

- Personalized Experiences, Enhanced Operations, and Revenue Growth. Emerald Publishing, s. 29-44. DOI: <https://doi.org/10.1108/978-1-83608-796-020251002>
- Sharma, R., Suwar, O., Nipane, P., Rathod, G., Sayyed, S. (2025). Destinai: An AI-powered personalized travel planning system. In *Learning and Analytics in Intelligent Systems*, Springer, vol. 56, s. 103-113. DOI: https://doi.org/10.1007/978-3-032-05373-2_11
- Shi, S., Gong, Y., Gursoy, D. (2021). Antecedents of trust and adoption intention toward artificially intelligent recommendation systems in travel planning: A heuristic-systematic model. *Journal of Travel Research* 60(8), s. 1714-1734.
- Sousa, A. E., Cardoso, P., Dias, F. (2024). The use of artificial intelligence systems in tourism and hospitality: The tourists' perspective. *Administrative Sciences* 14(8), 165. DOI: <https://doi.org/10.3390/admsci14080165>
- Sułkowski, Ł., Lenart-Gansiniec, R. (2023). *Metody badań mieszanych w naukach o zarządzaniu*. Dąbrowa Górnicza: Wydawnictwo Naukowe Akademii WSB.
- Wang, S., Wang, Q., Cui, Q., Lan, T. (2025). Artificial intelligence in tourism: A systematic literature review and future research agenda. *Sustainability* 17(20), 9080. DOI: <https://doi.org/10.3390/su17209080>
- Wang, W., Iahad, N. A., Al-Sharafi, M. A. (2025). Artificial intelligence implementation in the tourism industry: A literature review. In *Studies in Computational Intelligence*. Springer, vol. 1178, s. 149-166. DOI: https://doi.org/10.1007/978-3-031-75091-5_9
- Wong, I. A., Lian, Q. L., Sun, D. (2023). Autonomous travel decision-making: An early glimpse into ChatGPT and generative AI. *Journal of Hospitality and Tourism Management*, 56, s. 253-263.
- Xiaohang, M., Zhanyong, W., Ling, H. (2025). Deep reinforcement learning for personalized route planning in agricultural tourism: A DDPG and genetic algorithm approach. *Informatica (Slovenia)* 49(28), s. 91-104. DOI: <https://doi.org/10.31449/inf.v49i28.6865>
- Zantalis, F., Koulouras, G., Karabetsos, S., Kandris, D. (2019). A review of machine learning and IoT in smart transportation. *Future Internet* 11(4), 94.
- Zhang, L.-Y., Tseng, M.-L., Wang, C.-H., Xiao, C., Fei, T. (2019). Low-carbon cold chain logistics using ribonucleic acid-ant colony optimization algorithm. *Journal of Cleaner Production*, 233, s. 169-180.
- Zhang, W., Yu, Y., Qi, Y., Shu, F., Wang, Y. (2019). Short-term traffic flow prediction based on spatio-temporal analysis and CNN deep learning. *Transportmetrica A: Transport Science* 15(2), s. 1688-1711.

The use of Artificial Intelligence in planning tourist travel – results of a bibliometric analysis

Abstract. The article presents a bibliometric analysis of scientific publications on the application of artificial intelligence (AI) in travel planning. The study is based on Scopus data covering 961 publications from 2010 to 2025. Results show a significant increase in research activity after 2018, particularly in Asian countries such as China and India. The most common research areas include smart tourism, recommendation systems, urban smart mobility, and route optimization using AI algorithms. Keyword analysis revealed nine thematic clusters, highlighting the interdisciplinary nature of this research field. Artificial intelligence plays an increasingly important role in personalizing travel experiences, predicting tourist behavior, and supporting sustainable transport and logistics systems.

Keywords: artificial intelligence, travel planning, smart tourism, recommendation systems, bibliometric analysis, urban mobility

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Trends and characteristics of campervan tourism in Poland

Abstract. The research examines the emergence of campervan tourism as a new trend in Poland's tourism sector. The objective of this study was to describe the specific features of campervan tourism in Poland and to discuss the factors that have driven its growth. The paper also analyses the current state of the campervan market in Poland, including an analysis of the sale of such vehicles. The study employed methods of observation, data analysis and diagnostic survey using a questionnaire. The findings of the survey helped to define the profile of campervan travellers who turned out to be mainly middle-aged residents of cities belonging to the middle class. Respondents travel in a camper van all year round, most likely in warm months before and after summer vacation season. The most significant factor influencing the decision to travel in a campervan was the desire for autonomy and independence and visiting natural sites and active recreation were the main purposes of motorhome trips.

