

The Impact of Environmental Sustainability on Travel Decisions Among the Younger Population in North Macedonia

Tanja Angelkova Petkova¹

¹ Goce Delcev University, Stip, North Macedonia, Faculty of Tourism and Business Logistics,
mail: tanja.angelkova@ugd.edu.mk, <https://orcid.org/0000-0003-1516-4457>

Abstract: This study investigates the impact of environmental sustainability on the travel decisions and consumer behavior of the younger population (aged 18 to 35) within the developing tourism market of North Macedonia. Driven by the need to understand how climate awareness translates into actual travel preferences, the research fills a distinct gap in South-Eastern European sustainable tourism literature. Utilizing a quantitative survey design with a sample of 200 respondents, data were gathered through a structured online questionnaire based on a 5-point Likert scale. Empirical analysis was executed using statistical methods including Pearson correlation, One-Way ANOVA, and Linear Regression. The results demonstrate a high level of environmental awareness among young consumers, with a strong and statistically significant positive correlation between personal eco-beliefs and destination choice ($r = 0.54$, $p < 0.01$). Furthermore, inferential testing revealed that 66% of respondents are willing to pay a higher premium for certified eco-friendly accommodations. ANOVA findings confirmed significant generational differences, highlighting that the youngest subgroup (aged 18-25) exhibits the highest sensitivity toward sustainability. This paper contributes to the literature by integrating the Theory of Planned Behaviour to map pro-environmental travel choices. Practically, the findings offer destination managers, hospitality practitioners, and policymakers actionable insights to design tailored green policies, improve local micro-infrastructure, and leverage digital green platforms to capture the expanding Generation Z and Millennial market segments.

Keywords: sustainability, environmental awareness, consumer behaviour, young travellers, Generation Z.

Introduction and Literature Review

Environmental sustainability has evolved from a progressive market niche into an essential paradigm shaping the global tourism and hospitality industry in 2026. Over the past decade, climate change and ecosystem degradation have forced a major re-evaluation of tourism growth strategies. Following the COVID-19 pandemic, consumer segments have undergone an ethical transformation, realigning their purchasing patterns with personal environmental values. As noted by Smith and Jones (2022), modern tourists do not merely seek leisure and physical comfort; they actively pursue an ethical alignment between their travel consumption and their environmental worldview. While extensive sustainable tourism research focuses on mature Western economies, a substantial research gap exists regarding how environmental considerations dictate choices in developing transitioning economies, specifically within South-Eastern Europe and North Macedonia. Understanding the young consumer segment consisting of Millennials (Generation Y) and Generation Z, defined operationally in this study as individuals aged 18 to 35 is critical, as they represent the future economic core of travel spending. Younger demographics demonstrate a heightened receptivity to pro-environmental behaviors, which manifests in their transport selection, accommodation preferences, and structural interactions with destinations.



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To systematically analyze these dynamics, this research applies the Theory of Planned Behaviour (TPB) (Ajzen, 1991) and the Value-Belief-Norm (VBN) theory (Stern et al., 1999) as conceptual frameworks. TPB posits that an individual's behavioral intentions are driven by attitudes, subjective norms, and perceived behavioral control. In a sustainable tourism context, a positive attitude toward environmental conservation directly feeds the intention to engage in responsible travel consumption. VBN theory complements this by suggesting that personal values activate moral obligations (norms), leading to pro-environmental outcomes. Despite high stated environmental awareness, literature frequently reports an "attitude-behaviour gap," where structural constraints like price, convenience, and insufficient infrastructure prevent consumers from translating eco-friendly beliefs into concrete purchasing decisions (Kollmuss & Agyeman, 2002).

Sustainable tourism necessitates a balanced model that meets current stakeholder needs without jeopardizing future socio-ecological capacities (World Tourism Organization [UNWTO], 2023). Previous empirical works show that young tourists possess a deeper systemic understanding of environmental issues and are uniquely willing to support eco-certified hospitality operations (Gretzel et al., 2020). Moreover, structural attributes of a location ranging from waste management programs to green spaces strongly dictate destination competitiveness among eco-conscious travellers (Bramwell & Lane, 2011). In North Macedonia, regional assessments highlight substantial untapped potential for green development; for instance, the Gevgelija region contains rich natural and geo-thermal assets suitable for non-mass alternative tourism forms (Angelkova & Kitanov, 2021). Historically, the restructuring of specific tourism forms along border regions has been identified as a strategic tool for economic and spatial revitalization (Angelkova, 2012). However, executing this transition requires contemporary updates that bridge digitalization and environmental management. Modern hospitality systems must simultaneously deploy technological innovations and green operational metrics to secure market relevance, as digital tools and certification criteria increasingly dictate consumer tracking and choice (Angelkova & Maglovska, 2025).

