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**Shifts in travel behavior influenced by risk perception,
particularly in relation to the COVID-19 pandemic**

Theses of the doctoral dissertation

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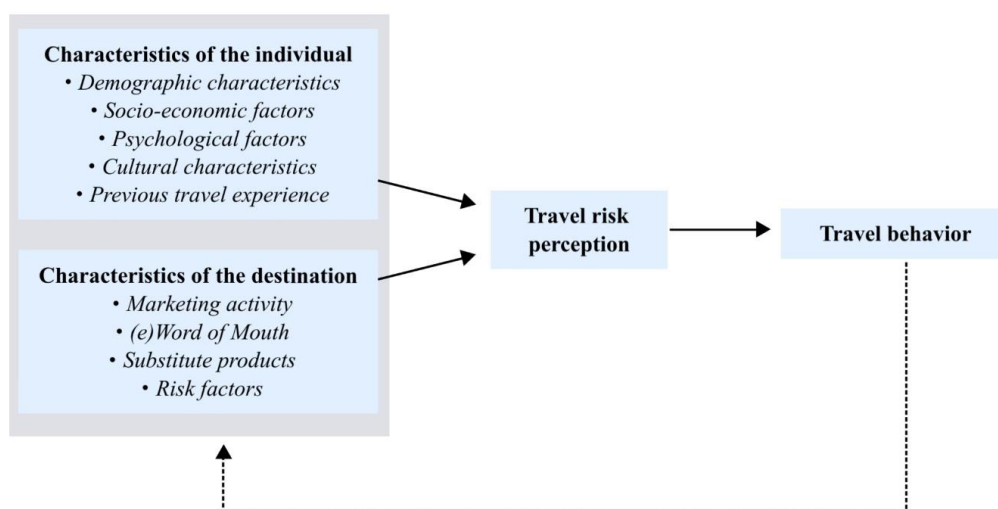
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1. The justification of the topic selection and the significance of the research

Tourism is one of the most dynamically growing sectors of the last decades, and in addition to its job-creating effect, it is also one of the most important drivers of economic growth (Csapó & Gonda, 2019). The crises that have occurred since 2008, including the COVID-19 pandemic, the Russian-Ukrainian conflict, and the energy crisis, have posed significant challenges to the tourism sector (Raffay, 2020; Cruz-Ruiz et al., 2022; Nagy et al., 2021; Kellér et al., 2022). Security is a precondition for the effective operation of tourism, which also strongly influences tourists' travel decisions (Dávid et al., 2007; Karl and Schmude, 2017; Garg, 2013; Isaac and Van den Bedem, 2020, Kiss & Michalkó, 2020). The successful functioning of this sector is not only the result of effective marketing communication but also the complex outcome of external and internal influences (Csapó & Töröcsik, 2019; Nundy et al., 2021; Cruz-Ruiz et al., 2022). Consumers show complex behaviors in response to different risks, influenced by personal and psychological characteristics, in addition to economic, natural, political, and social circumstances (Sönmez & Graefe, 1998, Lőrincz & Sulyok, 2017). Learning from historical crises becomes crucial, allowing more effective preparation for the next crisis. My dissertation aims to provide a comprehensive overview of past crises affecting the tourism sector and using an interdisciplinary approach integrating insights from psychology, sociology, anthropology, and economics. My objective was to develop a framework for studying changes in consumer behavior as a function of risk-taking. I started the research from the initial concept illustrated in Figure 1.

Figure 1: The initial concept of the research



Note. Self-edit.

2. Methodology overview

The aim of my secondary research is to use a systematic literature review methodology to identify past crises that have affected the tourism industry and classify their impact on consumer behavior in tourism, taking into account demographic, socio-economic and psychological characteristics. Given the complexity of consumer behavior, an interdisciplinary approach is essential. Therefore, in addition to economics, my dissertation also examines the work of disciplines such as psychology, sociology and anthropology.

For my primary research, I used several statistical methods, which are described in detail below. My first hypothesis assumes that the COVID-19 pandemic has led to significant variations in consumer groups regarding travel behavior. To test this, I employed a quantitative research methodology through an online questionnaire survey conducted in 2020. My analysis involved exploratory factor analysis to uncover underlying relationships between variables, hierarchical cluster analysis to group respondents based on similar travel behaviors, and K-means cluster analysis to refine these clusters. Additionally, I used Pearson's chi-squared test to examine whether the segments differed from each other based on demographic characteristics.

