



Navigating the ESG Landscape: An In-depth SWOT Analysis and Strategic Recommendations for Tesla's Sustainable Growth

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Abstract. This article provides an in-depth analysis of Tesla's strategic positioning as a leader in the electric vehicle and renewable energy industries. A comprehensive analysis of Tesla's sustainable growth was conducted through SWOT analysis (strengths, weaknesses, opportunities, and threats). The research focused on Tesla's commitment to environmental, social, and corporate governance (ESG), and the firm's implementation of green supply chain management (GSCM). The study found that although Tesla has made progress in environmental technology and GSCM, its social and corporate governance challenges have significantly affected its social status. The article recommends that Tesla combine ESG principles and robust GSCM practices to improve its social status and lead the future transformation of global sustainability and environmental awareness.

Keywords: SWOT analysis, ESG, Green supply chain management

1 Introduction

Tesla is an American electric vehicle and energy company whose main business is solar equipment, electric vehicles, and energy storage equipment. Tesla's aim is to speed up the worldwide transition to sustainable energy by supplying every consumer with a pure electric automobile within their purchasing power. In 2008, Tesla launched the Tesla Roadster, the first legally mass-produced pure electric vehicle using lithium-ion batteries. Although not a successful car project by traditional standards, its launch changed people's understanding of electric vehicles, and laid the foundation for Tesla to become a leading electric vehicle manufacturer. However, in recent years, Tesla's social status has continued to decline due to ESG issues. ESG principles are a framework system, including environmental, social and governance factors, proposed by the UN Environment Program (2004) [18]. It is regarded as an indicator for evaluating a company's operations. At the social level, although Tesla has created a significant number of job opportunities and its workforce has continued to grow, the firm has been associated with a series of controversies, such as in the realms of employee management and health and safety, with the firm accused of 'refusing to pay for medical insurance for

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employees injured on the job and ignoring employees' privacy rights.' The corporate governance benchmarks listed by the Sustainability Accounting Standards Board (SASB) include business ethics, competitive conduct, and fair treatment among stakeholders. However, the blatant violation of these standards by Tesla's chairman, Elon Musk, has posed significant corporate governance challenges for the company. These challenges have negative repercussions for Tesla's reputation, image, and influence. Nevertheless, it should be highlighted that Tesla has done a good job on the environmental front, designing a sustainable system that combines batteries, solar energy, and electric vehicles to achieve a global sustainable energy economy. Moreover, Tesla combines the green supply chain to achieve sustainable development (Guang Shi et al., 2012) and regulates various parts of the supply chain through the integration from green procurement to life cycle management in the supply chain (Lerman et al., 2022) to minimize carbon emissions [6][8].

2 Methodology

This study adopts a multi-faceted analytical approach to evaluate Tesla's international strategic market positioning, particularly in the electric vehicle and renewable energy sectors. Embracing a holistic view with a focus throughout the past few decades, the analysis transcends Tesla's internal dynamics, scrutinizing both intrinsic and extrinsic factors that influence its market presence in the global market. Central to methodology is the SWOT framework, which is expanded through the TOWS matrix, serving as a diagnostic tool to dissect Tesla's strengths, weaknesses, opportunities, and threats in a structured manner (Weihrich, 1982) [20]. This evaluative model lays the groundwork for a nuanced understanding of Tesla's competitive edge, development mode, developmental requisites, market adversities, corporate practice and potential leverage points.

2.1 SWOT Analysis

2.1.1 Strengths

Human activities have accelerated global warming. As a consequence, the E in ESG has become an issue of increasing concern to policymakers and regulatory agencies. Governments around the world have introduced incentives to protect the environment with various green technologies (Nielsen et al., 2019) [14]. In addition, they have sought to speed up effective responses to climate change by implementing a regulatory system for carbon credits (Mathews, 2008) [12]. In this system, automotive manufacturers are urged to produce electric vehicles in return for carbon credits. Because Tesla exclusively sells electric vehicles, it can take these credits for free and sell them to other manufacturers that cannot fulfil regulatory criteria. Tesla has already made billions of dollars through its regulated carbon credit sales. Indeed, as Figure 1 shows, Tesla's carbon credit sales increased by 116% in 2022, accounting for more than 20% of the firm's total profits (Jennifer, 2022). In addition, Tesla avoids supplier problems in its green supply chain management (GSCM) by working directly with existing suppliers

