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TOURISM CONSUMPTION IN CRISIS: THE IMPACT OF COVID-19 ON TOURIST EXPENDITURE IN CROATIA

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Abstract: This study examines the impact of the COVID-19 pandemic on tourism expenditure patterns in Croatia between 2019 and 2023. It aims to provide a comprehensive comparison across the pre-pandemic period, the peak of the pandemic, and the subsequent recovery phase. The analysis focuses on fiscalized transaction data from tourism-related activities, offering a detailed temporal and regional perspective. Official financial records were processed using the JASP statistical software package, applying analysis of variance, estimated marginal means, and planned contrast testing to detect significant differences between years and across regions. Complementary qualitative insights were gathered from focus groups to capture shifts in tourist behavior, such as booking preferences, payment methods, and budgeting strategies. Results reveal a pronounced contraction in tourism expenditure in 2020, attributed to global travel restrictions and public health measures, followed by partial recovery in 2021 and a strong rebound in 2022 and 2023. The rebound was especially marked in coastal counties heavily dependent on international arrivals, while inland regions with more diversified economies experienced moderate fluctuations. Focus group findings indicate increased reliance on digital booking platforms, a growing preference for contactless payments, and more cautious trip budgeting. These findings hold practical relevance for policymakers, tourism boards, and industry stakeholders, highlighting the importance of crisis preparedness, market diversification, and the sustained adoption of digital tools. The study contributes to a deeper understanding of how systemic shocks shape tourism consumption patterns and provides actionable insights for fostering resilience in the face of future disruptions.

Keywords: tourism expenditure, pandemic recovery, COVID-19, consumer adaptation, regional tour-ism impact

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INTRODUCTION

Tourism, as a highly sensitive and complex economic sector, reflects the broader social and economic conditions in which it operates. Its intensity and stability are directly influenced by both global and local circumstances, and crises such as the COVID-19 pandemic profoundly disrupt travel patterns, consumer expenditures, and tourist behavior. The year 2020 stands out as a major turning point in the history of modern tourism, not only because of strict travel restrictions and border closures, but also due to significant changes in perceptions of safety, trip planning habits, and the very structure of tourism related consumption. During that period, many destinations faced a sudden drop in arrivals and revenues, with tourist activity reduced to a minimum or completely halted. Croatia, as a country heavily reliant on tourism, was no exception.

The closure of markets, limited mobility, and general economic slowdown led to a clear disruption in tourism flows and expenditures, with different regions displaying varying levels of resilience and adaptation. Following the initial shock, the year 2021 brought a mild recovery, driven by the eas-ing of restrictions and the sector's adjustment to new circumstances, including service digitalization, more flexible booking systems, and the implementation of health and hygiene standards. By 2022 and 2023, most destinations were witnessing a stronger return of tourists, although changes in consumer behavior, such as shorter stays, greater interest in domestic travel, and a shift toward individual travel experiences remained evident.

The study by Mikulić et al., 2022 shows that Adriatic Croatia, due to its strong reliance on tourism, experienced a significantly larger economic decline during the pandemic compared to the continental part of the country. Continental regions demonstrated greater resilience thanks to their more diversified economic structure. The study by Payne et al., 2022 shows that COVID-19 caused lasting changes in Croatian tourism, particularly in foreign arrivals and overnight stays. The authors conclude that returning to pre-pandemic trends will require a shift from traditional tourism development models. In their study, Mikac & Kravarščan, 2021 conclude that the Croatian tourism sector operated reactively and insufficiently coordinated during the COVID-19 pandemic, without developed effective plans and crisis management systems. Although the results were better than expected, the crisis management system was fragmented, communication was uncoordinated, and the sector's response was largely based on improvisation instead of preprepared action plans.

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This study focuses on analyzing these changes over a five-year period (2019-2023), with particular attention to the comparison of tourism expenditures before, during, and after the pandemic. Based on fiscal transactions from tourism related activities and using quantitative methods, the research seeks to identify patterns of recovery and adaptation, as well as possible long-term shifts in expenditure behavior. Beyond aggregate trends, the analysis also considers regional differences between coastal and inland areas, urban and rural settings to provide a more comprehensive picture of the sector's dynamics during a period of extraordinary crisis.

LITERATURE REVIEW

Structural Disruptions and Changes in Tourist Expenditure During the COVID-19 Pandemic

According to the research by Efthimiou (2025), the COVID-19 pandemic caused sig-nificant changes in the trends and volume of the tourism industry, with the sector demon-strating resilience through digital transformation and adaptation to new forms of tourism, which impacted the economic development and social stability of countries before, during, and after the pandemic. According to Wu et al. (2022), the COVID-19 pandemic significantly reduced the contribution of domestic tourism to the economy of China's Guangdong province, with the share of domestic tourism in GDP falling from 2.53% to 1.20% during the analyzed period, according to data from the Tourism Satellite Account (TSA). The COVID-19 pandemic had a strong negative impact on tourism in developing countries, especially in the private sector, with a significant decline in international arrivals, pronounced seasonality in recovery, and a need for government support and new safety standards to restore travelers' confidence and stimulate spending (Kumar & Ekka, 2023). According to research by Allan et al. (2022), tourism spending in Scotland decreased by 54.3% in 2021, resulting in a GDP drop of 1.76% and putting 100,000 jobs at risk, with the loss of income from foreign tourists having a greater negative economic impact than the reduction in domestic spending. Satisfied tourists are essential for fostering loyalty and sustainable growth tourism sector, as they either return themselves or actively promote the destination to others.

Crisis periods such as the pandemic cause a prolonged decline in tourist arrivals, especially in developing countries, and highlight the need for policies that promote safety, sustainability, and diversification of tourism offer to increase sector resilience and enable recovery without permanent losses (Aronica et al., 2021). It also led to a significant increase in overall tourist spending by participants in a cycling event in Italy, mainly due to increased spending on associated products, which is partially attributed to the phenomenon of "revenge spending" after a period of restrictions (Guerra et al., 2024). A study by Ren et al. (2024) showed that both local and national COVID-19 situations significantly influenced the spending of residents and domestic tourists, with social distancing measures strongly reducing tourist spending, while state support increased residents' spending, although with uneven effects across economic sectors. Research by Varzakas & Metaxas (2024) showed that the spread of COVID-19 negatively impacted international tourism spending in 38 countries, both directly through increased fear of infection and indirectly through reduced tourist income. It was estimated that an increase of one COVID-19 case reduced tourism spending by USD 859,237.

The COVID-19 pandemic caused a historic decline in demand for international travel in the euro area, and research predicts that demand recovery will depend on macroeconomic factors, using a forecasting model that considers asymmetric income elasticities of tourism demand through 2022 (Plzáková et al., 2021). Inadequate government responses further exacerbated the negative consequences (Cheng et al., 2021). These disruptions affected Spanish regions unevenly, depending on their tourism specialization. Regions more reliant on international tourism suffered greater losses, while rural and less saturated destinations experienced a smaller decline and could potentially contribute to more sustainable tourism development in the future (Rodríguez et al., 2023). The COVID-19 pandemic revealed the vulnerability of European tourist regions, with urban destinations dependent on foreign guests and high seasonality suffering the most significant losses, while regions with natural resources and lower guest density were more resilient. This emphasizes the importance of diversifying the tourism offer to enhance resilience in future crises (Curtale et al., 2023). It represents a turning point highlighting the need for transforming the global tourism system toward sustainability, with particular attention to the vulnerability of low paid jobs and the disproportionate impact of the crisis on lower income countries (Gössling et al., 2020).

