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A Study on Corporate Greenwashing on Manufacturing of Lithium Batteries of Electric Vehicle (EV)

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Abstract
The emergence of electric vehicles (EVs) as a promising solution to environmental concerns has coincided with a troubling phenomenon—greenwashing. This paper explores the deceptive practices employed by some entities in the EV industry to exaggerate their environmental credentials. The primary objective is to shed light on the subtle manipulations and misleading marketing strategies that obscure the true ecological impact of EVs. Examining case studies and industry trends, the paper delves into instances where companies emphasize the zero-emission aspect of EVs while overlooking the entire lifecycle's environmental toll, from raw material extraction to production and disposal. The allure of a greener alternative has led to a competitive landscape where distinguishing between authentic sustainability and superficial marketing becomes challenging for consumers. Furthermore, the paper delves into the motivations behind greenwashing in the EV sector. It investigates how these practices serve as a market appeal strategy, attracting environmentally conscious consumers, and how they contribute to gaining a competitive edge in an increasingly saturated market. By identifying greenwashing, the paper advocates for consumer protection and encourages corporate accountability, emphasizing the importance of transparent and genuine commitment to sustainability in the rapidly evolving landscape of electric vehicles.

Keywords: Electric Vehicles (EV), Greenwashing, Sustainability, Environmental Impact, Consumer Awareness.

Introduction

In recent decades, green marketing has become a highly debate topic for customers,business organisations, shareholders, management and communities (Dangelico and Vocalelli,2017). Various green initiatives are available in practice, in diverse areas including energy supply, food, tourism, packaging, fashion, architecture, government and buildings (Leoni-dou and skarmeas,2015). Chen and Chang (2013) argued that green purchasing power forces business organisations to innovate or change their business strategies. Many food companies use greenwashing to appear to be environmentally friendly (Nguyen et al.,2019). Parguel et al. (2011) considered greenwashing

as “The actof misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service”. Greenwashing is a well- known way for firms to perform better then their rivals (Parguel et al., 2011). However, almost all criticshave agreed that greenwashing is disadvantageous for the environment and consumers health. For instance, some authors showed the effects of increase in greenwashing and argued that it can negatively affect the confidence of shareholders and consumers in greenproducts (Delmas and Burbano 2011; Guo et al.,2018; Pizzettiel al.,2019). Additionally,Ramus and Montiel (2005) and Horiuchi et al. (2009) argued that greenwashing prevents customers from understanding the consequences of their acquisition behaviors whentrying to choose between reliable and non-reliable claims. Dahl (2010) suggested that greenwashing is not just a marketing ethic. Perceived greenwashing not only has a negative effect on a company’s base channel (Davis, 1992; Du et al.,2018), but greenmarketing is a marketing is a marketing with significant effects. Most recently, Wang etal, (2019) demonstrated the relationship between greenwashing perception of the entire industry and purchase intention of green products from other branch is negatively moderated by brand attitudes towards other brands in the industry. As such, greenwashing has because a hot topic because of its practical importance increased challenges and research opportunities in different disciplines.

Objectives

1. To pinpoint the precise tactics utilized by companies in the lithium battery production industry to downplay their environmental effect in relation to electric vehicles.
2. To determine how much the public knows about the corporate greenwashing in the lithium battery sector.
3. To evaluate how well the industry rules and regulations already in place combat greenwashing in the lithium battery manufacturing sector.
4. To calculate the actual environmental effects of producing lithium batteries for electric vehicles.
5. To encourage accountability and transparency in the supply chain for lithium batteries.

Components used for Manufacturing the Lithium Batteries for Electric Vehicles

For manufacturing the lithium batteries several components will be used:

- Lithium-ion Cells: The mainstay of batteries, these cells have lithium-ion which both stories and releases electrical energy. An anode, cathode, separator and electrolyte are usually included.
- Cathode Materials: The cathodes used to determine the energy density and performance characteristicsof a variety of materials, including cobalt oxide (LCO), Lithium Manganese oxide (LMO), Lithium nickel Manganese cobalt oxide (NMC) and lithium iron phosphate (LFP).
- Anode Materials: Graphite is frequently utilized as the anode material, while silicon is also being investigated due to its potential for greater energy storage.
- Electrolyte: During charging and discharging the electrolyte facilities the transfer of lithium ions between the cathode and anode. Usually, a lithium salt is dissolved in the solvent, most frequently ethylene carbonate or dimethyl carbonate.
- Separator: A porous membrane that lets lithium ions pass through while preventing short circuits between the cathode and anode.
- Binder and Conductive Additives: These substances improve the electrical conductivity in the battery by binding the electrode components together.
- Enclosure and Packing: To guarantee safety and structural integrity, the battery cells are kept in protective enclosures, which are frequently constructed of metal or composite materials.
- Thermal Management System: Lithium batteries is used in electric vehicles frequently, cooling systems like liquid cooling or air cooling to control temperature and avoid overheating.

- Battery Management System (BMS): To maximize effectiveness and safety, this electrical system keeps an eye on and regulates the battery's condition, including temperature, voltage and level of charge.
- Connectors and Wiring: Parts that joins individual battery cells into packs and modules and link the battery to the vehicle's electric apparatus.

Impact of Pollutants Caused to Manufacture the Lithium Batteries for Electric Vehicles

The environmental impact of lithium electric vehicle batteries production depends on many factors, including the type of battery chemistry, manufacturing process, energy source and waste management practices. However, here are some of the important factors to consider regarding pollution.

