Economic Analysis of Efficiency for Chinese State-owned Enterprises

Xiaoxi Zheng\textsuperscript{1, a}*

\textsuperscript{1} Jincheng College of Sichuan University, Chengdu, Sichuan Province, China
\textsuperscript{a}245275768@qq.com

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\textbf{Abstract.} In combination with scientific efficiency outlook, the efficiency problems of state-owned enterprises were analyzed in aspects of overall economic efficiency, efficiency index, growth rate, innovation rate, feedback rate to the society, etc. through using relevant knowledge in economics based on analysis target of state-owned enterprises and relevant data. In terms of analysis of efficiency problems for state-owned enterprises, indexes that are different from what’s in previous researches were used. Therefore, state-owned enterprises are efficient and have a high overall efficiency in comparison with private enterprises and foreign-funded enterprises with social development. Meanwhile, relevant requirements were proposed aiming at state-owned enterprises.

\textbf{Introduction}

In recent years, Chinese economy has been in a key period for rapid transformation. Transformation development of the society and economy cannot be successful without good operation and growth of enterprises. Reform and development of state-owned enterprises has always played a core role in the process\cite{1}. With advance of social and economic transformation, the problem which used to be placid about reform of state-owned enterprises has been appearing in recent years. In 2004, Lang Xianping bitterly rebuked loss of state assets in reform process of state-owned enterprises aiming at acquisition of Gu Chujun. Then, reform direction of state-owned enterprises is lost without improved efficiency. With development of national economy, some small-sized state-owned enterprises made some outstanding achievements, which triggered thoughts to reform direction of state-owned enterprises, especially efficiency problems of state-owned enterprises\cite{2}. A large number of economists gave proper explanations from perspectives of principles of modern economics, methods, etc. Aiming at efficiency problems of Chinese state-owned enterprises, relevant analysis was made in the Paper from the perspective of economics. The research shows that efficiency of state-owned enterprises has been greatly improved in the process of economic transformation in combination with relevant Chinese development strategies.

\textbf{Discussion of Efficiency Problems of Chinese State-Owned Enterprises}

Three debates are gradually formed in economics circle in social development process:
(1) Theory about good efficiency is represented by Zhang Yu and Wu Xuan. Zhang Yu has made relevant analysis based on institutional innovation and strategic adjustment of state-owned enterprises and has pointed out that part of technical indexes for innovation and development of state-owned enterprises are in leading position in China and in the world\cite{3}. Wu Xuan has indicated that efficiency and value of state-owned enterprises are greatly developed in combination with development conditions of state-owned enterprises\cite{3-4}.

(2) Theory of low efficiency is represented by Shi Lei and Wu Jinglian. Shi Lei has established models for department of private enterprises, state-owned enterprises, and the government in combination with relevant data so as to verify the problem of low efficiency in state-owned enterprises and has further indicated encumbrance nature of state-owned enterprises to national economy\cite{5-6}. Wu Jinglian has analyzed development conditions of current state-owned enterprises and has indicated that although status of state-owned enterprises is improved, their development efficiencies are lower than private enterprises.

(3) Efficiency paradox is represented by Li Liying and Li Gang. Li Liying has indicated that
although production efficiencies of state-owned enterprises are greatly improved, their total profit rates are in obvious drop trend. Li Gang has analyzed the relation between efficiency of state-owned enterprises and non-state-owned enterprises in combination with the relation between four economics indexes which are value added and net assets, total assets, sales revenue, and sales cost[7-8].

**Efficiency Analysis Targets of State-Owned Enterprises**

Operation targets of state-owned enterprises are firstly required to be clarified; economic activities of state-owned enterprises in all production stages are required to be known at the time of analyzing efficiencies of state-owned enterprises so as to more comprehensively analyze their efficiencies. As state-owned enterprises account for a large proportion in Chinese economic form, state-owned enterprises are crucial to national economy. Therefore, in comparison with private enterprises, state-owned enterprises usually play other roles at the time of pursuing economic benefits due to their nature and special status.

In terms of establishment purpose of state-owned enterprises, in addition to pursuing social benefit, their roles are embodied in regulating and controlling national economy, maintaining national economic stability, assuming relevant social responsibilities, promoting industrial competition, and other aspects in detail. Specifically, in terms of regulating and controlling national economy, relevant reverse business cycle plan is implemented according to relevant national economic regulation and control policies so as to reduce market environment turbulence. However, in terms of maintaining national economic stability, state-owned enterprises mainly play roles of controllers so as to realize control of national economy and to ensure national economy stability.

