Chapter 10
Electric Vehicle Purchase Intention: Yay or Nay?

Anushia Chelvarayan
https://orcid.org/0000-0003-3750-6120
Centre of Excellence for Business Innovation and Communication, Multimedia University, Malaysia

Loh Wei Khang
https://orcid.org/0009-0005-1235-920X
Faculty of Business, Multimedia University, Malaysia

Sook Fern Yeo
https://orcid.org/0000-0002-8060-5872
Centre of Excellence for Business Innovation and Communication, Multimedia University, Malaysia

Kah Boon Lim
https://orcid.org/0000-0002-8346-9482
Faculty of Business, Multimedia University, Malaysia

ABSTRACT

The ever-increasing worries over transportation issues such as traffic congestion, automobile accidents, air pollution, and noise have led to breakthroughs in vehicle technology. Electric cars have the potential to reduce dependency on oil as well as the amount of air pollution that is produced, to improvements in the conditions of our health as well as the environment. This chapter investigates consumer's intention to purchase Electric Vehicle (EV). The questionnaire for this research is distributed to 153 respondents from generation X, millennials and generation Z. The research investigates if there is a significant relationship between consumer's

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intention to purchase EV and performance of electric vehicle, perceived ease of use, environmental concern, and perceived risk. Thus, this study can assist policymakers in designing effective rules and regulations to encourage the use of electric vehicles.

1. INTRODUCTION

The purchase intention for Electric Vehicles (EVs) is increasingly recognized as a pivotal area of research within the broader context of sustainable transportation. As the adverse impacts of climate change become progressively evident, the transition from traditional gasoline-powered vehicles to electric alternatives is essential for reducing greenhouse gas emissions and enhancing energy efficiency (Collazos et al., 2022). Understanding what drives consumer intentions to purchase EVs is crucial for the automotive industry, policymakers, and environmental advocates. With the escalating concerns over climate change and the depletion of fossil fuel reserves, the automotive industry is experiencing a paradigm shift towards sustainable transportation solutions. One of the most promising alternatives to conventional internal combustion engine vehicles is the EV. EVs offer the potential to significantly reduce greenhouse gas emissions and dependence on finite fossil fuel resources while promoting energy efficiency and technological innovation. The purchase intention of EVs is a critical area of research given the growing emphasis on sustainable transportation and environmental preservation. Understanding the factors that influence consumer behaviour in the adoption of EVs is essential for manufacturers, policymakers, and environmentalists alike. The ever-increasing worries over transportation issues such as traffic congestion, automobile accidents, air pollution, and noise have led to breakthroughs in vehicle technology, particularly in regard to electric powertrains and autonomous driving. These breakthroughs have been brought about as a direct result of the growing concern over these issues. Electric cars, commonly known as EVs are gaining popularity as a possible solution to the issue of environmentally responsible transportation in metropolitan areas. Electric cars have the potential to reduce dependency on oil as well as the amount of air pollution that is produced, both of which might contribute to improvements in the conditions of our health as well as the environment. The concept of EVs dates to the early 19th century, but it is only in recent years that EVs have gained widespread attention as a viable alternative to traditional gasoline-powered vehicles. Advances in battery technology, improvements in charging infrastructure, and government incentives have fuelled the growth of the EV market, leading to an expanding range of EV models and increasing consumer interest.

Despite these advancements, several challenges remain in achieving mass adoption of EVs. Concerns about limited driving range, perceived high upfront costs, and a