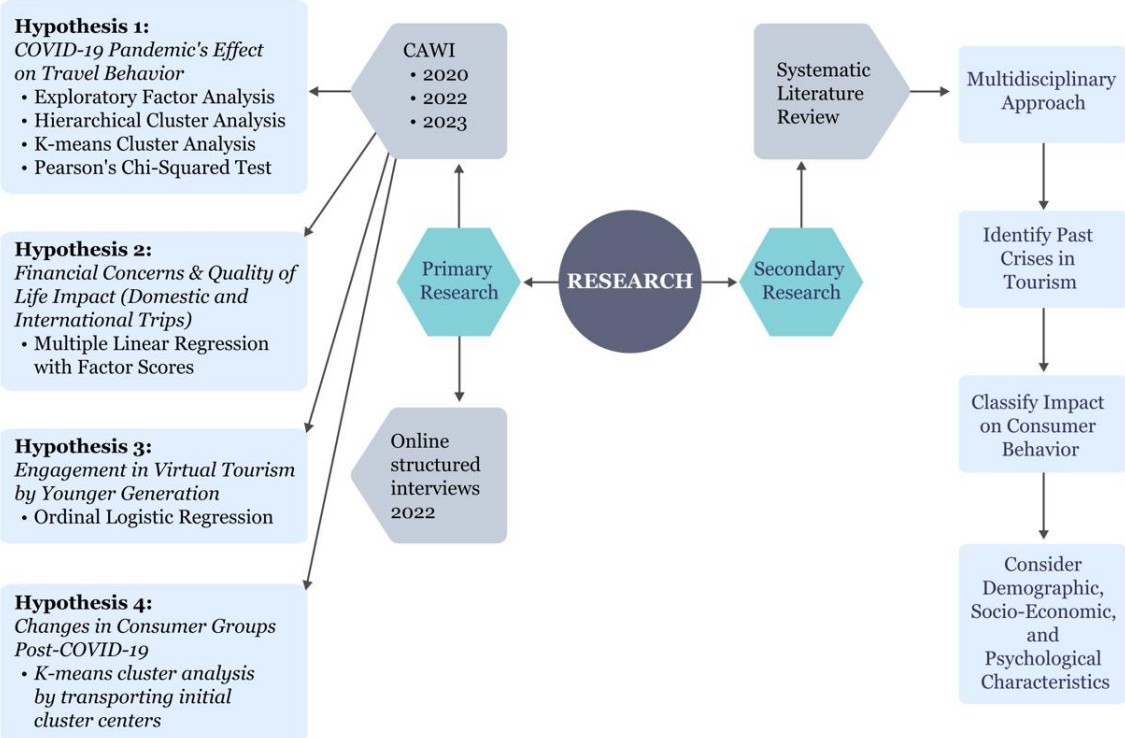
In exploring the relationship between the number of trips planned, financial concerns, and perceived impact on subjective quality of life, my second hypothesis is divided into two parts. The first part examines whether there is a significant relationship between the number of domestic trips planned in 2021 and concerns related to the financial situation, as well as the perceived impact of travel on subjective quality of life, assuming the COVID-19 pandemic is over. I used a quantitative approach, conducting an online questionnaire survey in 2020, and applied multiple linear regression with factor scores to assess the impact of financial concerns and perceived quality of life on the number of domestic trips planned. The second part of my hypothesis investigates the same relationship for international trips planned in 2021. Similar to the first part, I tested this hypothesis using multiple linear regression with factor scores, based on data from the 2020 online questionnaire survey.

My third hypothesis posits that the younger generation is more likely to actively engage in virtual tourism during the COVID-19 pandemic. I tested this hypothesis using a quantitative research approach through an online questionnaire survey conducted in 2022. The analysis was performed using ordinal logistic regression to determine the likelihood of engagement in virtual tourism based on age and other influencing factors.

Finally, my fourth hypothesis suggests that the composition of consumer groups has undergone substantial changes since the outbreak, encompassing alterations in the size of segments and their demographic characteristics. To test this hypothesis, I utilized a quantitative research methodology via an online questionnaire survey conducted in 2023. K-means cluster analysis, with the transportation of initial cluster centers, was applied to identify and analyze the changes in the composition of consumer groups over time.

Figure 2 outlines the primary and secondary research methodologies, breaking down the hypotheses and the statistical methods used for each hypothesis.