Keywords: tourism, campervan, traveling, caravanning

Introduction

Until recently, campervan (motorhome) travel was not as prevalent in Poland as other forms of tourism. In the past, tourists typically opted for hotels, guest houses, or holiday resorts as their preferred accommodation. However, in recent years, with the COVID-19 pandemic as one of the reasons, there has been a notable shift in preferences, with an increasing interest in campervan tourism as it allowed to travel independently and to avoid large gatherings of other tourists. This growing trend has led to the development of market and infrastructure tailored to the specific needs of campervan tourists. The authors wish to highlight the potential contribution of this work to expanding knowledge about campervan travel, which may encourage individuals to try this form of travel.

The subject of this study is the growing trend of campervan travel in the context of tourism. The paper examines the concept of campervan tourism and the conditions that shape it, as well as the current trends in the campervan market in Poland. The principal objective of this study is to demonstrate the distinctive characteristics and trends in campervan tourism in Poland as a novel phenomenon in the field of travel.

The following specific objectives were set, namely: to assess changes in the popularity of campervan tourism in Poland, to identify the preferred way, length and purpose of campervan travelling and to examine the factors that make tourists choose this form of travel.

Literature review

Caravanning is a form of active motor tourism, for which motorhomes and caravans serve as accommodation and catering facilities (Biesok and Wyród-Wróbel, 2013). Therefore, motorhome (campervan) tourism can be defined as part of caravanning tourism in which motorhomes are used as a means of transport and accommodation. This type of tourism has emerged as a significant segment within the broader tourism industry, attracting a diverse and growing audience seeking mobility, autonomy, and immersive travel experiences. Scholars have identified key motivational factors for campervan tourists, including the desire for freedom, flexibility, and closeness to nature, allowing travellers to bypass conventional tourist infrastructures and tailor itineraries to their preferences (Sari, 2022; Muhs, Agapito and Pereira, 2024). The appeal of slow travel and community interaction among campervan users further enrich these experiences, fostering social connections and unique vacation memories (Wilson and Hannam, 2017; Bilim and Özer, 2021).

Sustainability is a recurring theme in recent research, highlighting both opportunities and challenges. The push for environmentally friendly campervans, such as electric or hybrid models, reflects an industry-wide commitment to reducing ecological footprints (Calidcott, 2022). Nevertheless, campervan tourism can strain environments through increased congestion and waste, prompting regulatory responses in various countries to mitigate negative impacts and preserve local ecosystems and community well-being (Bilim and Özer, 2021; Euronews, 2024).

Market analysis reveals sharp growth in campervan tourism, influenced by shifting traveller demographics, notably the advent of younger vanlife enthusiasts who prioritize experiential travel and seek social distancing benefits following the COVID-19 pandemic (Sari, 2022; Tyagi, 2025). Innovations in vehicle design—offering compactness and off-road capabilities—expand the market appeal further, supporting a diversity of camper types from commercial caravan park users to freedom campers opting for less structured travel (Calidcott, 2022).

Also in Poland, campervan tourism is developing at a rapid pace, attracting an increasing number of travellers. Poland boasts a rich natural, cultural and historical heritage, which renders it an optimal destination for those who engage in camping. Such a mode of travel allows for the exploration of diverse landscapes, including majestic mountains, picturesque lakes, and sandy Baltic coasts. Furthermore, the combination of campervan tourism with other forms of travel can result in the creation of a diverse travel experience.

For some, camper tourism represents not merely a form of travel, but a way of life in itself. In Poland, there are numerous groups and associations of individuals with a shared interest in campervan tourism. Such organisations help coordinate and host

meetings, events and rallies, during which participants share their experiences and tips on camper tourism both in Poland and abroad, and have the opportunity to spend time with like-minded individuals (Hucko-Biernat, 2021).

