invtur2024 conference

Proceedings of the INVTUR Conference 2024
8-10 May 2024, University of Aveiro, Portugal

Pages
651 – 654

The ageing effect on European tourism demand: a short/medium term impacts scenarios

JAIME MANUEL SERRA[1], **FILIPE RIBEIRO**[1] **& LÍDIA PATRÍCIA TOMÉ**[1]

[1]Universidade de Évora - CIDEHUS

Contacting author: jserra@uevora.pt

Keywords | Tourism demand, Demographic determinants, Age-period-cohort theory, Cohort-component projections, CHAID

Objectives | This paper reflects about the impacts on short/medium term of aging effect on European tourism demand and provides a contribution to a recent McKercher (2023) call for adopting a more critical lens when examining differences among generations. Population aging challenges and constraints have been discussed mainly due to their impacts at the political, social, cultural and economic level. As reported by European Commission [EC] (2023), "ageing of the population is a long-term trend, which began several decades ago in Europe" (p.10). As underlined by EC on 1 January 2021, those aged 65+ represented 20.8% of the EU population but expected to attain 30,6% in 2050. Countries as Portugal, Spain and Italy are expected to present higher values than the European average. Nevertheless, the aging impact is not only registered in South Europe, and most relevant international tourism markets to Portugal, such as France will face this effect (European Commission, 2023). Considering recent research gaps on these aging effects on tourism, it is important to:

- relate the population structure of the most important European tourism markets in Portugal;
- suggest tourism demand scenarios supported by demographic projections;
- explore the attitudes of European tourists to go on holidays based on the Age-period-cohort theory.

Methodology | Data and materials adopted for the present study, were based on population data and death counts taken from the Human Mortality Database (http://www.motality.org) to develop demographic projections. We focus on the most representative European countries concerning tourism demand for Portugal (2021): United Kingdom, Spain, Germany, France, Netherlands, Italy, Ireland and Belgium (contextual setting – exploratory). For the analysis of attitudes of European tourists to go on holidays, we used EUROBAROMETER reports and database on "Attitudes of Europeans towards Tourism, Autumn" draw up in 2021. Concerning the methods, a first stage of data analysis was based on a Cohort-component population projection approach. In demography, this approach is the most consensual method for population projections

worldwide (Rowland, 2003; Preston, Heuveline & Guillot, 2001), here combined with a probabilistic component to the with the inclusion of a coherent functional procedure. This procedure ensures that constructed forecasts for populations maintain certain structural relationships based on extensive historic observation (Hyndman, Booth & Yasmeen, 2013). For the second stage of data analysis and considering this study as exploratory-based research, the Chi-squared Automatic Interaction Detection (CHAID) was applied to model attitudes of European tourists, based on socio-demographic factors and travel attitudes. With the support of CHAID, it was possible to find a classification of the population into groups that was suitable for the description of the dependent variable, i.e., the age groups. Kass (1980) introduced this exploratory statistical method and few years later, some researchers (e.g., Kim et al., 2011) called it decision tree analysis. The authors maintain that this method has been rarely adopted in the tourism market research context (Díaz-Pérez, García-Gonzéles & Fyall, 2020). The fact that it does not require the use of parametric tests for predictor variables is a very distinguish advantage. CHAID has at its base a criterion variable with two or more categories. Tourism literature is limited in the adoption of age groups as a dependent variable with CHAID analysis.

Results and contributions | Concerning the demographic development of the main countries under study, we realize that at the same time as life expectancy at birth increases with time, the average number of children per woman was going in the opposite direction. Nowadays, all countries presented are under the minimum level necessary to replace generations (2.1 children per woman). Portugal, Spain and Germany were even recognized often in the literature as the countries which, in the last decades, had the lowest fertility levels in Europe (Tomé, 2015; Goldstein, Sobotka & Jasilioniene, 2009). By extrapolating past tendencies across all countries under study, we developed coherent population projections for 2031. Portugal was also considered here to evaluate the ageing tendency of the host country. Despite different population pyramid shapes across countries, the result of its historical evolutions across time and associated aging level, the tendency is to have larger tops and tiny bottoms, i.e., an extreme increase in those aged 65+ together with a declining population below age 20. Even in countries like France, where younger individuals tend to diminish at a slower pace, the aging process seems to be installed. Results provided by CHAID model evidenced that European tourists belonged to the aged groups of Baby Boomers (over 55 years old), are clearly very concerned with the existence of clear information on health and safety guidelines, low impact of their travel on destination and aware about the existence of sustainable tourism certifications at the chosen destinations. Results also highlight for changing pattern on the methods to organise travel, wherein Baby Boomers are more willing to use online platforms combining travel services. Results as an implication market segmentation and senior tourists' profiles, meeting the conclusions of Prayag et al. (2022) concerning the increasing of environmental conscious of this generations. In other hand, these

results add a critical lens concerning the analysis of differences between and among generations claimed by recent McKercher (2023) work.

