Tourism-Induced Resilience of Rural Destinations in Relation to Spatial Accessibility

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Abstract
Tourism plays a vital role in many rural areas and has been proven a highly resilient sector following an unforeseen shock. Recent evidence points out its capacity to transfer resilient proprieties to the economic landscape of destinations. Yet, little is known about the way structural features of a destination impacts the tourism-induced resilience. Our study builds a mediation model for tourism-based economic resilience of rural destinations in relation to the accessibility towards urban areas. The results suggest that the accessibility towards the larger cities does not have a measurable effect upon the tourism-induced resilience. However, when the accessibility index took into consideration the medium cities and towns, a clear, distinguishable, effect was observed but only for time-distances up to 76 min. Therefore, we were able to map all rural areas that could benefit in a recovery period from their proximity from a city. The study increases our understanding of cone-like relationship model in tourism studies and completed previous approaches which established a relation between tourism growth and economic growth. Moreover, it confirms the role that accessibility plays during the recovery period and the contributions of tourism activities to strengthening the urban–rural synergies. Several policy recommendations regarding an integrated and efficient destination management are addressed at the end of the paper.

Keywords Rural tourism · Resilience · Accessibility · Mediation model · Urban–rural relations

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Introduction

During the last decades tourism activities have emerged as an economic restorative solution for territories in difficulty. Economic diversification (Roberts & Hall, 2001; Sharpley & Telfer, 2015), job creation (Jussila & Järviuluoma, 1998; Papatheodorou & Pappas, 2016), increase of revenues (Campbell, 1999), or revitalization of localities with weakening agricultural activities (Boujrouf et al., 1998; Ibanescu, 2015) are just a few from the long list of expected impacts following tourism introduction in rural destinations. It is reasonable to consider that for rural areas tourism managed to induce growth opportunities unlike any other activity before. The positive effect of tourism on economic growth is currently widely accepted (Antonakakis et al., 2015; Balaguer & Cantavella-Jorda, 2002; Brida et al., 2016; Dogru & Bulut, 2018; Schubert & Brida, 2011), despite the emergence of a certain scepticism following the 2008–2012 crisis pointing out the unbalanced development, the high vulnerability towards economic shocks, and the social conflicts (Almeida-García et al., 2016; Bahrami & Noori, 2013; Milano et al., 2019). Undeterred by the effect of the economic crisis, local policy makers were massively investing in implementing, promoting, and developing tourism products (Fotiadis, 2009; Qian et al., 2016). Furthermore, the positive ramifications induced by the tourism multiplier effect contributed to the reduction of disparities between territories (Xiaolu Li et al., 2016; Pascariu & Ibănescu, 2018), a more sustainable development for rural areas (Croes & Rivera, 2017), and provided a major support for poorer regions (Ferrari et al., 2018).

Nonetheless, the recent events related to the 2008–2012 crisis and the COVID-19 pandemic, as well as their unprecedented repercussions on travel industry, have highlighted the vulnerability of tourism sector regarding unforeseen shocks (Hall et al., 2020; Xun Li et al., 2021; Nepal, 2020; Yang et al., 2020). Each of these shocks impacted profoundly the destinations, their labour markets, communities, and economic actors directly or indirectly dependent on tourist flows. Against the tremendous consequences of the shocks, the scholars, conjointly with local policy makers, shifted their attention and efforts towards a contemporary concept focused on the constant adaptation and recovery following a disturbance: the resilience.

Studies showed that tourism induce economic resilience in destinations (Cellini & Cuccia, 2015; Lew, 2014; Luthe & Wyss, 2014; Ritchie & Jiang, 2019; Romão, 2020) to the point that it became an informal principle in scientific literature. However, despite the constant warning that this tourism-induced relation is not straightforward, but rather dependent on local structural factors, little effort and consideration was paid to the investigation of this particular feature. During the last decade, a series of researches identified the destination’s accessibility as of the main factors facilitating the relations between tourism and economic resilience (Bănică & Camară, 2011; Bulai & Eva, 2016; Ibanescu et al., 2016, 2020; Pascariu et al., 2021), although in most cases the relation was presented as being linear. Our study seeks to fill this gap regarding the role of local factors in facilitating the recovery of a destination through tourism activities. The aim of the
paper is to determine if and how the accessibility of tourism destinations plays an active role in mediating the relation between tourism recovery and economic recovery, therefore actively contributing to the amplification of tourism-induced resilience.