Therefore, in consideration of special roles played by state-owned enterprises, lots of factors in many aspects are usually involved at the time of analyzing their efficiencies; corresponding judgment criteria are complicated, which may lead to loss of corresponding fairness. Current efficiencies of Chinese state-owned enterprises can be properly reflected in combination with relevant economics principle and comprehensive scientific efficiency outlook.

**Efficiency Analysis of State-Owned Enterprises**

In combination with operation targets of state-owned enterprises, corresponding efficiency problem was analyzed in the Paper from perspective of economics. Specifically, relevant economics knowledge was used in consideration of target and in combination with scientific efficiency outlook[9]. Conditions of state-owned enterprises in aspects of overall economic efficiency, efficiency index, growth rate, innovation rate, feedback rate to the society, etc. were analyzed so as to make a scientific judgment for efficiency problems of state-owned enterprises from the perspective of economics and to draw a conclusion about advantages and disadvantages of state-owned enterprises. Research objects in the Paper are state-owned and state-holding industrial enterprises.

**Overall efficiency of state-owned enterprises.** In consideration of roles played by state-owned enterprises in driving and leading industry development and reform and guaranteeing national economy, corresponding scale, performance, and risk were mainly used as standards to evaluate state-owned enterprises in the industry in the process of analyzing overall economic efficiencies of state-owned enterprises.

(1) Statistics and analysis.

1) Dramatic reduction of scale for state-owned enterprises

In terms of quantity, there were 64,737 state-owned industrial enterprises in China in 1998, while there were only 18,574 enterprises in 2013. However, the data was 19,022 in 2016. Change of the data reflects that achievement made by state-owned enterprises as main reform battlefield is remarkable. Meanwhile, private enterprises were just 10,667 in 1998, while the data was 213,789 in 2014.

In terms of assets proportion, assets of state-owned enterprises were increased to 5.3 times from
1998 to 2015, which was increased by 10.3% per year. However, their development speed is lower than that of private enterprises. Proportion of state-owned enterprises accounted for 69% in 1998, while it was 24% in 2015.

In terms of social contribution—employment absorption, employment form of state-owned enterprises has been in dramatic drop trend in recent years. State-owned industrial enterprises absorbed about 40,000 thousand people in 1998. However, quantity of employment was dropped to 17,780 thousand people in 2015, which was decreased by 42% in comparison with that in 1998. The decrease rate was 52.6%. On the contrary, employees in private enterprises were only 1,610 thousand in 1998, while the number was increased to 34,630 in 2015, which was increased to 20.5 times. The proportion was increased from 3% to 36%.

In terms of scale, state-owned enterprises regarding to building materials, textile, nonferrous metals, and automobile had obvious changes due to national policies and industrial adjustment. Moreover, the overall economic efficiency has been developed.

2) Performance of state-owned enterprise is lower relatively

In economics, the operational state of an enterprise is reflected by return on assets—ratio of profit and asset. During 1998-2007, with the rapid development of state economy, performance of state-owned enterprises had gained significant increase. However, after 2008, with international financial crisis and structural adjustment of national industry, return on assets for state-owned enterprises decreased to a certain degree. In 2015, the ratio was 2.87% and it decreased by 3 percent points compared with 2007. The corresponding decreasing amplitude decreased to 58%.

3) Liability risk for state-owned enterprises is relatively higher

Generally speaking, since 1998, liability of state-owned enterprises mainly presents the trend of decreasing first and then rising. In 2015, corresponding liability reached 61.9% and the proportion was nearly equal to that in 1999. It is 5 percent points more compared with that in 2007. However, with the development of national economy and strongly support of the country for small and middle enterprises, although liability condition of small and middle enterprises is more common than that of state-owned enterprises before 2008, the liability condition for private enterprises was improved to large extent with global financial crisis and formulating policy of national 4 trillion after 2008. By 2015, it decreased by nearly 10 percent points compared with state-owned enterprises.

Economic efficiency indexes of state-owned enterprises. As for blame for low efficiency of state-owned enterprises, the arguments are mainly from judging the economic efficiency index. Therefore, asset of state-owned enterprises shall be taken into consideration at the time of analyzing efficiency of state-owned enterprises. Especially, social fixed assets always accounts for a large proportion. In the text, with corresponding index chosen to be cost, expense, and profit rates, it indicates proportion of profits, cost, and expense of the enterprises and the specific calculation formula is: cost, expense, and profit rates total profit/total expense of cost.

