IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 2, February 2025

Consumer Perspectives on Electric Vehicles: Barriers, Motivations, and Future Trends

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Abstract: Electric vehicles are on the way to replacing the traditional internal combustion engine vehicles because of multiple advantages that electric vehicles have exuded. This research explores consumer perspectives on EV adoption by addressing three critical dimensions: barriers, motivations, and future trends. Key challenges include high upfront costs, range anxiety, limited charging infrastructure, and concerns about battery performance. Conversely, environmental consciousness, technological advancements, and government incentives drive consumer interest. Emerging trends in the EV market include advancements in battery technology, autonomous driving, and shared mobility services. This study emphasizes that consumer concerns should be addressed by aligning policies, marketing strategies, and technological innovations to boost the adoption of EVs. Findings from this research provide actionable insights for stakeholders to foster a transition to sustainable mobility.

Keywords: Electric Vehicles, Consumer Behavior, EV Adoption Barriers, Sustainability, Green Technology, Charging Infrastructure, Environmental Awareness, Battery Technology, Autonomous Driving, Shared Mobility, Renewable Energy Integration, Government Policies

DOI: 10.48175/568

