

PREFERENCES OF DIGITAL NOMADS: ANALYZING POPULAR DESTINATIONS AND DECISION-MAKING FACTORS THROUGH INTERACTIVE DATA VISUALIZATIONS USING PUBLIC ACCESS DATABASES

Liza Dóra CZIBULKA ^{1*}, Emőke KISS ², Dániel BALLA ¹

¹ University of Debrecen, Faculty of Informatics, Department of Data Science and Visualization, Debrecen, Hungary; liza.czibulka@mailbox.unideb.hu (L.D.C.); balla.daniel@inf.unideb.hu (D.B.)

² University of Debrecen, Faculty of Science and Technology, Department of Landscape Protection and Environmental Geography, Debrecen, Hungary; kiss.emoke@science.unideb.hu (E.K.)

Citation: Czibulka, L. D., Kiss, E., & Balla, D. (2026). Preferences of digital nomads: Analyzing popular destinations and decision-making factors through interactive data visualizations using public access databases. *Geojournal of Tourism and Geosites*, 68(4), 2694–2703. <https://doi.org/10.30892/gtg.68406-1887>

Abstract: Digital nomadism is a rapidly spreading form of location-independent work that is fundamentally transforming the global labour market, economy, and tourism. The aim of this study is to quantitatively explore and model the destination preferences of digital nomads and to present an innovative, interactive data visualization framework. Our research analyses the structural changes of the period 2021-2024 following the logic of the PEST model (Political, Economical, Social, Technological). The study is based on a longitudinal database collected by a proprietary Python-based web scraping method from the nomads.com platform, which was analyzed using Spearman's rank correlation and multiple linear regression (OLS). The methodological innovation of the research is an interactive visualization dashboard based on the PEST framework, created with Tableau software, which enables the real-time exploration of complex decision factors and their trade-offs. Our results indicate significant restructuring of preferences. In the post-pandemic period, the social dimension, especially the quality of community life and safety, has become the most decisive attraction. The correlation coefficient between the Community factor and popularity increased from 0.58 to 0.65, and its explanatory power in our regression models nearly doubled relative to 2021. In parallel, technological infrastructure (internet speed) and healthcare have become critical, significant factors, indicating the professionalization of lifestyle. The relative importance of the cost factor has decreased. Geographically, Bangkok (Thailand) leads the global ranking, and Europe (Spain, Portugal) is making significant progress with the introduction of digital nomad visas. The higher coefficient of determination ($R^2 = 0.455$) for the 2024 decision models indicates that nomadic choices are becoming more rational and can be better described by objective indicators. Our study demonstrates how the integrated application of modern data science and infocommunication tools can support conscious decision-making for both digital nomads and host tourism destinations in this dynamically changing market environment.

Keywords: digital nomad, geospatial data visualization, web scraping, dashboards, nomad travel

* * * * *

INTRODUCTION

The explosive development of information and communication technologies has fundamentally transformed the global economy and the culture of work over recent decades. The worldwide spread of broadband internet access, the rise of cloud-based collaboration services, and the continuous improvement in the performance of portable computing devices have created the technological conditions for work to be physically detached from the traditional office environment. It was within this new digital ecosystem that the concept of digital nomadism emerged, a development foreshadowed by Makimoto & Manners as early as 1997, in the early stages of technological development (Makimoto & Manners, 1997; Pfening, 2023). This way of life enables individuals to work from anywhere in the world, free from geographical constraints, by leveraging modern telecommunications technologies. The importance of remote work is now indisputable, as it not only increases employee autonomy and flexibility but also provides macroeconomic benefits, reduces the environmental impact of commuting, lowers infrastructure costs for companies, and contributes to global knowledge transfer.

The popularity of the digital nomad lifestyle has grown exponentially in recent years, extending beyond the former, narrower professional strata (e.g. IT professionals, freelancers). This trend has been significantly accelerated by the COVID-19 pandemic, resulting in a fundamental shift in organisational culture. The forced introduction of home office during the pandemic has shown that remote work is not only an emergency solution but also a sustainable long-term operational model, and in many cases, even more efficient. As recognition of the Work from Anywhere concept has grown,

* Corresponding author

the digital nomad community has expanded to include those with traditional employee status (Schlagwein, 2018). At the same time, the destination market has also changed, with former tropical destinations focusing primarily on low costs (Indonesia, Thailand), large cities offering premium services, advanced digital infrastructure and security (Singapore, Dubai), as well as countries introducing digital nomad visas specifically aimed at remote workers (UNWTO, 2023).

Destination selection has become an increasingly complex decision-making process as the number of options expands (Ivancsóné Horváth et al., 2025). Employees no longer have to consider only the cost of living; they now base their decisions on a complex set of criteria that focus on internet connection speed, personal and public safety, the quality of health care, and the openness of the local community. As the number of available destinations and the diversity of decision factors increase, the amount of information to be processed has also increased drastically. This increase in the data set poses new challenges for individuals, as manually reviewing and comparing the vast amount of heterogeneous data is almost impossible without appropriate supporting tools. In the infocommunication approach, the application of modern data visualisation tools has become essential across both the economy and tourism. In line with the principles of cognitive infocommunication, the aim of visualisation is to support information processing by expanding human cognitive abilities (Baranyi & Csapó, 2010). Well-designed, interactive graphical interfaces can transform raw data into easy-to-interpret visual information. These tools not only visualise data but also enable the rapid recognition of hidden connections, patterns, and trends, significantly reducing the mental effort and time required for decision-making (Kiss et al., 2020).

This study examines the target-choice preferences of digital nomads and their temporal dynamics using a comprehensive quantitative research framework. The primary goal of the research is to empirically identify and hierarchise the economic, social, technological, and political factors that determine decision-making processes, with a special focus on structural changes between 2021 and 2024. To this end, we collected structured data from the nomads.com platform using a proprietary Python-based web scraping method, which was analysed using statistical modelling (correlation and regression analysis). The methodological innovation of the study is the development of an interactive data visualisation system based on the PEST model, enabling the intuitive exploration of complex decision factors and their trade-off relationships. Furthermore, our goal was to examine how the integrated application of modern data science and ICT tools can support rational decision-making and strategic planning for both digital nomads and host regions in a rapidly changing global labour market context.

