The Impact of Government Subsidies on Financial Performance of BYD

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Abstract. This study examines the impact of government subsidies on BYD's development in the new energy vehicle industry. Based on the Party's green development philosophy and the policy framework for the new energy vehicle sector, this paper analyzes BYD's subsidy and financial performance from 2015 to 2024. The research reveals that BYD's government subsidies first decreased before rebounding, reaching 10.66 billion yuan in 2024 with a 130.7% growth rate. Government subsidies positively influence operational capabilities, while inventory and total asset turnover ratios show increasingly significant impacts from subsidies. In terms of profitability, pre-2022 subsidies showed weak correlation with return on equity (ROE), but later increased synchronously with subsidy surges. Meanwhile, BYD faces challenges including subsidy reduction, R&D challenges, and infrastructure constraints. Therefore, strategies such as increasing R&D investment and optimizing cost management are proposed. Through the implementation of corresponding measures, BYD Company has effectively mitigated the constraints of reduced government subsidies, enabling it to pursue autonomous development to the greatest extent possible. Concurrently, during periods of robust government support, the company has leveraged these subsidies to achieve enhanced profitability.

Keywords: Government subsidy, new energy vehicles, BYD, financial performance, industrial policy.

1. Introduction

The period since the 18th Party Congress has witnessed substantial changes in the international situation. The Party Central Committee has deeply grasped the development trend of China and the world in the new era, promoted the development of a global community of shared destiny for mankind, adhered to green and low-carbon principles, and built a clean and beautiful world. In 2015, during the Fifth Plenary Session of the 18th CPC Central Committee, the Party officially introduced the green development concept, committed to make Chinese contributions to global climate governance. China is actively exploring a low-carbon economic development path with Chinese characteristics. China adheres to build a high-level socialist market economy system, promotes better integration of effective markets and proactive governments, and stimulates the vitality of various market entities. The government implements industrial policies to drive industrial optimization and transformation, and to achieve economic and social development goals.

In recent years, China has strongly supported the development of new energy enterprises by issuing relevant preferential policies to stimulate the vitality of the new energy market. As a result, car companies such as BYD and NIO have rapidly emerged. This article will take BYD as an example to examine the effect of government subsidies on the development of new energy vehicle enterprises, with a focus on financial performance.

The influence of government subsidies on the financial performance of BYD has been a research hotspot in recent years. Most scholars believe that government subsidies have significantly improved BYD's financial performance. Guo (2023) and Wu et al. (2025) both pointed out that government subsidies directly improve BYD's profitability and cash flow level by reducing research and development costs and alleviating financial pressure [1][2]. In addition, the case study of Wang and Liu (2021) shows that government subsidies not only improve short-term financial indicators, but also enhance the long-term competitiveness of enterprises through tax incentives and project subsidies [3]. However, Deng (2024) pointed out that with the reduction of subsidies, BYD's net profit growth rate has slowed down, indicating strong policy dependence [4]. Yuan (2023) further analyzed

and found that government subsidies not only promote financial performance, but also drive BYD's innovation performance, forming a virtuous cycle of "subsidies innovation financial growth" [5]. Zhang (2018), on the other hand, paid early attention to the policy dividends of the new energy vehicle industry and its role in driving BYD's revenue [6]. Overall, existing research generally suggests that government subsidies play a positive role on corporate financial performance, but also suggests that companies need to reduce their excessive dependence on subsidies to cope with the risks brought about by policy adjustments.

2. The Policy System of New Energy Vehicle Industry

2.1. Financial Subsidies and Tax Incentives Policies

On March 6, 2025, the Management Committee of Hefei Economic and Technological Development Zone issued the "Development Plan for Supporting the Pilot Work of New Energy Vehicle Battery Swap Mode Application". It clearly stated that special rewards will be given to enterprises that carry out the promotion of battery swap mode applications for new energy vehicles.

2.2. Technological Innovation Policies

The 2020 Development Plan for the New Energy Vehicle Industry (2021-2035) outlined key initiatives to achieve breakthroughs in battery technology and promote the development of the entire value chain of batteries.

2.3. Industry Management and Regulatory Policies

In 2019, China announced two key regulations—the Industry Standard Conditions and Interim Measures for Comprehensive Utilization of Waste Power Batteries for New Energy Vehicles—to strengthen industry management and recycling supervision.

2.4. Infrastructure Support Policies

According to the Guiding Opinions of the State Council on Accelerating the Construction of Electric Vehicle Charging Infrastructure in 2015 on Further Building a High Quality Charging Infrastructure System in 2023, many provinces and cities have strengthened the construction of new energy vehicle charging infrastructure and issued supporting regulations [7].