According to Ströhm (2020) and the study by Mikulić et al. (2022), the Croatian economy suffered one of the largest declines in Central, Eastern, and Southeastern Europe (CESEE) in 2020 due to its heavy dependence on tourism, with tourist overnight stays falling by 58.9% in the first seven months of 2020, the largest drop occurring in the Adriatic region. According to Mikulić et al. (2021), the contribution of foreign tourists to gross value added and employment fell by around 50%, and although some negative effects were partially mitigated by growth in other domestic sectors, long-term recovery will depend on accelerating structural reforms and well-considered economic policies. Government support had a positive impact on the survival and employment of firms, with support being more effective when smaller amounts were directed toward smaller enterprises, emphasizing the need for a more targeted and tailored approach in shaping future support policies (Stojčić & Vizek, 2024). On the other hand, Ružić & Biškupec (2021) stress the need for stronger macroeconomic policies to mitigate the consequences and accelerate the recovery of the sector. Croatia's future development should be based on sustainable strategies that include digitalization, individualized services, the promotion of local products, and cultural and natural resources to recover and adapt to new market conditions (Tomić et al., 2021; Lončarić & Kapeš, 2022). The study by Payne et al. (2021) suggests that the shock is long-lasting and that the recovery should include a shift from the traditional growth model toward a more sustainable form of tourism aligned with sustainable development goals. Despite its strong dependence on tourism, Croatian tourism demonstrated greater resilience to the pandemic compared to competing Mediterranean countries, thanks to its geographic proximity to large European markets and car accessibility. This further highlights the need for strategic development of more resilient types of tourism such as continental, cultural, and

gastronomic tourism, and increasing the share of domestic tourists to better prepare the sector for future global crises (Devčić & Pražić, 2023; Roška, 2021). Maintaining a positive destination image, enhancing safety, and leveraging word-of-mouth are key to boosting tourist confidence and promoting sustainable growth in touristic regions (Praprom & Laipaporn, 2025).

Adaptive Consumer Behavior and the Transformation of Tourist Expenditure in the Post-Pandemic Reality

According to the research by Toubes et al. (2021) and Araújo-Vila et al. (2021), the COVID-19 pandemic significantly altered consumption and promotion patterns in the Spanish tourism sector, accelerating digitalization, increasing the importance of online channels and personalized services, and highlighting health safety as a key factor in consumer decision making. Different generations exhibited varying consumption patterns, with increased orientation toward online shopping, greater reliance on digital technologies, and heightened sensitivity to safety and health aspects when making purchasing decisions (Ahmad et al., 2023). According to the study by Kumar & Reddy (2023) and Efthimiou (2024), the pandemic caused changes in travel demand and attitudes toward safety, creating the need to adapt marketing strategies and policies to ensure sector sustainability. This was particularly evident in changes in human resources and increased awareness of risk (Brozović & Saito, 2022). In the context of tourism and the pandemic, strategic use of the marketing mix can help rebuild and strengthen customer loyalty in the tourism sector, where traveler confidence and expectations have shifted significantly due to COVID-19, while staff interactions, although important, may have a lesser role in driving loyalty post-pandemic (Šostar et al., 2024).

There was a significant decrease in the use of public transport among tourists on the Catalan coast, with perceived health risks and changes in mobility patterns becoming key factors in transport decisions (Delclòs-Alió et al., 2022). According to the study by Algassim & Abuelhassan (2021), hygiene, safety, and fear of infection became key factors in travel decisions, with observed differences in perception and behavior between genders. Research in the Chinese context shows that issuing digital tourism vouchers significantly increases tourist arrivals, especially when implemented through large and reliable digital platforms, supported by high internet penetration and frequent distribution. The effects also spread to neighboring cities, making digital vouchers an effective tool for tourism recovery in the post-pandemic period (Chen et al., 2024). Furthermore, the importance of domestic tourism for economic recovery accelerated digital innovations and changed the career outlook of future tourism workers (Huang et al., 2023). The study by González-Reverté et al. (2022) confirms that the pandemic encouraged new tourist behaviors, with environmentally conscious travelers showing less interest in mass tourism, although some changes are temporary and linked to perceived health risks rather than a permanent decline in the importance of tourism in their lives. Research by Baños-Pino et al. (2021) conducted in Asturias shows that tourists shortened their stays by an average of 23.8% after the outbreak of COVID-19, maintained overall daily spending, but altered their ex-penditure structure in favor of activities and mobility within the destination. Tourists are behaving more responsibly and cautiously, which presents an opportunity for tourism managers to stimulate demand and build tourist loyalty during crises through media strategies, positive promotion, and adapting offerings (Fitriadi et al., 2022). In Portugal, the profile of cultural tourists also changed, encouraging domestic tourism, a greater tendency to stay in a single location and in rural areas, while maintaining high levels of satisfaction and intention to return, which has important implications for the development of cultural tourism in the post-pandemic period.

Crises can sometimes be opportunities, as seen in the increased openness of Croatian tourists to the concept of virtual tourism, with XR technologies and historical video games serving as temporary substitutes for cultural tourism, stimulating interest in real locations and offering a sustainable alternative during crises (Mavrin et al., 2022). The COVID-19 pandemic represents a transformative moment for tourism, requiring a redefinition of research approaches, adaptation of tourism organizations, empowerment of social entrepreneurship, and adoption of more sustainable, personalized, and technologically advanced models of tourism development (Abbas et al., 2021). In Taiwan, alongside reduced frequency and duration of travel, avoidance of public transport, and increased sensitivity to health risks, trust in public health measures and perceived safety play a crucial role in restoring domestic and international tourism (Kuo, 2021). Travel frequency, duration, and motivations also declined among older adults in Taiwan, yet overall spending increased, indicating the need to adapt tourism offerings to one-day trips, improve transportation accessibility, and enhance health and safety measures to meet the needs of the growing elderly population (Chan, 2022).

Research by Rahman et al. (2021) and Orîndaru et al. (2021) shows that perceptions of risk and travel management during the COVID-19 pandemic significantly influence tourist behavior, including avoidance of overcrowded destinations, changes in travel patterns, choice of safer distribution channels, focus on hygiene and safety, and service adaptations aligned with increased health demands. The study by Škare et al. (2021) shows that the COVID-19 pandemic has far-reaching and long-lasting negative effects on the global tourism industry compared to previous pandemics, with recovery requiring coordinated public and private support to ensure sector sustainability and resilience. The research Chang & Wu (2021) indicates that "quality management" was the most important factor in decision making for stakeholders in the tourism industry during the COVID-19 pandemic, especially in planning and managing safe international tourism "bubble zones." The study Jafari et al. (2021) shows that the COVID-19 pandemic severely affected the tourism sector in Famagusta, Northern Cyprus, with significant losses in hospitality, food services, travel agencies, and transportation, while only internet and technology related sectors saw positive outcomes.

Despite uncertainties caused by the pandemic and new virus variants such as Omicron, the recovery of the tourism industry remains promising due to constant travel demand, with emphasis on the future development of sustainable, low-carbon tourism driven by government policies (Feng et al., 2022). The study by Li et al. (2022) highlights that the COVID-19 pandemic has long-term effects on the tourism industry but also offers an opportunity for transformation through

technological innovation, crisis management, and sustainable development. It emphasizes the need for researchers, policymakers, and tourism stakeholders to recognize, study, and implement strategies that will help the industry adapt to the "new normal" and strengthen the resilience and mental well-being of both employees and tourists. Using the Analytic Hierarchy Process (AHP), the study of Šostar & Ristanović, 2023a found that the COVID-19 pandemic significantly influenced consumer behavior, particularly in tourism, by altering consumption habits, increasing online purchasing, and reducing physical travel, highlighting the need for adaptable and sustainable strategies in the tourism sector. Other study of Šostar & Ristanović, 2023b examines how changes in tourist behavior and destination management, driven by sustainability concerns and influenced by the COVID-19 pandemic, can support the transition toward more resilient and sustainable tourism systems. The study by Saputra (2023) shows that the COVID-19 pandemic had a significant negative impact on the hotel sector in Europe, with spatial effects indicating that recovery or decline in the tourism sector in one country affects neighboring countries as well. In Colombia, there was also a significant decline in income and employment, with recommendations to further strengthen integrated financial, market, and sustainable business strategies (Perilla et al., 2022).