Throughout the viewpoints of economists for blame for low efficiency of state-owned enterprises, total asset contribution rate of state-owned enterprises is mainly taken into consideration. The national statistical yearbook of 2014 shows that the total assets contribution rate of state-owned enterprises is relatively low, But the assets account for large proportion at the time of analyzing total asset contribution rate and considering social fixed assets of state-owned enterprises with relative lower revolving rate. Therefore, total asset contribution rate cannot reflect corresponding efficiency. However, in indexes for cost, expense, and profit rates, operation results of enterprises are mainly measured according to judge operation expense of enterprise. In combination of 2014 China Statistical Yearbook, difference of cost, expense, and profit rates for state-owned enterprises and other enterprises is small and the rate was higher than other enterprises during 2005-2007. It indicates that efficiency of cost and profits for state-owned enterprises in a specific period is not lower than that of other enterprises. However, economic efficiency of state-owned enterprises does not appear fall behind to a large extent compared with foreign and private enterprises. Therefore, efficiency of state-owned enterprises cannot be evaluated with problem for economic efficiency of state-owned enterprises simply.

Growth efficiency of state-owned enterprises. Targeted at particularity of state-owned
enterprises and in combination with corresponding economics theories, we shall also integrate added value of enterprise for judgment evidence to avoid unicity of evaluation index. Specifically speaking, added value of enterprise includes enterprise profits, employers’ welfare, employers’ salary, and income and taxes and factors.

Integrating 2014 China Statistical Yearbook, in growth rate of enterprises, the year-on-year growth rate of state-owned enterprises is 8.3%, shareholding system and collective enterprises of 10.8% and 3.4% respectively. However, that of foreign-funded enterprise grows is 8.9%. The data shows that growth rate of state-owned enterprises are equal to that of foreign-funded enterprises. At the same time, it reflects that state-owned enterprises presents more obvious advantages in efficiency compared with other ownership enterprises.

**Innovation and feedback for society rate of state-owned enterprises.** Innovation reflects the competition capability of an enterprise. Corresponding economic investment mainly acts as index at the time of judging innovative rate of state-owned enterprises. However, in feedback for society, providing employment opportunity, donation, energy conservation and emission reduction, ecological environment maintenance serve as indexes.

In recent years, the country has increased fund investment in scientific research and innovation. During 2006-2010, the data shows that funds for scientific and technological activities of state-owned enterprises have increased from 124.4 billion yuan to 307.9 billion yuan in 2010. Among others, 50% of them are used for research and development.

However, with development of social economy and the rising of artificial intelligent of all industries, especially the financial crisis after 2008, development of enterprises suffered huge impact. Many private and foreign enterprises had to reduce enterprise investment for maintaining its own profit and staff reduction was one important option. State-owned enterprises had demonstrated their special state during the course. Economic stability was maintained, while employment rate increased. The data shows that rate for state-owned enterprises to recruit graduating students increased by 7% in 2009 compared with that in 2008. Meanwhile, in donation, donation amount for 8 state-owned enterprises with rank of top 10 has reached to 1.5615 billion yuan in 2012 [10].

**Conclusion**

In combination of established targets of state-owned enterprises, efficiency of state-owned enterprises is analyzed with scientific value from perspective of economics. State-owned enterprises are efficient and it is more efficient than private and foreign enterprises.

The basic national condition of China determines that we shall not only seek for own profits but also pay more attention to targets of leaders for maintaining national economic stability, bearing corresponding social responsibilities, and serving people better at the development process of state-owned enterprises. Therefore, state-owned enterprises shall play the following roles well:

**Dominate economic development.** State-owned enterprise plays a role as bellwether in industry to a large extent. It not only leads the industry progress but also drives development of social economic, support the national economic lifeline, and maintaining stability of social economy.

**Implement related national policies.** Acting as industrial bellwether and dominator, the state-owner enterprises shall be consistent with related national policies and implement its responsibility on market regulation for realizing target of the country on market micro regulation.

**Guarantee social economic safety.** Development of national economy is associated with exploitation of state-owned enterprises. Especially, some industries related to lifeline of national economy and national safety, related fund output, technical input, and resource allocation of state-owned enterprises are usually needed for improving operational safety degree of the industry and guaranteeing healthy development of economy.

**Fulfill social responsibility.** State-owned enterprise is a wind indicator of all industries and all industries regards state-owned enterprise as working standard. Therefore, state-owned enterprise shall perform related social responsibility at the time of acquiring related profits for guaranteeing that the crowd can enjoy the related development fruits, especially in employment, energy conservation and emission reduction, ecological environment maintenance, and program for public
good and so on.

**Lead innovation.** Innovation provides an excellent competitive platform for enterprise development, especially in current social background with intensive competition. State-owned enterprise shall strengthen talents training and fund investment.

China is a developing country and its basic national condition determines that state-owned enterprise must occupy lifeline of national economy for maintaining economical and social stability during economic development course of China. However, from the perspective for development of state-owned enterprise, its corresponding results are efficient.

**Reference**