On March 10, 2025, the Shanghai Municipal Development and Reform Commission, Shanghai Municipal Transportation Commission, and eight other departments jointly issued the "Support Measures for Encouraging the Development of Electric Vehicle Charging and Swapping Facilities in Shanghai".

3. Current Situation of Government Subsidies for BYD Automobiles

3.1. Introduction of BYD

BYD Co., Ltd. is a dual-listed Fortune 500 company (HKEX: 1211; SZSE: 002594) with diversified operations across four core sectors: automotive, electronics, new energy, and rail transit. BYD provides comprehensive zero-emission energy solutions spanning energy generation, storage and utilization. It aims to drive technological innovation to meet people's aspirations for a better life and help cool the earth by 1 °C.

3.2. Government Subsidies Granted to BYD

As shown in Table 1, the scale of government subsidies received by BYD in recent years first decreased and then increased. The amount of government subsidies decreased from 1.55 billion yuan in 2015 to 1.25 billion yuan in 2017, with a decrease of 13.8% from 2016 to 2017. This period is a time when government subsidies are decreasing, and the scale of government subsidies is gradually

shrinking. In 2018, the scale of government subsidies rapidly expanded to 2.33 billion yuan, with a growth rate of 86.4%. The scale of government subsidies has decreased again from 2019 to 2020. In 2021, with the outbreak of the epidemic and the friction in Sino US trade relations, the scale of government subsidies has increased again to 2.26 billion yuan, an increase of 32.9% compared to 2020. And the country has stated that government subsidies for the automotive industry in recent years will be postponed until 2022, when they will be completely cancelled. In 2022, government subsidies decreased from 2.26 billion yuan to 1.68 billion yuan, a decrease of 25.7%. In July 2023, the government issued a notice on the continuation and optimization of the policy of reducing and exempting the purchase tax on new energy vehicles. Government subsidies increased by 130.7% from 4.62 billion yuan in 2023 to 10.66 billion yuan in 2024. Overall, the reason for these changes is that the Chinese government has adjusted its government subsidy policies in response to the development stages of the new energy vehicle industry to meet the needs of economic and social development.

Table 1. Government subsidies granted to BYD (Data source: BYD's annual reports)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Government subsidies/ 100 million yuan	15.5	14.5	12.5	23.3	17.2	17.0	22.6	16.8	46.2	106.6
Growth rate	-4.3%	-6.5%	-13.8%	86.4	-26.2	-1.2%	32.9%	-25.7%	175%	130.7%
Net profit/ 100 million yuan	28.23	50.52	40.66	27.8	16.14	42.34	30.45	166.2	300.4	402.5

In addition, as shown in Figure 1, before 2022, BYD's business performance was highly dependent on government subsidies [8]. In 2019, the company received more government subsidies than its net profit. Before 2022, the financial performance of enterprises tends to be embellished by government subsidies, especially the profitability in years with higher government subsidy amounts. After 2022, with the continuous expansion of government subsidies, corporate profits grow rapidly and gradually break free from dependence on government subsidies.