to address environmental and social issues. Where environmental problems are discovered, the number of audits of direct suppliers is tripled. Furthermore, there is a great emphasis on transparency in supply chain management to ensure suppliers comply with environmental standards. When risks are found in the supply chain, they are assessed and negotiated with relevant parties in a bid to address them, and the progress of problem resolution is constantly tracked. Tesla strives constantly to tackle environmental and social issues in the supply chain. The company has established systems to avoid underestimating supply chain emissions and is innovating in electric vehicle technology and renewable energy. It has created a new hardware and software architecture, and its cars feature more software than ordinary cars. Furthermore, Tesla has ramped up its promotion of renewable energy and battery recycling in an effort to cut carbon emissions.

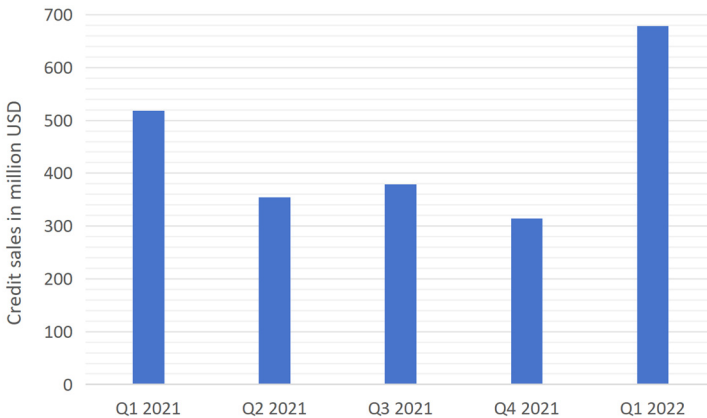


Fig. 1. Tesla's carbon credit sales (**Source:** Tesla regulatory credit sales (carboncredits.com))

2.1.2 Weaknesses

From the market's perspective, Tesla and Musk's inseparability from one another causes problems in terms of the G in ESG. In recent years, with almost all other important figures in the company leaving, Musk's importance has increased, giving him an increasing say in how the company is run. This concentration of decision-making power reveals a key corporate governance issue, namely the risk of over-reliance on a single leader. Especially in 2016, Musk encouraged Tesla shareholders to acquire SolarCity, which was about to go bankrupt, for US\$260 million (Carr, 2017) [4]. The acquisition price was deemed to be unreasonably high. This decision reflects Musk's deep involvement in Tesla's decision-making process. Musk's reason for promoting the purchase was that SolarCity represented great future potential, and the merger would be mutually beneficial for both companies. Analysts believed that Tesla's acquisition of SolarCity was risky (Song, 2019), as it would distract Tesla and hinder its achievement of production goals [17]. In 2020, Tesla's directors only agreed to offer \$60 million for the acquisition and filed a lawsuit against Musk (Caroom and Truvalue Labs, 2019) [3].

This seriously deviated from the SASE guidelines, resulting in Tesla's corporate governance insight score on TruValue Labs standing at only 55. In fact, Tesla's corporate governance long-term insight score has steadily fallen over the years (Caroom and Truvalue Labs, 2019) [3]. The lawsuit of SolarCity case underscore the vulnerable state of the independence of Tesla's board of directors due to Tesla's CEO duality and insider director issues, and highlight the undue influence that strong leaders can have on corporate decisions without adequate independent oversight. In 2018, Musk stated on Twitter that he planned to privatise Tesla sell-off. The company was preparing to delist and the funds were ready for the privatisation. However, this violated the principle of fair disclosure and attracted the attention of the SEC, which filed a fraud complaint against Tesla. Investors dissatisfied with Musk's tweet also filed a civil class action lawsuit that remains unresolved. Figure 2 shows that Tesla is ranked last in terms of vehicle reliability by J.D Power and Consumer Reports, with an average of 171 mechanical problems per 100 vehicles, which is 51 higher than the average for other manufacturers (Ryder, 2023) [16]. Mechanical issues include fire, automatic driving failure, sensor failure, etc. In 2022, US safety officials received 750 complaints regarding Tesla vehicles braking without explanation. This news has had an impact on Tesla's social status. In 2023, when Tesla recalled 2 million vehicles due to autopilot issues, this constituted the largest recall since the company was founded, further undermining Tesla's social status among consumers.

