WEP
Warwick
Evans
Publishing

Transactions on Economics, Business and Management Research
ISSN: 2960-1789, eISSN: 2960-2254 | Volume 9
GBMS 2024

ESG Practices in the Competitive Landscape of the US-China Electric Vehicle Industry: Tesla and BYD as an Example

Yurui Li

Department of Environmental Science and Engineering, Shanghai Jiao Tong University, Shanghai, 200231, China

liyurui233@sjtu.edu.cn

Abstract. This paper investigates the Environmental, Social, and Governance (ESG) practices of Tesla and BYD, prominent players in the global electric vehicle (EV) sector, and their influence on the competitive landscape. The analysis uncovers shared commitments to environmental sustainability and innovation yet also reveals distinctions in cultural factors, financial performance, and sustainability strategies. Challenges identified encompass supply chain management, regulatory compliance, and talent acquisition. Strategies proposed to overcome these obstacles include fostering strategic partnerships, diversifying procurement sources, and investing in employee development. The significance of this research lies in its contribution to understanding effective ESG integration within the EV sector, providing valuable insights for businesses seeking to enhance their sustainability practices. However, limitations such as reliance on secondary data exist, highlighting the need for future studies to incorporate primary data collection methods to enrich the analysis further. By expanding the understanding of ESG practices within the EV industry, this study offers actionable recommendations for companies to navigate challenges and capitalize on opportunities, ultimately fostering sustainable growth and innovation in the sector.

Keywords: ESG; Electric Vehicles; Tesla; BYD; Sustainability.

1. Introduction

1.1. Research Background

ESG, an important indicator for measuring the sustainable development capabilities of businesses, has gained widespread recognition globally. Standing for Environmental, Social, and Governance, it originated in the United States in the 1960s and was initially used to assess a company's social responsibility. With the popularization of the concept of sustainability, ESG has gradually become a standard framework for evaluating a company's sustainable development capabilities worldwide.

ESG advocates a balance among economic, environmental, and social values, and its emphasis on non-financial factors aligns with current developmental needs. It is an investment philosophy and evaluation standard that focuses on a company's environmental, social, and governance performance rather than just financial performance. A strong ESG performance can enhance a company's value and thereby increase investor returns. Conversely, poor ESG performance can lead to public aversion and cause a decline in the company's stock price. As a result, an increasing number of investors and businesses are paying attention to ESG performance, using it as a crucial basis for investment decisions. ESG rating agencies have accordingly emerged to provide investors with references for assessing a company's ESG performance. ESG encourages businesses to adopt more responsible and sustainable operating models. This helps to reduce a company's negative impact on the environment, enhances its social responsibility awareness, and strengthens its governance level, thereby promoting sustainable development for both the company and society.

The electric vehicle (EV) industry has witnessed remarkable growth in recent years, driven by increasing concerns about climate change and efforts to reduce carbon emissions. As two leading players in the global EV market, Tesla and BYD have been at the forefront of this transformation, driving innovation and shaping the competitive landscape. This research aims to explore the ESG

(Environmental, Social, and Governance) practices of these two companies and analyze their impact on the industry.

The significance of this research lies in its ability to shed light on the importance of ESG practices in the EV industry, which has become a critical aspect of corporate strategy. By examining the strategies and practices of Tesla and BYD, this study aims to provide valuable insights into how businesses can effectively integrate ESG principles into their operations, thereby creating both economic and social value.

1.2. Literature Review

Numerous studies have examined the EV industry and its key players, but limited research has focused specifically on the ESG practices of Tesla and BYD. Li examined the impact of BYD's ESG practices on corporate performance and found that these practices align with BYD's strategic development, which enhances consumer reputation, improves governance structures, boosts management efficiency and the company's financial status, reduces costs, and enhances financial performance [1]. Fu took China National Offshore Oil Corporation and ConocoPhillips as case studies to assess and improve ESG practices for Chinese and American enterprises, constructing an ESG evaluation index system and establishing a comprehensive index evaluation model based on integrated empowerment [2]. Gao & Niu & Xu evaluated the value of new energy vehicle enterprises with ESG factors considered, using BYD as the research subject. They developed a value assessment model based on the EVA framework and incorporated ESG factors, thereby obtaining the enterprise value adjusted for ESG considerations [3].

