Chapter 1
Investigating the Antecedents of Eco-Friendly Vehicle Purchase Intentions:
An Extension of the Theory of Planned Behavior

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ABSTRACT

Although vehicles have become necessary for our contemporary life and contributed significantly to our well-being, they have also contributed to more environmental pollution. However, to the best of the authors' knowledge, little research has empirically investigated eco-friendly vehicle buying intentions and behavior in the context of Algeria. To achieve this purpose, the authors integrated environmental concerns and electronic word of mouth (EWOM) into the theory of planned behavior (TPB) framework. The research hypotheses were validated through a survey of 174 conventional vehicle owners using the hierarchical multiple regression method. The results indicated that eco-friendly vehicle purchase intention is positively and significantly influenced by the environmental concerns, attitudes, perceived behavioral control (PBC), and subjective norms. However, it was found that EWOM is not an antecedent to behavioral intention. This chapter contributes to the debate on how to achieve sustainability by examining the drivers of eco-friendly vehicle purchasing intentions.

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INTRODUCTION

In recent years, various means of transportation, including vehicles, have become a major source of pollution (Higueras-Castillo et al., 2019), and thus attracted the attention of researchers, companies, and decision-makers (Okada et al., 2019). According to Nasuno (2022, p.46), "the global automobile industry is moving toward abolishing internal combustion engine vehicles and switching to electric vehicles." Eco-friendly vehicles are defined by Ju et al. (2021, p.2) as "vehicles with enhanced capabilities to reduce greenhouse gases or harmful emissions compared to conventional vehicles." In this study, we define an environmentally friendly vehicle as avehicle that operates in whole or in part on clean energy sources such as electricity and natural gas. Hence it has low environmental damage. Eco-friendly vehicles(also called eco-friendly automobiles, green cars, or sustainable automobiles) include both hybrid automobiles and electric automobiles. In Korea, customers perceive eco-friendly vehicles as "sophisticated, luxurious, youthful, clean, and that technical problems would be resolved in the future" (Ju et al., 2021, p.1).

Undoubtedly, the widespread adoption of eco-friendly vehicles will contribute significantly to reducing environmental pollution and thus achieving sustainability (Asadi et al., 2021; Bhuttoet al., 2022; She et al., 2017; Tanwir & Hamzah, 2020).However, the market share of eco-friendly vehicles, especially electric vehicles, remains low in many developing countries (Lee et al., 2021), including Algeria. Hamzah and Tanwir (2021) point out that little is known about the psychological drivers that lead to the increased adoption of hybrid vehicles.According to Tanwir and Hamzah (2020, p.1), "the adoption rate of environment-friendly vehicles is still low globally and vital to explore."

In Algeria, since the beginning of the year 2000, the government has undertaken many initiatives to encourage eco-friendly vehicles, including encouraging vehicle owners to switch from conventional vehicles (diesel and gasoline) to eco-friendly vehicles (liquefied gas) by adopting the famous policy of carrots and sticks and providing facilities and privileges to owners of friendly cars. These include installing a liquefied gas device at a low cost, keeping the price of gas very low, and exempting eco-friendly vehicles cars from car vouchers and pollution tax. In contrast, diesel and petrol prices have been raised repeatedly, and a pollution tax has been introduced and imposed on conventional cars. Moreover, in another initiative, the government has encouraged the import of hybrid cars and is currently seeking to boost the local electric car industry. Algeria's approach to hybrid cars aims to reduce environmental pollution and achieve sustainability. However, the Algerian market still suffers from a significant shortage of new vehicles, as the policy of reducing vehicle exports, in conjunction with the depreciation of the dinar, led to an insane rise in prices, which resulted in the discontent of many consumers, especially consumers of middle and low-income category. Therefore, as Panuju et al. (2020, p. 1) stated, "It is crucial to develop more understanding about correlations between customers' behavior and sustainable automotive products in developing countries to develop further strategies directing to global sustainability."

Planned behavior theory (TPB) proposed by Ajzen (1991) assumes that human behavior is voluntary and planned, and is determined by the intention, which in turn is determined by three constructs namely "attitudes", "subjective norms" and "perceived behavioral control" (PBC). Intention can be defined as "the extent of the individual's willingness to complete the behavior" (Mouloudj & Bouarar, 2023, p. 208). In our study, we define eco-friendly vehicle purchase intention as the willingness to buy avehicle that has environmentally friendly characteristics, such as having a less polluting engine.Indeed, the decision to buy an eco-friendly vehicle is complex and difficult to explain because it is influenced by many psychological, social, cultural, economic, and situational factors.