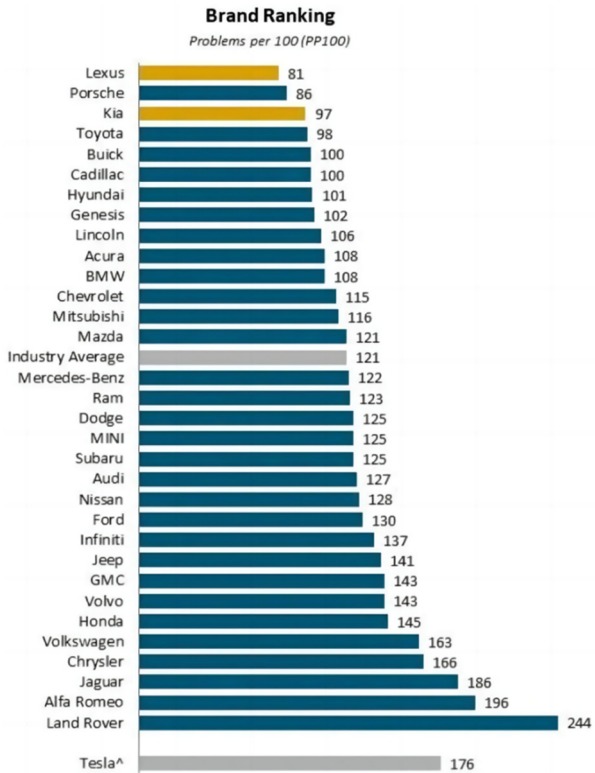


Fig. 2. 2021 Vehicle dependability ranking (**Sources:** 2021 U.S. Vehicle Dependability Study (VDS) | J.D. Power (jdpower.com))

2.1.3 Opportunities

While Tesla holds a large share of the North American and Australian electric vehicle markets, it has less influence in Asia and Europe (Figure 3). According to research by Lathabhavan (2021), Asian countries have begun to achieve sustainable development [7]. China is one Asian country that has successfully implemented green supply chain management (GSCM), and Thailand’s electronics industry has also made good progress in this area. With the era of complete sustainability approaching, Asia is likely to become the largest market for electric vehicles. As an original equipment manufacturer, Tesla could consider manufacturing in Asian countries that offer incentives such as India. The firm could attract local talents through exciting product planning and leverage Asia's markets and natural resources to become a global battery production leader. As technology progresses, consumer preferences for electric vehicles are changing and the proportion of consumers considering purchasing electric vehicles is increasing. However, the high green premium currently prevents more people from purchasing electric vehicles. Li et al. (2023) predict that as the production cost of electric vehicles drops significantly after 2023, the green premium will also decline, and by 2027, electric cars will cost less than cars running on traditional fossil fuels. More affordable prices should lead to more consumers opting for electric vehicles in the future, which will bring huge development opportunities [9].

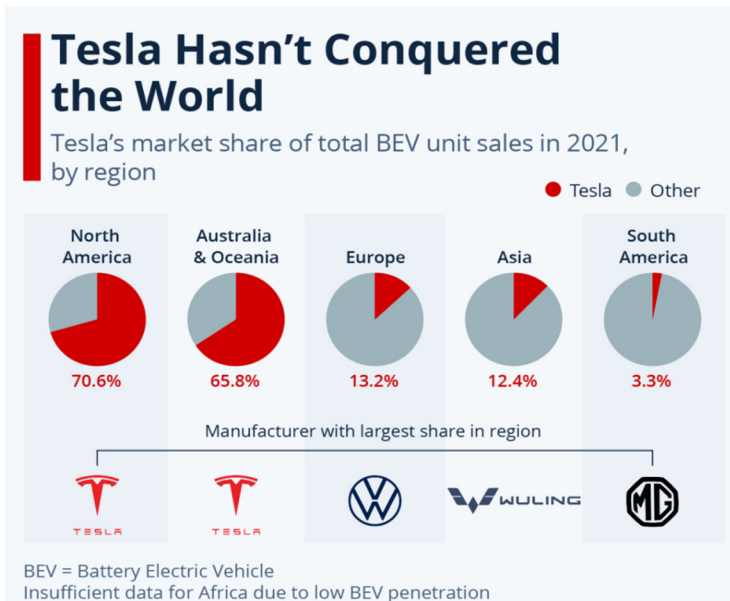


Fig. 3. Tesla’s market share of total BEV unit sales in 2021 (**Source:** Chart: Tesla Hasn't Conquered the World | Statista (statista.com))