1.3. Research Gap

The existing literature on the electric vehicle (EV) industry has extensively explored the technological advancements and market dynamics, yet there is a notable gap in the research regarding the Environmental, Social, and Governance (ESG) practices of prominent EV companies such as Tesla and BYD. While studies like Li have begun to address the impact of ESG practices on corporate performance, specifically within the context of BYD, the broader implications and strategies of these practices for industry leaders remain underexplored.

Li's research provides valuable insights into how BYD's ESG practices contribute to its strategic development and financial performance, but there is a need for more comprehensive studies that analyze the long-term sustainability and societal impact of these practices. Similarly, Fu's work on ESG assessment for Chinese and American enterprises is commendable, but the research gap lies in the lack of similar evaluations specifically focused on the EV sector and its key players.

Gao, Niu, and Xu's study is a step in the right direction as it considers ESG factors in the valuation of new energy vehicle enterprises, using BYD as a case study. However, the research gap persists in the form of a lack of comparative analysis between Tesla and BYD, which would provide a more nuanced understanding of the different ESG strategies and their effectiveness in the EV industry.

Moreover, the impact of ESG practices on the reputation and brand value of EV companies, as well as their role in shaping consumer behavior and policy decisions, has not been fully explored. This research aims to bridge this gap by conducting a comparative analysis of Tesla and BYD's ESG strategies, evaluating their effectiveness in enhancing corporate performance, and examining the potential ripple effects on the EV industry as a whole.

1.4. Research Framework

The study is organized as follows: First, an overview of the electric vehicle (EV) industry and the competitive dynamics between Tesla and BYD will be presented. Subsequently, an analysis of the Environmental, Social, and Governance (ESG) practices of both companies will be conducted, encompassing their environmental initiatives, social responsibilities, and governance structures. Thereafter, a comparison will be made to identify any commonalities and discrepancies in their ESG

approaches. In conclusion, the research will synthesize the findings and provide recommendations for businesses seeking to adopt effective ESG strategies within the EV sector.

2. Description of Tesla and BYD

The US market's overall sales scale is relatively small compared to the Chinese market. According to the data from the research institution EVtank, in 2023, the sales volume of new energy vehicles in the United States was 2.948 million vehicles, accounting for a year-on-year growth rate of 18.3% globally [4].

Tesla is an American multinational company that specializes in electric vehicles, solar energy products, and battery energy storage. Founded in 2003 by Elon Musk and other investors, Tesla has become synonymous with innovation and leadership in the EV market. The company's commitment to sustainability and its cutting-edge technology have helped it establish a strong brand presence globally.

Tesla reported a global total delivery of 1,808,581 vehicles in 2023, marking a 38% year-on-year increase. By vehicle type, the two models, Model 3 and Model Y, delivered a total of 615,407 vehicles [5]. Model Y is Tesla's main model and also the best-selling model globally in 2023. According to data from the China Passenger Car Association, in 2023, Tesla China delivered a total of 947,000 vehicles, accounting for 52% of its total global deliveries.

According to data from the China Association of Automobile Manufacturers, in 2023, vehicle sales in China reached 30,094,000 units, a year-on-year increase of 12%. Among these, new energy vehicle sales amounted to 9,495,000 units, ranking first in the world for the ninth consecutive year with a year-on-year growth of 37.9% and a market share of 31.6% [6].

BYD, on the other hand, is a Chinese multinational conglomerate headquartered in Shenzhen, Guangdong. Founded in 1995 by Wang Chuanfu, BYD started as a battery manufacturer before diversifying into the EV market. The company has emerged as a major player in the global EV industry thanks to its aggressive expansion plans and focus on sustainable development [7, 8].

The top-performing Chinese electric vehicle manufacturer, BYD, achieved revenue of 60.2315 billion yuan in 2023, a year-on-year increase of 42.04%, setting a new historical high. Its strong technological advantage serves as the engine of BYD's growth. In 2023, BYD's research and development investment exceeded 40 billion yuan, a year-on-year increase of 97%. The group launched several disruptive technologies in 2023, including the Yishang D9, Yunni, and DMO super hybrid off-road platforms [9].

Both Tesla and BYD have played a significant role in promoting the adoption of electric vehicles and advancing the ESG agenda. This research will explore their respective ESG practices, providing valuable insights into the competitive landscape of the EV industry and the importance of ESG considerations for businesses operating in this space.