Based on the above, the following objectives have been identified:

1. Quantitative exploration and modelling of the target choice preferences of digital nomads. The primary goal of the research is to empirically understand the factors that determine the destination choices of digital nomads and how their relative importance evolves.
2. Analysis of changes in the system of preferences over time (between 2021 and 2024), with a focus on structural shifts. To investigate the effects of the post-COVID-19 pandemic normalisation phase, exploring how global events and changing employee needs are reshaping popular destination rankings and decision hierarchies.
3. Develop and present an interactive data visualisation framework. The methodological goal of the research is to develop an innovative, interactive visualisation system based on the strategic PEST model, which provides a structured overview of complex decision factors and their interactions.
4. Demonstration of the practical applicability of modern data science and infocommunication tools. The aim of the study is to show, through a practical example, how the integrated application of web scraping, statistical modelling and interactive visualisation can support decision-making in the context of a dynamic global phenomenon (digital nomadism).

Theoretical background

Digital nomadism, although its roots can be traced back to the prehistoric nomadic lifestyle, is fundamentally different from traditional migration in its modern form. While migrants often leave their homes out of necessity, driven by political, economic, or security concerns, digital nomads choose to move for their own reasons, seeking freedom and self-realisation (Schlagwein, 2018). The technological foundations of the phenomenon were laid by the development of telecommunications in the 1970s, followed by the emergence of portable computers and the internet in the late 1980s (Schlagwein, 2018). However, in addition to technological determinism, psychological factors also play a role. Modern workers reject traditional corporate structures and seek to achieve self-realisation at the top of Maslow's pyramid through travel and flexible working (Woldoff et al., 2021). The pandemic that began in 2019 significantly accelerated the spread of remote work. Although travel restrictions initially limited international mobility, the concept of Work From Anywhere became widely accepted. According to statistics, the number of digital nomads in traditional employment doubled in 2020 and increased by an additional 42% in 2021. The response of companies has been mixed: while some, such as Spotify, have offered full flexibility to their employees, other tech giants (e.g., Apple, Amazon) have decided to return to preserve corporate culture and creative collaboration (MBO Partners, 2022).

The literature treats digital nomads as a heterogeneous group. Based on Cook's anthropological research, five main categories can be distinguished. The traditional model is represented by freelancers, who enjoy complete autonomy over both their work and the choice of their location. In contrast, entrepreneurs operate more complex business systems, often with employees, which can affect or limit their mobility (Cook, 2023). The most rapidly expanding group in recent years, especially during the pandemic, is composed of salaried nomads who work remotely with their employer's permission (MBO Partners, 2022). Finally, the typology also covers those in the transition phase. Experimental nomads are still testing mobility, although they often encounter financial obstacles, while armchair nomads are individuals who, although actively planning to change their lifestyle, have not yet physically embarked on a journey (Cook, 2023).

Based on travel habits, we can distinguish between slow travellers, who spend months in one place for deeper cultural integration, and fast travellers, who frequently change locations, typically for content production (Conway & Timms, 2012). Digital nomadism has a double impact on an individual's quality of life. The literature highlights benefits, such as a sense of freedom, personal development, and cost-effectiveness, especially when nomads are located in countries with a lower cost of living (geoarbitrage) (Verma 2023; Zaban & Unger, 2025). However, a number of challenges can also be identified. The most significant negative factors include loneliness, a lack of stable social protection, blurred boundaries between work and private life, and infrastructural difficulties (such as unstable internet connections). In addition, psychological risks, such as stress, can arise from continuous mobility (Krivtsova et al., 2019). The concept of home is being re-evaluated, no longer denoting a physical place but manifesting itself in the objects and relationships carried by the individual (de Loryn, 2021).

In recent years, digital nomadism has evolved from a marginal form of flexible work into an institutionalized socio-economic phenomenon situated at the intersection of work, mobility, and tourism (Šaffová et al., 2025). According to the latest reviews, interest in the topic has surged following the pandemic. However, conceptual frameworks remain divergent, leading to a growing need for integrated, multi-level interpretations (Başaran, 2025; Dreher & Triandafyllidou, 2025; Gupta et al., 2024). This suggests that digital nomadism can no longer be treated merely as a lifestyle trend or a tourism but must be understood at the intersection of the global labor market, the platform economy, and transnational mobility regimes.

One key finding in the latest literature is that it is not appropriate to simply categorize digital nomads as either traditional tourists or conventional migrants. Research suggests instead that this group is simultaneously linked to new forms of work, the reorganization of leisure time, and lifestyle-based mobility. Accordingly, the digital nomad lifestyle can be described as a hybrid social practice (Kozak et al., 2024; Rainoldi et al., 2025; Toivanen, 2026).

Current research also cautions, however, that behind the narrative of freedom often lie heightened self-discipline, uncertainty, and the constant renegotiation of work boundaries. With regard to destination choice, studies conducted between 2024 and 2026 clearly indicate that the decisions of digital nomads can no longer be reduced to the logic of low living costs. This is a particularly important connection for the present study, as it supports the argument that a combined examination of the political, economic, social, and technological dimensions is warranted (Lacárcel et al., 2024; Poulaki et al., 2025; Zhou et al., 2024). Another key insight from recent critical literature is that the local social and spatial consequences of digital nomadism cannot be ignored. Recent reviews and urban studies highlight the role of geopolitical inequalities, geo-arbitrage, gentrification, and platform-based urban transformation—that is, the fact that the presence of digital nomads can simultaneously create economic opportunities and new social tensions (Cohen & Hannonen, 2026; Sciuva, 2025; Sequera, 2025). In addition, intersectional approaches show that the experiences of digital nomads are not uniform. Gender and racial power dynamics, as well as varying levels of mobility privilege, significantly shape perceptions of safety, belonging, and attachment to place (Linao et al., 2024).

All of this means that, in addition to functional indicators, social inclusion, connections with local communities, and sustainability considerations also play a key role in the evaluation of destinations. Based on the above, by 2026, the study of digital nomads' choice of destination will clearly go beyond a mere description of traditional tourism preferences. The relevance of this research lies precisely in the fact that it treats the political, economic, social, and technological factors influencing decision-making within a unified analytical framework, linking them with longitudinal data and interactive data visualization. This approach not only contributes to a better understanding of digital nomads' preference systems but also offers useful, data-driven insights for the strategic planning of host destinations.

MATERIALS AND METHODS

Data collection

To study the preferences of digital nomads, it is essential to create a multidimensional database that integrates indicators of destination quality of life and changes in tourism demand (Figure 1).

