An assessment of the role of safety in digital nomads' destination selections

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Abstract

Purpose – The safety-related features of destinations affect tourist experiences and consequently influence destination choices. This research investigates the role of spatial profile and safety in the destination choices of digital nomads.

Design/methodology/approach – The study was designed using the multi-research method. To determine the spatial patterns of digital nomads' destination choices, Getis-Ord's Gi is utilized, and spatial regression techniques are employed to ascertain the role of safety in these choices.

Findings – The main result of the research is that the most visited cities are spatially clustered in Asia, Europe and America. In this regard, digital nomads' destination choices exhibit similarities to those of traditional tourists. However, safety plays a significant role in destination preferences.

Originality/value – The research findings provide valuable insight into the relationship between digital nomads' travel preferences and safety, thereby serving as a significant source of information for destination marketing and management.

Keywords Digital nomads, Safety, Destination selection, Spatial analysis, Spatial regression

Paper type Research paper

Introduction

Tourists seek to feel safe while traveling, as choosing a safe destination is critical for the satisfaction of their experiences. Therefore, safety significantly influences tourists' destination choices (Zou and Yu, 2022).

Scholars have examined the components of destination safety perceptions through diverse approaches. For example, destination crime rates are considered to be a significant factor influencing tourists' sense of safety (Brown, 2015; Park and Stokowski, 2009). Similarly, terrorism (Seger-Guttmann and Gilboa, 2023), natural disasters (Rosselló *et al.*, 2020; Zhang, 2021) as well as concerns regarding diseases or health-related issues (Curtale *et al.*, 2023), stand out as prominent factors. Moreover, political stability in a destination is a critical factor influencing tourists' safety. Political instability is also acknowledged as a factor that undermines tourists' sense of safety (Bianchi and Milano, 2024; Kundra *et al.*, 2021).

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For digital nomads, safety can also be a significant determinant in destination selection. One of the primary reasons is the constant mobility of digital nomads. This circumstance increases the risk of them encountering theft, assault or similar hazards. In addition to physical safety, data safety and online threats can also be considered significant safety components for digital nomads. Digital nomads, adopting the remote work model, require environments where necessary safety measures are taken regarding data safety, safe internet connection and information safety in destinations. Additionally, internet censorship or the prevalence of cybercrime in a number of countries poses safety risks for digital nomads. In addition to physical and cyber security, the need for legal guarantees and access to quality healthcare services also emerge as other aspects related to safety. All these factors play a significant role in digital nomads' destination selection by enabling them to efficiently conduct their work.

In this context, the focus of this study is on the role of safety in the destination selection of digital nomads, aiming to determine the distribution of digital nomads across countries and the impact of safety on this distribution. The research findings will provide insight into the travel tendencies of digital nomads, thereby contributing to the development of future strategies. Accordingly, the following questions were addressed in the research:

(1) What is the spatial pattern in the distribution of digital nomads?

(2) Is there a relationship between safety and the distribution of digital nomads worldwide?

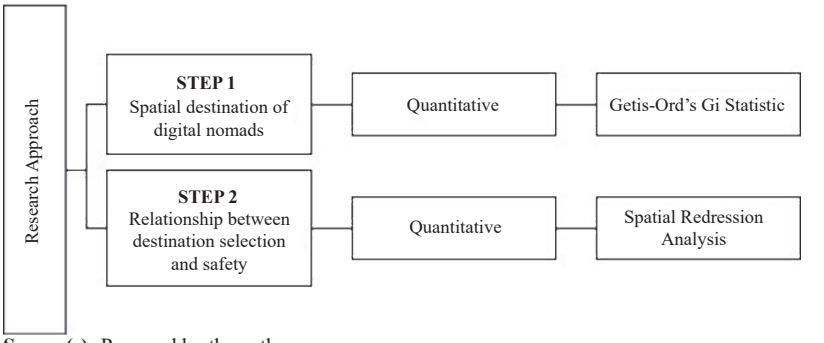
Methodology

Research approach

The research employed a multi-method approach to understand the role of safety in the destination selection of digital nomads. Gil-Garcia and Pardo (2006) provide an effective framework focusing on the advantages of the multi-method approach. This approach allows for a more comprehensive approach to the phenomenon and to the triangulation of results. Additionally, it enables a broader set of questions to be asked (for example, "what," "how" and "why"?), thereby facilitating discovery. The research approach is depicted in Figure 1.