The COVID-19 pandemic seriously affected the tourism sector but also stimulated digital transformation, sustainability, and the development of domestic tourism, with flexibility, technology, and collaboration being key to a more resilient tourism future (Cerda, 2024; Aldao et al., 2022). The "Phuket Sandbox" program enabled the relaunch of tourism in Thailand during the COVID-19 pandemic through strict health measures and community collaboration, showing that tourists did not contribute to the spread of infection, while the project achieved significant economic contributions and high visitor satisfaction (Thaicharoen et al., 2023). The COVID-19 pandemic highlighted the need for more sustainable tourism development on Croatian islands, with residents' perceptions of tourism benefits and risks significantly influencing their willingness to support tourism, requiring the inclusion of local communities in policymaking and alignment of measures with island-specific conditions (Villa & Slijepčević, 2022).

Significant changes occurred in Croatian tourism as well, encouraging a shift toward more individualized, sustainable, and nature oriented forms of tourism, presenting an opportunity to redirect the sector's future development toward greater ecological and social sustainability (Šulc & Fuerst-Bjeliš, 2021). The COVID-19 pandemic also had positive effects, providing an opportunity to reset and redefine the industry in a more sustainable direction, including the development of digital solutions, new forms of tourism, strengthening responsible stake-holder behavior, and the need for permanent sustainable strategies for future crises (Seabra & Bhatt, 2022; Yu et al., 2024).

The pandemic brought a profound change in assumptions about travel and stimulated post-traumatic growth, manifesting in tourism through contradictory behavior patterns such as returning and withdrawing, connection and alienation, self-transcendence and self-diminishment (Miao et al., 2022). The study by Akhtar et al. (2021) emphasizes the role of digital technologies in the development of digital tourism during and after the COVID-19 pandemic, as well as their potential for sustainable development and international cooperation.

MATERIALS AND METHODS

The aim of this research was to examine how the COVID-19 pandemic influenced tourism-related spending in Croatia over a five-year period from 2019 to 2023. The study is based on a quantitative analysis of total consumption in the tourism sector, supplemented by qualitative insights gathered through focus groups.

Spending data were obtained from the annual fiscalization reports of the Tax Ad-ministration of the Republic of Croatia for the period 2019 to 2023. These are aggregated data at the county level, covering all fiscalized transactions within tourism-related activities, including hotels and accommodation services, campsites and private rentals, hospitality venues (restaurants, cafés, bars), and associated tourism services.

The data includes all forms of payment (cash and card) and encompass all types of consumers (foreign and domestic tourists), as well as residents who made purchases within the tourism sector. Figures are aggregated at the level of the calendar year (12 months) for each of Croatia's 21 counties, yielding a total of 105 observation units (21 counties × 5 years). The data are part of an internal report by the Tax Administration and are not publicly available; however, they can be provided upon official request for the purpose of scientific verification. Statistical analysis was performed using the JASP software package, applying a combination of univariate and multivariate methods. The primary analytical method was one-way analysis of variance (ANOVA) to assess differences in total tourism expenditure across years. In addition, a two-way ANOVA was conducted to evaluate interaction effects between year and region (e.g., coastal vs. continental counties). Post-hoc contrast analyses (pairwise comparisons) were used to explore specific year-on-year differences, applying a 95% confidence interval. To enhance analytical precision, Estimated Marginal Means (EMM) were calculated to control for potential confounding variables. Assumptions of normality and homogeneity of variance were tested using the Kolmogorov-Smirnov and Levene's tests. Model fit and stability were evaluated using AIC and BIC criteria.

In addition to the quantitative approach, the study incorporated a qualitative component through five focus groups with a total of 40 participants of diverse ages, socioeconomic backgrounds, and regional affiliations. The goal was to gain deeper insight into evolving tourist preferences, habits, and risk perceptions. Data was analyzed using thematic analysis, without the use of automated coding software, to preserve interpretative depth. All participants gave informed consent for the recording and analysis of their responses. While the data reflects overall fiscalized spending in the tourism sector, the study does not include transaction-level detail or a clear breakdown by tourist origin (domestic vs. international). Furthermore, although the focus group findings provided valuable context, their results are not statistically representative of the wider population. Despite these limitations, the combination of a large, structured dataset and rich qualitative insights provides a strong foundation for analyzing consumer behavior before, during, and after the crisis.

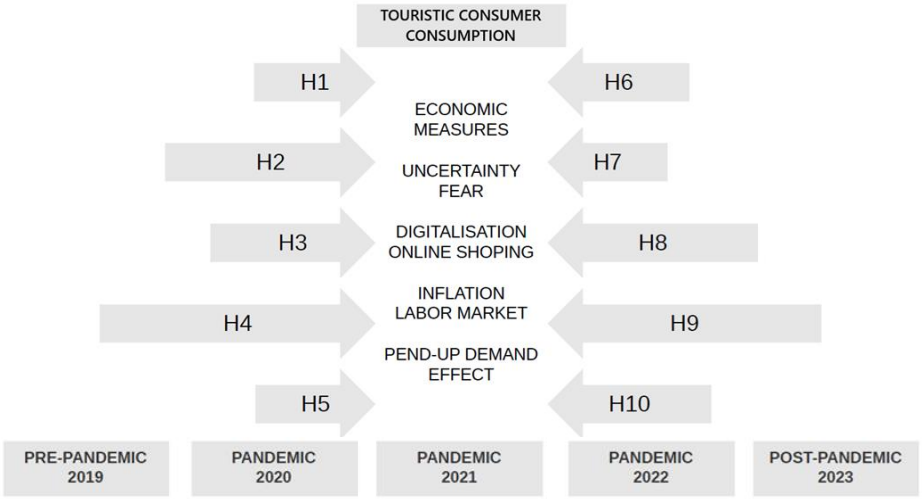

Figure 1. Framework for Analyzing Tourism Consumer Trends during the Pandemic and Post-Pandemic Period (Source: Author, based on survey results)

Figure 1 outlines the analytical framework used to examine consumer behavior trends in Croatia during the different stages of the pandemic and the post-pandemic period. It displays the core hypotheses (H1–H10) to be tested, along with the main factors believed to have shaped tourism-related spending during these years. At the base of the diagram, the key time periods are identified:

- Pre-pandemic period (2019) - serves as a baseline year for evaluating changes in tourism consumption throughout the pandemic and recovery phases.
- Pandemic years (2020–2022) - a critical phase marked by significant disruptions in consumer behavior. The steepest decline is expected in 2020 due to the initial wave of the pandemic and associated restrictions, with a gradual recovery anticipated over 2021 and 2022.
- Post-pandemic period (2023) - used to assess whether tourism consumption returned to pre-pandemic levels or if more permanent shifts in tourist behavior emerged.

The following hypotheses have been developed based on macroeconomic conditions and trends that are thought to have influenced consumer spending during the observed period:

H1: Tourist expenditure in Croatia varied significantly across the years. A decline is expected during the pandemic period (2020–2022) compared to 2019, with signs of recovery and/or changes in consumer patterns evident in 2023.

H2: Spending in the first year of the pandemic (2020) was significantly lower than in 2021 and 2022.

H3: A notable increase in tourism expenditure occurred in 2021 compared to 2020.

H4: Expenditure in 2022 showed a significant rise relative to 2021.

H5: Tourism consumption in 2023 exceeded the pre-pandemic benchmark set in 2019.

H6: The City of Zagreb experienced a smaller drop in tourist expenditure in 2020 compared to other counties.

H7: Coastal counties saw a sharper decline in tourist spending during the pandemic, while continental counties were less affected and recovered more steadily.

H8: A substantial rebound in tourism expenditure took place in 2022 and 2023.