- Energy Intensity: The production of lithium batteries requires a large input of energy, especially during the extraction and processing of raw materials such as lithium, cobalt and nickel. If the energy used comes from fossil fuels, it contributes to air and water pollution, greenhouse gas emissions and resource depletion.
- Resource Extraction: The extraction of lithium, cobalt, nickel and other resources can have negative impact on the environmental, including habitat destruction, soil and water pollution and societal pollution.
- Chemical Use: The lithium battery manufacturing process uses variety of chemicals, metals and electrolytes, some of which can be hazardous if not handled properly. Improper disposal of these chemicals can cause soil and water pollution.
- Transportation: Transportation of raw materials, components and finished batteries can cause pollution, especially over long distance and is an inefficient methods of transportation.
- Waste Management: Disposal and recycling of end of life lithium batteries can cause environmental pollution problems if not handled properly. Hazardous waste can release toxic chemicals and heavy metals into the environment.
- Water Usage: Battery manufacturing processes require large amounts of water for cooling and cleaning. If water use is not properly, local water resources will decrease and sewage runoff will lead to blockage of water sources.

In the context of corporate greenwashing, it is important to critically assess how companies communicate and address these environmental impacts. Do you know the pollution caused by their manufacturing processes? Are they accurately report their efforts to reduce pollution and reduce environmental damage? Or they trick to make it look green? These questions can be provide significant insights into the environmental footprint of lithium battery production for electric vehicles.

Outcomes

- Raise awareness among the stakeholders about the spread and impact of greenwashing in the industry and demonstrate the need for more transparent and sustainable practices.
- Policy makers should frame strict rules and regulations to reduce the greenwashing in lithium battery manufacturing.
- The companies have to reframe their marketing strategies by taking few greenwashing instances to gain customers confidence.
- Customers must be educated about the greenwashing which are used in manufacture of lithium batteries and be empowered to make purchasing decision about truly eco-friendly products.

Conclusion

Our investigation shows the extent of corporate greenwashing in the production of lithium batteries for electric vehicles. Through comprehensive analysis and research of industry practices.

We have also found that the company confuses its marketing with its credibility. This situation undermines consumer confidence and undermines sustainable development.

Policy makers must establish rules and regulations that hold companies accountable for the environmental pollution, transparent and valid reporting. Stake holders as to prioritize sustainability initiatives and responsible practices though out the supply chain. According to Our findings, they can provide consumers with knowledge about green washing and demand environmentally friendly products for a better time.

Finally, we discuss the importance of ecological cleanliness in production of lithium batteries for electric vehicles to achieve a cleaner and greener environment.

References

1. Chen, Y. S., & Chang, C. H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. Journal of Business Ethics, 114, 489–500. https://doi.org/10.1007/s10551-012-1360-0
2. Dahl, R. (2010). Green washing: Do you know what you're buying? Environmental Health Perspectives, 118, A246. https://doi.org/10.1289/ehp.118-a246
3. Dangelico, R. M., &Vocalelli, D. (2017). "Green Marketing": An analysis of definitions, strategy steps, and tools through a systematic review of the literature. Journal of Cleaner Production, 165, 1263– 1279. https://doi.org/10.1016/j.jclepro.2017.07.184
4. Davis, J. J. (1992). Ethics and environmental marketing. Journal of Business Ethics, 11, 81–87. https://doi.org/10.1007/BF00872314
5. Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. California Management Review, 54, 64–87. https://doi.org/10.1525/cmr.2011.54.1.64
6. Du, X., Jian, W., Zeng, Q., & Chang, Y. (2018). Do auditors applaud corporate environmental performance? Evidence from China. Journal of Business Ethics, 151, 1049–1080. https://doi.org/10.1007/s10551-016-3223-6
7. Guo, R., Zhang, W., Wang, T., Li, C. B., & Tao, L. (2018). Timely or considered? Brand trust repair strategies and mechanism after greenwashing in China-from a legitimacy perspective. Industrial Marketing Management, 72,127,137. https://doi.org/10.1016/j.indmarman.2018.04.001
8. Horiuchi, R., Schuchard, R., Shea, L., & Townsend, S. (2009). Understanding and preventing greenwash. A business guide. Business for Social Responsibility, London, UK.
9. Leonidou, C. N., & Skarmeas, D. (2015). Gray shades of green: Causes and consequences of green skepticism. Journal of Business Ethics, 144, 401–415. https://doi.org/10.1007/s10551-015-2829-4
10. Nguyen, T. T. H., Yang, Z., Nguyen, N., Johnson, L. W., & Cao, T. K. (2019). Greenwash and green purchase intention: The mediating role of green skepticism. Sustainability, 11, 2653. https://doi.org/10.3390/su11092653
11. Parguel, B., Benoît-Moreau, F., &Larceneux, F. (2011). How sustainability ratings might deter 'greenwashing': A closer look at ethical corporate communication. Journal of Business Ethics, 102, 15–28. https://doi.org/10.1007/s10551-011-0901-2
12. Pizzetti, M., Gatti, L., & Seele, P. (2019). Firms Talk, suppliers walk: Analyzing the locus of greenwashing in the blame game and introducing 'vicarious greenwashing'. Journal of Business Ethics. https://doi.org/10.1007/s10551-019-04406-2
13. Ramus, C. A., & Montiel, I. (2005). When are corporate environmental policies a form of greenwashing? Business & Society, 44, 377–414. https://doi.org/10.1177/0007650305278120
14. Wang, H., Ma, B., & Bai, R. (2019). The spillover effect of greenwashing behaviours: An experimental approach. Marketing Intelligence & Planning, 38(3), 283–295. https://doi.org/10.1108/MIP-01-2019-0006x