One of the principal advantages of campervan tourism is the ability to undertake such travel throughout the year, irrespective of meteorological conditions. Some travellers also embark on journeys during the winter months, though this necessitates a greater degree of preparation than is required during the summer. This presents a number of challenges, including the necessity to prepare both the travellers and the vehicle for a variety of weather conditions, as well as to ensure that the campervan is properly equipped and insulated. The most significant challenge associated with travelling in a campervan during the winter months is the potential for water to freeze at low temperatures, which could lead to damage to the water tank (Kennedy, 2024). Additionally, Poland has a relatively limited number of year-round camping sites compared to the other European countries.

Campervan tourism is a form of travel that is well-suited to the needs of older individuals. Consequently, the ageing population may be particularly inclined to engage in this mode of travel (Pearce and Wu, 2017). Frequently, selecting a campervan as a mode of transportation enables older individuals to circumvent potential complications that might arise from air travel. Furthermore, campervan tourism provides a degree of autonomy that facilitates travel for the elderly or those with health issues. The independence afforded by travelling in a campervan enables older people to tailor their trip to their specific needs. These factors are interrelated and have influenced the development of campervan tourism, which has emerged as a novel trend in the tourism industry allowing to achieve an optimal leisure lifestyle (Wilson and Obrador, 2021; Rodrigues and Marques, 2025). The distinctive characteristics of campervan tourism render it highly appealing, transforming it from merely a mode of transportation into a sought-after leisure activity among an expanding number of tourists.

The review of literature on camping tourism highlights that while the sector is experiencing global growth and diversification – especially with innovations like glamping and changes in accommodation preferences – it remains relatively under-researched compared to other forms of tourism, with significant gaps in both geographical and thematic coverage, particularly in the global South and regarding supply-side dynamics and management innovations (Rogerson and Rogerson, 2020). Therefore, the authors have taken up this topic in order to partially fill the existing gap in knowledge, taking Poland as an example.

Methods

In the study several methods were used: authors' observations of the campervan travel market, literature review with the help of Perplexity AI (2025), data analysis and diagnostic survey. Empirical research was conducted in spring 2024 with the use of online questionnaire technique. A survey questionnaire comprising 27 questions disseminated via social media and instant messengers was employed in this study. The use of these tools was conditioned by the fact that they enable reaching a large

number of people. Due to the purpose of the research, a link to the questionnaire was posted on several thematic groups on Facebook that brought together camping tourism enthusiasts. In addition, the questionnaire was distributed via the social networking site Instagram and Messenger.

Subsequently, Microsoft Excel was employed to create charts, as well as tables displaying the collated data. The data were then subjected to interpretation and conclusions formulated based on them, indicating potential reasons for the observed results. To detect monotonic trends in time series data concerning the registrations of campervans in Poland the Mann-Kendall test was used. Throughout the paper, the terms camper, campervan and motorhome will be used interchangeably as synonyms.

Characteristics of the study group

The study population comprised 167 respondents, of whom 113 were male, 53 were female, and one individual did not declare their gender. The predominant cohort in the survey was those within the 41-55 age range, representing 65% of the total respondents. Conversely, the smallest cohort of respondents was comprised of individuals under the age of 25, representing only 4% of the total sample. This is likely attributable to the fact that individuals in the middle age range are more likely to utilize caravanning forums, where the survey questionnaire was posted. Another characteristics of the surveyed population is the place of residence. The most numerous groups of respondents were people living in cities with more than 500 000 inhabitants who accounted for 29% of the respondents and in small cities with up to 50 000 inhabitants – 28%. The fewest people live in rural areas, with only 9% of survey participants. The survey showed that the vast majority, 81%, of the respondents were married. The majority, 66%, of the respondents have an income above PLN 4 000 net per family member. They belong to the middle-income class, which probably allows them to travel in a camper van, rent or buy a vehicle and maintain it.