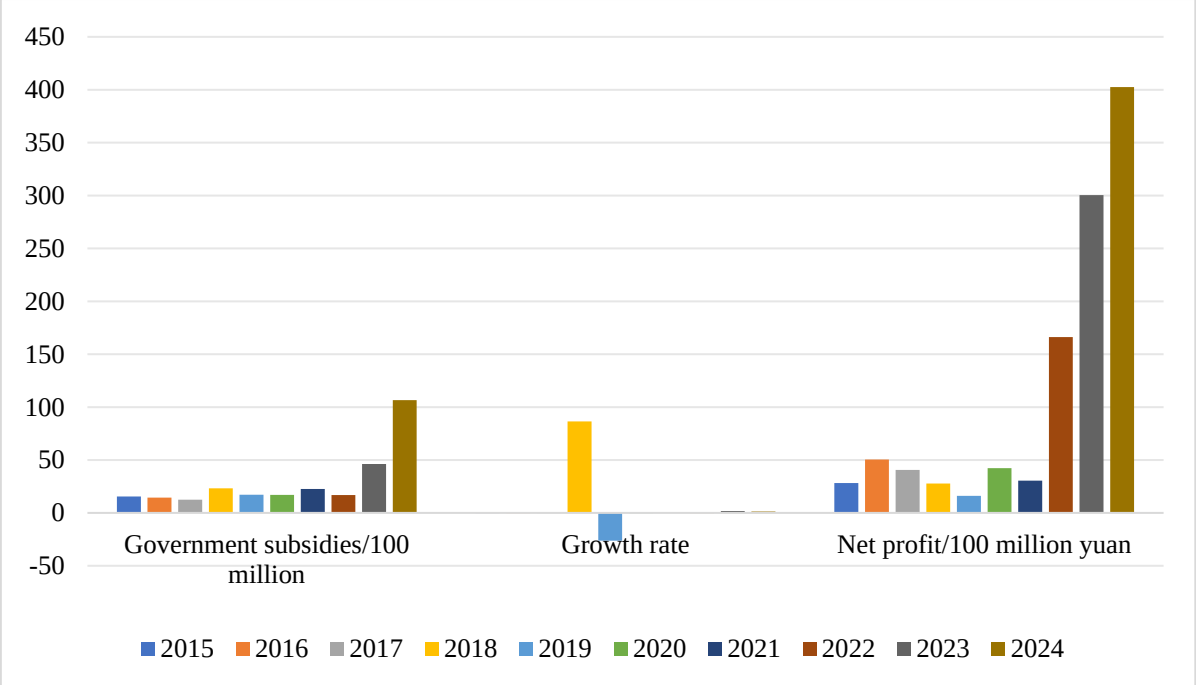

Fig. 1 Government subsidies and profits

4. The Impact of Government Subsidies on BYD's Performance

4.1. Operational Capacities

According to Table 2, the inventory turnover rate of BYD showed an overall fluctuating upward trend from 2016 to 2022, reaching 6.93 in 2022, reflecting an accelerated inventory turnover speed and improved operational efficiency. The total asset turnover rate fluctuated from 2016 to 2022, reaching 1.07 in 2022, indicating an increase in asset operational efficiency. In terms of the impact of government subsidies on revenue, the subsidies' effect on inventory turnover gradually increased from 0 in 2016 to 0.17 in 2022. The subsidies' effect on total asset turnover rate increased from 0 to 0.03 in 2022. Over time, government subsidies show a positive influence on the inventory and total asset turnover, and the effect is gradually strengthening. Subsidies help enterprises optimize operational processes, improve asset utilization efficiency, and promote the improvement of operational capabilities.

Table 2. Changes in relevant indicators of BYD's operational capability (Data source: Forward Looking database and BYD's annual reports)

	Inventory turnover ratio	Inventory turnover after deducting subsidy income	The impact of subsidy income	Total asset turnover	Total asset turnover after deducting subsidy income	The impact of subsidy income
2016	6.25	6.25	0.00	0.79	0.79	0.00
2017	5.69	5.68	0.01	0.66	0.65	0.00
2018	5.63	5.61	0.02	0.70	0.70	0.00
2019	4.92	4.87	0.05	0.65	0.65	0.01
2020	5.50	5.43	0.07	0.79	0.78	0.01
2021	5.78	5.64	0.14	0.87	0.85	0.02
2022	6.93	6.76	0.17	1.07	1.05	0.03

4.2. Profitability

As presented in Figures 2 and 3, there is a weak correlation between government subsidies and the return on equity (ROE) of BYD in the early stage, but a stronger correlation in the later stage. Before 2022, government subsidies fluctuated between 1 billion yuan and 3 billion yuan, while the ROE fluctuated significantly from 2015 to 2021, with no clear correlation between the two [9][10]. After 2022, government subsidies increased sharply, and the ROE rised rapidly during the same period, showing a synchronous growth trend and strong correlation.

Thus, it can be seen that when government subsidies are relatively low, companies will take some measures to enhance their profitability and reduce their dependence on government subsidies. When government subsidies increase, related industry support and R&D subsidies will provide important resource support for enterprises to expand production capacity, make technological breakthroughs, promote the improvement of enterprise profitability, and drive the increase of net asset return rate.