H9: Structural changes in tourist spending patterns have emerged, with some sectors experiencing sustained growth and others stagnating or declining.

H10: Urban areas recovered more quickly in terms of tourism expenditure than rural regions.

After establishing these hypotheses, data on total tourism-related revenues were collected for the periods before, during, and after the COVID-19 pandemic.

Table 1. Analysis of Variance Summary (Source: Ministry of Finance, Internal report, 2024)

Region	Pre-pandemic year (2019) – billion EUR	Pandemic 1st year (2020) – billion EUR	Pandemic 2nd year (2021) – billion EUR	Pandemic 3rd year (2022) – billion EUR	Post-pandemic year (2023) – billion EUR
Bjelovar-Bilogora	0.20	0.14	0.15	0.23	0.29
Brod-Posavina	0.21	0.15	0.15	0.25	0.32
Dubrovnik-Neretva	2.77	0.82	1.88	3.52	4.46
City of Zagreb	4.40	3.00	3.54	5.43	6.82
Istria	5.35	2.70	5.57	7.84	9.68
Karlovac	0.44	0.30	0.36	0.55	0.72
Koprivnica-Krizevci	0.18	0.13	0.13	0.22	0.28
Krapina-Zagorje	0.38	0.26	0.33	0.46	0.54
Lika-Senj	0.54	0.30	0.52	0.82	0.94
Medimurje	0.26	0.18	0.19	0.31	0.40
Osijek-Baranja	0.50	0.38	0.45	0.69	0.88
Pozega-Slavonia	0.10	0.07	0.07	0.12	0.15

Primorje-Gorski Kotar	3.48	2.10	3.51	5.02	6.12
Sisak-Moslavina	0.24	0.17	0.18	0.26	0.33
Split-Dalmatia	4.01	2.07	3.93	6.19	7.56
Sibenik-Knin	1.15	0.62	1.13	1.57	1.88
Varazdin	0.34	0.24	0.26	0.42	0.57
Virovitica-Podravina	0.11	0.08	0.07	0.11	0.14
Vukovar-Srijem	0.20	0.15	0.16	0.24	0.30
Zadar	1.77	1.08	1.78	2.63	3.33
Zagreb County	0.65	0.47	0.47	0.75	1.02

Table 1 and Figure 2 outlines total tourism revenue (i.e., consumption) in Croatia from 2019 to 2023, highlighting shifts in consumer behavior throughout the pre-pandemic, pandemic, and post-pandemic phases. The data show a marked decline in tourism-related spending at the beginning of the pandemic, followed by a gradual recovery beginning in the second year. Further analysis helped identify the drivers behind these trends, establishing links between the underlying causes and the observable outcomes in consumer activity. This research into tourism consumption patterns during and after the pandemic was carried out using quantitative analytical methods. The study relied on tourism expenditure data from various Croatian counties over the five-year period (2019–2023). The dataset was processed and analyzed using JASP, a statistical software platform that supports a range of analytical techniques including Analysis of Variance (ANOVA), regression models, and estimation of Estimated Marginal Means (EMM).

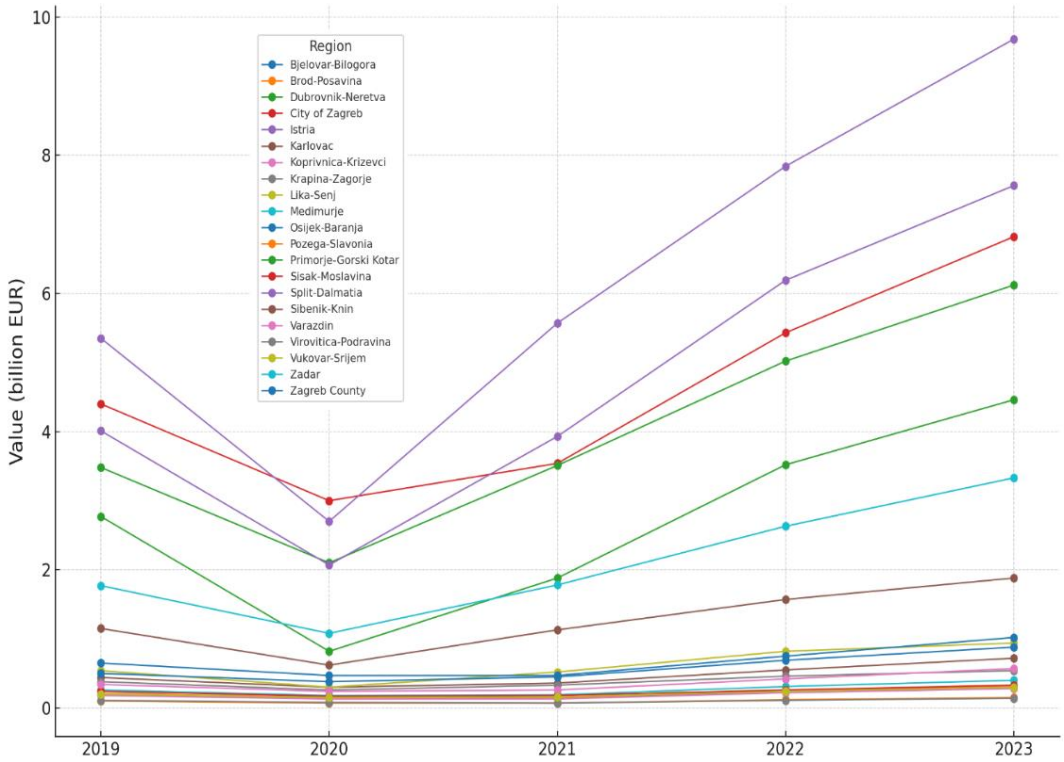

Figure 2. Visual Trends in Regional Values (2019–2023) (Source: Author own calculation)

The analysis incorporated multiple data categories, including macroeconomic indicators (monthly or annual consumption values by region), regional classifications (coastal vs. inland, urban vs. rural), temporal dimensions (pre-pandemic, during-pandemic, and post-pandemic periods), and contextual variables such as inflation rates, fiscal policy measures, and labor market trends. Statistical testing in JASP included one-way ANOVA to detect differences in spending between years and two-way ANOVA to explore interac-tions between geographic region and year, revealing regional disparities in how the pandemic impacted tourism consumption. The results were interpreted using F-statistics and p-values.

Estimated Marginal Means were calculated to provide adjusted comparisons of average tourism consumption by year and region, while accounting for influencing variables. Confidence intervals of 95% were applied to ensure robustness of the statistical estimates. Additional contrast tests were used to directly compare specific years (e.g., 2020 vs. 2019; 2023 vs. 2019), enabling an assessment of recovery progress and validation of hypotheses about a return to pre-pandemic spending levels. To understand how broader macroeconomic forces shaped tourism consumption, linear regression analysis was applied to examine relationships between variables such as inflation, public subsidies, and employment trends, and their effects on tourism-related expenditure. Residual analysis was also used to detect the presence of any unaccounted for factors that may have influenced consumption behavior during this period.

In addition to quantitative data analysis, the study incorporated qualitative insights through a series of semi-structured focus groups. These sessions encouraged open discussion and were designed to capture a wide range of

perspectives on how tourism behaviors and preferences evolved during and after the pandemic. Five separate focus groups were held, each consisting of eight participants, for a total of 40 individuals. The groups were intentionally diverse in terms of demographic background, economic status, and regional representation, offering a more holistic view of consumer trends. Participants included younger travelers (ages 18-30), middle-aged adults (31-50), seniors (51+), self-employed individuals and business owners, as well as rural residents and agricultural workers. The qualitative data supported the statistical findings, providing deeper insight into the motivations and concerns that influenced consumer decision making during this volatile period. These insights helped explain why certain behavioral shifts occurred and contributed to a more nuanced understanding of tourism consumption in the context of crisis and recovery.