Results and discussion

Recent trends in campervan vehicles market in Poland

In the year 2018, the number of new motorhomes registered reached 518, representing an increase of over 50% in comparison to the preceding year. In the following years, the upward trend continued, with the number of registrations reaching 2191 units in 2021, which was double the number of registrations compared to 2020 (Motorhome.pl, 2025). The data indicate that the motorhome sales market was undergoing a period of transition, with 2022 exhibiting a decline of over 20% compared to 2021, resulting in a total of 1746 newly registered motorhomes. The downward trend persisted until 2023, when only 1408 new campers were sold, while in 2024 there was a small rise with 1740 registrations (Fig. 1). The results of the Mann-Kendall test for new motorhomes registered indicated no trend although it was close to the statistical significance threshold (p -value = 0.057). However, the test result for data concerning the registration of used imported motorhomes indicated a statistically significant upward trend

in the analysed time series. A comparison of the number of new campervan registrations in Poland and used (first registered abroad at least one year prior to their registration in Poland) campervan imports between 2018 and 2024 reveals that used campervans are imported with significantly greater frequency than new ones are purchased. Imports of new campervans from abroad are negligible with the highest number of 152 in 2021.

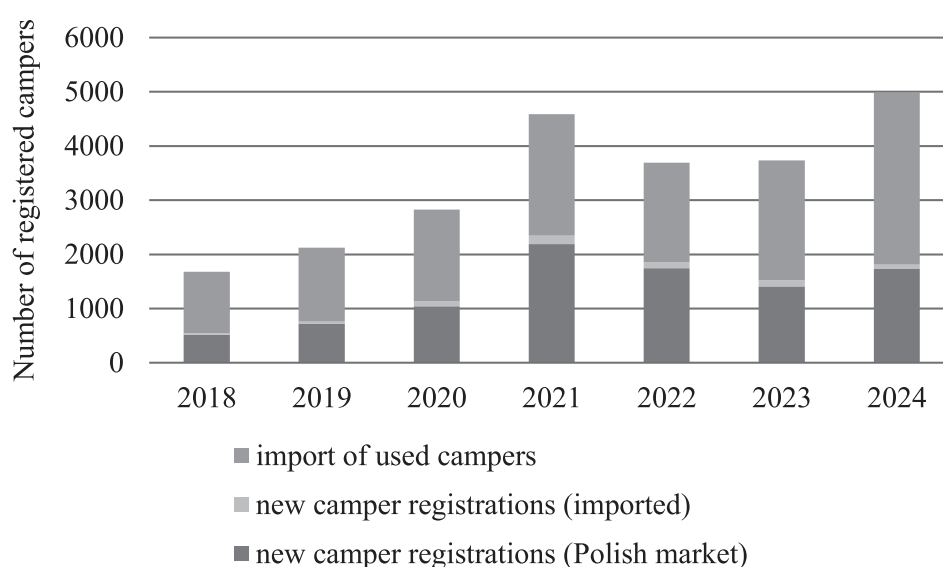


Figure 1. Registrations of new and imported campervans in Poland (2018-2024)

Source: own elaboration based data from Central Vehicle and Driver Register published by motorhome.pl (2025).

Campervan tourism – survey results

The objective of the survey was to identify the characteristics and motivations associated with campervan travel. Most respondents choose to travel as a group – usually in 2 people (62%) or even in 3-4 people (34%), which may indicate that these are parents/ grandparents who take children, grandchildren or other family members with them. Only 1% of survey participants travel alone. These results align with one of the few studies on campervan tourism by Mundet, Grijalvo and Marin (2024).

The research findings (Fig. 2) indicate that the majority of respondents engage in campervan trips of more than 14 days (31%) or – on the contrary – for 2-3 days only (27%). This is likely associated with the intended purpose of their trip, which is to engage in either a short-term or long-term holiday. Campervan tourism provides the opportunity to undertake both long-term expeditions to remote locations and shorter trips, for example, over the weekend. Respondents were also asked to state whether they preferred to travel in Poland or abroad. The vast majority, 76%, travel both abroad and in Poland. Camper tourism, through the freedom to travel, offers a variety of opportunities to discover new places, experience different cultures and landscapes, as well as the flexibility and comfort of travelling at one's own pace, so tourists can afford to go to different places around the world.