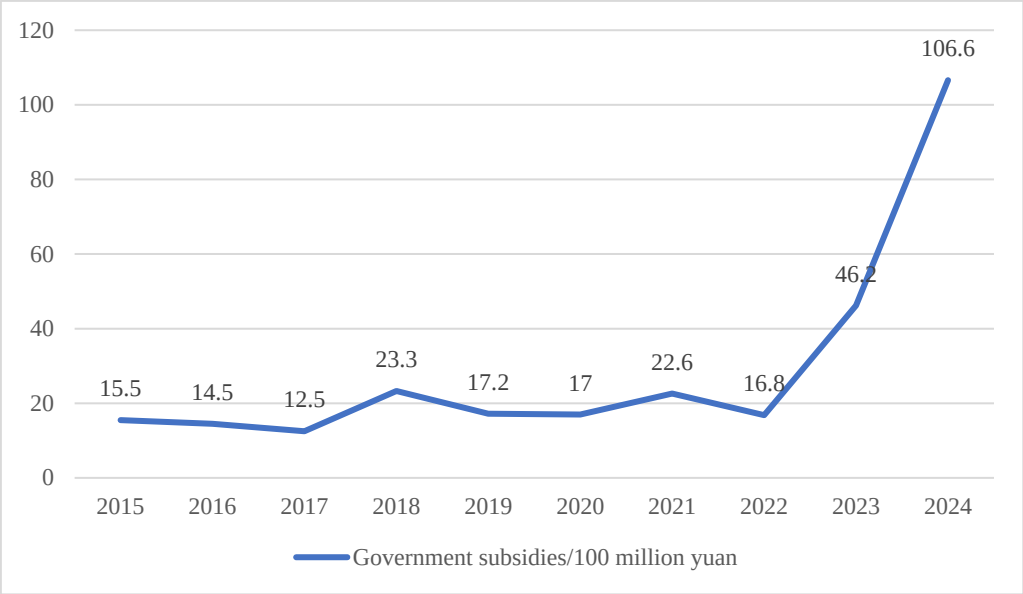

Fig. 2 BYD's government subsidies (Data source: BYD's annual reports)

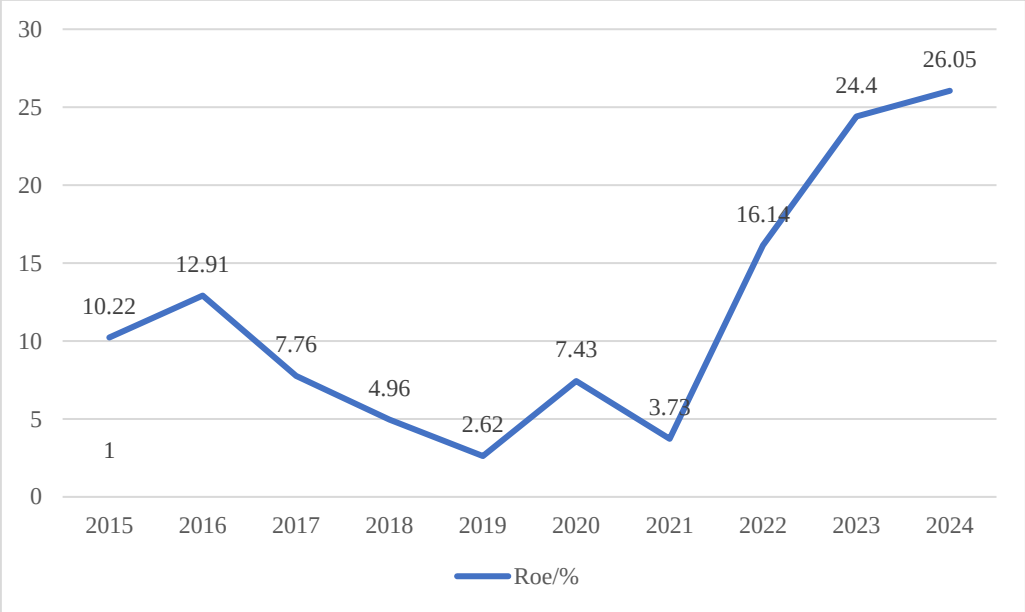

Fig. 3 BYD's ROE (Data source: East Money)

5. Policy-related Issues and Challenges Faced by BYD

5.1. Cost Pressure Caused by Reduced Subsidies

The financial statements show that BYD has been benefited from government subsidies and has performed well in recent years. The effectiveness of promoting subsidies and grants has gradually increased. However, during this period, the company's dependence on government subsidies is high, especially in 2019, when net profit was less than the subsidy amount, indicating that without subsidies and grants, BYD's profit would have been negative.

5.2. R&D Challenges

With the continuous upgrading of technical standards, BYD faced challenges in meeting higher standard requirements during its research and development, such as the need for continuous innovation and breakthroughs in battery technology, intelligent networking technology, etc. It has to adapt to policy and market demands.

5.3. Constraints of Lagging Infrastructure Construction

The lagging construction of infrastructure such as charging stations and battery swapping stations has constrained the promotion of BYD's new energy vehicles. It affects consumers' willingness to purchase cars and limits the scope of vehicle use. Insufficient infrastructure hinders the company's market expansion.

6. Conclusion

This paper examines the influence of government subsidies on corporate financial performance in new energy vehicle industry, using BYD as a case study. It documents positive effect of subsidies on operational capabilities and profitability. In response to the reduction in subsidies, BYD should further optimize its cost management system and control costs throughout the entire process of procurement, production, and sales. By establishing long-term stable cooperative relationships with suppliers, BYD can reduce the cost of raw material procurement. It should streamline manufacturing operations to enhance efficiency while lowering unit costs. It should also strengthen sales channel management and reduce sales costs to cope with the cost pressure caused by subsidy reduction and market competition.

It is also recommended that BYD continue to increase its research and development investment, conduct in-depth research in areas such as battery technology, intelligent networking technology, and autonomous driving technology, and maintain its leading position in technology. BYD can cooperate with universities and research institutions to improve its technological innovation efficiency, and accelerate the research and application of new technologies.

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