Impacts of cohesion funds on local tourism supply. Counterfactual analysis and Machine Learning approaches

Gianluca Monturano
(Department of Economics - University of Modena and Reggio Emilia)

Giulio Pedrini
(Department of Economics and Law – Kore University of Enna)

Raffaele Scuderi
(Department of Economics and Law – Kore University of Enna)

Tourism projects represent a significant share investments of public funds, and evaluating their outcomes ensures accountability and transparency in resource allocation. A rigorous assessment of their effectiveness can provide the policy-maker with evidence-based knowledge of the actual contribution of these projects to the intended goals of economic development, social inclusion, and environmental sustainability, as outlined in European cohesion policies. Secondly, understanding the impact of tourism projects enables municipalities to make informed decisions for future planning and investment. By identifying successes, challenges, and areas for improvement, local authorities can refine their strategies to maximize the benefits of tourism for both residents and visitors while mitigating potential negative consequences such as overtourism or environmental degradation. Moreover, assessing the impact of tourism projects facilitates knowledge sharing and best practices among municipalities within the European Union. By documenting experiences and lessons learned, local governments can support each other in optimizing the effectiveness of their tourism initiatives, ultimately fostering greater collaboration across regions, ensuring the responsible and sustainable development of tourism within municipalities, and aligning with the overarching objectives of European cohesion policies to promote balanced growth and prosperity across the EU.

The scientific literature on the impact of European cohesion funds reflects a multifaceted and context-dependent relationship. While some studies demonstrate positive effects on various types of outcome, others highlight limitations and potential negative spillovers. The impact of European cohesion funds on various aspects of growth has been a subject of extensive inquiry, yielding a diverse array of findings that underscore the nuanced nature of this relationship. Studies by Rodríguez-Pose and Fratesi (2004), Mohl and Hagen (2010), and Becke et al. (2010) have revealed highly heterogeneous outcomes concerning growth, with results varying significantly based on the time frame and the level of territorial focus. On one hand, positive effects have been observed across different dimensions of growth. Research by Giua (2017), Becker et al. (2018), Lu et al. (2019), and Fattorini et al. (2020) has demonstrated positive impacts on investment, employment, productivity, and wages both within the European Union and in other contexts like China. These findings suggest that European cohesion funds can effectively stimulate economic activity and enhance various aspects of growth, contributing to the overall development of regions and economies. However, contrasting perspectives have also emerged, highlighting limitations and challenges in the effectiveness of cohesion funds. Studies such as those by Ciani and De Blasio (2015) and Albanese et al. (2021) have pointed to a more limited impact of EU structural funds on local development and total factor productivity. These findings suggest that while cohesion funds may generate positive outcomes in some areas, their effects on broader measures of economic performance and productivity may be less pronounced or inconsistent. Furthermore, research conducted in other regions, such as the United States, has uncovered potential negative spillover effects associated with cohesion fund interventions. Hanson et al. (2013) found evidence of negative spillovers to non-treated neighboring areas, wherein these areas experienced declines in the number of firms and employment, offsetting the positive effects observed in treated areas. Accordingly, it is crucial to understand the complex dynamics and the potential unintended consequences of cohesion fund interventions, also considering broader spatial and economic interdependencies in assessing their impact.

In Europe, the importance of nuanced analysis and careful consideration of temporal dynamics, spatial heterogeneity, and broader economic contexts in understanding the impact of cohesion funds on growth and development, has become paramount after the approval of post-COVID-19 national recovery plan. Several issues has been raised from the literature in this regard. First, territories often struggle to fully realize the potential benefits of cohesion policies due to difficulties in effectively translating programmed resources into tangible services. Resce and Di Stefano (2023), for instance, emphasized the importance of evaluating projects to identify and address these challenges, ensuring that allocated funds translate into meaningful outcomes for communities. Moreover, the planning and administrative capacities of responsible bodies can be insufficient. Coco et al. (2023), stressed that effective project implementation depends on the expertise of organizations in developing and executing investment choices, as well as their ability to navigate bureaucratic procedures efficiently. Evaluation facilitates the identification of strengths and weaknesses in these processes, enabling corrective actions to enhance efficiency and effectiveness. Additionally, monitoring activities are essential for ensuring transparency, accountability, and progress tracking throughout the project lifecycle. By evaluating projects post-approval, stakeholders can assess whether objectives are being met, resources are being utilized optimally, and any deviations from the original plan are identified and addressed promptly. This proactive approach to monitoring helps mitigate risks of delays, cost overruns, or suboptimal outcomes, thereby maximizing the impact of cohesion policies on economic recovery and development.

Overall, the evaluation of projects financed by cohesion policies post-approval is vital for optimizing resource allocation, enhancing administrative efficiency, and ensuring the successful implementation of recovery plans. By addressing fragilities in project execution and monitoring performance against objectives, evaluations contribute to the overall effectiveness and sustainability of efforts to stimulate growth and resilience in EU territories.

Relying on these premises, this paper provides a comprehensive evaluation of the impacts of cohesion fund projects on local tourism development within Italian municipalities. It applies an ex-post counterfactual methodology alongside advanced machine learning techniques to assess the effectiveness of these projects in enhancing the tourism sector. By using granular data on cohesion policies, the study compares municipalities that received funding for tourism projects from the 2007-2013 and 2014-2020 programming cycles with those that did not through a twofold empirical analysis. First, through a diff-in-diff approach, we estimate whether different types of tourism projects had a positive outcome on tourism supply, controlling for a wide set of demographic, socio-economic, and institutional variables. Second, predictive analysis using machine learning is used to identify the most influential variables in the effectiveness of tourism funding and make forecasts regarding future funding allocations. Preliminary findings reveal that targeted investment in tourism infrastructure, cultural heritage, and sustainable tourism practices can significantly boost local economies. However, the effectiveness of such investments varies based on regional specifics, suggesting the need for tailored approaches in policy planning and implementation. In particular, our results show a favorable influence of funding on entrepreneurial management within the rental accommodations sector, but after controlling for covariates, a contrasting trend comes out. This implies that while funding may foster entrepreneurial initiatives, its ramifications within the tourism domain are intricate and contingent upon various contextual variables. Moreover, disparities in effectiveness between regions are evident, notably between the North and South. Further research could also look at the potential complementarity of this projects with the cohesion policies that target inner areas such as the Italian National Strategies for Inner Areas. From a methodological perspective, this study underscores the importance of integrating technological tools and data analytics in policy evaluation and development, paving the way for more informed and strategic decision-making in the tourism sector. Future developments in the field should focus on refining predictive models and exploring the long-term sustainability of tourism-related projects, ensuring they contribute to equitable and inclusive growth across regions.