Data collection

In the study, data from the network graph available on the Nomadlist platform was utilized to determine the distribution of digital nomads across destinations (Nomad, 2024). The dataset



Source(s): Prepared by the authors

Figure 1.
Research approach

comprises approximately 300,000 recorded travels by around 19,000 digital nomads across fifty cities on each continent between 2014 and 2024 (Nomad, 2024). The data was accessed on January 18, 2024. Safety scores based on the cities available on the same platform were used to determine the impact of safety on the destination choices of digital nomads. These scores are provided by digital nomads who are members of the platform and have visited the city, and are evaluated as follows: Conflict/political instability (1), very bad (2), bad (3), okay (4), good (5) and great (6).

Data analysis

The analysis method of the study was initially determined by testing whether there is a spatial dependence in the distribution of digital nomads. Because of the correlation arising from spatial factors, the independence assumption of linear regression is violated. The lack of geographic homogeneity in geographical data or in other words, the geographic heterogeneities of the data, necessitates spatial analysis (Yüncü *et al.*, 2017).

Global spatial autocorrelation

Spatial analysis reveals spatial distributions and spatial similarities associated with the data. Spatial autocorrelation analysis was conducted to determine whether there is a spatial dependence in the distribution of digital nomads worldwide. Therefore, within the scope of the study, the null hypothesis was defined as digital nomads being randomly distributed to destinations without any neighboring relationships.

In this study, the global Moran's I statistic was used to determine the correlation among neighboring values. Moran's I represents the autocorrelation of a variable at a specific location with the values at nearby locations as a global cluster index (Günay *et al.*, 2019). In this study, the contiguity weight type is chosen as queen, and the order of contiguity is set to 1. The Moran's I value and scatter plot regarding the distribution of digital nomads are presented in Figure 2. The Moran's I value is determined as 0.215307. While the global Moran's I coefficient varies between −1 and 1, a value of 0 indicates randomness in the distribution (Günay Aktaş *et al.*, 2021). A positive coefficient indicates that similar observation values are observed at neighboring locations, while a negative coefficient indicates differences in values at neighboring locations (Scrucca, 2005). Based on the obtained Moran's I value, the null hypothesis has been rejected. This value indicates a moderately positive global autocorrelation in the distribution of digital nomads worldwide.

The positive spatial dependence found in the distribution of digital nomads worldwide suggests that the numbers of digital nomads in neighboring locations are likely to be similar. Therefore, local clustering and spatial regression analyses are conducted to reveal the details regarding locations where the numbers of digital nomads may exhibit high or low values in conjunction with neighboring locations or where locations within a region may exhibit contrasting relationships with their surroundings.

Spatial distribution and local autocorrelation of digital nomads

The Getis-Ord's Gi statistic was used to determine the distribution of digital nomads. This statistic, which is one of the methods of local spatial autocorrelation, was preferred to not only ascertain whether clustering exists in the distribution of nomads but also to identify the areas of clustering. By calculating this statistic for all units in the sample, "hot spots" and "cold spots" in the study area can be determined. Hot spots, depicted in red, represent clusters of high variable values, while cold spots, depicted in blue, represent clusters of low variable values. Points in shades of yellow indicate statistically insignificant values (Çubukçu, 2015).

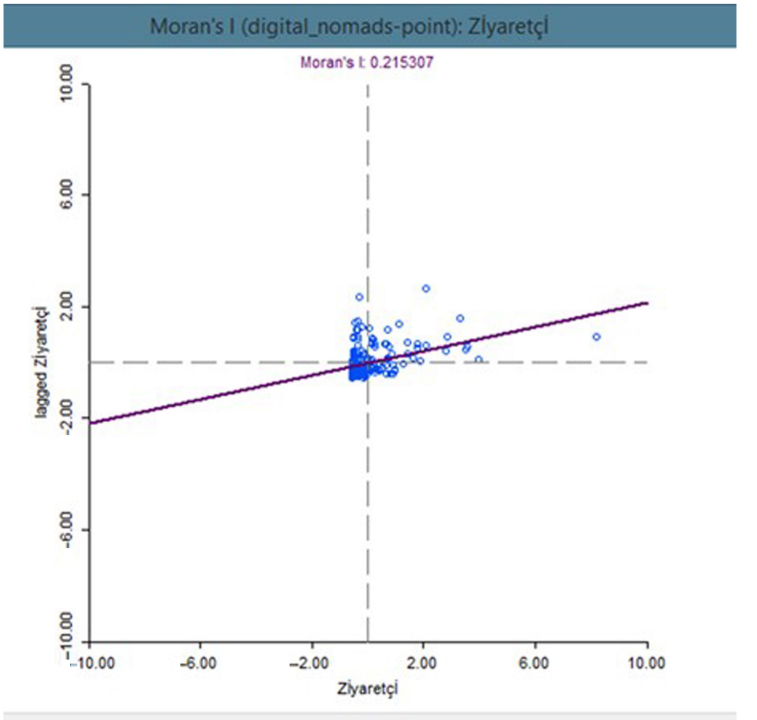


Figure 2.
The Moran's I value and scatter plot regarding the distribution of digital nomads