The remainder of the paper is organized as follows. In chapter 2 a thorough literature review regarding the relation between resilience and tourism activities is presented. Chapter 3 provides a detailed analysis of the mediating role that accessibility played in this relation. Chapter 4 presents the methodological approach, while chapters 5 and 6 are devoted to the main results as well as implications for policy makers and conclusions.

Resilience and Tourism – A Complicated Cohabitation?

Resilience is often used to describe the ability of a system (country, province, community, etc.) to respond and adapt to a quick change, to absorb or withstand shocks and alterations inflicted upon the system from the outside, and to reorganise itself, in order to be able to persist after the disruptions while still retaining the same functions and identity (Béné et al., 2014; Boschma, 2015; Martin, 2011; Martin & Sunley, 2014; Modica & Reggiani, 2015; Reggiani et al., 2002). In tourism, resilience was first used in the ‘90 s (O’Hare & Barrett, 1994), however, for more than a decade it dealt only with topics related to environmental or financial shocks. Nowadays, the tourism studies tackling the concept of resilience are more complex and more thorough, integrating a wider range of topics from the recovery following socio-economic shocks, community resilience, to the effects of tourism industry upon the overall resilience capacity of a locality.

The resilience-based approach calls for in-depth evaluations of place-specific consequences of various shocks, while simultaneously integrating the analysis of consequent transformation of a destination (Cellini & Cuccia, 2015; Cheer & Lew, 2017; Luthe & Wyss, 2014; Ritchie & Jiang, 2019). More recently, resilience-based planning emerged as a more effective alternative to sustainable tourism development through its approaches and perspectives on adjustments to a rapidly changing world (Hall et al., 2017; Lew, 2014). While the concept was mostly used in relation to the recovery of tourism destinations in terms of arrivals, new developments call for broader and interdisciplinary approaches. The notion of resilience offers new perspectives with respect to decision-making processes, in a time when the unanticipated events drastically altered the traditional views on tourism development. It is providing a useful framework capable of building a bridge between emergency, contingency, competitiveness, and sustainable development (Béné et al., 2014; Scott, 2013) and has succeeded in becoming a major objective and a central key word in many policy strategies aimed at reducing the disaster-related risks or at improving financial and economic stability. Both academics and policy-makers are demanding a new approach regarding tourism development, especially in peripheral, rural or lagging regions, an approach based on resilience rather than on growth (Cellini & Cuccia, 2015; Hall et al., 2019; Richards, 2020; Ritchie & Jiang, 2019).
In light of current events, the connections between tourism industry and resilience are brought into discussion more forceful than ever. While the effect of the pandemic upon regional growth is still subject of debate, tourism-orientated regions have been negatively affected, especially during the first waves (Hidalgo et al., 2022; Xun Li et al., 2021). Furthermore, the first scientific inquiries analysing the impact of COVID-19 pandemic upon tourism activities were addressing the same requirement: the need of building resilient destinations and the need to better understand the mechanisms of inducing resilience in destinations (Hall et al., 2020; Hidalgo et al., 2022; Nepal, 2020). Giving the frequency and the amplitude of the last shocks affecting the tourism industry, this approach should focus simultaneously on the resilience of tourism activities as well as the resilience induced by tourism activities, as two complementary facets of the same systemic strategy.

During the last decades two major postulates started to dominate the scientific discourse with regard to the relation between tourism activities and resilience:

1. Tourism is a more resilient activity than the majority of other economic activities.
2. Due to its higher resilience, tourism manages to induce and increase the overall resilience capacity of the local economy in destinations.