Digitalization plays a pivotal role in bridging information gaps for the young consumer. Mobile applications, online eco-aggregators, and specialized platforms allow travelers to transparently assess the carbon footprint and operational sustainability of providers (Buhalis & Law, 2008). Systems such as EcoBnb and Green Key act as vital informational channels, allowing young travellers to evaluate peer recommendations, cross-reference environmental performance indicators, and avoid greenwashed practices.

When choosing accommodation and transit, eco-conscious young travellers display unique behavioral modifications. They actively seek alternative lodging formats such as eco-hostels, certified eco-hotels, private homestays integrating recycling, and designated eco-camping zones. True sustainable accommodation requires robust baseline indicators, including renewable energy frameworks, active waste reduction, local procurement streams, and internationally recognized third-party eco-labels. Regarding transit, this segment tends to mitigate carbon emissions by reducing relying on commercial aviation and private cars, favoring public transit networks, rail systems, and active micro-mobility (walking, cycling, and electric scooters) within destination hubs.

Based on the theoretical frameworks and the reviewed literature, this study formulates the following testable hypotheses:

H1: There is a statistically significant positive correlation between the environmental awareness of young travellers and their destination choice.

H2: Young travellers level of environmental education is a significant predictor of their willingness to select and pay a premium for eco-certified accommodations.

H3: There are statistically significant differences in sustainability-driven travel attitudes across different age subgroups within the younger population.

The central aim of this research is to evaluate the direct impact of environmental sustainability on travel choices among the young population in North Macedonia, specifically identifying the motivational variables, behavioral intentions, and infrastructural barriers that shape their tourist profile.

Methodology

This study utilizes a deductive, quantitative research design to test the formulated hypotheses and evaluate the variables driving green travel decisions. Primary data collection was conducted via a structured online questionnaire distributed electronically across North Macedonia between January and March 2026. The target population was defined as residents of North Macedonia aged 18 to 35, capturing the core cohorts of Generation Z and younger Millennials. A non-probability convenience and snowball sampling method was implemented, yielding a final valid sample of N = 200 respondents.

The survey instrument comprised 20 closed-ended questions divided logically into four thematic sections: (1) Demographic Profiles, (2) Travel Habits and Transport Preferences, (3) Environmental Awareness and Perceptions, and (4) Travel Decisions and Economic Willingness-to-Pay (WTP). Behavioral and attitudinal metrics were captured utilizing a standard 5-point Likert scale, ranging from 1 (Strongly Disagree / Lowest Importance) to 5 (Strongly Agree / Highest Importance), alongside several categorical and dichotomous choice questions.

Prior to widespread distribution, a pilot test with 15 respondents was conducted to ensure structural and linguistic clarity. Internal consistency and reliability of the Likert-scale blocks were verified using Cronbach's alpha, which generated a coefficient of 0.82, exceeding the accepted academic threshold of 0.70. Statistical data processing was executed using inferential statistical packages. The analytical matrix included descriptive frequency tracking, Pearson bivariate correlation (r) to evaluate linear relationships between awareness and choices (H1), Multiple Linear Regression to measure predictive values of eco-education (H2), and One-Way Analysis of Variance (ANOVA) with Tukey's post-hoc tests to verify variance across distinct age cohorts (H3).

Results

The demographic distribution of the sampled population (N = 200) indicates a balanced representation across gender and age segments. Females accounted for 56% (n = 112) of the sample, while males represented 44% (n = 88). Age distribution was categorized into three

reflective cohorts: 18-24 years (46%, $n = 92$), 25-34 years (38%, $n = 76$), and a minor segment of respondents who had just transitioned past the primary youth boundary, classified as 35+ (16%, $n = 32$), as presented in Table 1.

Table 1: Demographic Distribution of the Sample

Category	Subcategory	Frequency (n)	Percentage (%)
Gender	Male	88	44.0%
	Female	112	56.0%
Age Cohort	18-24	92	46.0%
	25-34	76	38.0%
	35+	32	16%
Total		200	100.0%

Source: Author analysis

To address H1, a Pearson correlation analysis was conducted to examine the relationship between general environmental awareness scores and sustainable destination choice metrics. The results reveal a strong, statistically significant positive linear relationship between the two variables ($r = 0.54$, $p < 0.01$, $N = 200$). This empirical result supports H1, demonstrating that as a young traveler's internal environmental awareness increases, their explicit choice architecture shifts toward sustainable destination formats.

