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# Environmentally friendly innovation in Tourism: A toolbox of policies to promote green transition

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**Objectives** | Tourism is one of the central activities promoting economic growth, nevertheless, it is listed as a causer of environmental deterioration. Climate change is the major challenge of the present, albeit it is an opportunity to engineer a new economic model. As resource depletion generates negative spillovers, nudging is required to make green transition a reality. OECD countries developed national strategies to support eco-innovation, designing a policy strategy to foster the green transition (OECD, 2011). Governments can support eco-innovation directly, either by public funding, or indirectly, providing a favorable ecosystem (Callofi et al., 2022). Until the present, innovation policies were centered in novelty, but green policy packages must also consider both market structure and potential negative externalities stemming from innovation (Karmaker, 2021). This study aims to investigate the relations between environmental policy instruments and environment-related innovation with a holistic theoretical framework.

**Methodology** | The study used a quantitative approach based on multi-regression analysis. Policy instruments were analyzed individually and through a policy-mix to identify the marginal impact on innovation arising from the combined effect. Besides, we used firms' structural characteristics such as size, open innovation adoption, human capital, and internationalization, to isolate the impact of the internal dimension on innovative strategies. Robustness checks were run. The sample in use was extracted from the Portuguese Community Innovation Survey 2020, focusing in the Tourism Sector, encompassing 550 firms.

**Main results and contributions** | Results evidenced that policy mixes are more effective than the single instruments. The re-establishment of laws, regulations and legislation appear as an effective mechanism to accelerate the green transition, aligning with Costa (2021). Also,

subsidization of innovative strategies is insufficient to generate commitment towards the green. Endogenous motivations such as reputation and voluntary actions are among the most effective to promote the green transition. Firms' structural characteristics influence the propensity to perform environmentally friendly innovations. Additionally, human capital endowments fail to affect the propensity to perform eco-innovations. These findings indicate that governments should create specific policy packages rather than general policies to improve policy stringency. Small firms need positive discrimination to raise awareness of the ecological urgency. This finding is central to foster a green transition in the tourism sector, as SMEs prevail in most destinations. Also, imposing tougher environmental taxes has proved to be an effective way to persuade firms towards environmentally desirable practices needing further analysis in this case. These results shed light on the importance of considering the endogenous and the exogenous determinants of eco-innovation adoption. At the same time, the option for nudging strategies seems to accelerate the involvement.

**Limitations** | Despite the robustness of the sample in statistical terms, the analysis of sectional data may bring doubts about the inexistence of a long-time frame to address causality. However, the implementation of robustness checks undermining model structure and parameters support the validity of the results. Given that we draw upon secondary data, no 5-digit SIC codes were provided, and methodologically, we have opted to include only those codes entirely devoted to the sector, which leaves us with a narrow sense of the sector.

**Conclusions** | The present study proposes a toolbox to address the most effective policy mix to accelerate the green transition in the Tourism sector. The instruments were split into two vectors: enhancers and hinderers. Also, firm structural traits were taken into consideration to identify the singularities of each firm configuration in the propensity to perform green innovation. This conceptual framework, on the one hand, allows managers to understand which firm characteristics matter the most to leverage the green transition and, on the other hand, it will enable policymakers to identify the most effective combination of actions to enhance the adoption sustainable practices, avoiding the depletion of resource endowment.

**References**

Caloffi, A., Freo, M., Ghinoi, S., Mariani, M. & Rossi, F. (2022). Assessing the effects of a deliberate policy mix: The case of technology and innovation advisory services and innovation vouchers. *Research Policy, 51*(6), 104535. https://doi.org/10.1016/j.respol.2022.104535

Costa, J., 2021. Carrots or Sticks: Which Policies Matter the Most in Sustainable Resource Management? *Resources, 10*(2), 12. https://doi.org/10.3390/resources10020012

Karmaker, S. C., Hosan, S., Chapman, A. J. & Saha, B. B., (2021). The role of environmental taxes on technological innovation, *Energy, 232*, 121052. https://doi.org/10.1016/j.energy.2021.121052

OECD, 2011. Better Policies to Support Eco-innovation, OECD Studies on Environmental Innovation. *OECD Publishing*, Paris