The first postulate is almost unanimously accepted. While it displays a relatively high vulnerability towards financial, military, or socio-economic shocks (Bramwell & Lane, 2009; Lacitignola et al., 2007; Mill & Morrison, 2002; Russell & Faulkner, 1999), tourism manages, as recent evidence shows, to recover much quicker than most of other economic sectors (Cellini & Cuccia, 2015; Psycharlis et al., 2014). This ability of tourism to bounce back rapidly following an important shock contributes to its appeal among policy makers. The speed of recovery varies considerably among territories, destination profiles, and maturity of tourism activities within the territory, yet it continues to manifest itself systematically.

The second postulate, however, is still subject of debate in scientific literature. The capacity of tourism to induce and increase the resilience capacity in destinations is likely due to the economic diversification (Sharpley & Telfer, 2015), the tourism multiplier effect (Ferrari et al., 2018; Pascariu & Ibănescu, 2018), the quality of easily employing and integrating young or unqualified personnel (Jussila & Järviluoma, 1998), which proved to be extremely useful in post-shock periods. Nevertheless, a part of the scientific community is challenging this postulate, highlighting that the capacity of tourism to induce resilience is highly dependent on various inherent features of destinations, like the economic performance of destinations (Cehan et al., 2019) or, more commonly, their spatial accessibility (Bănică & Camară, 2011; Ibanescu et al., 2020; Modica & Reggiani, 2015; Reggiani et al., 2002; Yang & Fik, 2014). Therefore, given the commitment of decision makers to build more resilient destinations which manage to recover rapidly after a shock, the necessity arises to better understand the role that these factors play on the process.
The Mediating Role of Accessibility in Tourism-Induced Resilience

Spatial accessibility emerged as a key concept in tourism studies, significant theoretical models having been developed over time in order to better bridge the connectivity of a destination with tourist mobilities, economic development, and more recently, resilience capacity. Such models mostly aimed at delivering an overarching explanation of the role that accessibility plays in tourism development, the evolution of a destination, or its recovery.

One of the most noteworthy models in literature is represented by the cone-like relationship between distance from tourists’ origin and number of visitors in destinations (Greer & Wall, 1979). This model suggests that the number of visitors increases with the distance from tourists’ origin, however, only until a certain breaking point, beyond which the relation manifests antagonistically, the number of tourists decreasing with the distance. The implications of the model are pivotal for the understanding of the mechanisms which uphold the behaviour of a tourism destination. The distance between origin and destination could act both as a boosting or as an attenuating factor, depending on this crucial breaking point. Still, the aforementioned factor is usually overlooked when evaluating the performance of tourism destinations, or while designing local and regional tourism development plans.

Several theoretical contributions from the ‘80 s considered the tourists’ origin as the primary explanatory component in understanding the spatial dynamics of tourism (Lundgren, 1982, 1984), and while amid the ‘90 s the spatial factor was put in relation mainly in the core-periphery relations (Blomgren & Sørensen, 1998; Brown et al., 2000; Buhalis, 1999a, 1999b; Wanhill & Buhalis, 1999), during the last two decades the researchers called for the necessity of further inquiring the role of spatial accessibility in tourism studies (Flognfeldt, 2005), suggesting even the integration of the spatial interaction into the Tourist Area Life Cycle model (Hall, 2005). This call generated an increasing interest in empirically questioning the importance of spatial accessibility for tourism development or recovery (Bulai & Eva, 2016; Celata, 2007; Tóth & Dávid, 2010), assessing the importance of accessibility for employment dynamics in tourism sector (Apparicio et al., 2007; Giuliano et al., 2012; Jussila & Järviäluoma, 1998). It can be observed that while the relation between accessibility and tourism development was constantly encompassed in various scientific studies and debates, the role of spatial accessibility in mediating the recovery of a tourism destination following a shock is more scarcely scrutinized. It is only after the 2008–2012 crisis that this relation started to gain momentum, with several studies underlying the role of accessibility in accelerating the recovery of destinations in post-shock contexts (Bânică & Camară, 2011; Bulai & Eva, 2016; Ibanescu et al., 2020; Pascariu et al., 2021).

Still, in light of the current pandemic drastically affecting tourism industry, the issue of tourism-induced resilience arise anew (Burini, 2020; Hall et al., 2020; Richards, 2020), this time in a more imperative manner and with an immediate need to prompt a rapid and sustainable recovery in the most affected destinations (UNWTO, 2020; WTTC, 2020). Alongside the necessity of recovery, the role of
inherent features directly or indirectly affecting the recovery performance is also brought into discussion.