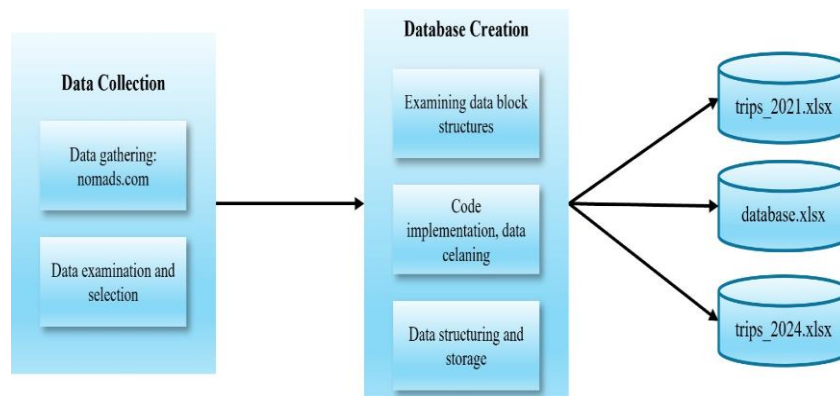


Figure 1. Process of data mining and visualization (Authors, 2026)

The primary source of data for the research was the nomads.com platform, which has one of the world's most extensive databases relevant to digital nomads (Nomads.com, n.d.). The credibility of the platform's data is ensured by combining crowdsourcing with data from official international organizations (United Nations, World Health Organization,

International Monetary Fund, World Bank), complemented by real-time API (Application Programming Interface) connections for meteorological and infrastructure data. To conduct a longitudinal analysis with a focus on post-COVID-19 trends, we used the Wayback Machine service operated by the Internet Archive as an additional source for the research. This enabled us to retrieve and compare visitor data from 2021 and 2024, even when the original web content had already been modified (Internet Archive, n.d.; NomadList, 2021; NomadList, 2024).

Technical implementation

The structured extraction of data was carried out using a custom-developed modular program system in Python 3.13 (Python Software Foundation, 2024). The code comprises three modules, ensuring reusability and transparency.

1. Data extraction and HTML analysis:

The content of the web pages was downloaded using the Requests directory, while the HTML structure was processed and the relevant data (e.g., scores, costs) extracted using the BeautifulSoup directory (Richardson, 2025; Reitz, 2025).

2. Data cleaning and exception handling

One of the key elements of the program is the handling of missing or corrupted data. If a particular attribute was unavailable for a town, the system marked it as None rather than aborting processing, thereby ensuring database consistency.

3. Data transformation

Converting the raw data to a numeric format and organizing them into lists, which were finally exported in CSV format.

The structure of the integrated database

As a result of the processing, three interconnected datasets were created, with the City and Country fields as the common key. The database.xlsx file contains a comprehensive profile of the studied settlements, including economic indicators (monthly cost of living, Airbnb prices), social indicators (community life, safety, English language skills), and infrastructure indicators (internet speed, quality of healthcare).

A key variable is the existence of a digital nomad visa, which is recorded in a binary (yes/no) form (Chen, 2025). The files trips_2021.xlsx and trips_2024.xlsx are databases that support time-series analysis, recording the number of visits during the two periods studied, allowing the quantitative measurement of changes in popularity.

Data visualization strategy and tool selection

To explore the patterns and correlations in the data, we used a business intelligence (BI)-based visualization tool, as visualization not only presents the data, but also supports decision-making and the recognition of anomalies by reducing cognitive load (Few, 2012; Kirk, 2016). When choosing a tool, we preferred Tableau software over Power BI, embedded in the Microsoft ecosystem. The decision was motivated by Tableau's outstanding graphics, the ability to create dynamic dashboards, and the ability to share publicly through the Tableau Public platform (Murray, 2016).

Interactivity plays a key role in the user experience because, unlike static reports, filters and drill-down features allow users to display data according to their preferences (Yau, 2013).

Interactive interface based on PEST analysis

The basic structure and logical framework of the visualization system were provided by the widely used PEST model (Political, Economical, Social, Technological) for strategic analyses (Cadle et al., 2010). By adapting this model, we have ensured a comprehensive and structured categorization of the factors influencing the decision of digital nomads, which will be presented through interactive visualization panels specific to each dimension. This approach allows users not only to see the data but also to interpret them strategically. The Political (P) Factors panel provides an interactive map and a filter-based visualization of the availability of digital nomad visas and the safety profile of destinations (Chen, 2025). The latter includes public safety and the "women's safety" indicator, which is considered crucial, especially for female nomads. Users can use filters to instantly identify countries or cities that align with their safety preferences.

To examine the economic (E) factors, we developed a multilayered map-based visualization (Figure 2). In it, the colour scales for each geographical location reflect the magnitude of the monthly cost of living, while the size of the symbols, displayed in each location, indicates the relative affordability of accommodation (mainly based on the average Airbnb price). This double-coding allows the quick assessment of the cost structure in a geographical context.

The social and cultural (S) dimension is visualized on a dynamic comparison dashboard that reveals subjective yet highly significant factors, such as the friendliness of locals, the perceived level of racism, or the social acceptance of the LGBTQ+ community. The interface allows users to rank the social aspects that are most important to them, using their own weighting system, thus personalizing the assessment of the relative attractiveness of different destinations.

Finally, the Technological (T) Factors panel focuses on the basic prerequisites for remote work. Combined charts (e.g. bar and line charts together) show average and peak internet speeds, the prevalence and quality of public Wi-Fi networks, and the density and availability of places specifically suitable for work (coworking offices, cafes).

The central innovation and greatest functional value of the system is an integrated, interactive dashboard that combines the above four PEST panels into a single coherent interface (Murray, 2016; Yau, 2013). This solution enables immediate exploration of complex, multidimensional relationships and trade-offs. For example, with a single click, the user can determine the trade-off between a low-cost (E) destination and safety (P) or internet quality (T), or the economic (E) consequences of a city with an excellent social environment (S). This integrated approach is not merely information provision but real-time, data-driven decision support, highly adapted to the complex and dynamic orientation needs of digital nomads.