Figure 2: Overview of research methodologies and hypotheses testing

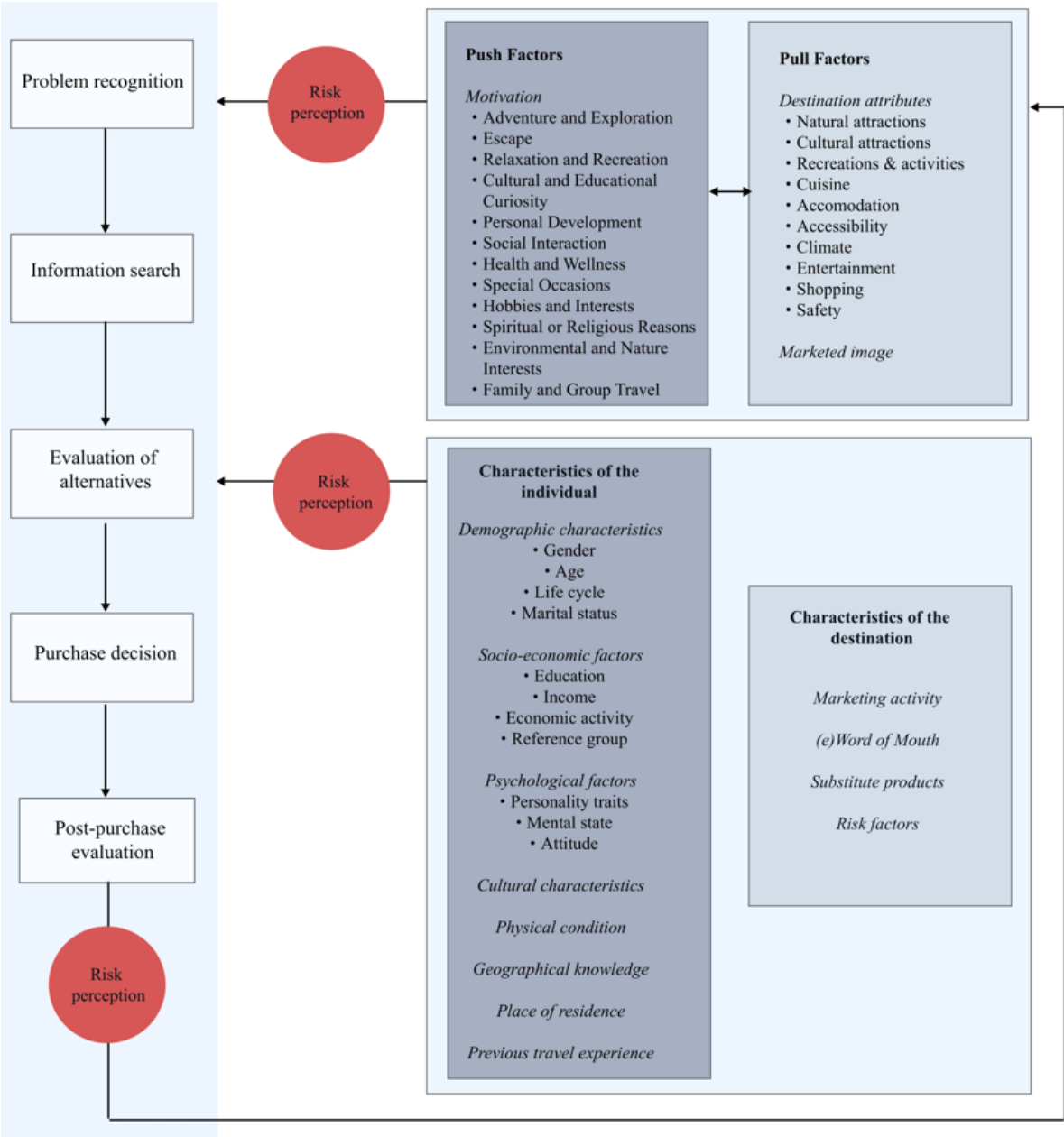


Note. Self-edit.

3. Conceptual framework of the secondary research: segmenting the factors influencing travel decisions in the light of risk perception

The travel decision is a complex process influenced by numerous factors (Figure 3). In my doctoral dissertation, based on the systematic literature review, I conducted a comprehensive analysis of how the elements of the conceptual model influence risk perception. This conceptual framework serves not only as a model for the present research but hopefully provides a complex system or model for further related research.

Figure 3: Conceptual framework of the secondary research



Note. Self-edit based on the results of the systematic literature review.

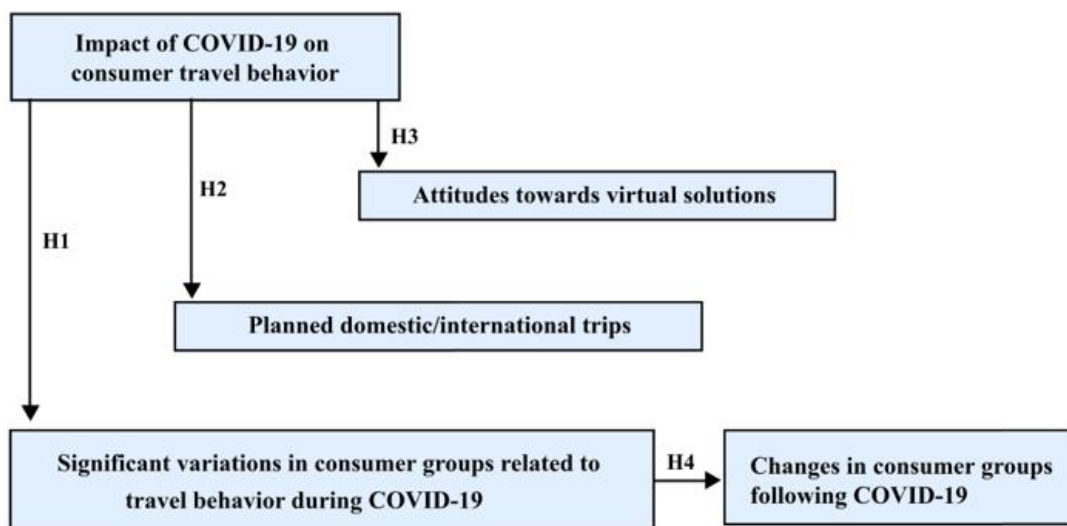
In the decision-making process, the stage of need recognition marks the initial point where we begin to form our list of potential destinations. However, even at this early stage, there are destinations that we consciously exclude from consideration due to safety concerns. This exclusion may be based on previous negative experiences or simply on prejudices and perceptions about the destination's safety. As we progress to the information search stage, we gather more data about the remaining alternatives on our list. It is during this phase that we once again encounter risk perception as we evaluate the safety aspects of each destination. Finally, the impact of our post-purchase experiences plays a crucial role in shaping our future

travel decisions. These experiences, whether positive or negative, contribute to our perception of each destination and influence our decisions on future trips (Lőrincz & Sulyok, 2017, Kiss & Michalkó, 2020).

4. Objectives and hypotheses of the dissertation

Building upon the research questions listed below and the insights derived from the systematic literature review, I have developed the hypotheses. The formulated hypotheses serve as key guiding principles, defining the study's direction and enabling a targeted exploration of the nuanced dynamics of consumer behavior amidst prevailing global challenges (Figure 4). This focused approach aims to yield valuable insights into the specific considerations and patterns within the Hungarian demographic group, contributing to a more nuanced understanding of the broader impact of the global crisis on consumer preferences.

Figure 4: The conceptual framework of my primary research



Note. Self-edit.

Research question 1 (RQ1): What distinct consumer groups have emerged in terms of travel as a result of the coronavirus pandemic?

Hypothesis 1 posits that the COVID-19 pandemic has led to substantial variations among consumer groups about travel behavior. At the outset of the coronavirus crisis, our research team, led by Prof. Dr. Mária Töröcsik, assumed that the primary changes could be identified regarding certain factors. These factors include attitudes towards virtual solutions, concerns related to financial situations, the subjective impact of travel on the quality of life, local

patriotism (preference for domestic travel), sustainability considerations, visiting family and friends as travel motivations, and willingness to use public transportation. This hypothesis suggests that the anticipated changes in these specific areas have likely contributed to the emergence of distinct consumer groups, each responding uniquely to the challenges and uncertainties introduced by the pandemic.

Hypothesis 1: The COVID-19 pandemic has led to significant variations in consumer groups about travel behavior.

Research Question 2 (RQ2): How do concerns related to the financial situation and the perceived impact of travel on subjective quality of life influence the number of trips planned post-COVID?