In this respect, our study employed advanced statistics to assess if, and to what degree, the inherent feature of spatial accessibility influences the relationship between tourism arrivals and the economic recovery of rural destinations. The current paper will lead to a better understanding of the overall topic regarding tourism-induced effects and the role that the distance between origin and destination plays in the economic recovery of a destination following a major shock.

**Method**

Our study focused on the latest shock with available data regarding the recovery period (2008–2012 financial crisis). The analysis was carried out on an in-depth study focused on Romanian rural destinations. Due to its high diversity of rural destinations, the distinguishable manifestations of economic crisis, and clear identification of recovery moment, the chosen territory represents the ideal field for achieving our objectives, simultaneously offering methodological replicability. Moreover, in the rural destinations the relation between tourist arrivals and number of employees is more prominent than in urban areas (Campbell, 1999). It should be mentioned that Romanian rural destinations displayed a clear, distinguishable, shock period (2008–2009) manifested through omnipresent intense decline in tourism arrivals, followed by a distinguishable recovery period (2010–2014), the homogenous nature of their behaviour making them ideal for the study of resilience.

We used data from 266 Romanian rural tourism destinations defined as localities which had constant tourism arrivals between 2006 and 2014, in order to cover pre-shock, during, and post-shock periods. This was required in order to respect the definition of a resilient system, which stipulate that the system persists after the disruptions while still retaining the same functions and identity (Boschma, 2015; Martin & Sunley, 2014). Therefore, we excluded the rural destinations which ceased to maintain their tourism function following the crisis, and, hence, displayed no recovery. The tourism recovery of destinations was evaluated through the annual number of arrivals, while their economic recovery was assessed through the evolution of the number of employees, according to the official data provided by the Romanian Statistical Institute. Since the rural destinations display a rather wide heterogeneity, the recovery, both for tourism arrivals and number of employees, was considered based on the dynamics of the indicator, rather than a certain threshold.

Spatial accessibility has been conceptualized as being the “ease” of urban population to reach rural tourism destinations. Due to the very high reliance of Romanian tourism flows on road transportation, the easiness of reaching tourism destinations have been defined as travel times separating tourism destinations from tourists’ geographical origins. A transportation model has been created and five indexes of spatial accessibility for tourism destinations have been computed.

i) Level I accessibility—number of minutes separating rural tourism destinations from the national capital (Bucharest, approx. 2 million inhabitants);
ii) Level II accessibility—number of minutes separating rural tourism destinations from large regional urban centres (> 200,000 inhabitants);

iii) Level III accessibility—number of minutes separating rural tourism destinations from cities with more than 100,000 inhabitants;

iv) Level IV accessibility—number of minutes separating rural tourism destinations from cities and towns with more than 50,000 inhabitants;

v) Level V accessibility—number of minutes separating rural tourism destinations from any city or town with more than 25,000 inhabitants.

Finally, a composite index integrating all the previous values has been conceived to assess whether spatial accessibility plays a greater role when regarded simultaneously at different urban scales.

Considering the aim of the paper, we chose to use cross-lagged models in order to estimate the impact that tourism arrivals have had on the number of employees during the recovery period (2010–2014). We hypothesise that the accessibility to urban centres can moderate the relationship between tourism recovery (expressed through tourism arrivals) and economic recovery (expressed through the number of employees), thus PROCESS was used to test this moderation (Hayes, 2017). The analyses were carried out with SPSS v22 and PROCESS. PROCESS is an observed variable OLS and logistic regression path analysis modelling tool which allows the estimations of the direct and indirect effects in single and multiple mediator models (Hayes, 2017). All analyses included a correction for heteroscedasticity (HC3) (Davidson et al., 1985) as recommended by Hayes and Cai (Hayes & Cai, 2007), while the Johnson-Neyman technique (Johnson & Neyman, 1936) was used to compute the range of significance and simple slopes for interaction. Nineteen entries were identified as outliers based on Mahalanobis, Cook, and Leverage distance and were subsequently taken out of the analysis.