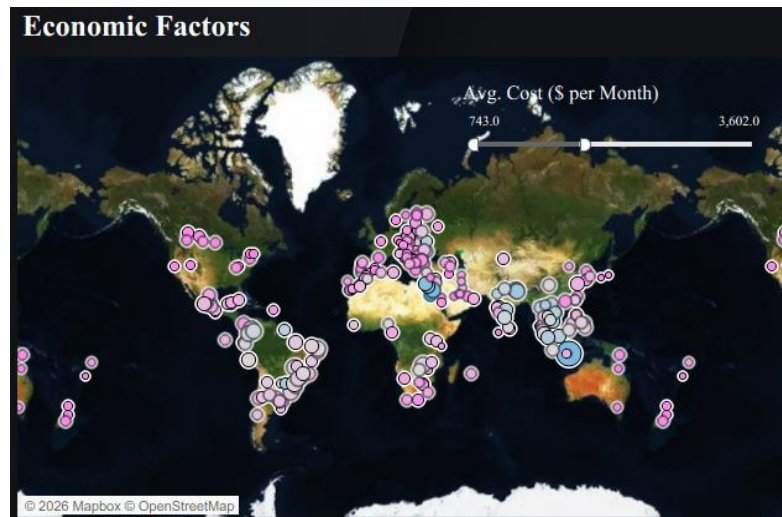


Figure 2. Multilayered map-based visualization of economic (E) factors (Authors, 2026)

RESULTS AND DISCUSSION

Interactive visualization framework to support PEST analysis

The completed Tableau dashboard was built from the visualisation views listed above, allowing the characteristics of the selected destinations to be viewed together, based on the PEST analysis. The dashboard charts work in coordination, except for Total Score (a weighted indicator aggregating all factors), which is independent of the others. The interactive map module allows you to select any number of settlements, which dynamically updates the visualization components and displays indicators related to those settlements in an integrated form on the control panel. Interactive filters for charts and tables are universally enforced to increase personalization (Figure 3).

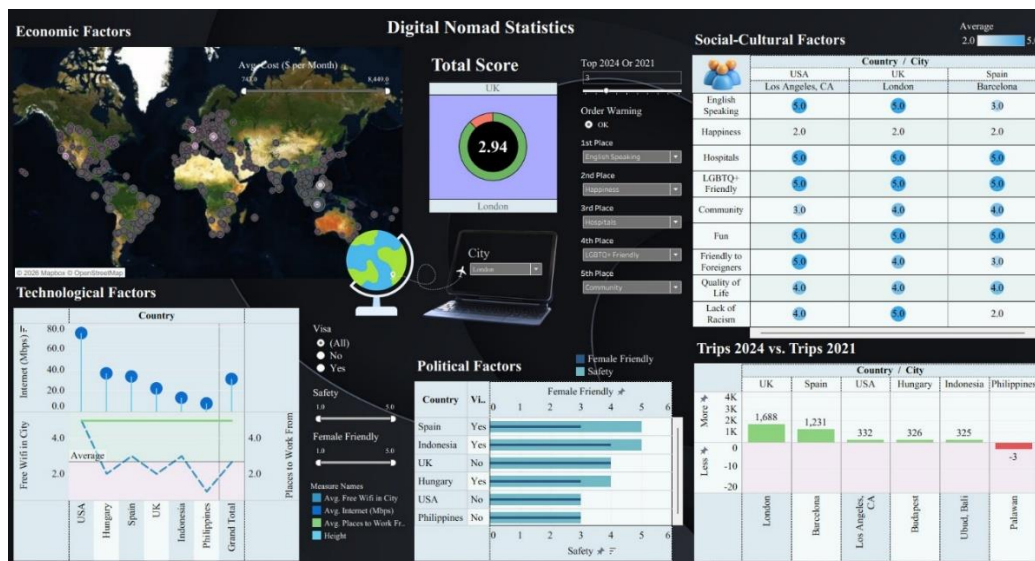


Figure 3. Interactive Tableau dashboard (Authors, 2026)

The visual layout of the interface is divided into four main areas, aligned with the PEST model. The map-based view (Economic) in the top-left corner shows the geographical location and average cost, allowing you to quickly see the regions. When the cursor is over the cities, the data and a link to the city's profile on the nomads.com website will be displayed. Below that, the combined chart for the Technological Factors section compares internet speed (Mbps) and public Wi-Fi availability, a critical aspect for digital nomads. The Social-Cultural Factors table on the right compares cities using a matrix-like scoring system (on a scale of 1 to 5) based on factors, such as host environment and language proficiency, while the Political Factors section highlights visa requirements and safety indicators (e.g. the Female Friendly index).

In addition to the current health check, the dashboard is also suitable for trend analysis. The Trips 2024 vs. Trips 2021 bar chart in the bottom-right corner shows changes in destination popularity. This highlights which cities have regained their appeal and which have declined. With the help of the Total Score indicator in the middle and the ranking filters, the user can weigh the aspects that are most important to them, so the tool functions not only as a data visualizer but also as an active decision support system. The user experience (UX) is further enhanced by dynamic parameterisation options. Using the slider above the map, you can filter by cost limit, while for Political Factors you can filter by safety level.

Statistical analysis of target choice preferences and modelling of decision factors

During the research, a detailed descriptive statistical analysis was carried out on a sample from the nomads.com database. The ranking of destinations was conducted along the dimensions of the PEST model, revealing trade-offs among safety, cost, and infrastructure. The sense of safety, especially for female digital nomads, is a critical screening condition. The countries that scored the highest on a scale of 5, namely Switzerland, Singapore, Iceland, Germany and Denmark, share high institutional trust and advanced public safety (Figure 4).

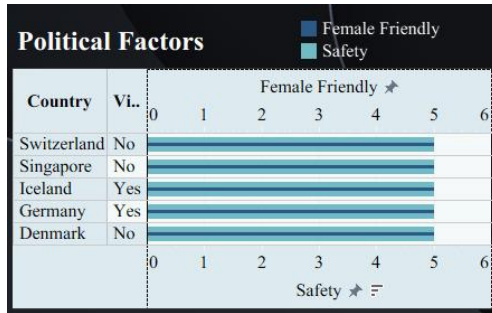


Figure 4. Safest countries (Authors, 2026)



Figure 5. The best rated city by total score (Authors, 2026)

In contrast, in addition to the classic Western metropolises (e.g., New York, London) and Scandinavian capitals (Copenhagen, Stockholm), Southeast Asian hubs (Ko Pha Ngan) and Portuguese coastal cities (Ericeira) stand out in the community index, which assesses the potential for social integration. This duality suggests that nomads seek two types of communities: the metropolitan environment, suitable for professional networking, and the lifestyle-based, more relaxed coastal communities. The study of cost-effectiveness has confirmed the phenomenon of geoarbitrage, in which Western wages are spent in countries with a low cost of living. The best value for money is offered by Southeast Asia and North Africa. The monthly cost of living in Indonesia is only around \$1165, including accommodation, with an average cost of \$10 per night. In contrast, the cost of living in cities in the most expensive category can exceed this amount by more than 5 times. The standard deviation of costs was exceptionally high in the sample, indicating a huge economic gap between destinations.

