

THE CHALLENGES OF TRANSITIONING TO ELECTRIC VEHICLES: A CASE STUDY OF GENERAL MOTORS (GM)

GM

Introduction

Automobile manufacturers are increasingly switching from internal combustion engines (ICEs) to electric vehicles (EVs) in the course of a major transformation in the industry. General Motors (GM), one of the world's leading manufacturers of automobiles, has committed to electrifying 50% of its fleet by 2030. By 2035, 100% of the automotive fleet, for passenger and light-duty vehicles, will be electric (General Motors, 2021).

The transition to electric vehicles is not without challenges, such as technological barriers, production costs, consumer acceptance, and competition. This research examines how GM is positioning itself to address these challenges as it transitions to this new era.

Aim of the Research



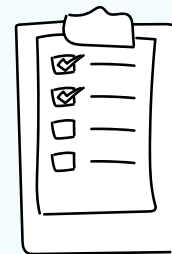
The study examines the technological, financial, and market barriers General Motors (GM) faces in transitioning to electric vehicles. The purpose of this study is to analyze GM's EV strategy and identify the key challenges that it must overcome in order to transition from producing traditional vehicles to a full line of EVs (General Motors, 2023).

Study provides insight into the company's competitive position in the emerging electric vehicle market, as well as exploring these challenges. It will also provide insight into how it compares with its competitors.



Research Questions

- What are the key technological and production challenges GM faces in its transition to electric vehicles?
- How effective are GM's strategies in addressing consumer concerns regarding electric vehicles and encouraging market adoption?



Objectives

- To identify the technological challenges GM faces in the development and production of electric vehicles, including the use of batteries, vehicle range, and charging infrastructure.
- To explore the financial barriers General Motors faces in transitioning to electric vehicles, particularly in terms of production costs and investments.
- To evaluate GM's marketing and consumer education strategies, focusing on overcoming consumer skepticism and increasing EV adoption.
- To compare GM's approach to electric vehicles with its competitors, such as Tesla, Ford, and Volkswagen, to understand its competitive position in the EV market. (General Motors, 2023).

Methodology

To explore the challenges General Motors (GM) faces in transitioning to electric vehicles (EVs), this research will use secondary data analysis as a qualitative approach. GM's shift to EVs will be examined through an analysis of public documents, reports, and studies.

Secondary Data Collection: The primary source of data for this research will be secondary data collected from a range of publicly available materials. These will include:

- Academic Journals and Case Studies: Literature on EV adoption in the automotive industry, GM's transition to electric vehicles, and automakers' challenges in this area.
- News Articles: Media coverage and announcements by GM related to their EV strategy, technological innovations, and consumer response.
- Comparative Analysis: To provide context, a comparative analysis will be conducted, examining GM's EV strategies in relation to other major automakers such as Tesla, Ford, and Volkswagen. This will help position GM within the broader electric vehicle market competitive landscape. (Bowen, G.A., 2009)

References

1. General Motors. (2021). GM's Bold Journey to an All-Electric Future. EV Magazine. [online] Available at: <https://evmagazine.com/articles/gms-bold-journey-to-an-all-electric-future> [Accessed 17 June 2025]
2. Bowen, G.A. (2009) 'Document analysis as a qualitative research method', *Qualitative Research Journal*, 9(2), pp. 27-40.
3. General Motors (2023) Sustainability Report 2023. Available at: <https://investor.gm.com> (Accessed: 18 June 2025).