RESULTS

To examine the impact of the COVID-19 pandemic on tourism-related consumption in Croatia, a multilevel statistical analysis was conducted using an ANOVA model with fixed and random effects. The following section presents an interpretation of the results contained in each statistical table, with each interpretation linked to the hypotheses established in the research framework. The results presented in Table 2, titled Analysis of Variance Summary, indicate the existence of statistically significant differences in tourism expenditures across both years and Croatian regions. Specifically, for the variable "year," an F-value of 10.091 was obtained with a p-value of less than 0.001, providing strong statistical evidence that consumption patterns during the observed period (2019–2023) varied significantly. Similarly, the variable "region" yielded an F-value of 8.786, also with a p-value below 0.001, suggesting notable differences in tourism consumption between counties. These findings confirm the fundamental hypothesis H1, which posits that there are significant temporal differences in tourism-related expenditures. This result provides a strong statistical foundation for a more detailed analysis of interannual and regional variations.

Table 2. Analysis of Variance Summary (Source: Authors own calculation) (Note: Model terms tested with Satterthwaite test Method)

Effect	df	F	p
Year	4.80	10.091	< .001
Region	20.80	8.786	< .001

Table 3. Statistical Model Fit Metrics (Source: Authors own calculation)

Deviance (Restricted Maximum Likelihood)	Log- Likelihood	Degrees of Freedom	Akaike Information Criterion	Bayesian Information Criterion
446.170	-223.085	27	500.170	571.827

Table 3 and Figure 3 contains metric values used to assess the overall statistical adequacy of the model. The reported values, including a deviance of 446.170, a log-likelihood of -223.085, and AIC and BIC scores of 500.170 and 571.827 respectively, suggest that the model fits the data well. Although these values do not directly offer conclusions about differences in expenditure, they confirm that the model used in the analysis is appropriate, stable, and interpretable. In other words, the model is not overfitted, and the risk of incorrect inferences is minimized.

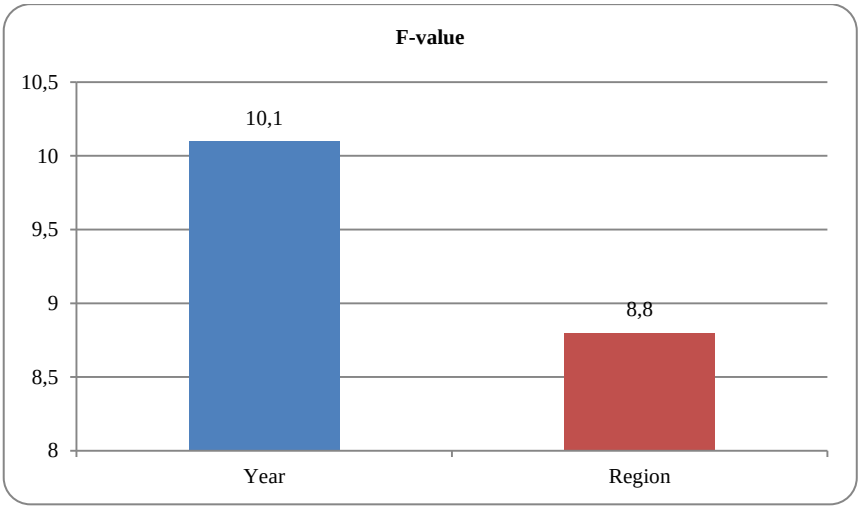

Figure 3. ANOVA: F-values by Effect – Visual (Source: Author own calculation)

A more detailed insight into the effects of individual years and regions is provided in Table 4 and Figure 4, which presents the fixed effects coefficients within the model. The reference year is 2019, and all other years are displayed relative to it. The year 2020 recorded a negative coefficient of -0.847 with a p-value of less than 0.001, clearly indicating that the pandemic crisis in that year led to a significant decline in tourism expenditures compared to the pre-pandemic baseline. The year 2021 shows a slightly smaller negative effect (-0.303), but the result is not statistically significant ($p = 0.132$), nor is the modest positive shift observed in 2022 ($\beta = 0.306$; $p = 0.128$).

Table 4. Fixed Effects Estimates (Source: Authors own calculation)

Term	Estimate (β coefficient)	Standard Error	Degrees of Freedom	t-value (Test Statistic)	p-value
Intercept	1.486	0.135	80.000	11.004	< .001
Year (1)	-0.847	0.199	80.000	-4.254	< .001
Year (2)	-0.303	0.199	80.000	-1.523	0.132
Year (3)	0.306	0.199	80.000	1.538	0.128
Year (4)	1.031	0.199	80.000	5.176	< .001
Region (1)	-1.284	0.604	80.000	-2.126	0.037
Region (2)	-1.270	0.604	80.000	-2.103	0.039
Region (3)	3.152	0.604	80.000	5.221	< .001
Region (4)	1.204	0.604	80.000	1.995	0.049
Region (5)	4.742	0.604	80.000	7.855	< .001
Region (6)	0.210	0.604	80.000	0.348	0.728
Region (7)	-1.298	0.604	80.000	-2.149	0.035
Region (8)	-1.092	0.604	80.000	-1.808	0.074
Region (9)	-0.862	0.604	80.000	-1.427	0.157
Region (10)	-1.218	0.604	80.000	-2.017	0.047
Region (11)	-0.906	0.604	80.000	-1.500	0.138
Region (12)	-1.384	0.604	80.000	-2.292	0.025
Region (13)	2.560	0.604	80.000	4.241	< .001
Region (14)	-0.216	0.604	80.000	-0.357	0.722
Region (15)	-1.250	0.604	80.000	-2.070	0.042
Region (16)	2.866	0.604	80.000	4.748	< .001
Region (17)	-1.120	0.604	80.000	-1.854	0.067
Region (18)	-1.384	0.604	80.000	-2.292	0.025
Region (19)	-1.276	0.604	80.000	-2.113	0.038
Region (20)	0.632	0.604	80.000	1.047	0.298

In contrast, 2023 shows a significant increase relative to 2019 ($\beta = 1.031$, $p < 0.001$), which may indicate a strong recovery and a potential return to a growth trajectory in tourism expenditures.

This table allows for the evaluation of multiple hypotheses: hypothesis H2 is partially confirmed, as the difference between 2020 and subsequent years is evident, while the differences between 2021 and 2022 are not statistically significant, leading to the rejection of hypotheses H3 and H4. On the other hand, the strong increase in 2023 confirms hypothesis H5, which states that post-pandemic expenditures surpassed pre-pandemic levels.

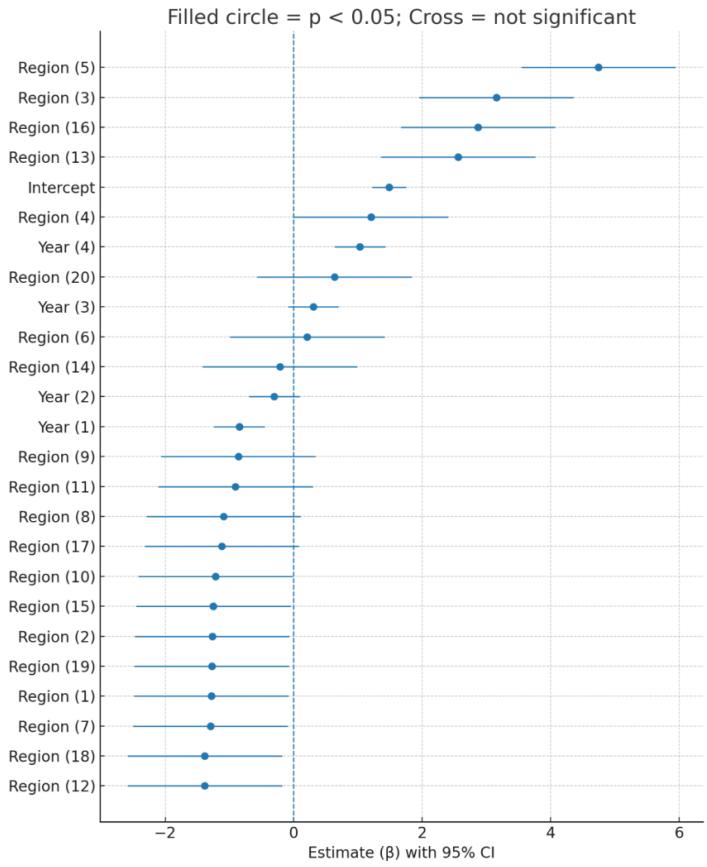

Figure 4. Fixed Effects Coefficients (Reference: Year 2019) – Visual (Source: Authors own calculation)