Based on the weighted Total Score aggregating all factors, Bangkok (Thailand) was the most attractive destination globally in 2024, with a score of 4.46 (Figure 5). This result indicates that Bangkok successfully combines developed infrastructure, vibrant community life, and affordability, outperforming 100% of the cities in the sample. Examining the detailed indicators, it is clear that the high total score was driven by outstanding performance in Social-Cultural Factors. The city's attractiveness is further enhanced by economic efficiency, with an average monthly cost of living of \$1,490, significantly lower than that of Western competitors, while the technological infrastructure (internet speed and free Wi-Fi coverage) provides a stable backdrop for work. These statistics are also confirmed by practical demand; the number of people travelling to the city increased by more than 2300 from 2021 to 2024, showing that theoretical scores are realized in real travel decisions.

The time-series analysis was based on a comparison of data from 2021 and 2024, reconstructed using the Wayback Machine. The purpose of the investigation was to identify post-pandemic market corrections.

The popularity of the countries was measured by the relative frequency of visits (P_i). The formula on which the calculation is based (Pandas Development Team, 2023):

$$P_i = \frac{n_i}{N} \cdot 100 \quad (1)$$

where n_i is the number of visits to the given country, N is the total number of recorded visits.

Based on the data, the United States dominated in 2021 with 16.55%, suggesting domestic nomadism due to international travel restrictions. However, by 2024, Thailand took the lead (12.38%), while the share of the U.S. dropped to 10.04%. The rise of Spain and Portugal is striking. Together, they cover a significant segment of the market, indicating an increase in Europe's attractiveness following the introduction of digital nomad visas (Figure 6).

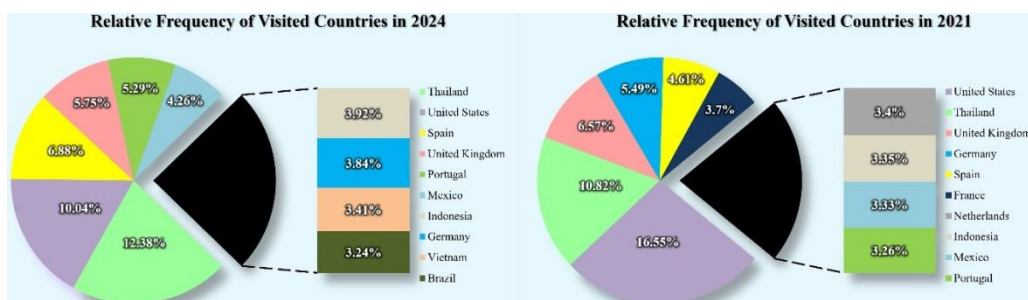


Figure 6. Relative Frequency of Visited Countries in 2024 and 2021 (Authors, 2026)

The percent change indicator $C_{\%}$ to measure the dynamics of growth (Pandas Development Team, 2023):

$$C_{\%} = \frac{T_{2024} - T_{2021}}{T_{2021}} \cdot 100 \quad (2)$$

According to trend analysis, Egypt (+3780%), Jordan (+950%) and Colombia (+609%) recorded the highest relative growth (Figure 7). Although these figures are partly due to a low base, they indicate rising demand for alternative, less saturated destinations. At the other end of the scale are the Philippines (-54%) and India (-38%), whose decline in popularity can be explained by infrastructure deficiencies and slower pandemic reopenings.

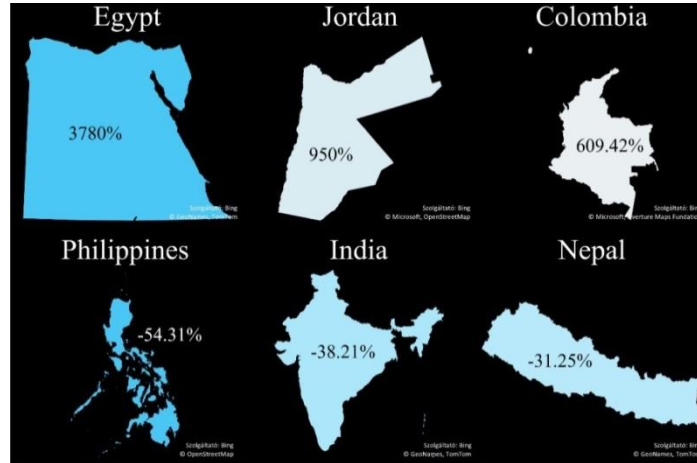


Figure 7. Trend analysis of changes in visitor numbers in the countries for 2021-2024 (Authors, 2026)

To uncover the hidden mechanisms of decision-making, we built our quantitative analysis on two complementary statistical methods. Spearman's rank correlation was used to explore monotonic relationships among variables, while multivariate linear regression (OLS) was used to determine the combined effect and relative weights of the influencing factors (Seabold & Perktold, 2010; Spearman, 1904). Performing these analyses separately on the 2021 and 2024 datasets enabled tracking the dynamics of the preference system over time, suggesting the normalisation of the global labour market and the growth of digital nomadism. The analysis highlighted a significant structural transformation (Figure 8). During the study period, the technological infrastructure, especially internet quality, has advanced in the decision-making hierarchy.