### Results

#### Descriptive Statistics

The descriptive statistics and Pearson correlations among the selected variables are presented in Table 1. The results are based on the original sample, before elimination of outliers, for the period 2010–2014.

As seen in Table 2, the number of employees displays a small and positive correlation with tourism arrivals, suggesting that a high number of tourists is correlated with a higher number of employees. Furthermore, there is a negative relationship between accessibility and the number of employees indicating that for high distances the number of employees decreases. The same relationship, even though less important, as the correlation values are smaller, can be noticed for tourism arrivals and accessibility.
### Table 1  Descriptive statistics for employees, tourism arrivals and accessibility for rural tourism destination in Romania

|          | M     | SD     | 1    | 2    | 3    | 4    | 5    | 6    |
|----------|-------|--------|------|------|------|------|------|------|
| Employees| 1482.75| 614.72 |      |      |      |      |      |      |
| Tourism arrivals| 3397.90| 9194.22 | -20**| .04  | .48**|      |      |      |
| Level I accessibility| 273.04| 125.00 | -11**| .29**| .64**|      |      |      |
| Level II accessibility| 98.12| 48.82 | -43**| -13**|      |      |      |      |
| Level III accessibility| 63.07| 39.17 | -7** | .30**| .50**| .74**|      |      |
| Level IV accessibility| 43.53| 26.72 | -42**| -7** | .30**|      |      |      |
| Level V accessibility| 36.48| 25.08 | -35**| -5** | .47**| .71**| .85**|      |

1 Employees 2 Tourism arrivals 3 Level I accessibility 4 Level II accessibility 5 Level III accessibility 6 Level IV accessibility 7 Level V accessibility

** p < 0.001, * p < 0.05

### Table 2  The mediation model for tourism-based economic resilience in relation to the accessibility towards urban areas

|          | B     | SE    | t     |
|----------|-------|-------|-------|
| Model 1—Level I accessibility—national capital (2 million inhabitants):  
Constant | 478.82| 16.08 | 29.77**|
| Tourism arrivals | 0.01 | 0.00 | 5.02**|
| LI Accessibility—capital | -1.00 | 0.13 | -7.80**|
| Tourism arrivals * Accessibility capital | 0.00 | 0.00 | 2.96*|
| Model 2—Level II accessibility (> 200.000 inhabitants):  
Constant | 477.40| 15.79 | 30.24**|
| Tourism arrivals | 0.02 | 0.00 | 5.85**|
| LII Accessibility—200 K | -3.67 | 0.33 | -11.14**|
| Tourism arrivals * Accessibility 200 K | 0.00 | 0.00 | 0.61|
| Model 3—Level III accessibility (> 100.000 inhabitants):  
Constant | 473.47| 14.90 | 31.78**|
| Tourism arrivals | 0.01 | 0.00 | 3.31**|
| LIII Accessibility—100 K | -6.87 | 0.40 | -17.24**|
| Tourism arrivals * Accessibility 100 K | 0.00 | 0.00 | -3.11*|
| Model 4—Level IV accessibility (> 50.000 inhabitants):  
Constant | 475.96| 14.89 | 31.96**|
| Tourism arrivals | 0.01 | 0.00 | 5.44**|
| LIV—Accessibility 50 K | -9.81 | 0.58 | -16.78**|
| Tourism arrivals * Accessibility 50 K | 0.00 | 0.00 | -2.71*|
| Model 5—Level V accessibility (> 25.000 inhabitants):  
Constant | 475.96| 14.89 | 31.96**|
| Tourism arrivals | 0.01 | 0.00 | 5.44**|
| LV Accessibility—25 K | -9.81 | 0.58 | -16.78**|
| Tourism arrivals * Accessibility 25 K | 0.00 | 0.00 | -2.71*|

** p < 0.001, * p < 0.05
Moderation Models

Our subsequent aim was to verify how each type of accessibility can influence the relation between tourism arrivals and employees. Each moderation will be presented separately in the following section.

