Ushus-Journal of Business Management
2023, Vol. 22, No. 3, *13-25*
ISSN 0975-3311 | https://doi.org/10.12725/ujbm.64.2

Sustainable Marketing: Electric Vehicles' Commitment to a Sustainable Future

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Abstract

The adoption of electric vehicles (EVs) in India is seen as a crucial step towards a sustainable future. As the world moves towards a more sustainable future, EVs have emerged as a promising alternative to traditional gas-powered vehicles. Sustainable marketing emphasizes the importance of social, environmental, and ethical considerations in business practices. Companies that produce and market EVs can use sustainable marketing tactics to showcase their commitment to a sustainable future and appeal to consumers who prioritize responsible choices. This includes promoting the environmental and economic benefits of EVs, using eco-friendly materials in production and packaging, and partnering with organizations that promote sustainable practices and causes. By exploring the intersection of sustainable marketing and EVs, this research paper aims to contribute to a better understanding of how businesses can drive sustainability and promote responsible consumer behaviour. The purpose of this conceptual paper is to identify the sustainability factors that drive countries to promote EVs. To conclude, this paper examined articles published after 2015. The researcher examined various

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papers to better understand the true sustainability threat posed by EVs.

Keywords: Electric Vehicles, Sustainability, Carbon Footprint, Sustainable Marketing

Introduction

The concept of sustainability has gained significant attention in recent years, as individuals and organizations have recognized the impact of their actions on the environment and society. In the automobile industry, this has led to a shift towards electric vehicles (EVs) that have a smaller carbon footprint and lower emissions. However, simply producing EVs is not enough to contribute to a sustainable future. Companies that produce and market EVs must also adopt sustainable marketing practices that appeal to environmentally conscious consumers.

This paper examines the concept of sustainable marketing and its relevance in the context of EVs. It will explore the common sustainable marketing practices used by EV companies to appeal to consumers, including the use of eco-friendly materials, promoting the environmental benefits of EVs, and offering incentives for environmentally conscious behaviour. Additionally, the paper will evaluate the effectiveness of sustainable marketing practices in promoting the adoption of EVs and contributing to a more sustainable future. Overall, this paper aims to contribute to the understanding of sustainable marketing and its role in promoting a more environmentally conscious society.

Literature Review

Bhattacharyya and Thakre (2020) explored the factors influencing electric vehicle adoption in India, finding that charging station accessibility was the most influential factor in market penetration. However, they noted that there was a lack of harmony among stakeholders in the Indian EV ecosystem, with discrete efforts by organizations. Chaturvedi et al. (2022) projected the impact of India's transition to electric vehicles on stakeholders. They found that the shift would have significant effects on the economy, including decreasing revenue generation and employment opportunities in the petroleum sector but opening new business and employment

opportunities in the electricity sector. They suggested that central and state governments could compensate for the loss in revenue through the introduction of green/pollution taxes on the consumption of fossil fuels, among other measures.

Christidis and Focas (2019) studied the uptake of hybrid and electric vehicles in the European Union and found that higher-income respondents expressed a greater willingness to purchase such vehicles. They noted that local conditions and regional variation played a major role in intentions to acquire electric or hybrid vehicles in Europe, with the local situation regarding mobility needs and support measures being the principal determinants of market conditions. Cihat Onat et al. (2020) argued that determining the optimal mix of alternative vehicles required multistage solutions and futuristic scenarios assessments, with the inclusion of socioeconomic perspectives providing vital insights for creating national policies that encourage the use of electric vehicles.

Finally, Crozier et al. (2021) focused on capturing diversity in electric vehicle charging behaviour for network capacity estimation, finding that domestic charging in the UK could be modelled using data from a trial and a set of highly representative vehicle usage data. They noted that the methodology could be applied to scenarios in other countries with similar work and life cultures but that separate trials would be needed for industrial fleet charging or domestic charging in countries with vastly different working patterns.

Objectives

- To examine the concept of sustainable marketing and its relevance in the context of EVs.
- To identify the sustainable marketing tactics that can be used by companies that produce and market EVs to appeal to environmentally conscious consumers.
- To analyze the effectiveness of sustainable marketing practices in promoting the adoption of EVs and contributing to a more sustainable future.