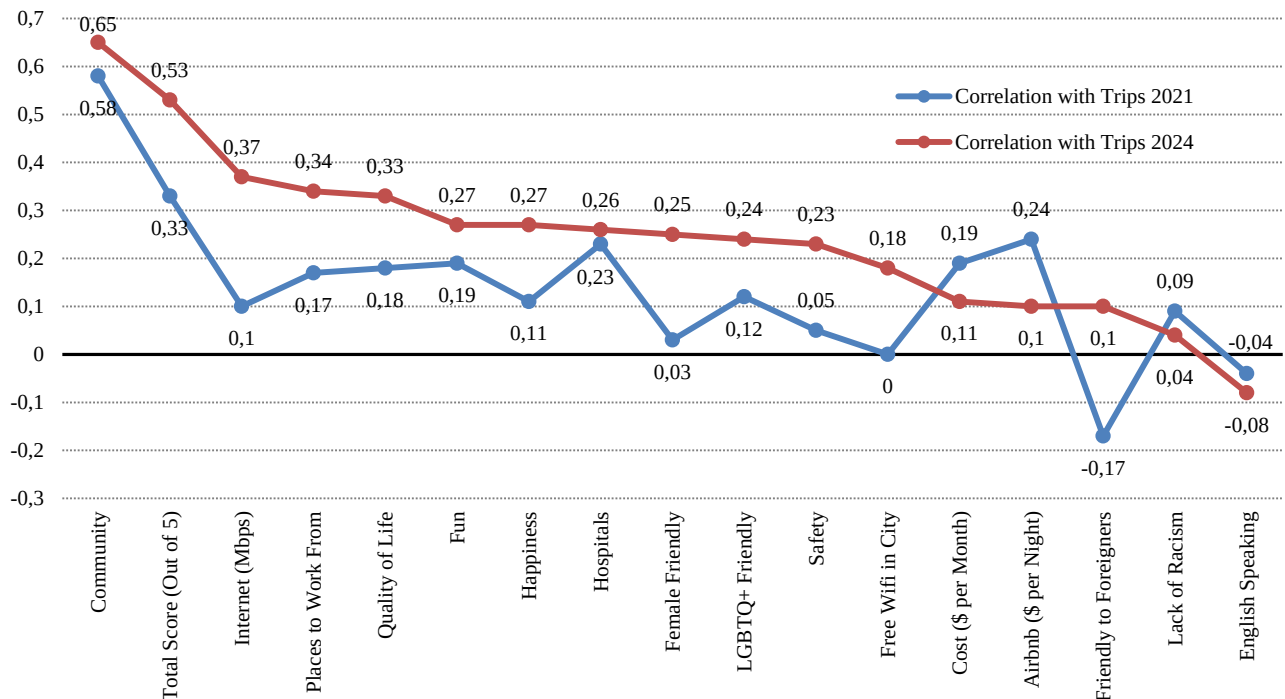


Figure 8. Correlation between key factors and the number of trips (Authors, 2026)

While in 2021 there was only a weak correlation between internet speed and popularity ($r = 0.10$), by 2024 this relationship had strengthened significantly ($r = 0.37$). This change indicates that the early, "anywhere" model has been

gradually replaced by a more considered approach that prioritises a reliable technical background. A stable relationship has become an essential prerequisite for productivity. At the same time, the reinterpretation of economic factors is also evident. The attractiveness of low-cost accommodation has declined, reflecting a shift in the preferences of nomads from mere cost minimisation to a broader sense of value. Participants are increasingly willing to pay a premium for quality, comfort and long-term liveability. Despite this, the social dimension remains the most stable and decisive driving force.

The correlation between the indicator measuring the quality of community life and popularity not only remained strong in both years studied ($r_{2021} = 0.58$; $r_{2024} = 0.65$) but also increased slightly. This confirms one of the fundamental paradoxes of the phenomenon: despite continuous physical mobility, nomads are deeply social human beings whose decisions are guided by networking opportunities, a reduction in loneliness, and a desire to integrate into the community, indicating that local social capital plays a key role in the success of a destination.

The general form of the multivariate linear regression model explaining the number of visits Y was as follows (Seabold & Perktold, 2024):

$$Y = \beta_0 + \beta_{Comm}X_{Comm} + \beta_{Hosp}X_{Hosp} + \beta_{Score}X_{Score} + \epsilon \quad (3)$$

where β_0 is constant, $\beta_{Comm/Hosp/Score}$ are the weights, $X_{Comm/Hosp/Score}$ are the ratings of the factors, ϵ is random error.

The most important finding from the regression analysis is that the effect of the Community variable not only remained significant but also strengthened markedly (Table 1). Although the effects of Total Score and Quality of Life were not statistically significant in the models, the community experience and the presence of health infrastructure by 2024 are fundamental to a city's success among digital nomads. This shows that digital nomads are not just looking for beautiful places but for functional ecosystems that support social relationships and physical safety.

Table 1. Comparative results of multivariate linear regression models explaining the number of visits (2021 vs. 2024) (Authors, 2026)

Indicator	2021 model	2024 model	Interpretation
Coefficient of determination (R^2)	0.318	0.455	The explanatory power of the 2024 model has increased by approximately 43%, decisions have become more rational.
Community variable (β)	351.02	693.61	One unit of improvement in the quality of community life attracted twice as many visitors in 2024.
Significant variables	Community	Community, Hospitals	By 2024 the quality of healthcare also became a decisive factor ($p < 0.05$)

CONCLUSION

In the present study, we explored the target-choice preferences of digital nomads using quantitative data analysis in the context of tourism trends from 2021 to 2024. Statistical analyses of the nomads.com database and archived data indicate that the decision-making process of digital nomads is complex and multivariate, and has undergone significant structural transformation over time. Based on the results, the decision-making process of digital nomads underwent a significant qualitative shift during the study period, indicating the maturation of lifestyles and the consolidation of the market. The most important finding was the restructuring of the hierarchy of decision-making factors. In the early phase, characterized by the pandemic, cost minimization was the dominant strategy, whereas in the post-COVID normalisation period, the social dimension came to the fore. The quality of community life and the appropriate social environment, as well as the sense of security associated with them, have become the most significant attractions.

This is also quantitatively supported by the regression analysis, which shows that the explanatory power of the "Community" variable nearly doubled by 2024 relative to 2021. This change suggests that nomads are not only seeking places to work but also a sustainable, integrated lifestyle in which social relationships and personal safety play essential roles. At the same time, digital nomadism has professionalized, indicated by technological and functional infrastructure becoming a determining factor. The availability of reliable, high-speed internet and high-quality healthcare is no longer merely a convenience but an essential prerequisite for productive, risk-free remote work.

In line with this transformation, geographical preferences have also been reshaped. At the top of the ranking are destinations that successfully combine this high-level functional infrastructure with a liveable, rich social environment. This explains the excellent performance of Bangkok, Ko Pha Ngan, the Scandinavian capitals and New York. At the same time, a new European core is emerging, in which Spain and Portugal are making significant progress through the introduction of specialized digital nomad visas and their Mediterranean lifestyle.