2.1.4 Threats

Lithium and cobalt are key materials for battery manufacturing. As overall global demand for such rare materials continues to rise, this could lead to price fluctuations and supply chain instability, despite Tesla’s investment in internal development (Figure 4). As for the aluminium industry, to achieve true sustainability, a switch to recycling is not enough. The key factor currently driving the rise in electric vehicle sales is government incentives such as tax breaks and government subsidies. However, governments cannot maintain these subsidies forever, because in some cases, abandoning gasoline-fuelled vehicles and opting for electric vehicles may actually increase overall emissions (Nielsen et al., 2019) [13]. Hence, Tesla’s prices are likely to increase to cope with rising costs, resulting in short-term sales declines and increasing financial pressure on the firm.

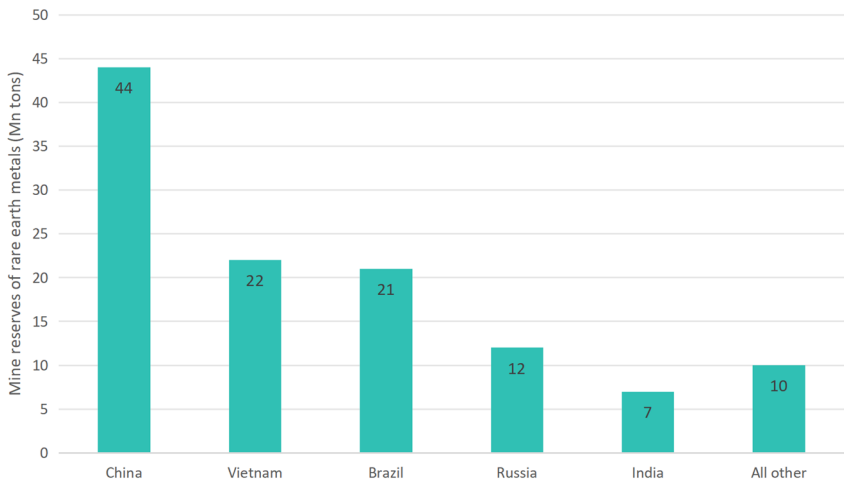


Fig. 4. Tesla’s sources of rare raw materials (Source: Where in the World Are They? (visual-capitalist.com))

Although in the automotive industry, internal combustion engines dominate the industry (Oltra and Saint Jean, 2009), in order to meet regulatory requirements for emissions, energy consumption, convenience, etc., zero-emission sustainable vehicles have become a new starting point (Van den Hoed, 2007) [14][19]. With Tesla leading the way in new energy vehicles, higher green R&D efforts have been made in reducing carbon emissions than some traditional cars (Ma et al., 2022) [12]. For the supply chain of electric vehicles, they often use lithium, cobalt and other key minerals as the key to a sustainable energy transition. Tesla stands out from most new energy vehicle manufacturers that still rely on intermediary companies (Borgstedt et al., 2017) through its strategy of sourcing directly from mining and refining companies in GSCM. From the perspective of market positioning, Tesla is positioned in the luxury car market, catering to the needs of wealthier people who pursue quality and try new things [2]. Therefore, it is more likely to be successful in sales than brands such as BYD that are positioned in the mid-range market (Liu and Meng, 2017) [10].

3 Discussion

Based on the above SWOT analysis and an evaluation of Tesla's green supply chain management and ESG, we propose the following steps that Tesla could take to effectively improve its social status.

3.1 Environmental Impact

Firstly, in order to improve Tesla's environmental performance, the firm needs to focus on the environmental impact of its batteries and explore and invest in green battery recycling technology. Energy efficiency can be improved in its production processes, while its use of solar energy and other renewable energy sources can be expanded to reduce carbon emissions in production and operations (Mathews, 2008) [11]. To ensure these enablers are effectively implemented and continuously improved, Tesla should establish a comprehensive sustainability assessment system. According to Chun et al. (2021), this system can effectively demonstrate business transparency, thereby having a significant and positive impact on environmental issues and brand trust [5]. As this kind of trust directly affects the recognition and attractiveness of the company's brand, it is a key way for enterprises to improve their social status.

