II, Chapter 1, Section 5, industrial subsidies are, as a general rule, considered to have a trade-promoting effect, but that does not necessarily mean that subsidies realize industrial development through productivity improvement. As to the specific benefits brought to industrial development by industrial policies implemented by the central government, it is necessary to look at targeted industrial sectors and policy measures in detail.[212]

2. Competition between local governments

Competition between local governments has been pointed out as an important mechanism that has brought about China's economic development. During the process of economic development that followed the launch of the reform and opening-up initiative, local governments were given decision-making powers concerning economic and civil administrative matters, and senior officials of local governments that achieved high rates of GDP growth got promotions. This meritocracy and incentive for promotion are considered to be major factors that have brought about economic development through competition between local governments.[213]

Regarding industrial policies as well, on the surface, the central government formulated policies and plans for the entire country, while local governments implemented concrete measures in light of the actual circumstances of their regions. However, in fact, during the period of high growth, local governments were granted considerable discretion, so in some cases, policies measures contrary to the

[210] Marukawa (2025). Despite the difficulty, Marukawa examined whether the growth in operating revenues and labor productivity of industries designated as priority areas under the Five-Year Plans was higher than the average and found that only around half of those industries succeeded in achieving higher growth under the most recent 13th Five-Year Plan.

[211] Garcia-Herrero and Krystyanczuk (2024)

[212] For example, Kajitani (2024b) pointed out that according to a study by Aghion et al., an industrial policy's effect of improving productivity is large when the policy is designed to promote competition between companies, while a study by Branstetter et al. found that subsidies are hardly effective in improving productivity or increasing R&D activity. Kajitani also mentioned that according to a study by himself and others, although investments by government guidance funds expanded business scale and net assets, they did not contribute to improving productivity or enhancing R&D activity.

[213] Jin (2025) calls this the "Mayor Economy."

central government's policy direction were implemented. For example, following the economic package worth 4 trillion yuan that was implemented during the global financial crisis, producer prices in the manufacturing industry recorded year-on-year declines and factory operating rates fell, resulting in the overcapacity problem. Although the State Council, which represents the central government, frequently issued guidance notes, local governments refused to comply from the viewpoint of the local economic conditions, including tax revenue and employment, so it was difficult to achieve results. Under the supply-side structural reform that was proposed in 2015, measures such as setting reduction targets regarding steel and coal production capacity were taken.

This pattern of behavior by local governments is considered to have been highly effective in maximizing the policy effects through competition between them, particularly in the industrial catch-up stage. On the other hand, it has been pointed out that this pattern of behavior tends to generate problems such as a low level of transparency over local governments' fiscal positions and industrial policies, wasteful investments made because of the top priority given to the GDP growth rate, an inefficient allocation of resources due to overlapping investments by local governments, and local protectionism that seeks to protect local enterprises and jobs. As local governments are incentivized to maximize production and protect jobs in their own regions, excess of nationwide capacity over domestic demand tends to persist particularly in a recession phase, and induce an increase in exports and price drops regarding products that cannot be fully absorbed by domestic demand, a situation that creates international tensions.

3. Market characteristics

There are also arguments that, focusing on the characteristics of the Chinese market, point out mechanisms concerning active market entry by enterprises and the ensuing competition, the development of efficient supply chains, and the formation of an industrial cluster through social implementation and the learning effect. Among the reasons cited for active market entry by enterprises are the fine vertical division of labor between enterprises and the reduction of cost due to the use of common technologies, parts, materials and markets. It has also been pointed out that government policies intended to expand the market on the demand side have encouraged market entry by enterprises and led to price falls and further expansion of demand.

The core concept that explains this mechanism is "economies of scale." Several cases of economies of scale causing gradual reduction of production cost or a gradual increase in profit have been pointed out. In the first case, production cost decreases due to a decline in fixed cost per product. This case typically applies to large-scale equipment industries, such as petrochemicals and steel. In the second case, productivity improves due to a rise in the yield rate due to the accumulation of technologies and skills through the learning effect from repetitive production. This case applies to semiconductors, among other industries. Third, within an industry where there is a final product and multiple intermediate goods, the diversity of intermediate goods increases while production is repeated over and over again, resulting in the deepening of labor-of-division relationship. This is known as the Marshallian externality, which makes it possible to gain benefits from industrial clustering. This case applies to a broad range of

industries, but the benefits gained are large particularly for machinery industries, which require a large number of parts.