Research Methodology

Data for the study was gathered from secondary sources

Electric Vehicles

Electric vehicles (EVs) are automobiles that use one or more electric motors for propulsion instead of traditional internal combustion engines (ICEs) that burn fossil fuels. EVs rely on rechargeable batteries to store the electrical energy that powers their motors. Electric vehicles are classified into two types: battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) (PHEVs).

BEVs are powered solely by electricity and have larger batteries that provide a longer driving range. They need to be recharged through an external power source, such as a charging station or an outlet at home. In contrast, PHEVs have both an electric motor and a gasoline engine. They can run on electricity only for a certain range and then switch to using gasoline when the battery is depleted, thus providing a longer range compared to BEVs.

EVs are considered to be more sustainable than traditional gasoline-powered vehicles, as they emit fewer greenhouse gases and other pollutants that contribute to climate change and air pollution. They also offer lower operating costs due to lower fuel and maintenance costs, and can potentially reduce the dependence on fossil fuels for transportation.

Electric Vehicles and Sustainability

The amount of carbon footprint produced by traditional vehicles varies depending on the type of vehicle, fuel efficiency, and how often it is driven. However, on average, a gasoline-powered car produces about 4.6 metric tons of carbon dioxide emissions per year, while a diesel-powered car produces about 4.7 metric tons of carbon dioxide emissions per year. Larger vehicles such as SUVs and trucks can produce significantly more emissions, with some models producing up to 12 metric tons of carbon dioxide emissions per year. It's important to note that these emissions are not just carbon dioxide, but also other harmful gases like carbon monoxide, nitrogen oxides, and particulate matter.

The carbon footprint of traditional vehicles and EVs is significantly different. Traditional vehicles rely on internal combustion engines that burn fossil fuels, emitting carbon dioxide and other harmful pollutants into the atmosphere. On the other hand, EVs use electricity from a grid that may or may not rely on fossil fuels for generation.

The manufacturing process for EVs can produce higher emissions due to the production of batteries and other components. However, studies have shown that the overall lifetime emissions of an EV, including production and usage, are significantly lower than those of traditional vehicles. EVs emit zero emissions during usage, which results in a lower carbon footprint compared to traditional vehicles.

In addition, renewable energy sources such as wind and solar power are increasingly being used to generate electricity, making EVs even more sustainable. As more renewable energy is integrated into the grid, the carbon footprint of EVs will continue to decrease.

Overall, while the production of EVs may have a higher initial carbon footprint, the lower emissions during usage and the shift towards renewable energy sources make EVs a more sustainable choice compared to traditional vehicles.

Evolution of Electric Vehicle in India

The evolution of electric vehicles (EVs) in India can be traced back to the early 2000s when a few companies started producing low-speed electric vehicles for personal and commercial use. However, the real push for EVs in India came with the launch of the National Electric Mobility Mission Plan (NEMMP) in 2013, which aimed to achieve national fuel security and promote sustainable growth by encouraging the adoption of electric and hybrid vehicles.

In the initial years, the focus was on hybrid and electric cars, with Mahindra launching the e2o in 2013, followed by other models like the e-Verito and e-KUV100. In 2019, Tata Motors launched the Tigor EV and the Nexon EV, while Hyundai launched the Kona Electric in 2020.

Apart from cars, the EV ecosystem in India has also seen a surge in electric two-wheelers and three-wheelers. Companies like Hero Electric, Okinawa, Ather Energy, and TVS Motors have launched

electric scooters and motorcycles, while Bajaj Auto and Piaggio have launched electric three-wheelers.

The Indian government has also been promoting EV adoption through various policies and initiatives, such as the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme, which offers subsidies for the purchase of electric vehicles, and the National Electric Mobility Mission Plan 2020, which aims to achieve 100% electric mobility in public transport by 2030.

Despite the challenges of high prices, limited charging infrastructure, and range anxiety, the EV market in India is growing steadily, with increasing awareness and government support. The Indian EV market is expected to reach a volume of 6.34 million units by 2027.