Role of Level I Accessibility (National Capital) in Tourism-Induced Recovery

The overall prediction model is significant, $F_{(3,1307)}=36.94$, $p<0.00$, explaining 28% of the employee variance. As seen in Table 2, all predictors in model 1 are significant, with both tourism arrivals and accessibility to Bucharest being independent predictors of employees. The interaction between tourism recovery and accessibility to the capital contributes to the overall model ($R^2_{\text{change}}=0.01$, $F_{(1,1307)}=8.78$, $p=0.03$). Since the interaction was significant, an analysis of the simple slopes was carried out. For high accessibility (when rural localities are closer to the capital), there is no relationship between tourism recovery (arrivals) and economic recovery (employees) ($b=0.0063$, $t=1.47$, $p=0.14$). However, further from the capital, at an average level of accessibility ($b=0.0141$, $t=5.02$, $p<0.01$) and low level of accessibility ($b=0.0218$, $t=6.63$, $p<0.01$), for each tourism arrival there is an increase in the number of employees during the recovery period. Up until an accessibility level of 170 min, the number of tourism arrivals does not impact the number of employees. As the accessibility decreases, (rural localities are situated further away from the capital), the number of tourism arrivals significantly influence the number of employees, such that for the lowest level of accessibility (509.48 min), each tourist arrival increases with 0.029 the number of employees.

Role of Level II Accessibility (> 200,000 Inhabitants) in Tourism-Induced Recovery

The overall prediction model is significant, $F_{(3,1307)}=55.23$, $p<0.00$, explaining 34% of the employee variance. As seen in Table 2, the individual predictors in model 2 are significant, with both tourism arrivals and accessibility towards cities with > 200,000 inhabitants, being independent predictors of employees. The interaction between tourism arrivals and level II accessibility, was however, insignificant $F_{(1,1307)}=0.37$, $p=0.54$, therefore the accessibility towards major regional cities does not contribute to the tourism-induced resilience.

Role of Level III Accessibility (> 100,000 Inhabitants) in Tourism-Induced Recovery

The overall prediction model is significant, $F_{(3,1307)}=117.40$, $p<0.00$, explaining 46% of the employee variance. As seen in Table 2, all predictors in model 3 are significant, with both tourism arrivals and level III accessibility being independent predictors of employees. The interaction between tourism arrivals and level III accessibility contributes to the overall model ($R^2_{\text{change}}=0.01$, $F_{(1,1307)}=9.67$, $p=0.001$). Since the interaction was significant, an analysis of the simple slopes was carried out. For high accessibility (rural localities located closer to these cities), there is a significant influence of tourism arrivals on the number of employees ($b=0.0172$, $t=2.34$, $p=0.02$).
t = 6.31, p < 0.001), the effect remaining perceptible at average levels of accessibility as well (b = 0.0095, t = 3.31, p = 0.01). However, at low levels of accessibility there is no impact of accessibility on the relationship between tourism recovery and economic recovery (b = 0.0018, t = 0.038, p = 0.70). Up until a time-distance of 76.01 min, the number of arrivals significantly influences the number of employees, each tourist arrival increasing by 0.021 the number of employees. Further away, the number of arrivals no longer impacts on the employees’ dynamics.

Role of Level IV Accessibility (> 50.000 Inhabitants) in Tourism-Induced Recovery

The overall prediction model is significant, $F_{(3,1307)} = 114.90, p < 0.00$, explaining 45% of the employee variance. As seen in Table 2, all predictors in model 4 are significant, with both tourism arrivals and level IV accessibility being independent predictors of employees. The interaction between tourism arrivals and accessibility contributes in this case to the overall model ($R^2_{\text{change}} = 0.01, F_{(1,1307)} = 7.32, p = 0.001$). Since the interaction was significant, an analysis of the simple slopes was carried out. For high accessibility (rural localities located in close vicinity), there is a significant influence of tourism arrivals on employees (b = 0.01952, t = 6.83, p < 0.001), as well as at an average level of accessibility (b = 0.0141, t = 5.43, p < 0.01). Finally, at a low level of accessibility there is a significant relationship between tourism arrivals and employees (b = 0.0086, t = 2.36, p = 0.01). Up until a time-distance of 73 min, the number of arrivals significantly influence the number of employees where for the highest level of accessibility, each tourism arrival increases with 0.022 the number of employees. Further away, the number of arrivals no longer impacts on the employees’ dynamics.