Hypothesis 2 posits that concerns regarding financial stability and the perceived benefits of travel significantly influence individuals' travel planning in the post-COVID era. Previous research indicates that even individuals with lower incomes maintained travel aspirations during the pandemic, although the most notable shifts in travel behavior were observed among those experiencing income reductions (Cruz-Ruiz et al., 2022; Stefko et al., 2022; Chandra Pratiwi et al., 2022; Li et al., 2021). This hypothesis suggests that the interplay between financial concerns and the perceived subjective quality of life associated with travel may lead to differing levels of trip planning, both domestically and internationally. Consequently, it is anticipated that those who perceive travel as a vital component of their well-being and who are less concerned about their financial situations will plan more trips in 2021, following the resolution of the pandemic.

Hypothesis 2.1: There is a significant relationship between the number of domestic trips planned in 2021 and concerns related to the financial situation, as well as the perceived impact of travel on subjective quality of life, assuming the COVID-19 pandemic is over.

Hypothesis 2.2: There is a significant relationship between the number of international trips planned in 2021 and concerns related to the financial situation, as well as the perceived impact of travel on subjective quality of life, assuming the COVID-19 pandemic is over.

Research Question 3 (RQ3): How have demographic characteristics influenced virtual tourism participation during the COVID-19 pandemic?

In response to the specific challenges posed by COVID-19, my hypothesis is grounded in the experience of the rapid growth of online solutions, suggesting potential impacts on the tourism

sector, particularly in terms of virtual tourism. I propose that younger generations are more likely to participate as they are familiar with digital technologies. The pandemic is accelerating the adoption of online tools (Pásztor, 2020; Pásztor & Bak, 2020), and the tourism industry appears to be adapting this practice.

Hypothesis 3: The younger generation is more likely to actively engage in virtual tourism during the COVID-19 pandemic.

Research Question 4 (RQ4): Since the outbreak of the COVID-19 pandemic, how has the composition of various consumer groups changed?

According to research by Bronner & Hoog (2012), who investigated the impact of the 2008 economic crisis on travel habits, there is a significant difference between planned and actual travel behavior. Based on these findings, I have hypothesized that there may be a discrepancy between planned and actual travel behavior in the context of COVID-19, leading to changes in the size and characteristics of segments identified through research conducted at the onset of the pandemic. The uncertainties and evolving circumstances surrounding the pandemic are likely to have influenced individuals' travel plans, potentially causing a divergence between their intentions and actual actions.

Hypothesis 4: The composition of consumer groups has undergone substantial changes since the outbreak, encompassing alterations in the size of segments and their demographic characteristics.

5. The results of the hypotheses and the theses of the dissertation

The primary objective of the dissertation was to investigate the impact of the coronavirus pandemic on consumer behavior in tourism among the Hungarian population. In my research, I sought answers to four different research questions, using a total of five hypotheses. Throughout my investigations, I applied a diverse methodology, with a significant role assigned to cluster analysis. The hypotheses related to the research questions and their outcomes are summarized in Table 1.

Table 1: Results of the research hypotheses

Research question	Hypothesis	Research methodology	Methodology used for hypothesis testing	Test results
RQ1	Hypothesis 1: The COVID-19 pandemic has led to significant variations in consumer groups about travel behavior.	Quantitative research - Online questionnaire survey conducted in 2020	<ul style="list-style-type: none"> • Exploratory factor analysis • Hierarchical cluster analysis • K-means cluster analysis 	Accepted
RQ2	Hypothesis 2.1: There is a significant relationship between the number of domestic trips planned in 2021 and concerns related to the financial situation, as well as the perceived impact of travel on subjective quality of life, assuming the COVID-19 pandemic is over.	Quantitative research - Online questionnaire survey conducted in 2020	<ul style="list-style-type: none"> • Multiple linear regression with factor scores 	Rejected
	Hypothesis 2.2: There is a significant relationship between the number of international trips planned in 2021 and concerns related to the financial situation, as well as the perceived impact of travel on subjective quality of life, assuming the COVID-19 pandemic is over.			Accepted
RQ3	Hypothesis 3: The younger generation is more likely to actively engage in virtual tourism	Quantitative research - Online questionnaire survey conducted in 2022	<ul style="list-style-type: none"> • Ordinal logistic regression 	Rejected

	during the COVID-19 pandemic.			
RQ4	Hypothesis 4: The composition of consumer groups has undergone substantial changes since the outbreak, encompassing alterations in the size of segments and their demographic characteristics.	Quantitative research - Online questionnaire survey conducted in 2023	<ul style="list-style-type: none"> • K-means cluster analysis by transporting initial cluster centers 	Partly accepted

Note. Self-edit.

To test the **first hypothesis**, I first performed exploratory factor analysis, then hierarchical cluster analysis to determine the exact number of clusters, followed by k-means cluster analysis. The practical utility of this hypothesis lies in drawing attention to the fact that the COVID-19 pandemic has led to significant changes in the travel habits of consumers. Among our initial assumptions, attitudes towards virtual solutions, concerns related to financial situations, and sustainability proved to be clustering factors. This finding allows professionals in the tourism sector to adapt to new circumstances and develop strategies accordingly. Based on the revealed results, the first hypothesis, stating that *the COVID-19 pandemic has led to significant variations in consumer groups about travel behavior*, is *accepted*.

I also analyzed whether there are significant differences among consumer segments that emerged due to the impact of the coronavirus pandemic in terms of gender, age categories, financial situation, and level of education. To investigate these differences, I performed chi-square tests (χ^2). The practical significance of my analysis lies in identifying variations between segments based on demographic characteristics. Understanding these distinctions can contribute to more targeted and effective marketing strategies. Based on the results, these differences were confirmed. Notably, while the consumer groups established at the beginning of the coronavirus outbreak displayed significant gender differences, this pattern did not persist after the outbreak. It is speculated that the reduction in significant gender differences between groups could be attributed to a decrease in women's perception of risk. Further investigation is needed to gain a clearer understanding of this issue. Accordingly, I formulated the following thesis:

1. thesis: Consumer travel behavior has changed significantly during the COVID-19 pandemic, showing changes in attitudes toward virtual solutions, sustainability, and financial concerns. Significant differences were observed between the resulting consumer groups in terms of gender, age, income and education.