3.2 Social Performance

It is of great importance for Tesla to be perceived as having outstanding social performance, as communities and stakeholders can wield a certain amount of power or influence, and potentially undermine the company's core interests (Owen and Kemp, 2023) [15]. Regarding its employees, Tesla should ensure they have social support and development opportunities, thereby ensuring a decent quality of life. Moreover, the firm should promote diversity in its internal culture. These measures can motivate employees to contribute more to the company's long-term success (Babalola et al., 2020) [1].

3.3 Mechanical Reliability

Another issue that needs addressing is mechanical reliability, as Tesla is ranked low in this regard, having faced a large number of vehicle recalls due to technical problems. This directly undermines the company's social status and consumer trust. Therefore, Tesla must improve its quality control processes, adopt proactive safety measures, and enhance customer communications. These measures would not only protect the rights and interests of consumers and employees, but also enhance its credibility in society. In turn, this trust would further solidify Tesla's position in society as a safe and reliable industry leader.

3.4 Corporate Governance

In the realm of corporate governance, Tesla needs to ensure a more independent board, such as by including a sufficient number of non-executive directors. Increasing the diversity of board members and ensuring greater independence would lead to more objective and innovative decision-making. Furthermore, the accountability mechanisms to which the CEO and senior managers are subjected need to be strengthened to ensure management takes responsibility for its decisions and actions. Moreover, in order to break the stalemate among shareholders, Tesla should hold regular shareholder meetings and provide effective feedback so that shareholders' opinions can be fully heard and considered. In addition, it is also crucial for Tesla to increase its financial and business transparency. Continuous monitoring and evaluation can be carried out through the regular publication of detailed financial reports and business updates, as well as details of tools or procedures. By implementing these governance measures, Tesla can not only improve the quality and transparency of its internal management, but also establish a more positive and credible image in society.

3.5 Green Supply Chain Management

Tesla has huge potential as well as great responsibility in terms of its green supply chain management. The company needs to focus on sourcing renewable energy and environmentally certified raw materials to reduce reliance on limited resources such as lithium and cobalt. Optimising logistics and transportation and choosing lower-carbon modes of transportation can help reduce the carbon footprint of the firm's product transportation. In addition, Tesla can also encourage the application of digital technology to improve the visibility and efficiency of the supply chain. Through cooperation with suppliers, Tesla can promote the greening of the entire industry chain. This would convey a positive sustainable development message to the public and stakeholders, and establish Tesla's image as a green leader in the industry and at the forefront of sustainable development.

3.6 Summary

In the context of the global promotion of an environmentally friendly and low-carbon economy, new energy vehicles offer great growth potential. From every perspective, the development of new energy vehicles is crucial. This article reveals the complexity of Tesla's sustainable development and corporate social responsibility through a SWOT analysis and a discussion of the firm's ESG and green supply chain, while also proposing solutions to the problems encountered. Tesla's journey towards sustainability is marked by both commendable strides and complex challenges. The company's initiatives in reducing the carbon footprint through innovative battery technologies and green supply chain practices set a benchmark within the industry. Tesla's assertive push towards solar energy utilization and battery recycling showcases its dedication to an eco-friendly trajectory. Yet, it confronts critical social and governance dilemmas that threaten to tarnish its public image and impede its operational efficacy.

4 Conclusion

During the research process, the following conclusions were drawn. Tesla has shown outstanding performance in environmental aspects, especially the innovative technologies implemented in its electric vehicles and in renewable energy, thereby promoting the global transition to sustainable energy. Tesla has also reduced its carbon footprint throughout the entire production process through effective green supply chain management. However, the company faces significant challenges in terms of the social and governance aspects of ESG, including employee management and product reliability. There are particular issues in terms of Musk's personal influence and decision-making transparency, which have affected Tesla's social status. To enhance its social status, Tesla needs to continue investing in green technologies, and fostering a culture that values the contributions and well-being of its employees. In addition, product reliability and safety issues are addressed head-on to increase consumer trust, as well as strategically re-evaluating the company's internal management to strengthen the board's independence. Furthermore, the company can significantly reduce its environmental impact and demonstrate leadership in sustainable practices through GSCM. Therefore, by adhering to these principles, Tesla can not only improve its standing in society but also lead the global transition to a more sustainable future.

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