Overall, these changes suggest that the decisions of digital nomads are becoming more rational and predictable. This is supported by the significantly higher coefficient of determination ($R^2 = 0.455$) of the 2024 regression model compared with the 2021 model. This growth indicates that decisions can be explained to a greater extent by objective, measurable economic, social, and technological indicators, reflecting greater maturity in market orientation and personal decision-making. The phenomenon has thus matured into a less experimental, more conscious and systematic life and career strategy. These findings also have practical implications for the main actors in digital nomadism, including nomads, host regions, and companies. For digital nomads, destination choice should extend beyond cost considerations.

Social factors, including quality of community and sense of safety, and functional infrastructure, such as stable internet and healthcare, are at least as critical as economic considerations. Quality of life, long-term viability, and integration opportunities should therefore also be prioritized.

For host destinations, competitiveness increasingly depends on the provision of a complex, high-quality ecosystem. Local authorities and tourism organisations should therefore pay particular attention to reliable, high-speed internet and the development of coworking and coliving spaces. Public safety, particularly for foreigners and women, has become a crucial marketing advantage, making its strengthening and communication important strategic tasks. In the interest of sustainable development, community-building initiatives should also be supported to promote the mutual integration of nomads and the local population and mitigate possible social tensions and the negative effects of gentrification. The introduction and simplification of specialized digital nomad visas can further strengthen the popularity and organization of a region.

For companies, the conscious adoption and management of the "work from anywhere" model can confer a competitive advantage. A flexible HR policy tailored to the needs of nomadic employees, including regulatory compliance, taxation, time zones, and digital security, can increase employee satisfaction and retention while also enhancing cost-effectiveness and talent attraction. In this context, investing in tools to support remote work and in a performance-based, remote-first corporate culture will become strategically important.

In conclusion, digital nomadism should not be treated as a temporary trend but as part of a lasting transformation of the global labour market. Future research should examine in greater depth the impact of generative AI on the nature of remote work, the economic and social effects of nomads on local communities, and the influence of climate change and geopolitical conditions on destination preferences. Conscious management of this phenomenon is essential for all three actors to ensure sustainable development, competitiveness, and individual well-being.

Author Contributions: Conceptualization, L.D.C., E.K. and D.B.; methodology, L.D.C.; software, L.D.C., D.B.; validation, L.D.C., E.K. and D.B.; formal analysis, L.D.C., E.K. and D.B.; investigation, L.D.C.; data curation, L.D.C., E.K. and D.B.; writing - original draft preparation, L.D.C., E.K. and D.B.; writing - review and editing, L.D.C., E.K. and D.B.; visualization, L.D.C. and D.B.; supervision, D.B. All authors have read and agreed to the published version of the manuscript.

Funding: Not applicable.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are available in Nomads.com and the Internet Archive Wayback Machine at <https://www.nomads.com> and <https://web.archive.org/>. These data were derived from the following publicly available resources: Nomads.com (<https://www.nomads.com>), NomadList 2021 archived dataset (<https://web.archive.org/web/20210928084307/https://nomadlist.com/graph.json>), and NomadList 2024 archived dataset (<https://web.archive.org/web/20240621165641/https://nomadlist.com/graph.json>).

Acknowledgements: Supported by the University of Debrecen Program for Scientific Publication.

Conflicts of Interest: The authors declare no conflict of interest.

Use of Generative AI: ChatGPT (OpenAI) was used exclusively for language editing to improve grammar, wording, and readability. All scientific content, analyses, interpretations, and conclusions were developed and verified by the authors, who take full responsibility for the manuscript.

Abbreviations: AI – Artificial Intelligence; API – Application Programming Interface; BI – Business Intelligence; COVID-19 – Coronavirus Disease 2019; CSV – Comma-Separated Values; HR – Human Resources; HTML – HyperText Markup Language; ICT – Information and Communication Technology; IT – Information Technology; LGBTQ+ – Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, and other identities; Mbps – Megabits per second; OLS – Ordinary Least Squares; PEST – Political, Economic, Social, and Technological; UNWTO – United Nations World Tourism Organization; UX – User Experience.

REFERENCES

- Baranyi, P., & Csapo, A. (2010). Cognitive infocommunications: cogincom. *2010 11th International Symposium on Computational Intelligence and Informatics (CINTI)*, 141-146. <https://doi.org/10.1109/CINTI.2010.5672257>
- Başaran, A. (2025). Digital Nomads, the New Frontier of Work in the Digital Age: A Bibliometric Analysis. *Sustainability*, 17(5). <https://doi.org/10.3390/su17051906>
- Cadle, J., Paul, D., & Turner, P. (2010). *Business analysis techniques: 72 essential tools for success*, BCS, The Chartered Institute, Swindon, UK.
- Chen, K. (2025). 68 countries with digital nomad visas and how to apply to the top programs. Condé Nast Traveler.
- Cohen, S., & Hannonen, O. (2026). A review of research into lifestyle mobilities and digital nomadism. *Annals of Tourism Research*, 116, 104067. <https://doi.org/10.1016/j.annals.2025.104067>
- Cook, D. (2023). What is a digital nomad? Definition and taxonomy in the era of mainstream remote work. *World Leisure Journal*, 65(2), 256-275. <https://doi.org/10.1080/16078055.2023.2190608>
- Conway, D., & Timms, B. F. (2012). Are slow travel and slow tourism misfits, compadres or different genres?. *Tourism recreation research*, 37(1), 71-76.
- de Loryn, B. (2021). Not necessarily a place: How mobile transnational online workers (digital nomads) construct and experience 'home'. *Global Networks*, 22(1), 103-118. <https://doi.org/10.1111/glob.12333>
- Dreher, N., & Triandafyllidou, A. (2025). Understanding digital nomadism: A three-level framework for migration studies. *Journal of Ethnic and Migration Studies*, 51(19), 4801-4820. <https://doi.org/10.1080/1369183X.2025.2517353>