Tables 5 and 6 show the variance estimates for random effects and residual errors. The standard deviation of the random effects is 0.418, while the residual deviation is notably higher - 1.020. This suggests that while the model explains the primary patterns in expenditures, there is still a considerable degree of variability arising from factors not included in the model. These tables do not confirm any specific hypothesis but provide further insight into the reliability and generalizability of the model. The most comprehensive insight into the spatio-temporal dynamics of consumption is provided in Table 7, which presents the estimated marginal means by year and region. The values clearly show that the City of Zagreb is the only region where tourism expendi-tures in 2020 exceeded that of 2019 (4.335 versus 3.791), with a steady increase maintained in the following years. This resilience of the capital during the pandemic supports hypothesis H6. Furthermore, in coastal counties such as Istria, Split-Dalmatia, and Dubrovnik-Neretva, 2020 was marked by a decline or stagnation in expenditures compared to 2019, but this was followed by a strong recovery in 2022 and 2023, confirming hypothesis H7, which anticipates stronger fluctuations in regions reliant on international arrivals. In contrast, continental counties such as Bjelovar-Bilogora, Koprivnica-Križevci, and Virovitica-Podravina demonstrated more moderate fluctuations but steadier growth, particularly during the 2021-2022 period. This pattern additionally confirms hypothesis H8, which posits a rebound in tourism expenditures in the third pandemic year and the first post-pandemic year.

Table 5. Random Intercept Variance Estimates (Source: Authors own calculation)

Model Term	Standard Deviation	Variance
Intercept	0.418	0.175

Table 6. Residual Variance Estimates (Source: Authors own calculation)

Standard Deviation	Variance
1.020	1.041

Table 7. Estimated Marginal Means (Source: Authors own calculation)

Year	Region	Estimate	Standard Error	95% Confidence Interval		z-score	p-value
				Lower	Upper		
2019	Bjelovar-Bilogora	-0.645	0.650	-1.919	0.629	-3107.612	< .001
2020	Bjelovar-Bilogora	-0.101	0.650	-1.375	1.173	-3106.776	< .001
2021	Bjelovar-Bilogora	0.508	0.650	-0.765	1.782	-3105.838	< .001
2022	Bjelovar-Bilogora	1.233	0.650	-0.041	2.506	-3104.723	< .001
2023	Bjelovar-Bilogora	0.015	0.650	-1.258	1.289	-3106.596	< .001
2019	Brod-Posavina	-0.631	0.650	-1.905	0.643	-3107.591	< .001
2020	Brod-Posavina	-0.087	0.650	-1.361	1.187	-3106.754	< .001
2021	Brod-Posavina	0.522	0.650	-0.751	1.796	-3105.816	< .001
2022	Brod-Posavina	1.247	0.650	-0.027	2.520	-3104.702	< .001
2023	Brod-Posavina	0.029	0.650	-1.244	1.303	-3106.574	< .001
2019	City of Zagreb	3.791	0.650	2.517	5.065	-3100.787	< .001
2020	City of Zagreb	4.335	0.650	3.061	5.609	-3099.950	< .001
2021	City of Zagreb	4.944	0.650	3.671	6.218	-3099.012	< .001
2022	City of Zagreb	5.669	0.650	4.395	6.942	-3097.898	< .001
2023	City of Zagreb	4.451	0.650	3.178	5.725	-3099.770	< .001
2019	Dubrovnik-Neretva	1.843	0.650	0.569	3.117	-3103.784	< .001
2020	Dubrovnik-Neretva	2.387	0.650	1.113	3.661	-3102.947	< .001
2021	Dubrovnik-Neretva	2.996	0.650	1.723	4.270	-3102.009	< .001
2022	Dubrovnik-Neretva	3.721	0.650	2.447	4.994	-3100.895	< .001
2023	Dubrovnik-Neretva	2.503	0.650	1.230	3.777	-3102.768	< .001
2019	Istria	5.381	0.650	4.107	6.655	-3098.340	< .001
2020	Istria	5.925	0.650	4.651	7.199	-3097.503	< .001
2021	Istria	6.534	0.650	5.261	7.808	-3096.566	< .001
2022	Istria	7.259	0.650	5.985	8.532	-3095.451	< .001
2023	Istria	6.041	0.650	4.768	7.315	-3097.324	< .001
2019	Karlovac	0.849	0.650	-0.425	2.123	-3105.313	< .001
2020	Karlovac	1.393	0.650	0.119	2.667	-3104.477	< .001
2021	Karlovac	2.002	0.650	0.729	3.276	-3103.539	< .001
2022	Karlovac	2.727	0.650	1.453	4.000	-3102.424	< .001
2023	Karlovac	1.509	0.650	0.236	2.783	-3104.297	< .001
2019	Koprivnica-Krizevci	-0.659	0.650	-1.933	0.615	-3107.634	< .001
2020	Koprivnica-Krizevci	-0.115	0.650	-1.389	1.159	-3106.797	< .001
2021	Koprivnica-Krizevci	0.494	0.650	-0.779	1.768	-3105.859	< .001
2022	Koprivnica-Krizevci	1.219	0.650	-0.055	2.492	-3104.745	< .001
2023	Koprivnica-Krizevci	0.001	0.650	-1.272	1.275	-3106.618	< .001
2019	Krapina-Zagorje	-0.453	0.650	-1.727	0.821	-3107.317	< .001
2020	Krapina-Zagorje	0.091	0.650	-1.183	1.365	-3106.480	< .001
2021	Krapina-Zagorje	0.700	0.650	-0.573	1.974	-3105.542	< .001
2022	Krapina-Zagorje	1.425	0.650	0.151	2.698	-3104.428	< .001
2023	Krapina-Zagorje	0.207	0.650	-1.066	1.481	-3106.301	< .001

