

REVIEW

Open Access



Green entrepreneurial orientation and its influence on green innovation, economic performance, and sustainable performance a meta-analytic review

Dedrix Stephenson Bindeebea^{1*} , Owen Kembabazi¹ and Amon Tibihika²

Abstract

Green entrepreneurial orientation (GEO) is increasingly viewed as a strategic posture that helps firms remain competitive while responding to rising environmental pressures. This study synthesizes empirical evidence on how GEO relates to green innovation and whether these relationships extend to economic and broader sustainable performance outcomes. Using a meta-analytic approach, the review integrates evidence from 48 quantitative studies, comprising 56 effect sizes and 13,311 firms. Random-effects models show that GEO has its strongest association with green innovation ($r=0.488$), followed by economic performance ($r=0.378$), and a smaller but significant association with sustainable performance ($r=0.294$). Substantial heterogeneity indicates that GEO's payoffs vary across contexts. Subgroup analyses show that industry context moderates the GEO–green innovation relationship, with stronger effects in mixed or multi-sector settings than in manufacturing or industrial contexts. Country development status does not differentiate the GEO–innovation relationship, but it does condition GEO's associations with economic and sustainable performance, suggesting that value capture and stakeholder reward structures shape performance returns more than innovation initiation. Overall, the findings help reconcile mixed results in the GEO literature by showing that GEO is most reliably linked to innovation outcomes, while performance associations are more context-dependent and likely to materialize through effective implementation and stakeholder valuation. Practically, this implies that managers and policymakers should complement GEO promotion with support for green innovation capabilities and market mechanisms that recognize, reward, and scale green outcomes.

Keywords Green entrepreneurial orientation, Green innovation, Economic performance, Sustainable performance, Meta-analysis

Introduction

Firms increasingly face the challenge of reconciling environmental responsibility with cost efficiency, growth, and competitive positioning. Across industries, sustainability has shifted from a peripheral compliance concern to

a core strategic issue shaping access to markets, finance, and organizational legitimacy [18, 28, 72]. Environmental pressures now influence how firms design products and processes, configure supply chains, and position themselves relative to stakeholders. As sustainability becomes more tightly coupled with competitiveness, firms are no longer confronted with whether to respond to environmental demands, but with how to do so in ways that generate innovation, performance, and durable advantage [17, 64].

*Correspondence:

Dedrix Stephenson Bindeebea
dedrixbindeebea@gmail.com

¹ Mbarara University of Science and Technology, Mbarara, Uganda

² Kyambogo University, Kampala, Uganda