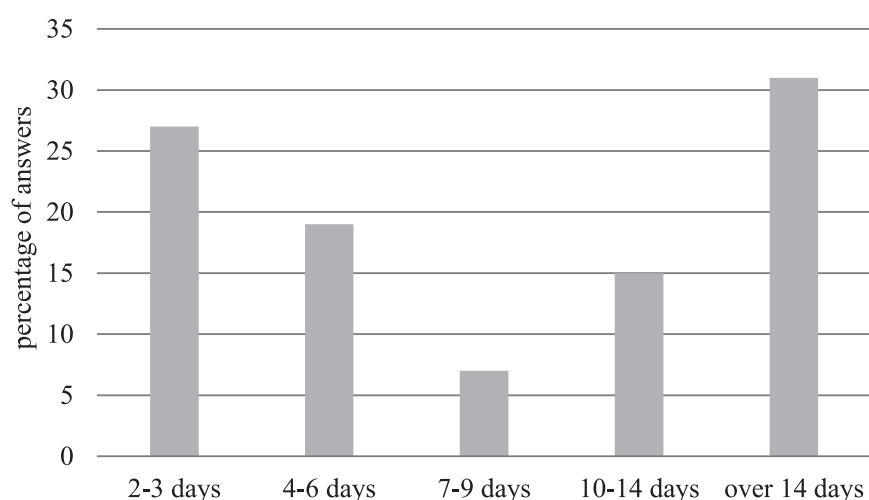


Figure 2. Preferred duration of campervan trip

Source: own elaboration based on survey results.

The respondents typically utilise camper vans for travel during the summer season (Fig. 3). One might assume that respondents would select July and August as their preferred travel months. However, these months coincide with the highest levels of congestion at camping sites, rest areas, and tourist attractions and are characterised by elevated prices for caravan hire, camping fees, etc. Consequently, many travellers opt for June (the most preferred month), or September (second most preferred) or May (closely following), instead. Such choice increases the probability of securing campervan hire and suitable locations for the parking of the camper van. However, the

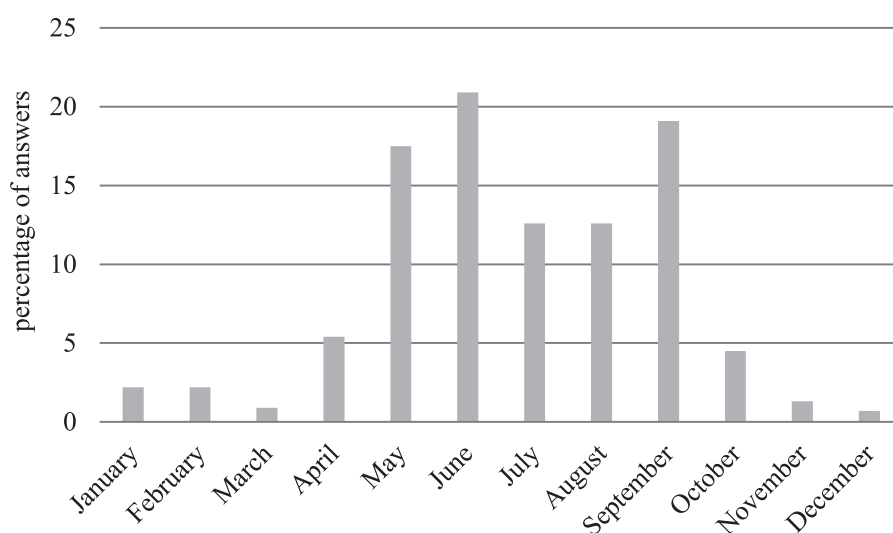


Figure 3. Preferred month of campervan trips

Source: own elaboration based on survey results.

survey findings indicate that respondents utilise campervans at different times of the year. Some travellers also embark on trips during winter, but this necessitates more meticulous preparation than during the summer months.

In order to explore the main reasons for choosing to travel in a camper van instead of a traditional mode of travel, respondents were asked to identify up to three of the most important determinants of this decision (Fig. 4). The most important reason appeared to be having freedom and independence, with 37% of respondents selecting this answer as the main dependency influencing their decision to travel in a campervan. In second place was the ease of changing the itinerary (33%), which is related to flexibility when travelling in a campervan. The lowest importance was given to pandemic safety (2%) and environmental considerations (1%). Thus, the results show that flexibility and comfort in travel are most important to respondents, which is why they choose campervan tourism over traditional travel.