Source(s): Prepared by the authors

Spatial regression analysis

When the data are independent of the location where they are found, classical regression analysis is used. However, when the data vary depending on their location, spatial regression models, such as the spatial lag model (SLM) and the spatial error model (SEM), are utilized to represent the relationship between them mathematically (LeSage, 1997). Within the scope of the study, the relationship between the number of digital nomad visitors to different locations worldwide and the safety levels of these locations has been investigated. Since it was determined that the relationship between visitor numbers and safety is not independent of location, spatial regression analysis was conducted in the study to represent this relationship mathematically.

The SLM takes into account the presence of spatial autocorrelation in the dependent variable but assumes spatial independence of the error terms (Anselin and Bera, 1998). At this point, the null hypothesis, defined as "there is no relationship between the numbers of nomads per location and the perceived safety levels of locations by digital nomads", is tested. The SLM expresses the equality equation among the dependent variables, as shown in Equation 1. Here, y represents the dependent variable defined as the number of nomads, X represents the explanatory variable taken as safety, β represents the regression coefficient, ρ represents a measure of spatial correlation, W represents the weight value and ε represents the error term.

$$\mathrm{y\_SLM} = \mathrm{X}\beta + \rho \mathrm{W}\mathrm{y} + \varepsilon \tag{1}$$

The SEM allows for the consideration of spatial correlation in the error terms as well. Therefore, the SEM examines to what extent the clustering of digital nomad visitor numbers unexplained by safety perception can be explained compared to the clustering of error terms. While u represents the error term expressing spatial dependence, λ represents the autoregressive coefficient and the SEM equation is as shown in Equation 2, where $u = \lambda Wu + \varepsilon$.

$$y\_SEM = X\beta + u \quad (2)$$

Results

Destination selection of digital nomads: spatial patterns

In the study, focusing on the destination selection of digital nomads and the impact of safety as a factor, 292 cities were examined. The total number of digital nomads, according to the cities visited, is 47,073. When evaluating the destination choices of digital nomads, it can be seen that the visitors prefer the Asian continent the most (39%). This is followed by Europe (30%) and America (23%). The proportion of digital nomads visiting Oceania and Africa is 8%. The distribution of digital nomads worldwide is visualized in Figure 3.

Heterogeneity within continents can also be observed in the destination selection of digital nomads (Figure 3). Accordingly, countries located in the southeast of the Asian continent constitute the most visited area by digital nomads. Approximately 70% of the total visitors in Asia are from Thailand (30%), Indonesia (12%), Vietnam (11%), Malaysia (8%) and Singapore (6%). Another highly preferred destination for digital nomads is European countries. Visitors are present in almost every region of Europe. However, there is a clear concentration, especially in the southwest of the continent. Spain (21%), Portugal (16%),

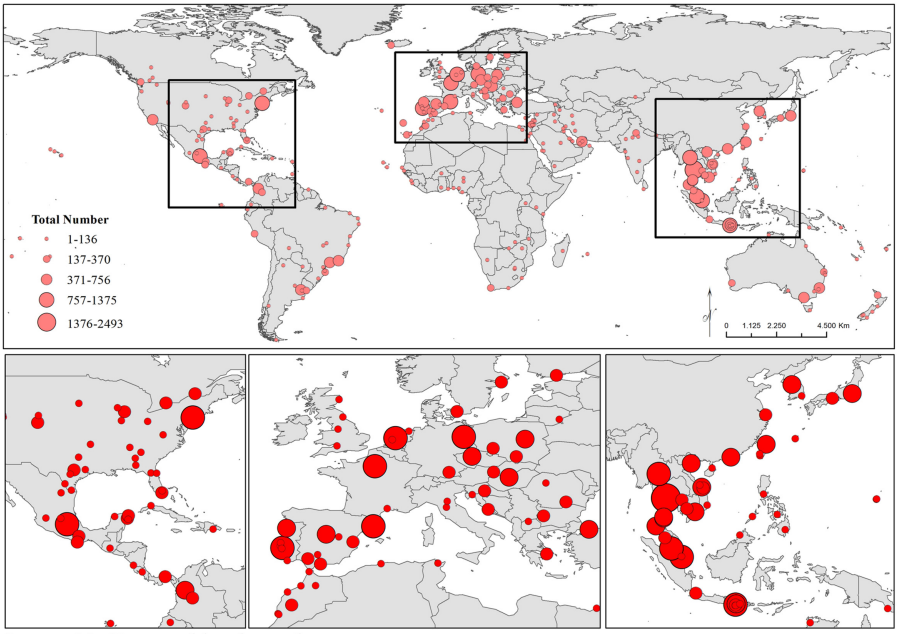


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Figure 3.
Spatial distribution of digital nomads