The COVID-19 pandemic has significantly influenced travel behavior, with financial concerns and the perceived impact of travel on quality of life playing a crucial role. Understanding these factors is essential for developing strategies that address the evolving needs of travelers. To explore the relationship between financial concerns and the perceived impact of travel on subjective quality of life in 2021, I conducted an analysis focusing on domestic and international travel patterns.

To investigate these relationships, I employed multiple regression analyses. Based on the revealed results, the **first sub-hypothesis of the second hypothesis**, stating that *there is a significant relationship between the number of domestic trips planned in 2021 and concerns related to the financial situation, as well as the perceived impact of travel on subjective quality of life, assuming the COVID-19 pandemic is over*, was *rejected*. Financial concerns did not significantly influence domestic travel plans, indicating that economic uncertainties were not a major barrier for those considering trips within their own country. However, the perceived positive impact of travel on quality of life was a motivating factor for those planning domestic travel, suggesting that individuals valued travel as a way to enhance their well-being, even amidst uncertainty.

In contrast, the **second sub-hypothesis of the second hypothesis**, stating that *there is a significant relationship between the number of international trips planned in 2021 and concerns related to the financial situation, as well as the perceived impact of travel on subjective quality of life, assuming the COVID-19 pandemic is over*, was *accepted*. The analysis of international travel plans showed a significant relationship with financial concerns, indicating that economic challenges led many to reconsider or postpone their international trips. Nonetheless, for individuals who perceived travel as vital to their quality of life, the desire to resume international travel remained strong. This highlights the psychological benefits of travel, which continued to influence planning decisions despite financial worries.

The practical application of these findings is crucial for stakeholders in the travel industry, such as tourism agencies, travel companies, and policymakers. For domestic travel, the results suggest that promoting the well-being benefits of travel could effectively encourage more

people to take trips within their own country, even in the face of economic uncertainty. This could lead to targeted marketing campaigns emphasizing the mental and emotional rewards of domestic travel.

For international travel, understanding that financial concerns significantly impact decision-making can help industry players develop more flexible and budget-friendly options, such as installment payment plans or discounted travel packages. Additionally, focusing on the importance of travel for quality of life could resonate with travelers eager to resume international trips, making it a key message in post-pandemic marketing efforts. Accordingly, I formulated the following thesis:

2. thesis: The COVID-19 pandemic has reshaped travel behavior, with financial concerns and the perceived impact of travel on quality of life influencing both domestic and international travel plans. While domestic travel was driven by the desire to enhance well-being, international travel was more significantly affected by economic uncertainties, underscoring the need for tailored marketing strategies in the tourism sector.

The COVID-19 pandemic has accelerated the spread of technological solutions in the tourism sector as well. Virtual tourism may open up new opportunities for travelers, serving as a potential substitute for actual travel or enhancing on-site experiences. It is crucial to understand how the technological proficiency of different generations is reflected in the use of virtual solutions. With this knowledge, it becomes possible to develop appropriate communication and marketing strategies to promote these services effectively. To test the **third hypothesis** ordinal logistic regression was conducted. Based on the revealed result, the second hypothesis, stating that *the younger generation is more likely to actively engage in virtual tourism during the COVID-19 pandemic*, was *rejected*. The results showed that age explains a relatively small proportion of the variation between the interest in virtual /digital tourism. The results were the opposite of what I expected; as age increased, interest in virtual/digital tourism increased, albeit slightly, rather than decreased. Further research would be necessary to gain a better understanding of the results. However, as indicated by the cluster analysis, although the majority of individuals interested in virtual/digital tourism were older, this trend reversed after the pandemic in favor of younger people. One possible explanation for this could be that the older generation primarily viewed virtual/digital tourism as a substitute, but once the crisis subsided, they reverted to their preference for traditional travel. Accordingly, I formulated the following thesis:

3. thesis: The COVID-19 pandemic has reshaped the tourism sector, fostering the adoption of technological solutions such as virtual tourism. Older individuals exhibited higher participation in virtual tourism during the pandemic.

To test the **fourth hypothesis**, I performed a K-means cluster analysis by transporting initial cluster centers. The results revealed that only virtual travelers exhibited a change in demographic composition. The relatively high representation of the older generation in this group during the pandemic may have been more out of necessity, due to health and safety concerns, than preference, with a subsequent shift to a higher representation of the younger generation after COVID. Regarding size and preferences the *optimistic intellectuals* cluster experienced a moderate decrease in size alongside a slightly increased rejection of virtual solutions, all while maintaining financial optimism. In contrast, the *crisis-created environmentalist* cluster saw a slight increase in size, maintaining a strong rejection of virtual solutions and persistent financial concerns. *Anxious materialists* witnessed a significant decrease in size, coupled with an increased rejection of virtual solutions and financial concerns. The *ecotourists* cluster experienced a notable decrease in size alongside a sharp decline in the rejection of virtual solutions, possibly indicative of changing preferences and increased acceptance of virtual solutions. I could only partially accept the third hypothesis, stating that *the composition of consumer groups has undergone substantial changes since the outbreak, encompassing alterations in the size of segments and their demographic characteristics*, since some clusters have not changed at all in terms of demographic composition and have only experienced slight changes in size too. The practical benefit of these results lies in their implications for targeted marketing and resource allocation in the tourism industry. By understanding how different demographic groups respond to virtual/digital tourism and how their preferences and cluster sizes change over time, tourism businesses can tailor their offerings and strategies accordingly. For example, they can adjust marketing campaigns to better target specific demographic segments or allocate resources to develop virtual/digital tourism products that cater to changing preferences. Accordingly, I formulated the following thesis:

4. thesis: Consumer preferences and demographic trends are changing constantly in the tourism industry. A notable shift in virtual passengers has occurred, presumably due to health concerns surrounding the pandemic, from older to younger generations.

