

# Efficiency of Public Services and Upgrading of Manufacturing Structure: Promoting Mechanisms and Improving Paths

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**Abstract:** *In the context of the New Era, enhancing the effectiveness of public services is crucial to advancing and optimizing manufacturing structure. This paper organizes the literature on public service efficiency and manufacturing structure upgrading, analyzes the mechanism of public service efficiency promoting manufacturing structure, and concludes that both direct and indirect effects of public service efficiency affect manufacturing structure upgrading, with indirect effects including talent agglomeration and technological innovation. The optimization path is then presented, consisting of the following steps: Transforming government functions and enhancing the efficiency of public services; Promoting the recruitment of high-caliber talent; and Continuing to support technological innovation.*

**Keywords:** *Public service efficiency, Upgrading of manufacturing structure, Talent Gathering, Technical innovation*

## 1. Introduction

China's economic development has advanced significantly since the reform and opening up, producing accomplishments that have garnered notice on a global scale. The international pattern is complicated, entering a new phase of chaotic change, and the globe has sped its evolution in a century. In recent years, western countries led by the United States have advocated unilateralism and protectionism. China's economy has transitioned from high-speed growth to high-quality growth in the framework of the new era, while also encountering new opportunities and difficulties. Many people from all walks of life are now concerned about how to encourage the efficient improvement of quality and sensible expansion of quantity, how to assure the steady realization of Chinese style modernization and the construction of a powerful socialist modern country. The manufacturing sector, which makes up the bulk of the economy, is what gives our nation its stability, its ability to reenergize, and its strength.

To increase China's overall national strength, it is essential to promote the development of a manufacturing sector that is globally competitive and to optimize and upgrade the manufacturing structure. We should continue to concentrate economic development on the real economy, hasten the development of a manufacturing power, and support the high-end, intelligent, and environmentally friendly development of the manufacturing sector; this will ensure and guide the development of China's manufacturing sector. Due to demographic, structural, and reform dividends, China has currently surpassed all other nations in terms of manufacturing output; however, issues with its large but weak manufacturing sector, lack of core technology, and long-term low end of the manufacturing value chain remain and need to be addressed immediately. Manufacturing industry urgently has to change its structure, convert and upgrade, increase quality and efficiency, and foster high-quality economic development in order to evolve into a manufacturing power.

Public services are a significant driver of increased domestic demand since they are a key way for the government to allocate resources. An essential and advantageous part of the optimization and modernization of China's manufacturing structure is the improvement of production efficiency and supply efficiency of public services.

## 2. Literature review

### 2.1 Public service efficiency

The idea of public service efficiency is interdisciplinary and applies to both public administration and political science. It comes from welfare economics. We must first understand public service in order to comprehend the meaning of the phrase "efficient public service." Welfare economics is the foundation of public service, which is why the government dominates the public sector and offers citizens public products or services. When he originally introduced the idea of public goods in 1954, Samuelson<sup>[1]</sup> was of the opinion that no one's consumption of a good would result in a decrease in the consumption of another good. "The marginal conversion rate of public and private products is equal to the sum of the marginal substitution rates of all private products" is the definition of the efficiency of public services. Bradford (1969)<sup>[2]</sup> discusses public services from the perspective of supply and consumption, highlighting the fact that the government's provision of public services is a function of public investment while the supply of public services is a factor in the provision of services to the general public. Using this as a foundation, Savas (1978)<sup>[3]</sup> proposes two efficiency standards for public services: production efficiency and allocation efficiency. The former standard measures the ratio of output to input of public services, which is essentially the input output ratio of public resources, and the latter measures the relationship between the effect of public services and the resources consumed by public services (Wang Weitong, 2011)<sup>[4]</sup>. The term "allocation efficiency" refers to the degree to which public services are effective, adequate, and in line with demand, or, put another way, with the demands of the general public. Public services cannot be effectively provided by the market because of their lack of exclusivity and competition, so they should be provided by the government, which is within the purview of government functions. The aforementioned perspectives on the definition of public services are different, so the connotation of public service efficiency is different.

The effectiveness and equity of public services are currently the key areas of attention in China's study on public services. Whether public services influence fairness while considering efficiency, and if it is required to increase the efficiency of public services while encouraging fairness in order to improve the quality of public services. When it comes to efficiency, academic debate primarily centers on how to create "service-oriented government" and "effective government." Chi Fulin (2006)<sup>[5]</sup> said that the public service government is capable of delivering fundamental and guaranteed public goods and efficient public services; In order to create a government that is focused on serving its citizens, we should prioritize increasing the effectiveness and caliber of public services while ensuring that administrative costs are kept to a minimum. According to Zhang Wenli (2007)<sup>[6]</sup> research, service-oriented governments develop an efficient supply mechanism for public services that delivers high-quality public goods and services to the general public and the entire society. When it comes to fairness, academics mostly concentrate on the equality of essential public services and shared prosperity. Enhancing the effectiveness and quality of public services to encourage the equality of basic public services appears to be a new approach for academics to research common prosperity because common prosperity is difficult to genuinely enhance in the short run. The realization of the equality of basic public services requires letting the general public freely choose the public services offered by the government, according to Liu Shangxi (2007)<sup>[7]</sup> observations. Public services are actually a series of public acts carried out by the government to promote the equality of basic consumption of residents.

