

EXTENDED ABSTRACT

TOURISM RESILIENCE IN SPAIN: THE ROLE OF WORLD HERITAGE SITES

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1. INTRODUCTION

In recent years, Spain faced a severe economic crisis due to COVID-19, with tourism among the hardest-hit sectors. Travel restrictions in 2020 brought tourism to a near halt. A key milestone was the recovery of domestic tourism, nearing pre-pandemic levels by summer 2021. However, international tourism recovered more slowly, only returning to 2019 figures by summer 2023. This gap reflects differences in travel policies and shifts in tourist preferences.

International travel restrictions, including border closures and quarantines, caused a sharp decline in arrivals. As restrictions eased at varying rates, travelers' confidence remained affected. Many opted for closer, less crowded destinations, boosting domestic tourism. By late 2024, Spain had surpassed pre-pandemic levels, welcomed 94 million foreign visitors and generating €126 billion in revenue.

The crisis caused by the pandemic presents a unique opportunity to analyze the effect of UNESCO World Heritage Sites on tourism and their influence on the sector's resilience. This study examines the role of these cultural and natural assets in attracting both domestic and international travelers before, during, and after the crisis.

2. OBJECTIVES

The main objective of this article is to determine whether the presence of key tourism assets, such as UNESCO World Heritage Sites, had a different impact during the crisis or whether their relevance in attracting tourists remained stable or declined. To achieve this, the study analyzes tourism trends in Spain from 2018 to 2024. Using a quantitative approach, econometric models are employed to assess the relationship between tourist arrivals and the presence of UNESCO-listed sites, while controlling for other attraction factors that may also influence tourism demand.

3. METHODOLOGY

Tourism levels are analyzed using two data sources from January 2018 to December 2024: the Hotel Occupancy Survey and the Non-Hotel Accommodation Survey from the

National Statistics Institute (INE). These monthly datasets, stratified by 50 provinces, provide a detailed view of tourism dynamics. Provincial-level data allows for assessing recovery patterns across territories, unlike EGATUR, which only offers regional data for the 17 regions. The province is chosen as the unit of analysis because INE data on rural accommodations is unavailable at the tourist destination level. While some data exist for 65 tourist destinations, only 31 of them are available across hotel and apartment surveys, making a provincial approach more comprehensive. This ensures the inclusion of all UNESCO World Heritage sites, central to the study.

UNESCO sites attract cultural tourism, particularly to provinces with historical and architectural landmarks. However, mass tourism can lead to degradation. Studies emphasize both economic benefits and sustainability challenges. An econometric analysis examines whether World Heritage sites influenced national and international tourism recovery. Three provincial-level variables are considered: (i) cultural sites designated before 1990, which may have weakened tourism resilience; (ii) cultural sites designated after 1990, potentially having different effects; and (iii) natural sites, blending heritage and nature-based tourism.

Other tourism drivers include sandy beaches, national parks, climate (Tourism Climate Index), and accommodation capacity. Beach length is a key attraction, while accommodation supply is measured through hotel rooms, rural lodgings, and tourist apartments. Additional factors like city size, transport infrastructure, entertainment, and safety are considered but sometimes excluded due to data limitations or multicollinearity. Cost-related variables are omitted due to incomplete data before 2021.

Panel data models assess tourism trends, with Bai-Perron structural break tests identifying disruptions: March 2020 (pandemic onset) and June 2021 (domestic tourism recovery). International tourism shows a second break in April 2022, marking a stronger recovery.

Models are estimated for pre-pandemic, crisis, and recovery periods. Stationarity is confirmed, and Breusch-Pagan LM tests validate fixed/random effects models. Autocorrelation and heteroscedasticity are addressed with feasible generalized least squares (FGLS). Significance is assessed via Wald χ^2 .

Tourism resilience is analyzed by estimating the time to recover 60%-90% of pre-pandemic levels. Correlation analysis links beach areas, accommodation capacity, and climate factors, with VIF tests confirming no multicollinearity. Robust regressions address heteroscedasticity, ensuring reliable statistical inferences.

4. RESULTS

The analysis examines the impact of World Heritage sites on domestic and international tourism across three periods: pre-pandemic, crisis, and recovery. Before COVID-19, UNESCO cultural sites declared before 1990 had the strongest positive effect, attracting over 15,000 additional foreign tourists per month, while later-designated sites contributed around 8,000. This effect vanished during the pandemic but partially recovered afterward. Natural heritage sites had no significant impact in any period.

For domestic tourism, trends were similar but with notable differences. Cultural sites declared before 1990 attracted even more visitors after the pandemics (rising from 14,500 to over 17,000 per month), while newer sites also gained importance. Unlike foreign tourism, natural protected areas had a significant positive effect on domestic visitors, even during the pandemic. Beach length remained a strong determinant for both tourist groups, with a lasting impact.

Regarding resilience, the presence of early-designated cultural heritage sites delayed recovery, particularly for foreign tourism. Provinces with these sites took over two months longer to regain 60% of pre-pandemic tourism and more than six months longer to reach 90%. This suggests that cultural tourism, often reliant on long-distance travel and older visitors, was slower to bounce back. Additionally, protected natural areas were linked to slower foreign tourism recovery. For domestic tourism, cultural heritage sites affected initial recovery but lost significance at higher thresholds, as demand for cultural destinations gradually returned.

5. CONCLUSIONS

This study has analyzed the relationship between UNESCO World Heritage sites and tourism resilience in Spanish provinces during the post-pandemic recovery. By examining factors influencing domestic and international tourism, significant patterns have been identified in the interaction between heritage and sector resilience.

The key findings indicate that cultural heritage sites designated before 1990 play a crucial role in attracting tourists but also significantly prolong the recovery of international tourism. Provinces hosting these sites took longer to regain pre-pandemic levels of foreign visitors compared to those without them. This effect is likely due to the reliance of cultural tourism on international mobility, which was heavily restricted during the global health crisis. In contrast, more recently designated cultural heritage sites had a less pronounced impact on tourism resilience, suggesting their international recognition has not yet reached the level of older heritage sites.

For domestic tourism, the results were less conclusive. Early designated cultural heritage sites also delayed initial recovery, as national tourists initially favored closer destinations associated with nature and beach tourism. However, as restrictions eased, cultural tourism regained momentum, partially mitigating the initial recovery delay.

Future research should explore additional factors such as transport connectivity, leisure and entertainment offerings, and perceived destination quality to enhance the understanding of tourism resilience. It would also be valuable to investigate differences in recovery dynamics across accommodation types, such as hotels, tourist apartments, and rural lodgings. Furthermore, examining whether other cultural assets—such as BICs (Assets of Cultural Interest), historic districts, and national heritage protections—affect the tourism impact of UNESCO sites could provide insights into better integrating different heritage protection systems.