Electric Vehicle Brands in India

1. Tata Motors: Tata Motors launched the Nexon EV in India, which is the country's first electric compact SUV.
2. Mahindra Electric: Mahindra Electric is a subsidiary of Mahindra & Mahindra and produces the e2o electric car and the e-Verito sedan.
3. MG Motors: MG Motors offers the ZS EV, an all-electric SUV, in the Indian market.
4. Hyundai: Hyundai offers the Kona Electric, which is the first fully electric SUV in India.
5. Ather Energy: Ather Energy is an Indian electric vehicle company that produces the Ather 450X and 450 Plus electric scooters.
6. Bajaj Auto: Bajaj Auto offers the Chetak electric scooter, which was reintroduced in 2020 after more than a decade.
7. Hero Electric: Hero Electric is one of the largest electric two-wheeler manufacturer in India, producing a range of electric scooters and motorcycles.

The Concept of Sustainable Marketing and its Relevance in the Context of EVs

Sustainable marketing has gained increasing attention as a response to the growing concern about environmental sustainability. The concept emphasizes the use of environmentally and socially responsible practices to create value for consumers, stakeholders, and the planet. Sustainable marketing practices can lead to a competitive advantage for companies that adopt them, as they meet the needs of consumers who are increasingly aware of the impact of their purchasing decisions on the environment. In the context of electric vehicles (EVs), sustainable marketing can be a crucial factor in promoting the adoption of EVs by consumers who are concerned about reducing their carbon footprint.

The relevance of sustainable marketing in the context of EVs is significant as EVs have the potential to reduce carbon emissions and improve air quality. EVs are an important part of the transition towards sustainable transportation and are seen as a way to address the environmental and social issues created by traditional gasoline-powered vehicles. Sustainable marketing practices such as eco-labelling, green advertising, and cause-related marketing can be used by EV manufacturers to promote the environmental benefits of EVs and increase their appeal to consumers. Furthermore, companies can develop sustainable marketing strategies emphasizing EVs' social benefits, such as increased energy security and reduced dependence on foreign oil.

In conclusion, sustainable marketing is a relevant and important concept in the context of EVs. Companies that adopt sustainable marketing practices can increase the adoption of EVs by creating awareness of their environmental and social benefits. The adoption of EVs can lead to a reduction in carbon emissions, which can have a positive impact on the environment and society. Therefore, EV manufacturers must integrate sustainable marketing practices into their marketing strategies to promote the adoption of EVs and contribute to the transition towards sustainable transportation.

The Sustainable Marketing Tactics that can be used by Companies that Produce and Market EVs to Appeal to Environmentally Conscious Consumers

Companies that produce and market EVs can use various sustainable marketing tactics to appeal to environmentally conscious consumers. Some of these tactics include:

1. Highlighting the Environmental Benefits of EVs: Companies can educate consumers about the positive environmental impact of EVs such as reduced greenhouse gas emissions, improved air quality, and lower noise pollution. This can be done through marketing campaigns, social media posts, and other forms of advertising.
2. Promoting Sustainable Manufacturing Practices: EV companies can demonstrate their commitment to sustainability by using eco-friendly materials, reducing waste, and minimizing their carbon footprint during the manufacturing process. They can also highlight their use of renewable energy sources such as solar or wind power in their production facilities.
3. Providing Charging Infrastructure: One of the biggest concerns for EV owners is the availability of charging infrastructure. Companies can address this concern by partnering with governments and other organizations to install charging stations in public places and on major highways. They can also offer home charging solutions to make it more convenient for consumers to charge their EVs.
4. Offering Incentives: To encourage more people to switch to EVs, companies can offer incentives such as tax credits, rebates, and discounts on EV purchases. These incentives can make EVs more affordable and accessible to a wider range of consumers.
5. Collaborating with Sustainability Organizations: Companies can partner with sustainability organizations to promote environmental causes and support sustainability initiatives. This can help to build a brand reputation and demonstrate the company's commitment to sustainability.

Here are some marketing strategies adopted by a few popular EV brands in India:

1. Tata Motors: Tata Motors has taken various marketing initiatives to promote its EV brand, Nexon EV. They have collaborated with

various companies to set up charging stations across the country. They have also initiated test-drive campaigns across various cities in India to create awareness about their EV offerings. Additionally, they have launched digital campaigns and social media contests to engage with their audience and increase brand visibility.