In a nutshell, efficiency is a gauge of the proportionality between the input and output of social production activities, and it serves as a critical yardstick for evaluating those activities; Second, service effectiveness emphasizes the connection between management and service; Last but not least, the efficiency of public services emphasizes that the government's public departments provide efficient public services, that is, work to provide more high-quality and efficient public services at the lowest administrative cost, which is to adapt the efficiency mode of enterprise production and management to the public sector. More importantly, though, implement management in services, reflect services in management, and continually improve the people's "sense of a sense of a thing".

## 3. Upgrading of manufacturing structure

Generally speaking, both a national (regional) and an international perspective can be used to conduct research on the upgrading of industrial structure. The former describes "the transformation from labor-intensive and resource-intensive industries to capital and technology intensive industries" (Wu Chongbo, 1988)<sup>[8]</sup>. This refers to the adjustment or upgrading of industrial structure in response to the issues

encountered in the process of national (regional) industrial structure or economic development. The latter is based on the idea that international commerce participates in the global division of labor and links industrial upgrading with the global value chain in the belief that this will ultimately increase a nation's competitiveness. Based on this, Chen Yu and Kuang Guoliang (2009)<sup>[9]</sup> summarized the upgrading of industrial structure as two ideas of "industrial structure adjustment" and "value chain upgrading" and noted that the perspective of value chain upgrading is more comprehensive and the perspective of industrial structure is more macro.

First, from the perspective of industrial structure adjustment or optimization, Jiang Zehua (2006)<sup>[10]</sup> defined its connotation, that is, the process or trend of continuous transformation of industrial structure from low form to high form, including the size of structural scale, the level of structural level, and the tightness of structural connections. Tian Hongchuan (2013)<sup>[11]</sup> believes that this kind of macro description of the three industrial changes in the national economic structure is actually an extension of the research on the "upgrading of industrial structure". In actuality, the upgrading and rationalization of industrial structure should be included in industrial structure optimization. Gan Chunhui (2011)<sup>[12]</sup> also examined the causes of the changes in industrial structure at the same time, namely: the difference in the rate of technological advancement between industries and the displacement of leading industries with economic development, the latter of which has a greater impact on a country's industrial structure. Fu Yuanhai (2016)<sup>[13]</sup> further suggested that the upgrading and rationalization of manufacturing structures may be consistent or deviated from, and that the rationalization of manufacturing structures is conducive to the improvement of economic growth efficiency, whereas the upgrading of manufacturing structures is not.

Another concept is "value chain upgrading," which refers to the modernization of industrial structure based on the global value chain theory. This theory is derived from the standpoint of the international division of labor. It can be claimed that Gerrifi (1999)<sup>[14]</sup> lifted the lid on the study of industrial upgrading in the global value chain. He establishes a connection between the global value chain and industrial upgrading by examining how the East Asian garment industry was integrated into the global trade network. He holds that a country's industry is a component of the global value chain, and that industrial upgrading is the process by which manufacturing enterprises move up the global value chain.

Follow-up academics have extensively explored the dimensions of industrial upgrading due to its multidimensional qualities. Four different types of upgrading—process upgrading, product upgrading, function upgrading, and value chain upgrading—are proposed by Humphrey & Schmitz (2002)<sup>[15]</sup>. On the basis of this, he contends that industrial upgrading results in better products, more effective processes, increased functionality, and a value chain that is constantly optimized. Industrial upgrading can be summed up as follows by Ernst et al. (2002)<sup>[16]</sup> cross-industry, cross-factor, demand, functional, and chain upgrading. Tian et al. (2019)<sup>[17]</sup> proposed a method to quantify process, product, and function upgrading, and they believe that these quantitative measurements can also depict value chain upgrading; Furthermore, he discovered that the backward participation of the value chain is beneficial to the industrial upgrading of developing countries through the empirical examination of the aforementioned quantitative measurement measures. Researchers have also looked into the factors that support industrial upgrading as a result of global value chains. For instance, Kaplinsky (2000)<sup>[18]</sup> holds that the "economic rent" of various advantageous endowments serves as the primary source of income for global value chains; Xiao Jie Liu (2022) proposed the industrial upgrading mechanism known as "supply chain upgrading driven by smile curve" and discovered that the two essential requirements for this mechanism are an increase in production complexity and an increase in factor density in the production stage.