Germany (11%), France and the Netherlands (14%) constitute the most visited places for digital nomads in Europe. In the Americas, the United States (US) (30%) is the most preferred destination for digital nomads. This is followed by Mexico (19%), Brazil (15%) and Canada (9%).

Although less preferred, a number of countries in Oceania and Africa have quite remarkable visitor numbers. Australia and New Zealand in Oceania host 97% of the digital nomads visiting the continent. In Africa, 81% of digital nomads prefer South Africa (28%), Morocco (26%), Egypt (17%) and Nigeria (10%) (Figure 3).

Although the number of digital nomads is high on the Asian continent, the urban spread ranks the Americas first. In the Americas, 89 cities have been visited by digital nomads, while in Asia, 82 cities, 50 cities in Europe, 44 cities in Africa and 27 cities in Oceania have been visited. The urban distribution appears to be clustered in Europe and Asia, while a scattered distribution is evident in the Americas (Figure 3).

It is noteworthy that digital nomads tend to concentrate in certain cities. The cities of Bangkok and Chiang Mai in Thailand host 8% of digital nomads. Lisbon, Berlin, Barcelona, Paris and Amsterdam are the most preferred cities in Europe in terms of city selection. These five cities host 11% of digital nomad tourists worldwide. Singapore, Canggu and Kuala Lumpur are also among the top cities frequently chosen by digital nomads (7%). Additionally, New York City and Mexico City in the Americas are frequently visited cities by digital nomads (3%). Therefore, it can be observed that digital nomads generally prefer island countries and cities that are developed in terms of tourism.

Digital nomads are spatially clustered in three areas (Figure 4). Two of these clusters stand out as hotspots shown in red, representing the clusters of high variable values and one is a cold spot shown in blue, representing the cluster of low variable values. The first hotspot is in Europe. Western Europe, in particular, stands out as an area where high values are clustered,

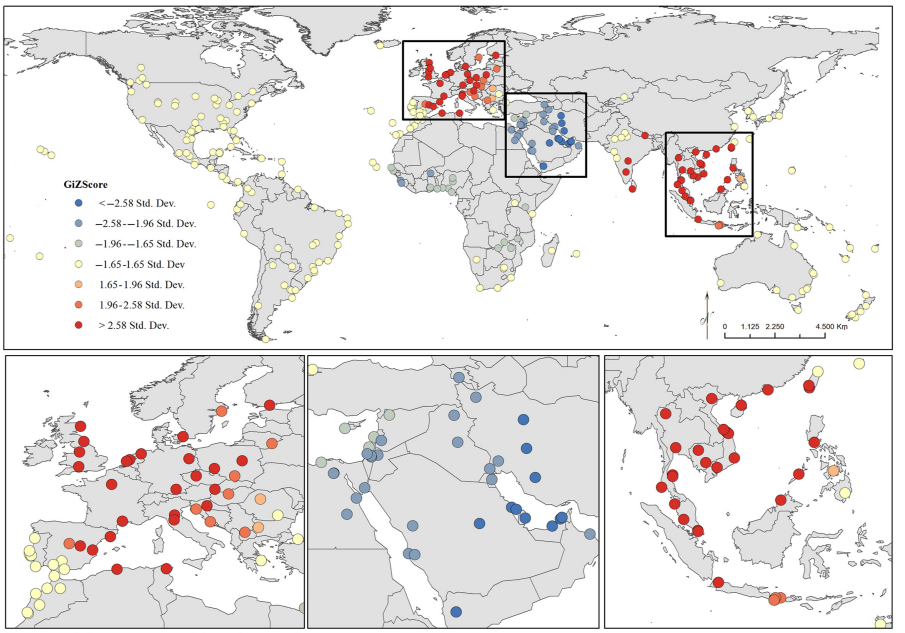

Figure 4.
Spatial clustering of digital nomads

Source(s): Prepared by the authors

indicating that it is visited by digital nomads more often than other destinations. The second hotspot is Southeast Asia. This area, primarily including Thailand and Vietnam, exhibits spatial clustering of visits in its vicinity. The third area is the Middle East, which represents a cold spot where low values or areas less preferred by digital nomads compared to other destinations are clustered.

