

Green Insurance for Electric Vehicles: An Empirical Study on Consumer Awareness and Adoption

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Abstract: The rapid growth of electric vehicles (EVs) has increased the importance of green insurance as a sustainable financial protection mechanism. Green insurance for EVs provides specialized coverage for batteries, charging equipment, and technology-related risks while supporting environmental sustainability. This study examines consumer awareness, perception, and adoption of EV insurance among EV users in Gujarat. The research also analyses the challenges faced by consumers regarding EV insurance purchase and utilization. The study is based on a descriptive research design and uses primary data collected through a structured questionnaire from 181 respondents using judgmental sampling. Secondary data were collected from research papers, journals, IRDAI reports, insurance company websites, and government publications. Data analysis was conducted using MS Excel and Structural Equation Modelling (SEM). The findings reveal that awareness and understanding of EV insurance remain limited among consumers, particularly regarding battery protection, claim procedures, and policy coverage. High premium perception, limited infrastructure, and complicated claim settlement processes were identified as major barriers to green insurance adoption. The SEM analysis indicates that Awareness & Knowledge, Policy & Institutional Support, and Facilitating Conditions significantly influence Green Insurance Utilization Intention, while Green Insurance Utilization Intention positively affects Electric Vehicle Intention. The study concludes that green insurance has strong potential to support sustainable transportation and environmental protection in India. Increasing consumer awareness, simplifying insurance products, improving infrastructure, and strengthening policy support can significantly enhance the adoption of green insurance products for electric vehicles.

Keywords: Green Insurance, Electric Vehicles (EVs), Consumer Awareness, Sustainable Transportation

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