Limitations| Limitations open new paths for further research, however the adoption of secondary data that was collected for other purposes, might cause few bias effects on the objectives of this research. These bias effects need to be analysed with more detail. For future research, our results suggest the need to conduct a separate analysis of the four different age-groups (Generations). Since most tourism demand studies are longitudinal studies, this study should adopt a cross-sectional analysis with cohort-age criteria to contribute to the growing literature on a demographic segmentation base analysis.

Conclusions | As a managerial contribution, this study underlined that the extreme aging observed across developed countries, tourism demand will certainly need an urgent re-adaptation of tourism offers to be able to keep competitiveness and sustainability.
As a theoretical contribution, an important avenue should be opened with this research, concerning the fact that the demographic projections combined with the tourists' behaviour seems to gain paramount importance to estimate trends in generational tourists' attitudes; results seems to add new insights to generational tourism studies, particularly to the age-related lifecycle holidays attitudes; at the same time results evidence also that boundaries among tourist generations might be less demarcated, and those destinations should meet the interest and be aware of travel attitudes of more elderly markets, suggesting an update of marketing programmes targeted at senior citizens, as suggested by Chen and Shoemaker (2014).

Acknowledgements | This research is funded with a grant from the FCT – National Funding Agency for Science, Research and Technology, under the project UIDB/HIS/00057/2020 & UIDP/HIS/00057/2020 – CIDEHUS/Universidade de Évora.

References

Chen, C. C., & Shoemaker, S. (2014). Age and cohort effects: The American senior tourism market. *Annals of Tourism Research, 48*, 58–75.

Días-Pérez, F. M., García-González, C. G., & Fyall, A. (2020). The use of CHAID algorithm for determining tourism segmentation: A purposeful outcome. *Heliyon, 6*(1), 1–11.

European Commission. (2023, October 19). Population projections at regional level. *Eurostat Statistics Explained.* https://ec.europa.eu/eurostat/statisticsexplained/index.php?title=Population_projections_at_regional_level#Projected_changes_in_regional_populations

European Commission. (2022). *Flash Eurobarometer 499 (Attitudes of Europeans towards tourism, autumn 2021).* GESIS, Cologne. https://doi.org/10.4232/1.13878

Goldstein, J. R., Sobotka, T., & Jasilioniene, A. (2009). The end of lowest-low fertility? *Population and Development Review, 35*(4), 663–700.

Hyndman, R. J., Booth, H., & Yasmeen, F. (2013). Coherent mortality forecasting: The product ratio method with functional time series models. *Demography, 50*(1), 261–283.

Kass, G. V. (1980). An exploratory technique for investigating large quantities of categorical data. *Applied Statistics, 29*(2), 119–127.

Kim, S. S., Timothy, D. J., & Hwang, J. (2011). Understanding Japanese tourists' shopping preferences using the decision tree analysis method. *Tourism Management, 32*(3), 544–554.

McKercher, B. (2023). Age or generation? Understanding behaviour differences. *Annals of Tourism Research, 103*, 1–11.

Prayag, G., Aquino, R., Hall, C. M., Chen, N., & Fieger, P. (2022). Is Gen Z really that different? Environmental attitudes, travel behaviours and sustainability practices of international tourists to Canterbury, New Zealand. *Journal of Sustainable Tourism*. https://doi.org/10.1080/09669582.2022.2131795

Preston, S. H., Heuveline, P., & Guillot, M. (2001). *Demography: Measuring and modeling population processes.* Oxford: Blackwell Publishing.

Rihova, I., Buhalis, D., Moital, M., & Gouthro, M.-B. (2015). Conceptualising customer-to-customer co-creation in socially dense tourism contexts. *International Journal of Tourism Research, 17*(4), 356–363. https://doi.org/10.1002/jtr.1993

Rowland, D. T. (2003). *Demographic methods and concepts.* Oxford: Oxford University Press.

Tomé, L. (2015). Why Portugal is not replacing generations? A period and cohort perspective in a comparative analysis with selected European countries [Doctoral dissertation, Universidade de Évora].