6. Research limitations and possible future research directions

During my research, I encountered several limitations, the presentation of which, I believe, is essential to interpreting the results and ensuring the completeness of my work. One limitation of my study is that the research conducted at the beginning of the COVID-19 pandemic used a non-validated questionnaire. Although a 3-member expert committee formulated the questions, comparing the results with the international literature is therefore challenging. Unfortunately, due to a lack of financial resources, the survey is not representative and is only suitable for presenting pilot results.

Another limitation is that the tourism sector has faced numerous crises in recent years, making it difficult to isolate the effects solely caused by the COVID-19 pandemic. However, the constraints of my dissertation in terms of length and time did not allow for an in-depth analysis of impacts, such as the Russian-Ukrainian conflict or the energy crisis. It is also important to highlight that, although I also conducted qualitative research to gain a deeper understanding of the quantitative results, the number of interview participants was limited, so the observations may not be fully representative of the entire Hungarian population. Additionally, the information gathered during the interviews could be subjective, depending on the interviewee's perspective.

One potential direction for future research could involve creating a validated questionnaire that could effectively assess and compare the impact of various risks on travel choices, utilizing findings from existing international literature. Additionally, conducting a comprehensive qualitative study with a representative sample would provide a more precise understanding of individual perspectives and considerations when making travel decisions.

In parallel with my primary research, I also sought to categorize results from the international literature based on the different waves of the COVID-19 pandemic and the availability of vaccines as part of my secondary research. However, significant differences in how COVID-19 waves affected various countries were influenced by factors such as government responses, healthcare capacity, and socioeconomic conditions. Furthermore, COVID-19 vaccines were not available in all countries simultaneously, with availability varying due to production capacity, distribution logistics, and financial resources. In light of these considerations, the emergence of different waves varied by country, making it impossible to categorize the results found in the international literature accordingly.

Literature used in the thesis booklet

- Aro, A. R., Vartti, A.-M., Schreck, M., Turtiainen, P., & Uutela, A. (2009). Willingness to Take Travel-Related Health Risks - A Study among Finnish Tourists in Asia during the Avian Influenza Outbreak. *International Journal of Behavioral Medicine*, 16(1), 68–73. <https://doi.org/10.1007/s12529-008-9003-7>
- Bettany-Saltikov, J. (2012). *How to do a Systematic Literature Review in Nursing, A step-by-step guide*, RCN Publishing Company, pp. 173
- Booth, A., Papaioannou, D. & Sutton, A. (2011). *Systematic Approaches to a Successful Literature Review*, SAGE Publications Ltd, pp. 288
- Brida, J. G., Mogni, V., Scaglione, M., & Seijas, M. N. (2021). The impacts of the coronavirus on tourism demand in Uruguay during the 2021 high season: a factor analysis. *Journal of Policy Research in Tourism, Leisure and Events*, 15(4), 401–416. <https://doi.org/10.1080/19407963.2021.1975290>
- Brida, J. G., Mogni, V., Scaglione, M., & Seijas, M. N. (2022). Travel risk perceptions and behavior in the course of the COVID-19 pandemic 2021: a cluster analysis. *Journal of Policy Research in Tourism, Leisure and Events*, 1–15. <https://doi.org/10.1080/19407963.2022.2098964>
- Bronner, F., & de Hoog, R. (2012). Economizing strategies during an economic crisis. *Annals of Tourism Research*, 39(2), 1048–1069. <https://doi.org/10.1016/j.annals.2011.11.019>
- Csapó, J., & Gonda, T. (2019). A hazai lakosság utazási motivációinak és szokásainak elemzése az aktív turizmus és a fizikai aktivitás tekintetében. *Turisztikai és Vidékfejlesztési Tanulmányok*, 4(4). <https://doi.org/10.15170/tvt.2019.04.04.06>
- Csapó, J., & Töröcsik, M. (2019). Turizmus és biztonság: a magyar lakosság utazási szokásaihoz köthető, biztonsággal kapcsolatos attitűdök reprezentatív vizsgálata. *Turizmus Bulletin*, 13–20. <https://doi.org/10.14267/turbull.2019v19n3.2>
- Chandra Pratiwi, I., Novani, S., & Arinta Suryana, L. (2022). Tourists' Intentions During COVID-19: Push and Pull Factors in Extended Theory of Planned Behaviour. *Pertanika Journal of Social Sciences and Humanities*, 30(2), 699–721. <https://doi.org/10.47836/pjssh.30.2.15>

