Extended Abstract

Tourism Development and Resilience in Italian Municipalities

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Tourism has long been recognized as both a vulnerable and resilient economic sector. While previous studies have primarily examined this duality within the tourism sector itself, they have largely overlooked its broader economic implications. This paper addresses this gap by investigating the relationship between the development of the tourism sector and the ability of local economies to respond to and recover from shocks, focusing on the economic impact of the COVID-19 pandemic on Italian municipalities. This stems from the fact that the degree of specialization and diversification within an economy is widely recognized as a main determinant of economic resilience. However, the contribution of specialization in tourism remains an underexplored area of research, despite its critical importance. Indeed, tourism is a highly impactful sector, and specialization in tourism brings both opportunities and challenges. On the one hand, tourism significantly contributes to economic growth by boosting GDP, generating employment, attracting investments, and enhancing infrastructure. On the other hand, excessive tourism development can lead to economic dependency and the phenomenon known as "overtourism." Understanding how these dynamics interact and how the overspecialization of tourism affects the broader economy during a shock is crucial. Previous studies have shown that less diversified economies struggle to resist the initial impact of a shock due to the absence of a portfolio effect that can help spread damages and losses. However, in a second phase, through catalyzed growth driven by expertise concentration and targeted investments, these economies can recover more swiftly. This raises a fundamental question: does specialization in tourism enhance or hinder resilience?

To answer this question, the paper first develops a conceptual framework inspired by a risk matrix to assess the estimated risks of tourism specialization, which can be harmful to both the local economy and the environment. This framework evaluates the extent to which an economy relies on tourism as its primary source of income and the degree to which tourism activities and tourist arrivals strain local resources. The study also draws on the literature on economic resilience to identify its various dimensions, particularly resistance (the ability to minimize the impact of a shock) and recovery (the ability to return to pre-crisis levels or adapt to a new trajectory).

The empirical analysis focuses on Italy at the municipal level, covering the years from 2014 to 2022. Various time periods are used to construct different variables of the analysis. Regional resilience is the dependent variable, measured using economic indicators, particularly employment dynamics, to assess resistance and recovery following the COVID-19 pandemic. Employment data across all economic sectors is used to construct two sensitivity indices: one for resistance and one for recovery. Sensitivity indices are widely employed in resilience literature and they capture regional variations (in this case municipal variation) in a specific indicator between two time periods. Resistance is measured by employment variation between 2021 and 2020, while recovery captures employment variations between 2022 and 2021. By intersecting these two indices, the resilience index is formed, comprising four categories:

1. Non-resilient: Municipalities unable to resist or recover from the shock.
2. Only resistant: Municipalities that resisted the shock but did not recover.

3. Fully resilient: Municipalities that successfully resisted and recovered.
4. Only recovered: Municipalities that suffered an initial downturn but recovered strongly.

The aim of the analysis is to explain the likelihood of Italian municipalities of belonging to one of these resilience categories based on their tourism specialization pattern prior to the shock. For this purpose, the paper employs Social Sequence Analysis (SSA) to classify different types of tourism development patterns based on the degree of reliance on tourism within the economy and the pressure tourism exerts on the local territory from 2014 to 2019.

SSA is a methodological approach that analyzes the progression and patterns of social phenomena over time by processing categorical longitudinal data as sequences – an ordered series of states a unit experiences over time. SSA identifies the most typical patterns in the data and groups units that follow similar trajectories in the development of a particular phenomenon. In this study, the objective is to categorize municipalities with similar tourism development trajectories.

Since, according to the conceptual framework, tourism development results from the interaction between reliance on tourism as an economic sector and the pressure tourism as an economic sector exerts on the territory, the paper analyzes how different sequences of tourism reliance and tourism pressure co-evolve. To achieve this, it employs Multichannel Sequence Analysis (MSA), an extension of SSA that examines multiple parallel sequences simultaneously. Each "channel" represents a different aspect of the process being studied, allowing for a comprehensive understanding of how these dimensions interact over time. To perform MSA, indicators of tourism reliance and tourism pressure are identified and constructed. Tourism reliance is measured using the location quotient for tourism employment, while tourism pressure is captured by constructing a composite indicator aggregating accommodation density, facility utilization, residential capacity, tourism intensity, and tourism density. These indicators are transformed into categorical variables by partitioning their distributions into quartiles. Each municipality is then associated with two separate sequences – one for tourism reliance and one for tourism pressure – spanning six years (2014-2019), with states corresponding to the yearly levels (minor, moderate, significant, and major) of each indicator.

Optimal matching techniques are then applied to uncover patterns by computing the distance between each pair of sequences based on the minimal combination of substitutions, insertions, and deletions required to transform one sequence into another. A hierarchical cluster analysis is subsequently performed on the resulting matrix of all pairwise intersequence distances, leading to a data-driven classification of the sequences. This process identifies three distinct clusters of municipalities with similar co-evolution trajectories of tourism reliance and pressure:

1. Tolerable tourism development: Municipalities with low to moderate tourism reliance and pressure.
2. At-risk tourism development: Municipalities with increasing reliance on tourism and moderate to high tourism pressure.
3. Excessive tourism development: Municipalities with high and persistent tourism reliance and tourism pressure, indicating overtourism.

These clusters serve as the categories of the main independent variable in the multinomial logit regression, which models the probability of a municipality belonging to one of the resilience categories based on various municipal characteristics, including tourism development patterns and control variables such as population growth, population density, per capita income, education levels, and institutional quality, with regional fixed effects to account for policy differences during the pandemic.

The findings reveal that municipalities with a high correlation between tourism reliance and tourism pressure exhibited lower resistance to the initial economic shock but demonstrated a stronger capacity for recovery. However, when considering overall resilience – incorporating both resistance and recovery – these municipalities were less likely to achieve full resilience compared to those with more balanced tourism development. These results indicate that tourism's dual nature as both a vulnerable and resilient sector extends to the broader economy, acting simultaneously as a driver of recovery and a source of vulnerability for local economies. They also suggest that tourism-dependent economies may benefit from strategic policies that promote diversification and sustainable tourism practices to mitigate long-term risks. In conclusion, the paper underscores the importance of balancing tourism development with broader economic stability, ensuring that local economies can withstand and recover from shocks without becoming overly dependent on a single sector.