Role of Level V Accessibility (> 25.000 Inhabitants) in Tourism-Induced Recovery

The overall prediction model is significant, $F_{(3,1307)} = 80.19, p < 0.00$, explaining 39% of the employee variance. As seen in Table 2, all predictors in model 5 are significant, with both tourism arrivals and level V accessibility being independent predictors of employees. The interaction between tourism arrivals and accessibility contributes to the overall model $R^2_{\text{change}} = 0.01, F_{(1,1307)} = 8.11, p = 0.001$. Since the interaction was significant, an analysis of the simple slopes was carried out. For high accessibility, there is a significant influence of tourism arrivals on employees (b = 0.0215, t = 6.96, p < 0.001) as well as at an average level of accessibility (b = 0.0141, t = 5.43, p < 0.01). Finally, at a low level of accessibility there is a significant relationship between tourism arrivals and employees. Up until a time-distance of 74 min, the number of arrivals significantly influence the number of employees where for the highest level of accessibility, each tourism arrival increases with 0.024 the number of employees. Further away, the number of arrivals no longer impacts on the employees’ dynamics.

The generally low levels of $R^2$ suggest that the importance of spatial accessibility in mediating the relationship between the number of tourism arrivals and the number of employees in rural tourism destinations is rather low. However, the fact that the mediation is statistically significant shows that, at least in some geographical
contexts, synergies between spatial accessibility and tourism activities do exist and contribute to a greater impact of arrivals on overall local employment during the recovery period, which defines the resilience performance of destinations.

The statistical analysis allowed us to determine that:

- the accessibility towards capital city, the largest city of Romanian urban network plays a positive role towards the tourism-induced resilience, however, only after overcoming a proximity area of no effect (170 min). Given the size of the capital, any destination situated too close is perceived to be too familiar to be considered a suitable destination.
- The accessibility towards large regional cities of more than 200,000 inhabitants does not have a measurable effect upon the tourism-induced resilience.
- The accessibility towards smaller cities and towns appears as highly important in moderating the relation between tourism resilience and economic resilience, but only for time-distances up to 76 min.

Following this assessment, we were able to map, in relation with the urban network, all destinations that could benefit in a recovery period from their proximity from a city (Fig. 1).

![Image](image_url)

**Fig. 1** The representation of the areas where the effect of accessibility is significant
The model mapped in Fig. 1 suggests that the mediation of spatial accessibility is significant in the proximity of cities, but insignificant in the peripheral destinations (Carpathian area, Danube Delta), despite their tourism potentiality. Contrarily, the spatial accessibility to Bucharest acts differently, creating a distinct and large no-effect zone within 170 min around the capital.

**Discussions and Conclusions**

The aim of the study was to assess how and to what degree the accessibility affects the relationship between tourism recovery and the economic recovery of rural destinations. As mentioned in the literature, despite the fact that resilience-based approaches are considered fundamental in a rapidly changing world constantly threaten by social, economic, or pandemic disturbances, very little was found on the role of structural features of destinations in smoothing the economic recovery following a major shock through tourism activities.

Our results suggest that spatial accessibility acts as a catalyst on the relationship between tourism resilience and economic resilience. This effect is not active for level I and II accessibility, though it is becoming evident for accessibility of levels III, IV, and V, with clear and distinct thresholds. If the capital manages, nevertheless, to exert an influence for time-distances of over 170 min, due to its considerable demographic weight and economic influence, the regional centres do not manage to actively affect the relation between tourism recovery and economic recovery in rural destinations, fact that drastically questions their ability to fully support the immediate recovery of adjacent rural areas.