To test H2 and assess the economic dimension of green tourism consumer choices, respondents were queried on their economic choices regarding eco-certified accommodation providers. The descriptive data shows that a significant majority, 66.0% ($n = 132$) of the young travelers, explicitly stated they were willing to pay a premium price for accommodations demonstrating verified green practices and eco-labels. Conversely, 34.0% ($n = 68$) rejected price premiums due to budgetary constraints (Table 2).

Table 2: Willingness to Pay a Premium for Eco-Certified Accommodation

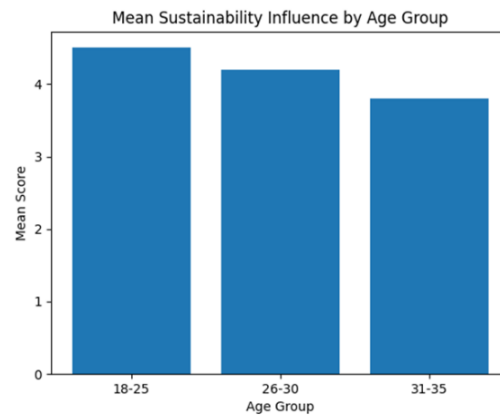
Response Option	Frequency (n)	Percentage (%)
Willing to pay a higher price	132	66.0%
Not willing to pay a higher price	68	34.0%
Total	200	100.0%

Source: Author analysis

To determine if the level of environmental education acts as a valid predictor for selecting eco-accommodations, a simple linear regression was performed. The model specified Environmental Education as the independent variable and Eco-Accommodation Choice as the dependent variable. The regression model was statistically significant ($F(1, 198) = 24.35$, $p < 0.001$, $R^2 = 0.11$), with environmental education accounting for 11% of the total variance in accommodation choice. The standardized coefficient was highly significant ($\hat{\beta}^2 = 0.33$, $t = 4.93$, $p < 0.001$), validating H2 and confirming that formal and informal eco-education drives green hospitality consumption.

To examine structural variations in attitudes among different age subgroups (H3), a One-Way ANOVA was executed. The dependent variable was the Mean Sustainability Influence Score (calculated across the environmental values items), tested against the three age brackets. The ANOVA model revealed statistically significant differences between the groups ($F(2, 197) = 14.82$, $p < 0.001$, $\hat{f} \cdot \hat{A}^2 = 0.13$).

Graph 1: Mean Sustainability Influence Score by Age Group



Source: Author analysis

HSD post-hoc test indicated that the youngest age group (18-24 years, $M = 4.50$, $SD = 0.42$) exhibited a significantly higher sustainability concern score compared to both the 25-34 group ($M = 4.20$, $SD = 0.51$, $p < 0.05$) and the 35+ group ($M = 3.80$, $SD = 0.63$, $p < 0.001$). This confirms H3, indicating that sustainability concern is highly concentrated within the youngest Generation Z.

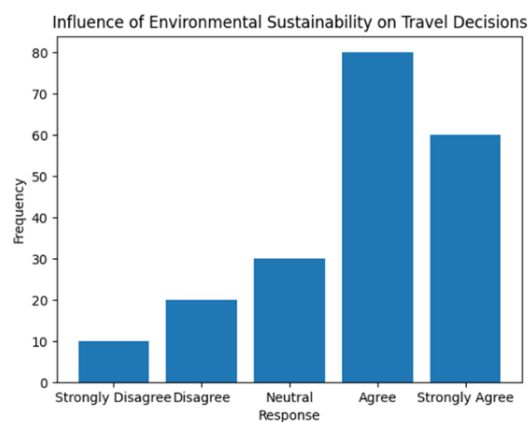
Table 3 evaluates the specific underlying motivational factors directing destination selection on a 1-5 scale. "Nature conservation" emerged as the dominant motivational driver ($M = 4.62$, $SD = 0.45$), closely followed by the desire for authentic "Local food" experiences ($M = 4.30$, $SD = 0.52$). "Low cost," while relevant, achieved a substantially lower relative importance threshold ($M = 3.15$, $SD = 0.88$).

Table 3: Analysis of Motivations for Destination Choice

Motive	Mean Value (1-5)	Standard Deviation
Nature conservation	4.62	0.45
Local food	4.30	0.52
Low cost	3.15	0.88

Source: Author analysis

Graph 2: Distribution of Responses on Overall Sustainability Influence



Source: Author analysis

The visual data in Graph 2 confirms the skew towards positive alignment, with 140 out of 200 respondents selecting either "Agree" (n = 80) or "Strongly Agree" (n = 60) when assessing whether environmental sustainability directly governs their overall travel decision architecture.