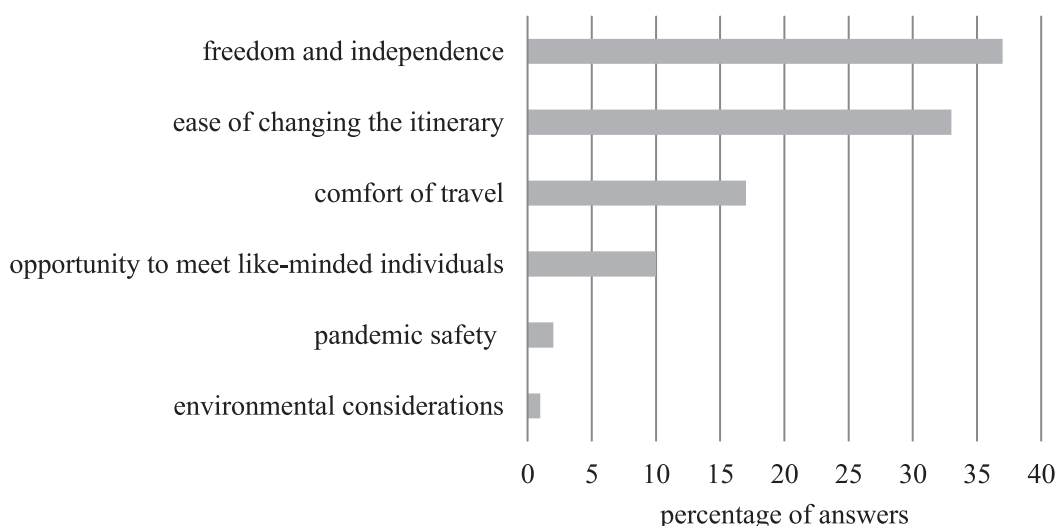


Figure 4. Determinants of choosing campervan travel over traditional travel arrangements

Source: own elaboration based on survey results.

The question about the main form of spending time while travelling in a campervan showed (Fig. 5) that the majority of people choose to visit natural sites (28%) and active recreation such as cycling (26%). Respondents were able to indicate two answers, and still the least frequently chosen was spending time with friends (9%). Some respondents also spend time visiting cultural sites or on leisure relaxing on the beach, for example. Thanks to the independence offered by campervan travel, tourists can spend time according to their preferences.

In order to clarify respondents' preferences for campervan travel destinations, they were asked, through an open-ended question, to indicate the countries they prefer to visit. The Balkan countries, in particular Greece and Croatia, appeared most frequently in the responses. In addition, the most repeated responses were Italy,

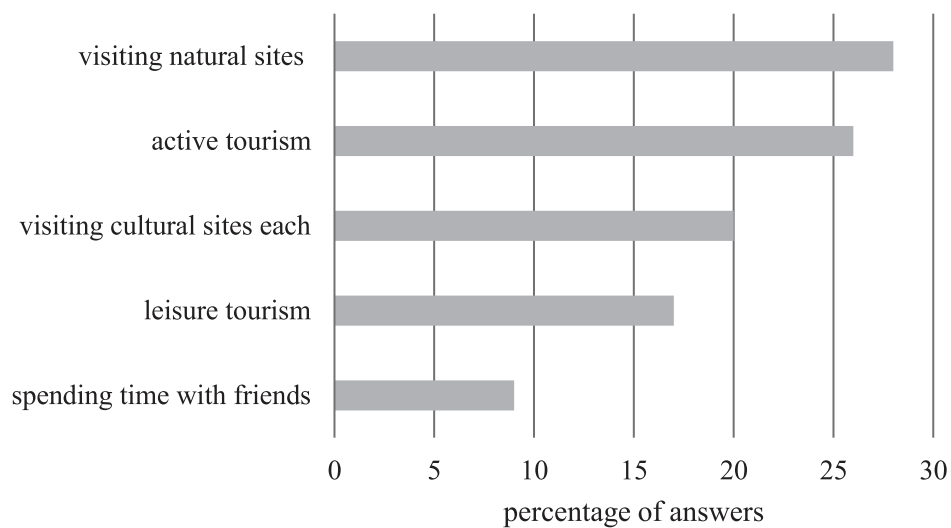


Figure 5. Main forms of spending time while travelling in a camper

Source: own elaboration based on survey results.

