

XXV Edizione (2025) Premio SIE  
Società Italiana di Economia – S.I.E.

Oggetto: XXV Edizione (2025) Premio SIE – Presentazione dell'Abstract

Gentili,

Nel rinnovare il mio interesse a partecipare al concorso da Voi indetto in occasione della XXV Edizione (2025) Premio SIE, sono lieto di allegare a questa lettera l'abstract del paper con il quale intendo partecipare al Premio.

In attesa di Vostro riscontro, Vi porgo i miei più cordiali saluti.

Giovanni Asmundo

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**Titolo:** Rethinking Innovation Drivers in the EU Green Transition: The Underestimated Role of Scientific Collaboration Beyond R&D

**Abstract:** While research and development (R&D) expenditure has traditionally been regarded as a key engine of technological progress, recent empirical evidence suggests its role in fostering green innovation may be more nuanced than expected. This paper investigates the relative influence of R&D and international scientific collaboration on green patent activity across the EU-27 from 2000 to 2023, using patent family data from the European Patent Office (EPO). The results, drawn from a panel dataset and an econometric model with fixed effects and robustness checks, show that R&D expenditure – though important – does not consistently exhibit strong statistical significance in explaining the growth of green technologies.

In contrast, international scientific collaboration emerges as a powerful and statistically robust determinant of green patenting dynamics, especially in sectors such as energy, transport, and agriculture. These findings call for a rethinking of the innovation policy paradigm underpinning the European Green Deal and the Net-Zero Industry Act. Policies focused primarily on fiscal incentives for R&D may fall short unless complemented by measures that strengthen scientific networks, promote cross-border cooperation and lower institutional barriers to knowledge exchange. The paper concludes with policy recommendations to enhance the impact of international scientific partnerships and suggests reframing green innovation strategies to reflect the complex interplay between knowledge creation, diffusion, and collaborative ecosystems. This work contributes to the literature by bridging the gap between innovation theory and policy practice in the context of Europe's climate neutrality goals.