3. Comparative Analysis of Tesla and BYD

3.1. Similarities Identified in Tesla and BYD

3.1.1. Environmental leadership and innovation.

Both Tesla and BYD share a strong commitment to product greenness and corporate greenness. They understand the importance of reducing carbon emissions and doing their part to combat climate change [10]. This is evident in their production of electric vehicles, which are designed to be environmentally friendly and reduce reliance on fossil fuels.

Tesla and BYD prioritize the development of green energy solutions. Tesla is well-known for its electric vehicles, but the company also produces solar panels and solar roofs to harness the power of

the sun. Similarly, BYD is not only focused on electric vehicles but also invests heavily in the research and development of battery technology, solar panels, and other renewable energy solutions.

Both companies also have a strong focus on innovation and sustainability. They invest heavily in research and development to improve their products and make them more environmentally friendly. This includes developing more efficient batteries, improving vehicle performance, and finding ways to reduce the environmental impact of their manufacturing processes.

Furthermore, Tesla and BYD are both committed to advancing the adoption of electric vehicles and renewable energy. They recognize the importance of infrastructure and charging networks to support the growth of electric vehicles and make it easier for consumers to switch to greener transportation options. They have been at the forefront of developing energy-efficient technologies and promoting the transition to electric vehicles, which are crucial for reducing carbon emissions and combating climate change. Their focus on research and development has allowed them to introduce cutting-edge solutions in the EV market, such as battery technology, electric powertrains, and autonomous driving features.

3.1.2. Strategic partnerships and supply chain management.

Tesla and BYD understand that strategic partnerships and efficient supply chain management are critical to their competitive advantage and business sustainability. Tesla has cultivated relationships with a range of suppliers, including those for lithium-ion batteries, advanced electric motor technologies, and other key components. The company's supply chain is designed to ensure the availability of these critical materials, which is essential for maintaining production schedules and meeting customer demand. Similarly, BYD has developed a robust supply chain that supports its diverse product range, from batteries to automobiles. The company's vertical integration, particularly in the battery sector, allows for greater control over quality and cost, which is a significant strength in the competitive electric vehicle market.

3.1.3. Employee culture and talent attraction.

The employee culture and talent attraction strategies of Tesla and BYD are integral to their global expansion and market dominance. Both companies have fostered an internal environment that values innovation, sustainability, and performance, which not only attracts top talent but also drives the continuous development of their products and services.

Tesla's culture is characterized by a startup-like environment that encourages risk-taking and creativity. The company's commitment to visionary leadership and cutting-edge technology has allowed it to attract some of the most talented engineers and designers in the world. Tesla's employee benefits, including stock options and a collaborative work environment, further enhance its ability to retain and motivate its workforce. This unique culture not only supports the production of high-quality electric vehicles but also contributes to Tesla's brand image as a leader in the sustainable energy movement.

Similarly, BYD has cultivated a culture that emphasizes teamwork, continuous learning, and social responsibility. The company provides a comprehensive training program for its employees, ensuring that they have the necessary skills to adapt to the fast-paced changes in the electric vehicle industry. BYD's focus on employee development and work-life balance has helped to foster a loyal and engaged workforce. The company's commitment to green technology and sustainability also resonates with many job seekers who are drawn to the opportunity to contribute to a cleaner and more sustainable future.

3.2. Differences Identified in Tesla and BYD

3.2.1. Cultural and regional influences.

Tesla, as an American company, operates within a different cultural and regulatory context compared to BYD, a Chinese company. This has influenced their business strategies and ESG practices. For

example, Tesla has been more focused on pushing the boundaries of technology and innovation, while BYD has emphasized collaboration with local governments and communities to promote sustainability.

3.2.2. Financial performance and growth trajectory.

Tesla and BYD have exhibited different financial performance and growth trajectories. Tesla, as a market leader, has enjoyed higher valuations and a stronger brand presence. However, BYD has experienced rapid growth, especially in the Chinese market, and has become one of the largest EV manufacturers globally. Their differing financial positions have influenced their investment strategies and capabilities to expand and scale their operations.

3.2.3. Approach to sustainability and social responsibility.

Tesla and BYD have taken different approaches to sustainability and social responsibility. Tesla has been more vocal about its commitment to environmental causes and has actively engaged in initiatives to promote the adoption of renewable energy sources. On the other hand, BYD has been more focused on addressing social issues, such as poverty alleviation and environmental cleanup in its hometown.