With the above in mind, let us look at specific arguments. In various chapters of a paper edited by Watanabe, "active entry" and "price falls" were cited as characteristics of China's industrial development and the factors that generated those characteristics were analyzed.[214] In China, there was behavior of pursuing cost reduction and low prices, particularly among private enterprises that were unable to depend on finance from state-owned banks. As a mechanism behind that behavior, Marukawa cited the narrowing of the scopes of capital investments and technology costs incurred by individual enterprises through vertical division of production processes between companies, which was referred to as "vertical division." Marukawa also described a mechanism called a "supportive" value chain, which makes it easy for enterprises without experience or knowhow to enter a market by receiving services from superior parts suppliers.[215] Meanwhile, Watanabe's analysis found that a framework called "platform," which reduces cost through the sharing of technologies, parts, materials, and markets among enterprises, led to active market entry through the lowering of barriers to entry.[216] It has been mentioned that as a premise for such enterprise behavior, there were open and free transactional relationships, under which enterprises actively resorted to external procurement without being obsessed about self-sufficiency and sold products widely to external customers (Figure II-2-2-1).

If a particular enterprise undertakes production of key components that require high fixed cost due to a high level of technological challenge in a certain production process and if the key components are supplied to other enterprises through external sales and used as common parts, those other enterprises can save development cost and fixed capital expenditure and concentrate on other processes. As a result of this mechanism, new market entry became easy, resulting in active entry. Due to competition between enterprises, prices continued to fall and demand continued to expand. As will be mentioned later, the manufacturing and sale of *shanzhai* mobile phones (counterfeit mobile phones emulating models from well-known brands) was an example of a business that grew through this mechanism.

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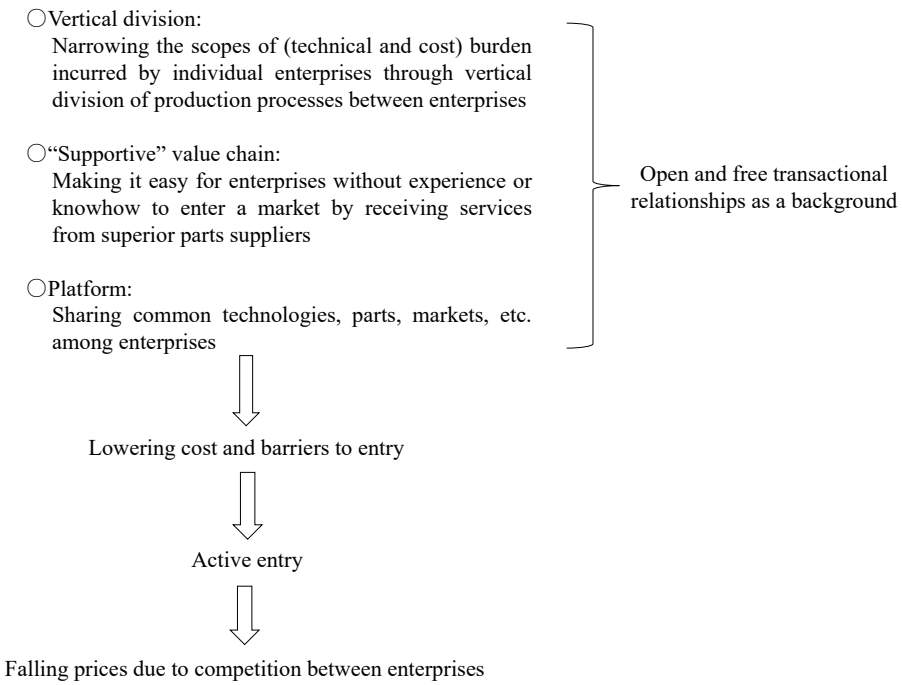
214 Watanabe (ed.) (2013)

215 Marukawa (2013) also pointed out that emphasis will shift to vertical integration or to enhancement of research because continuing to depend on a supportive value chain is insufficient to create products with high value added or to achieve product differentiation, although such a value chain facilitates market entry. However, Marukawa mentioned that so long as there are enterprises that seek market entry, uniquely Chinese industrial organizations will continue to exist.

216 In the paper, the system to use common technologies and parts is called a "technology platform," and the system to use a common market is called a "trading platform." The case of IC chip sets commonly used as key components by many enterprises, which will be mentioned later in relation to the case of *shanzhai* mobile phones, represents a technology platform that makes it possible to save research and development cost and fixed equipment cost. Meanwhile, the Huaqiangbei Electronics Market in Shenzhen, where many stores were concentrated and transactions for mobile phones and electronic parts were conducted, was cited as an example of a trading platform that makes it possible to save the cost of screening suppliers and purchasers.