Discussion

The empirical findings generated from this sample offer critical insights into the eco-tourist profile of young consumers in North Macedonia. The verification of H1 ($r = 0.54$) proves that environmental awareness is not merely abstract sentiment but actively shapes travel planning. This aligns with the baseline assumptions of the Theory of Planned Behaviour, where strong pro-environmental attitudes foster clear behavioral intentions (Ajzen, 1991). The results match the findings of Miller (2020), who demonstrated that structured environmental education serves as a key predictive baseline for long-term sustainable choices. The young consumer segment in North Macedonia is shifting away from passive tourism consumption toward an active, value-driven framework where natural heritage preservation is closely linked to service provider ethics (Brown, 2021).

However, interpreting these findings requires addressing the "attitude-behaviour gap" common in sustainable tourism research (Kollmuss & Agyeman, 2002). While 66% of respondents report a willingness to pay higher premiums for eco-certified operations (Table 2), actual purchasing behavior may be constrained by market realities. Self-reported survey instruments are susceptible to social desirability bias, where participants overstate their ethical commitments to align with socio-environmental norms. In North Macedonia, this gap is widened by severe macro-economic and infrastructural constraints. While young travelers express an ideological preference for green alternatives, the domestic market lacks widespread, affordable eco-certified accommodation options and structured eco-labels, often turning price into a deciding barrier for budget-constrained youth.

Furthermore, the confirmation of H3 via ANOVA highlights a sharp generational divide. The youngest bracket (18-24 years) demonstrated the most intensive sensitivity to green mandates ($M = 4.50$). This demographic group has grown up amid global climate justice movements, and their consumption patterns reflect a deeper internalization of ecological limits than older Millennials (Brown, 2021). Therefore, a uniform marketing approach targeting "youth" is structurally flawed; destination management organizations (DMOs) must isolate Generation Z from older Millennials to properly align their digital marketing and green communication strategies.

Barriers and Challenges

Accelerating sustainable tourism in North Macedonia faces several systemic challenges. The primary obstacle is limited green infrastructure (Radio MOF, 2026). Outside major urban centers, public transport links are inefficient, regional recycling systems are rare, and integrated pedestrian or bicycle lanes are almost non-existent. These structural deficits restrict travelers' ability to act on their green intentions, forcing reliance on carbon-intensive transit.

Secondly, cost remains a critical limiting factor. Sustainable accommodation options and organic local supply chains frequently command price premiums that conflict with the lower disposable income of Macedonian youth. Finally, a significant information deficit persists.

Many regional hospitality operators engage in sustainable activities (such as local sourcing or water reduction) but fail to secure eco-labels or digitally communicate these practices, making it difficult for eco-conscious consumers to discover them.

Conclusion and Future Research Directions

This study confirms that environmental sustainability is an important factor shaping travel decisions among the younger population in North Macedonia. The analysis confirms that younger travellers, particularly Generation Z, are increasingly seeking to minimize their ecological footprint by selecting eco-certified lodgings, demanding natural heritage conservation, and turning to digital green platforms. Consequently, green management is no longer an optional promotional niche; it is a baseline requirement for long-term market competitiveness (Angelkova & Maglovska, 2025).

To capitalize on these trends, policymakers and private operators must implement targeted interventions:

1. Infrastructure: Municipalities should invest in regional green micro-mobility, synchronized public transit links, and accessible waste-separation networks.
2. Certification and Standards: Hospitality managers must pursue credible third-party eco-labels (e.g., Green Key) and actively promote these credentials digitally to attract young consumers (Buhalis & Law, 2008).
3. Local Integration: Tourism strategies should prioritize low-impact, slow-travel frameworks that emphasize local culinary assets and disperse tourism revenue outside mass hubs, supporting regional economic development (Angelkova, 2012; Republika, 2026).
4. Education and Digital Tools: Developing localized green travel applications can bridge information deficits, providing immediate data on regional carbon footprints and verified eco-accommodations.

This study has several limitations. First, the sample size (N = 200) and reliance on convenience sampling restricts universal generalization across the entire youth demographic of North Macedonia. Second, the study utilizes self-reported survey data, which may capture ideal intentions rather than actual booking behaviors. Future research should utilize longitudinal designs to track actual spending patterns and measure real-world choices rather than stated intentions. Additionally, cross-cultural studies comparing youth demographics across Western and Eastern Balkan nations could provide valuable insights into how macroeconomic variance impacts green consumer behavior.

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