3.3. Problems Identified Based on Similarities and Differences

3.3.1. Inadequate supply of key materials.

Both Tesla and BYD face challenges related to the inadequate supply of key materials, such as lithium and rare earth metals, which are essential for EV battery production. This scarcity and dependence on imports can lead to cost increases and supply chain disruptions, affecting their ability to meet the growing demand for electric vehicles.

3.3.2. Regulatory compliance and environmental standards.

As the EV industry continues to grow, both companies must navigate complex regulatory environments and adhere to varying environmental standards across different countries. This can pose challenges in terms of compliance costs and the need to customize their products and practices to meet specific regulations.

3.3.3. Workforce development and skill shortages.

The EV industry requires a skilled workforce to design, develop, and manufacture innovative products. Both Tesla and BYD face challenges related to workforce development and skill shortages, particularly in areas such as engineering, manufacturing, and battery technology. Attracting and retaining talented professionals is crucial for their continued growth and success.

In conclusion, while Tesla and BYD share similarities in their commitment to environmental sustainability and innovation, they differ in terms of cultural influences, financial performance, and approaches to sustainability. These similarities and differences highlight several challenges faced by the EV industry, including supply chain management, regulatory compliance, and workforce development. Addressing these issues is essential for the long-term success and growth of Tesla, BYD, and the broader EV industry.

4. Suggestions

4.1. Addressing Supply Chain Challenges

To effectively address supply chain challenges, Tesla and BYD need to adopt a comprehensive approach that encompasses strategic partnerships, procurement diversification, and vertical integration. Strengthening strategic partnerships with raw material suppliers is crucial for ensuring a consistent and reliable supply of essential components such as lithium and rare earth metals. By fostering closer relationships with suppliers, the companies can gain better visibility into the supply chain and enhance collaboration, thereby reducing the risk of shortages and disruptions.

Diversifying procurement sources is equally important as it helps to mitigate the risks associated with over-reliance on a single supplier. By establishing relationships with multiple suppliers across different regions, Tesla and BYD can effectively spread the risk and create a more resilient supply chain. This strategy also allows for competitive pricing and ensures access to the latest technological advancements in the industry.

Promoting vertical integration, particularly in critical sectors like batteries, can provide Tesla and BYD with greater control over the quality and cost of their products. By integrating the production of key components in-house, the companies can streamline operations, reduce dependency on external suppliers, and enhance the overall efficiency of their supply chain.

In addition to these measures, Tesla and BYD should also focus on developing robust supply chain management systems. These systems should be designed to ensure the availability of critical components, maintain production schedules, and effectively manage demand fluctuations. By leveraging advanced technologies such as artificial intelligence, predictive analytics, and automation, companies can gain real-time insights into supply chain operations, identify potential bottlenecks, and proactively address them.

4.2. Coping with Regulatory Compliance

Coping with regulatory compliance is of paramount importance for Tesla and BYD, given the dynamic and disparate nature of regulations around the world. To effectively manage this challenge, both companies should establish dedicated teams with expertise in legal, regulatory, and compliance matters. These teams would be responsible for closely monitoring and analyzing regulatory policies across different countries and regions, ensuring that the companies stay ahead of any changes that could impact their operations.

In addition to tracking regulations, these teams should actively engage with government agencies to foster positive relationships and secure policy support that aligns with the companies' sustainable goals. This involves not only compliance but also proactive participation in policy discussions and consultations to influence the development of favorable regulations.

To meet the diverse regulatory requirements of different markets, Tesla and BYD must also embrace localized product and technology adaptations. This means customizing their electric vehicles and battery technologies to align with specific safety, emissions, and performance standards set by various regulatory bodies.

Both companies should invest in robust compliance management systems that integrate seamlessly into their operations. These systems should facilitate ongoing compliance training for employees, maintain up-to-date records of regulatory changes, and provide a framework for ensuring compliance with all applicable laws and regulations.

4.3. Resolving Talent Shortages

Resolving talent shortages is critical for the sustained growth and innovation of Tesla and BYD. To address this challenge, both companies should prioritize investment in employee training and development. This involves providing ongoing learning opportunities, career progression paths, and mentorship programs to enhance the skills and expertise of their workforce. By doing so, Tesla and BYD can foster a culture of continuous learning and development, which in turn attracts and retains top talent.

Establishing a comprehensive talent development system is essential for nurturing internal talent and ensuring a pipeline of skilled professionals. This system should identify high-potential employees and provide them with the necessary resources and opportunities to excel in their roles.

