Scenario Simulation to Identify Decisive Attributes for Purchasing Electric Vehicles in Emerging Markets

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Abstract:

The purpose of the study was to Identify decisive attributes that influence electric vehicles (EVs) purchase in emerging markets. The study was conducted in Brazil using the **Free Word Association Technique (FWAT)**. The study explored how different combinations of attributes can influence consumers' EV purchase decisions through scenario simulations. Four scenarios were tested, focusing on **Economy, Technology, Maintenance,** and **Comfort** and **Performance**. In the scenario focused on **Economy,** the weight of this attribute increased to 33.8%, with a reduction in the importance of the **Comfort and Performance** attribute. In the scenario focused on **Technology,** there was a 50% increase in the relevance of this attribute, revealing consumers' willingness to prioritize technological innovations. The scenario focused on **Maintenance** attribute showed a growing concern with long-term operational costs. These simulations and findings suggest that consumer behavior may shift under different economic and technological contexts, offering valuable insights for the development of business model that can promote sustainable mobility and zero emissions, which are fundamental to the adoption of EVs.

Keywords:

Brazil, electrical vehicles, attributes, consumer.