#### **4. Analysis of the public service efficiency mechanisms that support modernizing the manufacturing structure**

The first is the direct impact of public services. At the micro level, public investment will shift the industry portfolio to the industries that benefit the most from public investment by improving the rate of return and labor productivity of enterprises, thus promoting the transformation of industrial structure; From a macro point of view, the upgrading of industrial structure is actually a problem of resource allocation, and public services and public expenditure, as important means for the government to allocate resources, have an important impact on the upgrading of industrial structure.

For instance, Shi Qi and Kong qunxi (2012) discovered, for instance, that raising public spending during the current time can enhance the economic structure and optimize resource allocation, and that the "directional" supply of productive public goods might encourage the growth of particular businesses.

But not every public investment benefits the modernization of the industrial structure. For instance, Chu Deyin and Jiankecheng (2014) noted that government investment expenditure and nature management are not favorable for the adjustment of industrial structure, whereas expenditure on education and science and technology has a favorable impact. Additionally, there is a significant variation and marginal drop in the economic impact of basic public service spending on the upgrading of manufacturing industries to high-end.

The second is how public services have an indirect effect. The "voting with your feet" theory states that capital, labor, and technology will move to administrative regions that offer high-quality, efficient public services; The labor force chooses to move to a city not only for higher wages and employment opportunities in the city but also for access to public services like basic education and medical services in the city. They prefer to congregate in locations with more fundamental public services, higher quality environments, and more equitable market mechanisms, particularly for high-tech workers. Accordingly, providing public services is seen as a crucial way for local governments to compete for talent. According to Deng Huihui and others (2021), public services have evolved into the primary assets used by central cities and urban agglomerations to entice development factors. Even with the new incentive and restraint mechanism, it is still possible to switch from competition for economic growth to competition for public services.

### **5. Efficiency in public services encourages modernization of the production structure**

First, we should keep enhancing government operations and raising the effectiveness of public services. Generally speaking, the government is the provider of public services, and the effectiveness of government public services has a direct or indirect impact on the improvement and optimization of the manufacturing structure. As a result, the government must actively optimize its operations, increase awareness of efficiency, and then deliver more effective and high-quality public goods and services. To increase the effectiveness of the government, we should keep advocating for the uniformity, concurrent examination, and approval of administrative examination and approval. Enhancing the consistency of administrative review and approval is crucial to raising the caliber and effectiveness of public services. The effectiveness and standard of services can be considerably enhanced by optimizing, standardizing, and integrating the components of administrative inspection and approval. In addition, we should integrate and parallelize the functions of multiple departments, encourage online "one-stop" services, allow people and businesses to conduct fewer errands, and raise public satisfaction with government services. Finally, the openness of government affairs needs to be properly implemented.

Utilizing the demographic dividend wisely is the second step, particularly the reward of high-quality population agglomeration. High-quality talent frequently chooses to reside in cities with effective public services, particularly in the areas of education and healthcare, when government public service is a new pattern of government competition. In addition to increasing the effectiveness of the government in providing public goods and services, as well as social services and management, it is necessary to weaken the government's micromanagement function and reduce the government's interference in the operations of microeconomic entities in order to support the optimization and upgrading of manufacturing structures. In order for the government to return from being held to the "government standard" and instead become held to the "citizen standard" and the "social standard," we should further transform the management function of the government into the government's service function. High-quality talents can only be attracted by the government when it offers effective public services, and it can only continue to seek benefits for the people when it consistently fulfills its original mission of putting the people first. With the assurance of effective public services from the government, high-quality talents can not only devote themselves to their work but also live carefree in the neighborhood and truly contribute themselves to the community.

Third, we must keep advancing technological innovation. Long-term, technical advancement is the primary driver promoting the modernization of the manufacturing system. The innovation process is intricate. There are numerous success-related components in this process that can be examined from the perspectives of supply, demand, and environment. The first is the supply side of innovation, which includes the provision of financial and technical assistance for innovation, such as the establishment of scientific and technological infrastructure elements, and the training of talent teams with relevant expertise and vocational skills. The second is the demand side of innovation, where innovation will be necessary once the government's economy and society have developed to a certain extent in order to improve economic efficiency. The environment, which includes regional tax laws and other local rules and regulations, is the last. In other words, government support and technological innovation go hand in

hand. On the one hand, talent innovation and technology innovation go hand in hand. Therefore, in order to give scientists a platform and guarantee, the government must increase investment in innovation and policy support for technological innovation, improve the efficiency of science, education, culture, and health services, and further increase the effectiveness of government public services.

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