The impact of safety on digital nomads' destination selections

The spatial pattern of digital nomads' distribution worldwide raises the question of whether there is a relationship between this distribution and their perceptions of safety in different geographical regions. A spatial regression analysis conducted to answer this question is presented in Table 1.

In both the SLM and the SEM, a significant relationship (p-value ≤ 0.05) was found between safety and the distribution of digital nomads. The estimated models are given as:

$$(\text{SLM})\ Y = -77.77 + 37.19\,\text{safety}$$

$$(\text{SEM})\ Y = -77.77 + 41.16\,\text{safety}$$

Safety explains the distribution of digital nomads to a low extent, with an R-squared value of 0.15. This could be attributed to the complexity of variables in a vast area such as the world. On the other hand, the limited data available for a study on a global scale might contribute to the low explanatory power of spatial analysis. Nonetheless, even with limited data, low explanatory power in spatial analysis can still be considered significant.

Discussion

Although the UNWTO (2024) stated that the Middle East, Europe and Africa performed strongest in 2023, the significant rise of the Asian travel market continues. Yang and Ong (2020) assert that the proliferation of low-cost carriers in expansion and the widespread use of smartphones for travel planning and assessment have been instrumental in the boom of Asian tourism. The development of the blue economy (Bhattacharya and Dash, 2021) has also influenced this rise. Boey (2024) expresses her forecast for the future, saying that the providers of travel industry business intelligence, market research data and trend analysis predict that the recovery of tourism in Asia will continue in 2024 and approach the pre-pandemic levels of 2019. The destination choices of digital nomads also parallel international trends.

According to the research results, Asia stands out as the most popular destination among digital nomads. Subsequently, Europe and America are the most visited destinations. The European Travel Commission's (2023) report evaluates the summer of 2023 positively for European tourism despite various environmental and economic challenges affecting the tourism sector and tourists. Destinations located in the southern Mediterranean in particular have been significant attractions for foreign tourists (ETC, 2023). America is one of the

	Coefficient	Std. error	p-value	R^2
Safety SLM	37.1927	14.3969	0.00978	0.15
Safety SEM	41.1653	17.3968	0.01797	0.15

Source(s): Authors' own work

Table 1. The relationship between the distribution of digital nomads and safety

destinations where post-pandemic recovery is clearly observed (WTTC, 2023). In this sense, the research findings are parallel to international trends. Accordingly, it can be stated that the destination choices of digital nomads closely resemble those of traditional tourists.

People travel to visit and experience different places, making safety one of the biggest challenges in the tourism industry (Hamm and Su, 2021). This is because it influences tourists‟ destination choices, thereby being decisive for the overall tourist arrivals at any destination. Therefore, providing a safe environment for visitors is one of the fundamental priorities in the tourism sector. According to the research findings, digital nomads exhibit low spatial clustering in the Middle East. This suggests that safety could be a determining factor in the destination choices of digital nomads, as indicated by the spatial regression analysis results, which, despite a low number of data points across a wide geography, hint at the existence of a relationship between safety and the spatial pattern of digital nomads' distribution worldwide.

Conclusion

The research results indicate that during the period under review, the destination choices of digital nomads exhibit similarities with international trends and traditional tourists. Accordingly, it can be forecast that in the near future, Asia, Europe and America will continue to be the most preferred destinations for digital nomads. Moreover, the study identifies safety as an influential factor in nomads' destination choices. According to the results, this research provides practical contributions by offering valuable guidance to businesses in the tourism sector and destination managers on understanding the preferences of digital nomads and reaching the target audience more effectively. This information could serve as a significant resource for determining marketing strategies and objectives for tourism companies and destinations. Additionally, the identification of safety as an influential factor in the destination choices of digital nomads could guide relevant stakeholders in enhancing safety measures at tourist destinations and ensuring the safety of visitors. Therefore, this research may assist in improving decision-making processes in the tourism industry and contribute to the sustainable development of the sector.

Limitations of the study

The analysis suggests that safety could play a significant role in the destination choices of digital nomads, as inferred from the spatial regression analysis results. However, it is important to note that the study encountered limitations due to the relatively small number of data points collected across a wide geographical area. Therefore, while the results hint at a potential relationship between safety and the spatial distribution of digital nomads worldwide, further research using larger and more diverse datasets is needed to validate and strengthen this conclusion.

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