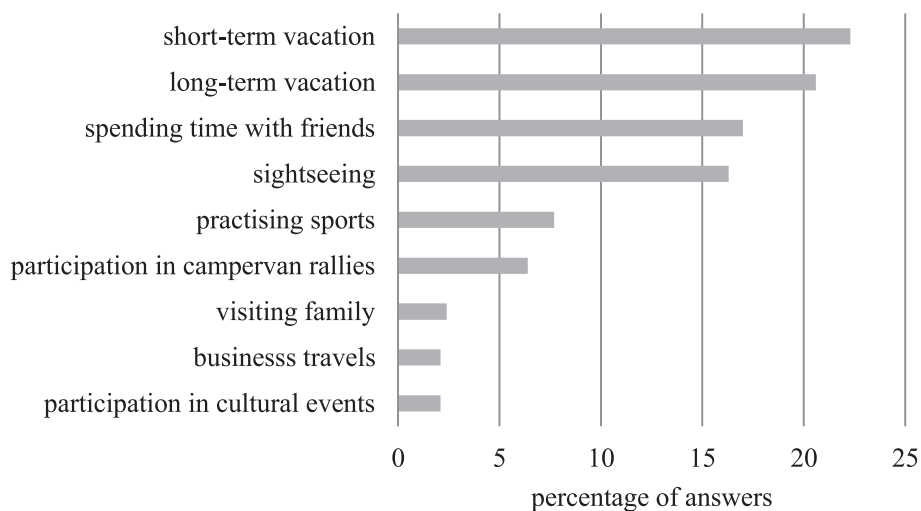


Figure 6. Main purposes of campervan travels

Source: own elaboration based on survey results.

Spain, Hungary and the Scandinavian countries, mainly Norway. The choice of the Balkan countries as a preferred destination for campervan travel may be due to the fact that, compared to Western Europe, many Balkan countries offer a lower cost of living, which translates into cheaper accommodation, food and fuel. In addition, they are relatively close to Poland and have a warm climate, which is attractive to travellers, especially during the summer months (Petrevska, 2022).

Conclusions

The phenomenon of campervan tourism is emerging as a novel trend within the broader field of tourism. The results of the data analyses and surveys conducted among campervan travellers permitted the following conclusions to be drawn:

The popularity of campervan tourism in Poland measured by campervan vehicles market shows an increase of new campervan sales in the years 2018-2021 with a period of transition (2022-2023) followed by a renewed growth in 2024. The number of used imported motorhomes was also increasing, which was confirmed by the Mann-Kendall test indicating a statistically significant upward trend in the analysed time series.

Visiting natural sites and active recreation are the most preferred activities when travelling in a camper van. Respondents indicated spending a short-term or long-term holiday as the main purpose of travelling in a camper van.

The survey shows that respondents travel in a camper van all year round, most likely in warm months before and after summer vacation season to avoid the holiday peak.

The respondents indicated that the most significant factor influencing their decision to travel in a campervan rather than a conventional mode of transportation was the desire for autonomy and independence. A significant advantage of travelling in a camper van is the lack of restriction imposed by hotel reservations. The autonomy afforded by the camper van enables travellers to determine the course and pace of their journey independently.

The popularity of campervan tourism is growing, influenced by a number of factors. An increasing number of individuals are seeking the autonomy and adaptability that campervans provide in terms of travel. The growth in popularity of campervan tourism is also supported by the development of technology and social media, which play an important role in inspiring people to choose this mode of travel. In recent years, the global pandemic caused by the SARS-CoV-2 virus has had a significant impact on the growth of campervan tourism. This is because many people were seeking a safe mode of travel, and campervans became the optimal solution, allowing them to travel independently and avoid large concentrations of people.