Competitive compensation and benefits are also crucial in attracting and retaining top talent. Tesla and BYD should conduct regular market assessments to ensure their compensation packages are

aligned with industry standards and offer attractive benefits that enhance work-life balance and overall employee well-being.

Strengthening collaboration with universities and research institutions can provide access to fresh talent and cutting-edge research. By establishing partnerships and internships, Tesla and BYD can tap into academic expertise and innovative ideas, which can be invaluable for their product development and technological advancements.

Lastly, creating a positive work environment that values innovation, sustainability, and performance is essential for attracting and retaining top talent. This involves fostering a culture of inclusivity, respect, and collaboration, where employees are encouraged to share ideas, take calculated risks, and contribute to the company's mission.

These strategies aim to address the identified issues and facilitate sustainable development for businesses. By implementing these strategies, Tesla and BYD can enhance their competitive advantage, improve their financial performance, and create both economic and social value. Moreover, these strategies will enable them to effectively integrate ESG principles into their operations and contribute to the sustainable development of the electric vehicle industry.

5. Conclusion

In conclusion, this research paper has highlighted the significance of ESG practices in the competitive landscape of the US-China electric vehicle (EV) industry, with Tesla and BYD as the primary examples. The analysis has revealed the following key findings:

Both Tesla and BYD demonstrate a strong commitment to environmental sustainability and innovation, prioritizing the development of green energy solutions. However, they differ in their cultural and regional influences, financial performance, and approaches to sustainability. Common challenges identified for the EV industry include supply chain management, regulatory compliance, and talent shortages.

To address these challenges, the paper suggests strategies such as strategic partnerships, procurement diversification, vertical integration, dedicated regulatory teams, localized product adaptations, investment in compliance systems, and employee training and development.

The research's significance lies in its ability to provide valuable insights into the importance of ESG practices for businesses in the EV industry. It highlights the strategies and practices of Tesla and BYD, shedding light on how companies can effectively integrate ESG principles into their operations, thereby creating economic and social value.

The limitations of the study include the reliance on secondary data sources such as company reports and academic literature. To enhance the depth of analysis, future studies could incorporate primary data through surveys, interviews, and direct observation of company operations.

References

[1] Li Jinpin. The Impact of BYD's ESG Practices on Its Corporate Performance [Dissertation]. Nanjing University of Posts and Telecommunications, 2023. DOI: 10.27251/d.cnki.gnjdc.2023.001084.

[2] Fu xingyu. ESG Assessment and Improvement of Chinese and American Enterprises [Dissertation]. Nanjing University of Information Science and Technology, 2022. DOI: 10.27248/d.cnki.gnjqc.2021.000963.

[3] Gao Linlin, Liu yinhuan, Xu kuan. Consideration of ESG Factors in the Valuation of New Energy Vehicle Enterprises: A Case Study of BYD. Finance and Accounting Monthly, 2024, 45 (1), 95-101. DOI: 10.19641/j.cnki.42-1290/f.2024.01.014.

[4] Li Cuisun. Exclusive interview with Zuojianyang: Unveiling the secrets of BYD and Tesla (Part I). Automobile World, 2024, (03), 30-39.

[5] Liu Shiyong. Competition and valuation: a case study of Tesla Motors. In IOP Conference Series: Earth and Environmental Science, 2021, 692 (2): 022103). IOP Publishing.

[6] Wang Ruixin. New energy vehicle consumption accelerates into the "fast lane". Luoyang Daily, 2024, (004).

[7] Zhou, Xinyi, and Xin Song. A Study on the Market Response to the Impact of Emergencies on New Energy Vehicle Companies—A Case Study of Tesla. Academic Journal of Business & Management, 2023, 5 (7), 11-16.

[8] Graham, John D., Keith B. Belton, and Suri Xia. How China beat the US in electric vehicle manufacturing. Issues in Science and Technology, 2021, 37 (2), 72-79.

[9] Liu, Jinpeng, and Shiyun Zhou. Analysis of China's New Energy Vehicle Market Competitive Strategy: Taking Tesla and NIO as Examples. In 2022 7th International Conference on Social Sciences and Economic Development (ICSSED 2022), pp. 356-362. Atlantis Press, 2022.

[10] Liou, To-hai. The Romance of Three Economic Blocs: EU-China Economic Relations Evolving in an Era of Uncertainty. In Middle-Power Responses to China's BRI and America's Indo-Pacific Strategy, pp. 53-72. Emerald Publishing Limited, 2022.