- Few, S. (2012). *Show Me the Numbers: Designing Tables and Graphs to Enlighten*, Analytics Press, Burlingame, USA.
- Gupta, S., Jaiswal, R., & Gupta, S. K. (2024). Digital nomads: A systematic literature review and future research agenda. *Tourism Review*, 81(1), 396–414. <https://doi.org/10.1108/TR-12-2023-0869>
- Internet Archive. (n.d.). Wayback Machine. Available online: <https://archive.org/web> (accessed November 21, 2025).
- Ivancsóné Horváth, Zs., Kupi, M., & Kundi, V. (2025). Digitalization and tourism: How X, Y, and Z generations make travel decisions in the online era. *GeoJournal of Tourism and Geosites*, 60(2spl), 1302–1314. <https://doi.org/10.30892/gtg.602spl26-1502>
- Kirk, A. (2016). *Data Visualisation: A Handbook for Data Driven Design*, SAGE Publications, London, UK.
- Kiss, E., Zichar, M., Fazekas, I., Karancsi, G., & Balla, D. (2020). Categorization and geovisualization of climate change strategies using an open-access WebGIS tool. *Infocommunications Journal*, 12(1), 32–37. <http://doi.org/10.36244/ICJ.2020.1.5>
- Kozak, M., Cetin, G., & Alrawadie, Z. (2024). Repositioning Work and Leisure: Digital Nomads Versus Tourists. *International Journal of Tourism Research*, 26(4), e2732. <https://doi.org/10.1002/jtr.2732>
- Krivtsova, E. V., Martynova, T. N., & Valko, O. V. (2019). Social risks and human values in context of digital nomadism. In *International Conference Communicative Strategies of Information Society (CSIS 2018)* 389–395. Atlantis Press, Dordrecht. <https://doi.org/10.2991/csis-18.2019.79>
- Lacárcel, F. J. S., Huete, R., & Zerva, K. (2024). Decoding digital nomad destination decisions through user-generated content. *Technological Forecasting and Social Change*, 200, 123098. <https://doi.org/10.1016/j.techfore.2023.123098>
- Lin, P. A., Heimtun, B., & Morgan, N. (2024). Digital nomadism, gender and racial power relations. *Annals of Tourism Research*, 106, 103770.
- Makimoto, T., & Manners, D. (1997). Digital nomad. John Wiley & Sons, Chichester, United Kingdom.
- MBO Partners. (2022). 2022 Digital Nomads Report. Available online: <https://www.mbopartners.com/state-of-independence/digital-nomads-2022-report> (accessed November 21, 2025).
- Murray, D. (2016). *Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software*, Wiley, Indianapolis, USA.
- NomadList. (2021). graph.json [Web archival copy]. Available online: <https://web.archive.org/web/20210928084307/https://nomadlist.com/graph.json> (accessed November 21, 2025).
- NomadList. (2024). graph.json [Web archival copy]. Available online: <https://web.archive.org/web/20240621165641/https://nomadlist.com/graph.json> (accessed November 21, 2025).
- Nomads.com. (n.d.). Nomads. Available online: <https://www.nomads.com> (accessed November 21, 2025).
- Pandas Development Team. (2023). pandas [Computer software]. Available online: <https://pandas.pydata.org/> (accessed November 21, 2025).
- Pfening, Á. (2023). Digitális nomádok-napiaink divatos kifejezése vagy a holnap utazói? [Digital nomads - today's fashionable expression or tomorrow's travelers?]. *Turizmus Bulletin*, 23(3), 15–25. <https://doi.org/10.14267/TURBULL.2023v23n3.2>
- Poulaki, I., Vlassi, E., Mavragani, E., Chatzimichali, E., & Papatheodorou, A. (2025). Destination Buzzers: Netnographing Digital Nomads. *Tourism and Hospitality*, 6(2). <https://doi.org/10.3390/tourhosp6020081>
- Python Software Foundation. (2024). Python (Version 3.13) [Computer software]. Available online: <https://www.python.org/downloads/release/python-3130/> (accessed November 21, 2025).
- Reitz, K. (2025). Requests: HTTP for Humans. Available online: <https://docs.python-requests.org> (accessed November 21, 2025).
- Rainoldi, M., Ladkin, A., & Buhalis, D. (2025). Digital nomads' work-leisure management practices. *Annals of Tourism Research*, 111, 103904. <https://doi.org/10.1016/j.annals.2025.103904>
- Richardson, L. (2025). Beautiful Soup Documentation. Available online: <https://www.crummy.com/software/BeautifulSoup> (accessed November 21, 2025).
- Šaffková, I., Matusíková, D., & Vargová, T.D. (2025). Digital nomadism aspects at the current tourism market of Slovakia. *GeoJournal of Tourism and Geosites*, 61(3), 1814–1821. <https://doi.org/10.30892/gtg.61340-1550>
- Schlagwein, D. (2018). The history of digital nomadism. In *International workshop on the changing nature of work (CNOW)* 22, 1.
- Sciuba, E. (2025). Geographies of Digital Nomadism: A Research Agenda. *Geography Compass*, 19(2), e70016. <https://doi.org/10.1111/gec3.70016>
- Seabold, S., & Perktold, J. (2010) Statsmodels: Econometric and Modeling with Python., *SciPy*, 2010, 57–61. <https://doi.org/10.25080/Majors-92bf1922-011>
- Seabold, S., & Perktold, J. (2024). statsmodels: Econometric and statistical modeling with Python [Computer software]. Available online: <https://www.statsmodels.org/> (accessed November 21, 2025).
- Sequera, J. (2025). Struggling With The Digital Nomad: Transnational teleworkers as the new 'creative class' in the urban marketplace? *International Journal of Urban and Regional Research*, 49(1), 204–213. <https://doi.org/10.1111/1468-2427.13293>
- Spearman, C. (1904). The proof and measurement of association between two things. *The American Journal of Psychology*, 15(1), 72–101. <https://doi.org/10.2307/1412159>
- Toivanen, M. (2026). The Freedom Paradox: Meanings and Configurations of Digital Nomadic Work. *International Migration Review*, 60(1), 22–45. <https://doi.org/10.1177/01979183251314848>
- Verma, M. (2023). The future of work for digital nomads: the benefits and risks of automation. *IJSART*, 9(4), 339–343.
- Woldoff, R. A., Woldoff, R., & Litchfield, R. C. (2021). *Digital nomads: In search of freedom, community, and meaningful work in the new economy*, Oxford University Press, New York, USA.
- World Tourism Organization (UNWTO). (2023). UNWTO Brief: Digital Nomad Visas. Madrid, Spain.
- Yau, N. (2013). *Data Points: Visualization That Means Something*, Wiley, Indianapolis, USA.
- Zaban, H., & Unger, O. (2025). Crisis, Privilege, and Lifestyle Migration: Mobility in Times of Uncertainty. *Population, Space and Place*, 31(8), e70136. <https://doi.org/10.1002/psp.70136>
- Zhou, L., Buhalis, D., Fan, D. X. F., Ladkin, A., & Lian, X. (2024). Attracting digital nomads: Smart destination strategies, innovation and competitiveness. *Journal of Destination Marketing & Management*, 31, 100850. <https://doi.org/10.1016/j.jdmm.2023.100850>