Literature

- Biesok, G., Wyród-Wróbel, J. (2013). Czynniki satysfakcji na przykładzie turystyki karawaningowej. W: H. Howaniec, I. Szewczyk, W. Waszkielewicz (eds.). Information and marketing in activities of organization. Bielsko-Biała: Wydawnictwo Naukowe Akademii Techniczno-Humanistycznej w Bielsku-Białej, pp. 157-166.
- Bilim, Y., Özer, Ö. (2021). No “over”, yes “minimal”! Camp and caravan tourism. *Revista Anais Brasileiros de Estudos Turísticos* 11, pp. 1-13.
- Calidcott, R. W. (2022). The RV camping framework for understanding modern caravanning. *Journal of Outdoor Recreation and Tourism* 38, 100471.
- Euronews (2024). Denmark regulates camper van tourism after clashes with locals. Available online: <https://www.euronews.com/embed/2588678> (access: 22.09.2025).

- Hucko-Biernat, O. (2021) Subkultura karawaningu w Polsce – zarys problematyki. W: D. Antowska, W. Barcewicz (eds.). *Podróże liczone (nie tylko) w kilometrach. Dyskursy podróżnicze w naukach humanistycznych i społecznych*. Poznań: Wydawnictwo RYS, pp. 149-164.
- Kennedy, S. (2024). How to Prepare your Campervan & Motorhome for Winter Travel. Available online: <https://roamer.com/blogs/stories/winterised-campervan> (access: 10.10.2025).
- Motorhome.pl (2025). Rynek kamperów w Polsce. Available online: <https://www.motorhome.pl/rynek-kamperow-w-polsce/> (access: 17.06.2025).
- Muhs, C. S., Agapito, D. L. M., Pereira, L. N. (2024). Understanding Vanlife: the current state of the art of a vehicle-based hypermobile travel phenomenon. *Current Issues in Tourism* 27(15), pp. 2369-2391. DOI: <https://doi.org/10.1080/13683500.2024.2311148>
- Mundet, L., Grijalvo, M., Marin, J. (2024). Are Camper Travel Lovers the New Wave of Tourism? A Growing Trend for Destinations, *International Journal of Hospitality & Tourism Administration* 25(5), pp. 918-939. DOI: <https://doi.org/10.1080/15256480.2023.2175290>
- Pearce, P. L., Wu, M.-Y. (2017). A mobile narrative community: Communication among senior or recreational vehicle travellers. *Tourist Studies* 18(2), pp. 194-212. DOI: <https://doi.org/10.1177/1468797617723469> (Original work published 2018).
- Petrevska, B. (2022). Open Balkan initiative: Prospects for tourism development. *UTMS Journal of Economics*. Skopje: University of Tourism and Management 13(2), pp. 214-220.
- Perplexity AI. (2025). Perplexity [Large language model]. Available online: <https://www.perplexity.ai/> (access: 17.06.2025).
- Rodrigues, T. I., Marques, J. F. (2025). Motorhome and vanlife travel as serious leisure: a positive sociology approach. *Leisure Studies*, pp. 1-16. DOI: <https://doi.org/10.1080/02614367.2025.2481561>
- Rogerson, C. M., Rogerson, J. M. (2020). Camping tourism: a review of recent international scholarship. *GeoJournal of Tourism and Geosites* 28(1), pp. 349-359. DOI: <https://doi.org/10.30892/gtg.28127-474>
- Sari, R. J. (2022). Trends of nomadic tourism using campervan as a tourism attraction for millennials to travel in Bali. *Tourism Research Journal* 6(2), pp. 248-258.
- Tyagi, A. (2025). 2025 sees surge in caravan and motorhome popularity amid travel trends. LinkedIn Articles. Available online: <https://www.linkedin.com/pulse/2025-sees-surge-caravan-motorhome-popularity-amid-travel-akash-tyagi-zdyjc> (access: 22.06.2025).
- Wilson, S., Obrador, P. (2021). Dwelling in campervans: homemaking and mobile neighbouring on the move. *Mobilities* 17(1), p. 102-118. DOI: <https://doi.org/10.1080/17450101.2021.1967095>
- Wilson, S., Hannam, K. (2017). The frictions of slow tourism mobilities: Conceptualising camper-van travel. *Annals of Tourism Research* 67, pp. 25-36. DOI: <https://doi.org/10.1016/j.annals.2017.07.021>