- Cruz-Ruiz, E., Ruiz-Romero de la Cruz, E., & Caballero-Galeote, L. (2022). Recovery Measures for the Tourism Industry in Andalusia: Residents as Tourist Consumers. *Economies*, 10(6), 133. <https://doi.org/10.3390/economies10060133>
- Dávid, L., Molnár, F., Bujdosó, Z., & Dereskey, A. (2007). *Biztonság, terrorizmus, turizmus. Gazdálkodás*. 51(20). Különkiadás. pp. 160-166.
- Ertaş, M., & Kirlar-Can, B. (2022). Tourists' risk perception, travel behaviour and behavioural intention during the COVID-19. *European Journal of Tourism Research*, 32, 3205. <https://doi.org/10.54055/ejtr.v32i.2606>
- Garg, A. (2013). A study of tourist perception towards travel risk factors in tourist decision making, *Asian Journal of Tourism and Hospitality Research*, Vol. 7 No. 1, pp. 47-57.
- Golets, A., Farias, J., Pilati, R., & Costa, H. (2020). *COVID-19 Pandemic and Tourism: The Impact of Health Risk Perception and Intolerance of Uncertainty on Travel Intentions*. <https://doi.org/10.20944/preprints202010.0432.v1>
- Isaac, R. K., & Van den Bedem, A. (2020). The impacts of terrorism on risk perception and travel behaviour of the Dutch market: Sri Lanka as a case study. *International Journal of Tourism Cities*, 7(1), 63–91. <https://doi.org/10.1108/ijtc-06-2020-0118>
- Karl, M. & Schmude, J. (2017). Understanding the role of risk (perception) in destination choice: A literature review and synthesis, *Tourism*, 65(2), pp. 138-155.
- Keller, K., Kaszás, N., & Kovács, L. (2022). Turisztikai szolgáltatók válságra való felkészültsége a Covid19 tekintetében. *Turizmus Bulletin*, 26–35. <https://doi.org/10.14267/turbull.2022v22n4.3>
- Kiss, K., Michalkó, G. (2020) *A turizmus- és biztonságmarketing*, In: Michalkó, G; Németh, J; Ritecz, Gy (szerk.) *Turizmusbiztonság*, Budapest, Magyarország: Dialóg Campus Kiadó (2020) 463 p. pp. 129-140., 12 p.
- Li, J., Nguyen, T. H. H., & Coca-Stefaniak, J. A. (2021). Understanding post-pandemic travel behaviours - China's Golden Week. *Journal of Hospitality and Tourism Management*, 49, 84-88. <https://doi.org/10.1016/j.jhtm.2021.09.003>
- Lőrincz, K., & Sulyok, J. (Eds.). (2017). *Turizmusmarketing*. Akadémiai Kiadó. <https://doi.org/10.1556/9789634540601>

- Nagy, D., Csapó, J., & Végi, S. (2021). A jövő turizmusa, a turizmus jövője – vállalkozói prognózis kutatás a dél-dunántúli turisztikai vállalkozók szemszögéből. *Turisztikai és Vidékfejlesztési Tanulmányok*, 6(2), 72–85. <https://doi.org/10.15170/tvt.2021.06.02.05>
- Nundy, S., Ghosh, A., Mesloub, A., Albaqawy, G. A., & Alnaim, M. M. (2021). Impact of COVID-19 pandemic on socio-economic, energy-environment and transport sector globally and sustainable development goal (SDG). *Journal of Cleaner Production*, 312, 127705. <https://doi.org/10.1016/j.jclepro.2021.127705>
- Pásztor J. (2020). *A COVID–19-járvány hatása a fiatalok külföldi munkavállalási terveire: az érzelmi intelligencia és az önszabályozás szerepe a stressz kezelésében*. In: Kovács L. (szerk.) *Globális kihívás – lokális válaszok: A koronavírus (Covid–19) gazdasági és társadalmi összefüggései és hatásai*. Szombathely, Magyarország: Savaria University Press, 65–77.
- Pásztor J. & Bak G. (2020). *Z generáció online: közösségi média használat, FoMO és a társas kapcsolatok közötti összefüggések*. In: Szabó, Csaba (szerk.) *XXIII. Tavaszi Szél 132 Tanulmánykötet*. Budapest, Magyarország: Doktoranduszok Országos Szövetsége (DOSZ), 509–520.
- Peluso, A. M., & Pichierri, M. (2020). Effects of socio-demographics, sense of control, and uncertainty avoidability on post-COVID-19 vacation intention. *Current Issues in Tourism*, 24(19), 2755–2767. <https://doi.org/10.1080/13683500.2020.1849050>
- Raffay, Z. (2020). *A COVID-19 járvány hatása a turisták fogyasztói magatartásának változására*. Pécsi Tudományegyetem Közgazdaságtudományi Kar, Marketing és Turizmus Intézet.
- Shahabi Sorman Abadi, R., Ghaderi, Z., Hall, C. M., Soltaninasab, M., & Hossein Qezelbash, A. (2021). COVID-19 and the travel behavior of xenophobic tourists. *Journal of Policy Research in Tourism, Leisure and Events*, 15(3), 377–399. <https://doi.org/10.1080/19407963.2021.1943415>
- Shin, H., Nicolau, J. L., Kang, J., Sharma, A., & Lee, H. (2022). Travel decision determinants during and after COVID-19: The role of tourist trust, travel constraints, and attitudinal factors. *Tourism Management*, 88, 104428. <https://doi.org/10.1016/j.tourman.2021.104428>
- Sönmez, S. F., & Graefe, A. R. (1998). Influence of terrorism risk on foreign tourism decisions. *Annals of Tourism Research*, 25(1), 112–144. [https://doi.org/10.1016/s0160-7383\(97\)00072-8](https://doi.org/10.1016/s0160-7383(97)00072-8)

Štefko, R., Džuka, J., & Lačný, M. (2022). *Factors Influencing Intention to Go on a Summer Holiday during the Peak and Remission of the Covid-19 Pandemic*. *Ekonomický Časopis*, 70(2), 144–170. <https://doi.org/10.31577/ekoncas.2022.02.03>

Zheng, D., Luo, Q., & Ritchie, B. W. (2021b). The Role of Trust in Mitigating Perceived Threat, Fear, and Travel Avoidance after a Pandemic Outbreak: A Multigroup Analysis. *Journal of Travel Research*, 61(3), 581–596. <https://doi.org/10.1177/0047287521995562>

Own publications in the field of the dissertation

Csapó, J., Töröcsik, M., Végi, S. (2021). *A jövő turizmusának értékelése egy hazai fogyasztói felmérés alapján*, In: Csapó, János; Végi, Szabina (szerk.) *A globális, lokális és a globális turizmus jelenlegi szerepe és jövője elméleti és gyakorlati megközelítésben*, Pécs, Magyarország: Pécsi Tudományegyetem Közgazdaságtudományi Kar Marketing és Turizmus Intézet (2021) 145 p. pp. 63-113., 51 p.