Figure II-2-2-1. Factors that drive active entry in China

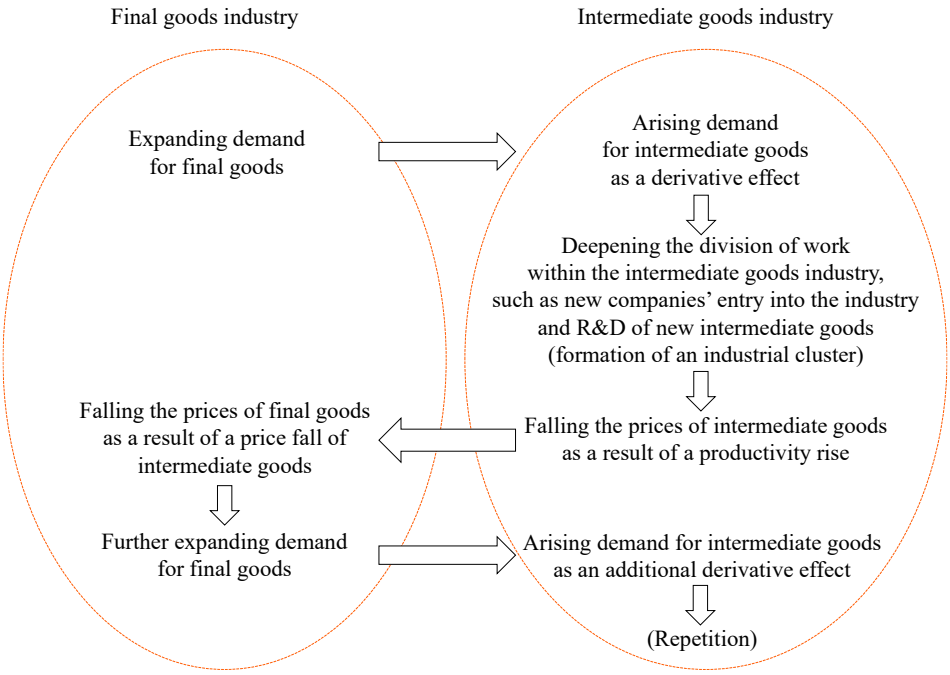


Source: METI, referencing Watanabe (ed.) (2013).

Kajitani pointed out the connection between "industrial policies oriented toward demand expansion" and "economy of saturation" in the process of the development of the electric vehicle industry in recent years.[217] He argued: "First, because of governmental subsidies and infrastructure investments, the market expands, and then, private enterprises saturate the market, leading to progress in the division of work, which in turn brings about a further market expansion—that is, a virtuous circle arises." Kajitani emphasized the Marshallian externality as the theoretical basis for his argument. When there are two industries that produce final goods and intermediate goods, respectively, if demand for the final goods expands, demand for the intermediate goods arises as a derivative effect, resulting in entry into the intermediate goods industry by new companies. At the same time, a greater variety of intermediate goods is introduced and more sophisticated division-of-work relationships are developed. As a result of a productivity rise due to the deepening of the division of work, an industrial cluster, including supporting industries, is created and prices of intermediate goods fall. Following the fall in prices of intermediate goods, prices of final goods also decline, and this further expands demand for the final goods, leading to additional demand for the intermediate goods. Kajitani observed that the amplifying effect between final goods and intermediate industries leads to further efficiency improvements and price falls (Figure II-2-2-2).

[217] Kajitani (2024a)

Figure II-2-2-2. Mechanism of industrial policies oriented toward demand expansion



Source: METI, referencing Kajitani (2024a).

Regarding either of the abovementioned mechanisms, the possibility was suggested that once a company has become more competitive due to economies of scale and gains a market share, it may become easier to further lower prices, particularly for products whose cost declines because of increased production, putting those products at a greater advantage.

It has also been argued that in China, there is a mechanism that promotes rapid social implementation and diffusion because of the very short period of time between the development of new products and services and implementation. Regarding the rapid diffusion of new IoT solutions in China, Ito and Takaguchi pointed out the importance of a "light" approach, which is characterized by a very short development period and low initial introduction cost for end-users, as well as the importance of governmental policy support, the role of platform companies, and the existence of policy gray zones.[218] An approach like this is also observed in the case of social implementation of autonomous driving and drones, and this indicates that the light approach is contributing to the establishment of economies of scale in a short period of time.

[218] Ito and Takaguchi (2019)