Additionally, the results indicate that most of the Carpathian mountain area encompasses a particular category of rural tourism destinations where spatial accessibility to urban network does not significantly influence the impact of tourism upon the economic resilience (Fig. 1). A possible explanation is offered by the fact that in most peripheral rural destinations tourists are not spending money on activities that significantly lead to local job creation. Furthermore, these destinations are actually relying on various forms of agritourism and ecotourism, with local families owning and managing their own accommodation establishments, without the necessity of hiring personnel (Buhalis, 1999a; Wanhill & Buhalis, 1999), therefore a methodological difficulty arises in properly assessing the effect. Hence, in such cases, a higher number of tourism arrivals does not necessary translates into a significantly higher value of employment in the locality. An additional explanation could be offered by the location of Carpathian destinations (usually, far from urban areas and major road axis) in comparison with non-Carpathian destinations which usually prefer the proximity of cities and main roads. Hence, the synergy between tourism and economic performance is maximum when rural destinations are located within the critical thresholds highlighted by our analysis.

Overall, our analysis shows that closer a rural destination is to a medium and small urban area, the higher is its ability of triggering economic benefits from tourism arrivals during the recovery period following a shock compared to rural destinations situated either further away (i.e. more peripheral destinations), either in immediate
proximity of larger urban areas. This may be due to the fact that such rural destinations offer a larger array of (tourism) services that depend on local persons being employed in such services, at least compared to rural destinations located in the remote periphery.

The study has major theoretical implications regarding the effects of tourism upon the economy of destinations. It confirms the theories from the ‘80 s which considered the tourists’ origin as a major explanatory factor in tourism dynamics (Lundgren, 1982, 1984) and increases our understanding of Greer and Wall’s (1979) cone-like relationship model by adding a no-effect zone when urban area become so massive that cannibalise the development of surrounding areas. Furthermore, our study boosted previous approaches which established a relation between tourism growth and economic growth (Antonakakis et al., 2015; Brida et al., 2016; Dogru & Bulut, 2018) by adding the resilience dimension.

Moreover, the results confirm the extremely important role that accessibility plays during the recovery period (Bourdeau-Lepage & Torre, 2020) and the mechanism by which it impacts the design of tourism flows. While the crisis tend to influence visitors perceptions regarding the cost of holidays (Garau-Vadell et al., 2018), pushing them towards more accessible destinations, by reducing the costs of long distance travels, the geographical proximity offers a major competitive advantage. Tourism actively contributes to strengthening the urban–rural synergies in terms of employment and employment growth (Van Leeuwen, 2015).

The findings call for out of the box approaches in tourism planning, in order to counteract the traditional linear approaches (Holladay, 2018) and guide the discourse towards a better understanding, maintaining, and enhancing of systemic resilience capacity in destinations (Luthe & Wyss, 2014), in order to reconsidering ‘development’ in tourism research (Hall et al., 2019). The role of accessibility and spatial features should be starting points of these resilience-oriented strategies, alongside community needs and resources (Dentinho & Serbanica, 2020).

Regional and national actors could consider an active support towards the creation of a tourism market connected to urban areas, especially medium cities and towns, capable of ensuring a constant, but vital, tourism flow during and following a major crisis. The interconnections between destinations and nearby urban areas could, therefore, prove vital. Additionally, the creation of a tourism market in peripheral areas requires a certain degrees of innovation (Pezzi et al., 2019) in order to compensate for the lack of proximity urban basins. Instead of thinking about resilient tourism activities in destinations, it might prove to be more useful an approach towards resilient destinations, where tourism activities, economies, local communities, stakeholders, policy-makers and visitors contribute altogether towards an integrated, more efficient, management (Hall & Lew, 2009; Hall & Veer, 2016). Finally, for the specific case of the Romanian rural destinations the issue of a relative low accessibility could be addressed as well. The vast majority of the rural destinations rely on road network, despite the existence of an active (although obsolete) rail network which proved to be rather efficient during the last years of the communist regime. Infrastructure investments specifically designed for the upgrade of the rail network could significantly benefit the rural destinations (as well as the overall economic performance of the rural areas).
A better understanding of the overall resilience capacity, including community resilience and adapting capacity, represents an important research topic for the future. Thus, further studies on supplementary components, such as demographical behaviour or emigrational impact, are needed in order to fully understand how the structural features filter the impact of tourism arrivals on rural destinations.

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