Csapó, J., Végi, S. (2021). *A jövő turizmusának értékelése egy regionális vállalkozói felmérés alapján*, In: Csapó, János; Végi, Szabina (szerk.) *A globális, lokális és a globális turizmus jelenlegi szerepe és jövője elméleti és gyakorlati megközelítésben*, Pécs, Magyarország: PTE KTK Marketing és Turizmus Intézet (2021) 145 p. pp. 114-137., 24 p.

Csapó, J., Végi, S. (2021). *Összefoglalás, elképzelések a világjárvány utáni időszak nemzetközi és hazai turizmusáról*, In: Csapó, János; Végi, Szabina (szerk.) *A globális, lokális és a globális turizmus jelenlegi szerepe és jövője elméleti és gyakorlati megközelítésben*, Pécs, Magyarország: PTE KTK Marketing és Turizmus Intézet (2021) 145 p. pp. 138-145., 8 p.

Csapó, J., Végi, S., Töröcsik, M., (2021). *Az új koronavírus (Covid-19) megjelenésének hatása a magyar lakosság turisztikai fogyasztói szokásaira - egy online megkérdezés eredményei*, In: Szalai, Katalin; Rátz, Tamara; Michalkó, Gábor (szerk.) *VIII. Magyar Turizmusföldrajzi Szimpózium 2021: Absztrakt kötet* Székesfehérvár, Magyarország, Budapest, Magyarország: Kodolányi János Egyetem, Csillagászati és Földtudományi Kutatóközpont Földrajztudományi Intézet, Magyar Földrajzi Társaság (2021) 77 p. pp. 19-21., 3 p.

Csapó, J., Csóka, L., Gonda, T., & Végi, S. (2023). *Tourists' attitudes towards digitalisation before and after COVID-19 pandemic – A Hungarian perspective*, In: Sanja, Sever Mališ; Ivana, Načinović Braje; Fran, Galetić (szerk.) *Proceedings of FEB Zagreb 14th International Odyssey*

Conference on Economics and Business, Zagreb, Croatia: Faculty of Economics & Business University of Zagreb (2023) 505 p. pp. 134-146., 13 p.

Csapó, J., Csóka, L., Gonda, T., & Végi, S. (2023). A digitalizációhoz köthető recens hazai turisztikai fogyasztói szokások elemzése. *Marketing & Menedzsment*, 57(3), 68–78.

Nagy, D., Csapó, J., Végi, S. (2021). A jövő turizmusa, a turizmus jövője – vállalkozói prognózis kutatás a Dél-dunántúli turisztikai vállalkozók szemszögéből, *Turisztikai és Vidékfejlesztési Tanulmányok* 6: 2 pp. 72-85., 14 p.

Végi, S. (2023). Az új koronavírus (COVID-19) megjelenésének hatása a magyar lakosság turisztikai fogyasztói szokásaira: klaszterelemzés = The impact of new coronavirus (COVID-19) on the tourism consumption patterns of the Hungarian population: a cluster analysis In: Csóka, László; Csapó, János (szerk.) *A turizmus korszakváltása – Okos desztinációk és okos magatartás válságok idején = A new era in tourism - Smart destinations and smart behaviour in times of crises: absztraktkötet = book of abstracts*, Pécs, Magyarország: Pécsi Tudományegyetem Közgazdaságtudományi Kar (2023) 140 p. pp. 83-84., 1 p.

Végi, S., & Csapó, J. (2023). Towards a better understanding of the dynamics and impacts of consumer behaviour and travel decisions in response to crises – an SLR based analysis. *Acta Turistica*, 35(1), 79–111. <https://doi.org/10.22598/at/2022.35.1.79>

Végi, S. (2020). *A válságok hatására bekövetkezett utazási szokások változásának szisztematikus irodalmi áttekintése*, In: Töröcsik, Mária; Csapó, János; Jakopánecz, Eszter; Lányi, Beatrix (szerk.) *Fogyasztásváltozás a Covid-19 járvány első hullámában – szekunder kutatási eredmények*, Pécs, Magyarország: Pécsi Tudományegyetem Közgazdaságtudományi Kar Marketing és Turizmus Intézet (2020) pp. 53-72., 20 p.

Végi, S., Csapó, J., Töröcsik, M. (2020). Fogyasztói magatartásváltozások kutatása a turizmusban az új koronavírus (COVID-19) megjelenésének tekintetében Magyarországon, In: Szász, Jenő; Tözsér, Anett; Hadnagy, Izabella (szerk.) *II. Interdiszciplináris konferencia a Kárpát-medencei magyarság társadalmi és gazdasági helyzetéről c. konferencia*, absztraktkötet, Budapest, Magyarország: Nemzetstratégiai Kutatóintézet (2020) 76 p. pp. 45-45., 1 p.

Végi, S., Csapó, J., Töröcsik, M. (2020). Az új koronavírus (COVID-19) megjelenésének hatása a magyar lakosság turisztikai fogyasztói szokásaira - egy online felmérés elsődleges

eredményei, In: Ercsey, Ida (szerk.) *Marketing a digitalizáció korában: Az Egyesület a Marketing Oktatásért és Kutatásért XXVI. Országos konferenciájának előadásai*, Győr, Magyarország: Széchenyi István Egyetem (2020) pp. 357-368., 12 p.

Végi, S. (2021). *A válságok természetének és az arra adott turisztikai fogyasztói válaszoknak a vizsgálata SLR módszer alapján*, In: Csapó, János; Végi, Szabina (szerk.) *A globális, lokális és a globális turizmus jelenlegi szerepe és jövője elméleti és gyakorlati megközelítésben*, Pécs, Magyarország: PTE KTK Marketing és Turizmus Intézet (2021) 145 p. pp. 34-54., 21 p.