

ABSTRACT

This study investigates the relationship between Environmental, Social, and Governance (ESG) performance, Green Technology Innovation (GTI), and corporate value in the Asian automotive industry using an unbalanced panel dataset of 182 firms from 2019 to 2023. Employing a Two-Way Fixed Effects (TWFE) model with firm-clustered robust standard errors, the analysis accounts for both firm-specific heterogeneity and year-specific shocks. The study further examines whether GTI functions as a mediating mechanism through which ESG performance influences corporate value, following a non-parametric bootstrapped mediation approach.

The empirical findings reveal several key insights. First, ESG performance exhibits a positive but statistically insignificant effect on corporate value, indicating that sustainability disclosure does not translate into higher market valuation within the short-term horizon of the study period. Second, ESG performance does not significantly influence Green Technology Innovation, suggesting that sustainability initiatives alone are insufficient to stimulate green patent output in a capital-intensive and technology-driven sector. Third, GTI itself does not have a significant impact on corporate value, reflecting the long-gestation nature of R&D and the delayed financial realization of green technological efforts. Consequently, the mediation analysis confirms that GTI does not mediate the relationship between ESG performance and corporate value.

Overall, the results highlight that corporate value in the Asian automotive sector is driven more strongly by fundamental firm characteristics, particularly revenue growth, than by ESG initiatives or green innovation efforts. The study enriches the empirical literature on ESG and innovation by providing evidence from a developing regional context and offers policy-relevant insights regarding the slow translation of sustainability and green innovation into measurable financial outcomes. These findings underscore the need for stronger institutional incentives, improved ESG integration, and long-term innovation strategies to support the sustainable transformation of the automotive industry.

Keywords: Environmental, Social, and Governance (ESG), Green Technology Innovation (GTI), Corporate Value, Tobin's Q, Two-Way Fixed Effects (TWFE), Asian Automotive Industry.