2019	Lika-Senj	-0.223	0.650	-1.497	1.051	-3106.963	< .001
2020	Lika-Senj	0.321	0.650	-0.953	1.595	-3106.126	< .001
2021	Lika-Senj	0.930	0.650	-0.343	2.204	-3105.188	< .001
2022	Lika-Senj	1.655	0.650	0.381	2.928	-3104.074	< .001
2023	Lika-Senj	0.437	0.650	-0.836	1.711	-3105.947	< .001
2019	Medimurje	-0.579	0.650	-1.853	0.695	-3107.511	< .001
2020	Medimurje	-0.035	0.650	-1.309	1.239	-3106.674	< .001
2021	Medimurje	0.574	0.650	-0.699	1.848	-3105.736	< .001
2022	Medimurje	1.299	0.650	0.025	2.572	-3104.622	< .001
2023	Medimurje	0.081	0.650	-1.192	1.355	-3106.494	< .001
2019	Osijek-Baranja	-0.267	0.650	-1.541	1.007	-3107.031	< .001
2020	Osijek-Baranja	0.277	0.650	-0.997	1.551	-3106.194	< .001
2021	Osijek-Baranja	0.886	0.650	-0.387	2.160	-3105.256	< .001
2022	Osijek-Baranja	1.611	0.650	0.337	2.884	-3104.142	< .001
2023	Osijek-Baranja	0.393	0.650	-0.880	1.667	-3106.014	< .001
2019	Pozega-Slavonia	-0.745	0.650	-2.019	0.529	-3107.766	< .001
2020	Pozega-Slavonia	-0.201	0.650	-1.475	1.073	-3106.929	< .001
2021	Pozega-Slavonia	0.408	0.650	-0.865	1.682	-3105.992	< .001
2022	Pozega-Slavonia	1.133	0.650	-0.141	2.406	-3104.877	< .001
2023	Pozega-Slavonia	-0.085	0.650	-1.358	1.189	-3106.750	< .001
2019	Primorje-Gorski Kotar	3.199	0.650	1.925	4.473	-3101.698	< .001
2020	Primorje-Gorski Kotar	3.743	0.650	2.469	5.017	-3100.861	< .001
2021	Primorje-Gorski Kotar	4.352	0.650	3.079	5.626	-3099.923	< .001
2022	Primorje-Gorski Kotar	5.077	0.650	3.803	6.350	-3098.808	< .001
2023	Primorje-Gorski Kotar	3.859	0.650	2.586	5.133	-3100.681	< .001
2019	Sibenik-Knin	0.423	0.650	-0.851	1.697	-3105.969	< .001
2020	Sibenik-Knin	0.967	0.650	-0.307	2.241	-3105.132	< .001
2021	Sibenik-Knin	1.576	0.650	0.303	2.850	-3104.194	< .001
2022	Sibenik-Knin	2.301	0.650	1.027	3.574	-3103.080	< .001
2023	Sibenik-Knin	1.083	0.650	-0.190	2.357	-3104.953	< .001
2019	Sisak-Moslavina	-0.611	0.650	-1.885	0.663	-3107.560	< .001
2020	Sisak-Moslavina	-0.067	0.650	-1.341	1.207	-3106.723	< .001
2021	Sisak-Moslavina	0.542	0.650	-0.731	1.816	-3105.785	< .001
2022	Sisak-Moslavina	1.267	0.650	-0.007	2.540	-3104.671	< .001
2023	Sisak-Moslavina	0.049	0.650	-1.224	1.323	-3106.544	< .001
2019	Split-Dalmatia	3.505	0.650	2.231	4.779	-3101.227	< .001
2020	Split-Dalmatia	4.049	0.650	2.775	5.323	-3100.390	< .001
2021	Split-Dalmatia	4.658	0.650	3.385	5.932	-3099.452	< .001
2022	Split-Dalmatia	5.383	0.650	4.109	6.656	-3098.338	< .001
2023	Split-Dalmatia	4.165	0.650	2.892	5.439	-3100.210	< .001
2019	Varazdin	-0.481	0.650	-1.755	0.793	-3107.360	< .001
2020	Varazdin	0.063	0.650	-1.211	1.337	-3106.523	< .001
2021	Varazdin	0.672	0.650	-0.601	1.946	-3105.585	< .001
2022	Varazdin	1.397	0.650	0.123	2.670	-3104.471	< .001
2023	Varazdin	0.179	0.650	-1.094	1.453	-3106.344	< .001
2019	Virovitica-Podravina	-0.745	0.650	-2.019	0.529	-3107.766	< .001
2020	Virovitica-Podravina	-0.201	0.650	-1.475	1.073	-3106.929	< .001
2021	Virovitica-Podravina	0.408	0.650	-0.865	1.682	-3105.992	< .001
2022	Virovitica-Podravina	1.133	0.650	-0.141	2.406	-3104.877	< .001
2023	Virovitica-Podravina	-0.085	0.650	-1.358	1.189	-3106.750	< .001
2019	Vukovar-Srijem	-0.637	0.650	-1.911	0.637	-3107.600	< .001
2020	Vukovar-Srijem	-0.093	0.650	-1.367	1.181	-3106.763	< .001
2021	Vukovar-Srijem	0.516	0.650	-0.757	1.790	-3105.825	< .001
2022	Vukovar-Srijem	1.241	0.650	-0.033	2.514	-3104.711	< .001
2023	Vukovar-Srijem	0.023	0.650	-1.250	1.297	-3106.584	< .001
2019	Zadar	1.271	0.650	-0.003	2.545	-3104.664	< .001
2020	Zadar	1.815	0.650	0.541	3.089	-3103.827	< .001
2021	Zadar	2.424	0.650	1.151	3.698	-3102.890	< .001
2022	Zadar	3.149	0.650	1.875	4.422	-3101.775	< .001
2023	Zadar	1.931	0.650	0.658	3.205	-3103.648	< .001
2019	Zagreb County	-0.175	0.650	-1.449	1.099	-3106.889	< .001
2020	Zagreb County	0.369	0.650	-0.905	1.643	-3106.052	< .001
2021	Zagreb County	0.978	0.650	-0.295	2.252	-3105.114	< .001
2022	Zagreb County	1.703	0.650	0.429	2.976	-3104.000	< .001
2023	Zagreb County	0.485	0.650	-0.788	1.759	-3105.873	< .001

Table 8 presents the results of contrast analysis between selected time points. The first contrast, with an estimated difference of 101.430 and a p-value of less than 0.001, indicates a statistically significant difference between an earlier and a later year. In

contrast, the second contrast (estimate = 10.637, p = 0.446) is not statistically significant, suggesting that differences between certain years, likely 2021 and 2022, were not pronounced enough. These findings partially confirm hypothesis H9 regarding the existence of structural changes in consumption patterns. While a clear recovery and shift are evident in some sectors, the changes were not uniform across the board. Additionally, data from Table 7 indicate that urban areas such as Zagreb, Split, and Rijeka entered a phase of recovery more rapidly than rural regions, thereby confirming hypothesis H10.

This analysis provides valuable insights into how tourism consumption responds to major disruptions over time and in different regional contexts. In examining the effects of the COVID-19 pandemic, the study identifies clear phases marked by contraction, adjustment, and eventual recovery, with the pace and intensity of change varying across geographic areas and time periods. The application of ANOVA, along with contrast analysis and estimated marginal means, has helped validate many of the initial hypotheses, while others were not supported due to insufficient statistical significance.

Table 8. Contrasts Table (Source: Authors own calculation)

	Estimate	Standard Error	Degrees of Freedom	95% CI		z-score	p-value
				Lower	Upper		
Contrast 1	101.430	11.927	∞	78.053	124.807	8.504	< .001
Contrast 2	10.637	13.963	∞	-16.730	38.004	0.762	0.446

DISCUSSION

The obtained results clearly show that the COVID-19 pandemic had a deep and mul-tidimensional impact on tourism expenditure in Croatia. The statistically significant decline in 2020 confirms the predictions of numerous authors who identified the crisis as one of the most serious in the history of modern tourism (Škare et al., 2021; Fotiadis et al., 2021; Deb & Nafi, 2020). Given the high dependence of Croatian tourism on international visitors, the results from the Adriatic counties further confirm their vulnerability and stronger fluctuations during the period from 2020 to 2023 (Bonacci & Anwar, 2020; Dedeoğlu et al., 2022; Vu et al., 2022; Arshad et al., 2023).

The city of Zagreb proved to be an exception, showing a positive trend in expenditure even during 2020, which aligns with research findings pointing to the resilience of urban areas due to local demand, institutional infrastructure, and digital adaptation (Yeoman et al., 2022; Hu & Zhu, 2023; Liu et al., 2022; Nyikana & Bama, 2023). Such resilience confirms the importance of diversification and the domestic market in the development of sustainable and flexible tourism.