2. Mahindra Electric: Mahindra Electric has been actively promoting its EV brand, e2oPlus, through various marketing channels. They have initiated campaigns to educate people about the benefits of EVs and have also set up charging infrastructure in various cities. They have collaborated with taxi aggregators to introduce their EVs in the fleet segment. Mahindra Electric has also introduced special schemes and discounts to attract customers.
3. MG Motors: MG Motors has been aggressively promoting its EV brand, ZS EV, in India. They have set up charging stations across various cities and have initiated campaigns to educate people about the benefits of EVs. MG Motors has also collaborated with various companies to offer attractive financing options to customers. They have also introduced attractive exchange offers to encourage customers to switch to EVs.
4. Hyundai: Hyundai has launched its EV brand, Kona Electric, in India. They have set up charging infrastructure across various cities and have initiated campaigns to educate people about the benefits of EVs. Hyundai has also collaborated with various companies to offer attractive financing options to customers. Additionally, they have introduced special schemes and discounts to attract customers.

The Effectiveness of Sustainable Marketing Practices in Promoting the Adoption of EVs And Contributing to a More Sustainable Future

Electric vehicles (EVs) are becoming an increasingly popular alternative to traditional gasoline-powered cars due to their lower environmental impact. However, to further promote the adoption of EVs, companies that produce and market them need to implement sustainable marketing practices. This includes focusing on promoting the environmental benefits of EVs, such as reducing carbon emissions and improving air quality, as well as using

sustainable materials in the manufacturing process. Furthermore, providing incentives such as tax credits or rebates can also encourage consumers to choose EVs over traditional cars.

While the implementation of sustainable marketing practices is crucial in promoting the adoption of EVs, it is also important to consider the overall sustainability of the entire EV ecosystem. This includes the sourcing of materials, production processes, and end-of-life recycling. Companies can further improve the sustainability of EVs by investing in renewable energy sources such as solar or wind power to charge the vehicles, as well as implementing more efficient battery technologies to extend the lifespan of EV batteries. By taking a holistic approach to sustainability, companies can not only promote the adoption of EVs but also contribute to a more sustainable future for all.

Are Electric Vehicles Truly Sustainable?

Electric vehicles (EVs) have been touted as a more sustainable alternative to traditional gasoline-powered vehicles. However, a Forbes India article questions whether EVs are truly sustainable. The article argues that while EVs produce fewer emissions than gasoline-powered vehicles during use, the manufacturing process and disposal of batteries create significant environmental impacts. The production of EV batteries requires mining for rare earth metals and other minerals, which can lead to deforestation, water pollution, and habitat destruction. Additionally, battery production and disposal can lead to toxic waste and greenhouse gas emissions.

To address the sustainability concerns of EVs, the article suggests several measures. These include reducing the use of rare earth metals in battery production, implementing more efficient and environmentally friendly manufacturing processes, and improving battery recycling and disposal. Furthermore, the article emphasizes the importance of considering the full lifecycle of EVs, from manufacturing to disposal, in assessing their sustainability. By implementing more sustainable practices throughout the lifecycle of EVs, their sustainability can be improved and their potential to contribute to a more sustainable future can be realized.

Conclusion

In conclusion, sustainable marketing practices play a crucial role in promoting the adoption of electric vehicles and contributing to a more sustainable future. EV companies can use various tactics such as emphasizing the environmental benefits of EVs, using eco-friendly materials in their production process, and implementing green marketing strategies to appeal to environmentally conscious consumers. However, it is important to note that EVs are not a perfect solution to sustainability, and there are still challenges to overcome, such as the production and disposal of batteries.

Furthermore, as the demand for EVs continues to grow, companies need to prioritise sustainable practices throughout their entire supply chain and not just in their marketing efforts. This includes ensuring ethical sourcing of materials, reducing carbon emissions in production and transportation, and implementing responsible end-of-life solutions for batteries. By doing so, EV companies can contribute to a more sustainable future and create long-term value for both the environment and their business.

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