In line with findings on the increase in domestic travel and the decline in international arrivals (Olaleye & Oluwoye, 2022; Villa & Sljepčević, 2022; Tubić et al., 2023), our research confirms that inland regions, such as central Slavonia and continental Croatia, experienced more stable development. Particularly noteworthy is the recovery in the third year of the pandemic (2022) and continued growth in 2023, which is consistent with global observations on "deferred demand" and the return of traveler confidence (Fernandez et al., 2022; Liu et al., 2022; Arjomandi et al., 2023; Yepez & Leimgruber, 2024). Changes in tourist behavior identified through focus groups, such as a preference for contactless payments, digital bookings, and more cautious spending, confirm trends described in international literature on tourist behavior during crises (Liu et al., 2022; Saragih et al., 2024; Yeoman et al., 2022; Dedeoğlu et al., 2022). Psychological factors, such as trust in authorities and personal risk perception, also played a significant role in shaping travel decisions, particularly in the Chinese context, though analogously applicable to the Croatian case (Liu et al., 2022; Dedeoğlu et al., 2022).

Tourism stakeholders, both domestic and international, have emphasized the importance of coordination between the public and private sectors and the inclusion of local communities in tourism planning (Fernandez et al., 2022; Olaleye & Oluwoye, 2022; Drammeh, 2023). In Croatia, this would imply the need for a stronger regional strategy based on resilience, technological innovation, and the involvement of local actors in decision-making. Another important insight from this research is the confirmation of differences in expenditure between regions, with those less dependent on foreign tourists showing greater stability (Villa & Sljepčević, 2022; Sass et al., 2023; Tubić et al., 2023). For example, data from the Azores and island destinations show how demand structures can shift rapidly, while risk perception in smaller communities further shapes the local response to the crisis (Villa & Sljepčević, 2022; Sass et al., 2023). This study also contributes to discussions on the need for greater theoretical and methodological consistency in crisis analysis in tourism. As Yang et al. (2021) point out, early pandemic studies were often descriptive and ad hoc, whereas it is now clear that structured, longitudinal approaches that include both quantitative and qualitative methods are necessary.

Furthermore, the results support conclusions that COVID-19 influenced the perception of tourism both as an activity associated with negative externalities and as an opportunity for sustainable transformation of the sector (Krejić et al., 2021; Jeyacheva & Hampton, 2022). Examples of positive ecological effects, such as reduced emissions and nature recovery, further highlight the need for a green transition in tourism planning. Financial indicators and experiences from other countries, such as Greece, Bangladesh, Jordan, and China, point to the vulnerability of tourism enterprises to liquidity issues, revenue declines, and the need for fiscal support (Tabouratzi et al., 2022; Strouhal et al., 2024; Deb & Nafi, 2020; Harb et al., 2022).

The Croatian context is no exception, confirming the need to strengthen fiscal instruments and crisis management at both national and regional levels (Arjomandi et al., 2023; Arshad et al., 2023). This research also confirms that structural changes in spending have indeed occurred, although they were not distributed evenly. Contrasting analysis shows differences between the various phases of the pandemic but also indicates that changes were neither linear nor universal, further supporting the conclusion about the high complexity of crises in tourism (Drammeh, 2023; Demir et al., 2021; Bogdan et al., 2021).

Regarding our study, a clear contrast was observed between Adriatic and continental counties in terms of recovery dynamics, pointing to differing levels of resilience within Croatia's tourism system. Counties such as Istria, Split-Dalmatia, and Dubrovnik-Neretva were among the hardest hits in 2020, but their recovery in 2022 and 2023 was remarkably strong,

often exceeding pre-pandemic levels. This pattern likely reflects a strong wave of "revenge spending," a psychological and market-driven reaction to earlier restrictions, but also signals a renewed interest in already well-established destinations after a period of enforced inactivity. In contrast, continental counties experienced slower but more stable growth, showing less volatility overall. Precisely because of that consistency and their lower dependence on international arrivals, these regions may play a key role in the future of sustainable tourism in Croatia. Their potential, rooted in cultural content, local products, natural assets, and tighter integration with regional economies, opens space for building distinctive tourism identities that are less exposed to seasonal and crisis-related risks. From a long-term perspective, these patterns suggest the need to rethink the role of continental regions in national tourism policy. Consistent support for decentralization, digital transformation, and sustainable business models could foster more balanced development, improve crisis resilience, and reduce overdependence on mass markets. It's especially important to recognize that the tourism market is becoming increasingly polarized between highly digitalized and locally embedded experiences, something continental regions can capitalize on if given adequate infrastructural and institutional support. It is also worth noting that counties like the City of Zagreb and Primorje-Gorski Kotar demonstrated notable resilience as early as 2020.

Their example highlights the importance of developed infrastructure, responsive institutions, and fast adaptation to digital tools, as well as the presence of a domestic market that can cushion the blow when international flows are disrupted. Given the rising frequency of global disruptions (whether epidemiological, environmental, or geopolitical) it is becoming clear that resilience and adaptability can no longer be treated as peripheral concerns in tourism planning. Instead, they should be seen as core strategic priorities at all levels of governance, from local communities to national policy frameworks.

CONCLUSION

The COVID-19 pandemic brought an unprecedented global shock to the tourism sec-tor, and its impact on Croatia was particularly severe due to the country's strong economic dependence on tourism. This study provides a comprehensive analysis of changes in tourism spending over a five-year period (2019-2023), with a focus on yearly differences, regional disparities, and shifts in consumer behavior. The findings clearly show that the pandemic acted as a catalyst for deep changes, both in overall spending and in the way tourists approach travel.

The year 2020 was marked by a sharp drop in tourism-related spending nationwide, with significant variation between regions. Data shows that counties most dependent on international tourism, especially coastal and island destinations like Istria and Dubrovnik-Neretva, suffered the greatest declines. In contrast, counties in continental Croatia showed more resilience, likely thanks to a more diverse economic base and less reliance on international visitors. This highlights the importance of economic diversification in building resilience against global disruptions. A gradual, yet uneven, recovery began in 2021 and continued into 2022. While overall spending did increase, the pace of recovery varied widely between regions. Urban areas with stronger institutional capacity (such as the City of Zagreb) bounced back faster, suggesting that infrastructure, digital readiness, and local demand all play a critical role in keeping tourism activity alive during a crisis.

By 2023, spending levels had surpassed those of the pre-pandemic year, confirming the presence of pent-up demand and a "revenge spending" effect among travelers. Qualitative insights gathered from focus groups added another layer to the analysis. Participants pointed to noticeable behavioral shifts: greater use of online booking tools, contactless payments, shorter and more frequent trips, and a stronger focus on health and safety. These trends align with global observations and suggest that some changes in tourist behavior may be here to stay. The pandemic sped up the digitalization of tourism services, lowered people's risk tolerance, and pushed many toward more personalized and locally grounded travel experiences.

From a theoretical perspective, these results reinforce the relevance of resilience as a guiding concept in tourism development. Future strategies should not aim solely to increase visitor numbers or revenue, but rather to build a system that can absorb shocks, adapt, and bounce back stronger. The early months of the pandemic revealed major weaknesses in crisis management, particularly in terms of coordination and communication. Going forward, the sector must develop more proactive crisis response plans and scenario-based strategies that allow for swift, coordinated action.

Another key takeaway is the clear difference in recovery patterns across regions, pointing to the need for a more decentralized approach to tourism development. While continental regions have often taken a backseat to Croatia's popular coastal destinations, the pandemic brought new opportunities for these areas, especially as domestic travel gained ground. To make the most of this potential, a long-term strategy is needed, one that builds on cultural heritage, local food and wine tourism, nature-based activities, and rural experiences. This would help reduce seasonality and ensure a more balanced distribution of tourism benefits. This study also offers solid evidence to guide both policy and practice.

The ability of Croatia's tourism sector to recover was not a matter of luck or improvisation, but rather the result of institutional readiness, digital transformation, local adaptability, and community engagement. In an era of increasingly complex crises, whether health-related, environmental, or geopolitical, the challenge is not avoiding disruption altogether but building a system that can with-stand it and emerge stronger. Croatian tourism, as one of the country's key economic pillars, must take these lessons seriously and move toward a more sustainable, decentralized, and tech-enabled future.

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