

TOURISTS' PERCEPTION OF FOOD WASTE REDUCTION IN HOTELS: AN ANALYSIS FROM A GENDER PERSPECTIVE

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Abstract: *The study analyses the perceptions of Romanian tourists regarding food waste in hotels, highlighting gender differences. Women were found to be more aware of the problem, more receptive to visual messages and more willing to adopt sustainable behaviours, such as accepting small portions or supporting food donations. Men preferred token rewards, digital apps, and clear hotel policies. Both groups believe that the responsibility is shared between tourists and the hotel. The conclusions suggest the need for differentiated strategies, adapted to the gender profile, to increase the involvement of tourists in reducing food waste in hotel units.*

Key words: *food waste, hospitality industry, tourist perception, gender differences, sustainable behaviour*

1. Introduction

Reducing food waste has become a major concern in the hospitality industry, carrying substantial economic, social and environmental implications. As key stakeholders in this sector, hotels contribute significantly to the generation of food waste. The effectiveness of waste reduction strategies relies not only on operational interventions, but also on the attitudes and behaviours of consumers. In this context, tourists' perception of food waste plays a vital role in shaping sustainable policies that are responsive to real-world conditions.

The general objective of the study is to examine the perceptions of Romanian tourists regarding food waste in hotels. Specifically, it explores their level of awareness, gender-based differences in attitudes, factors influencing their engagement in waste reduction efforts, and their preferences for strategies that can be implemented by accommodation units. By analysing these aspects, the study seeks to enhance the understanding of the responsible tourist consumer profile and to support the shaping of viable, contextually appropriate measures for reducing food waste within the hotel industry.

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2. Literature Review

2.1. Food waste in the hospitality industry and its impact on sustainability

The hotel industry plays a key role in the tourism economy, but it also has a major environmental impact, particularly through the generation of food waste (Juvan et al., 2017; Wang et al., 2020; Kim et al., 2022). This mainly stems from overproduction, large portions and unsustainable tourist behaviour. Hotel buffet restaurants are particularly problematic, as their operation requires constant availability of food, which often results in significant amounts of food being thrown away (Zhu and Liu, 2024; McKercher et al., 2011; Goh et al., 2022; Juvan et al., 2017). Food waste has serious environmental implications, contributing to pollution and the emission of greenhouse gases such as methane (Kuo & Shih, 2016; Itthiophakorn, 2020; Hunter and Shaw, 2007). Moreover, it involves unnecessary consumption of resources such as water, energy and labour (Wang et al., 2018; Šenková et al., 2020). According the European Commission, approximately 90 million tons of food is thrown away every year, much of which would have been fit for consumption. Waste also has an important economic component: hotels suffer losses due to oversupply and inefficient resource management (Cardenas et al., 2024; Wang et al., 2021; Filimonau et al., 2019). Furthermore, waste disposal involves additional logistical and processing costs (Šenková et al., 2020). Research recommends adjustable portions, clear labelling, food and education of donors (McKercher et al., 2011; Šenková et al., 2020; Pearson et al., 2025; Sulong et al., 2022). Recent studies reveal the active role of tourists in reducing waste, highlighting the influence of personal motivation, perceived responsibility and cultural or demographic differences (Juvan et al., 2017; Zhu and Liu, 2024; Kim et al., 2022). In this context, promoting responsible consumption becomes essential for the sustainability of the hotel industry.

2.2. Gender differences in food waste management

Gender differences significantly influence how tourists perceive and manage food waste in hotels. Studies show that women are generally more aware of the environmental impact of waste and more frequently adopt sustainable behaviors (Šenková et al., 2020; Juvan et al., 2017; Zhu and Liu, 2024; Yao et al., 2024). These differences are explained by a higher level of empathy, concern for health and an active role in food management (Wang et al., 2020; Kim et al., 2022; Hunter and Shaw, 2007; McKercher et al., 2011). Preferring large portions and being more receptive to visual or reward-based solutions, men are more likely to waste food (Filimonau et al., 2021; Koiwanit and Filimonau, 2025; Pearson et al., 2025). On the other hand, women are more likely to support measures such as portion adjustment, food donation and educational campaigns (Wang et al., 2018; Goh et al., 2022). Therefore, hotel strategies should be tailored differently, taking into account the specific behaviours and motivations of each gender (Zhu and Liu, 2024; McKercher et al., 2011; Wang et al., 2018).

3. Material and Methods

The study aimed to examine the perceptions of Romanian tourists regarding food waste in hotels, with particular emphasis on gender differences and food consumption patterns in the context of tourism. In line with the overall purpose of the research, to explore tourists' perception of food waste in hotels, including a gender-based perspective, the following objectives were established:

- O1** - Assessing tourists' awareness of food waste in hotels;
- O2** - Analysis of gender differences in tourists' attitudes towards reducing food waste;
- O3** -Determining the factors that influence tourists' involvement in reducing food waste;
- O4** -Identifying tourists' preferences regarding strategies implemented by hotels to reduce waste;

The research was guided by four general hypotheses, formulated to lead the directions of investigation, without being statistically tested, due to the exploratory nature of the study. These hypotheses were the basis for the development of the questionnaire and the definition of the objectives, contributing to the analysis of Romanian tourists' perceptions regarding food waste in hotels, from the perspective of gender differences.

H1 - Most tourists are aware of the problem of food waste in hotels, but the level of awareness varies by gender, with women showing a higher concern than men.

H2 - Women are more willing than men to support and adopt responsible behaviours to reduce food waste in hotels.

H3 - Previous experiences and environmental education significantly influence tourists' attitudes towards reducing food waste, with this influence being more pronounced among women.

H4 - Tourists prefer passive and convenient measures to reduce food waste (e.g. adjustable portions, donations), with women being more receptive to sustainable initiatives than men.

In this article, exploratory statistical tests were used to highlight significant differences between variables, without testing previously formulated statistical hypotheses, in accordance with the exploratory nature of the study. These analyses had the role of supporting the interpretation of the data and identifying possible relevant associations between the variables analysed. Statistical analysis was used as a tool to support the interpretation of the data, within a descriptive and exploratory approach. The results obtained provided starting points for understanding the behaviours and perceptions of tourists, while also contributing to the outline of relevant directions for future research.

The research was based on an online survey, using the CAWI (Computer-Assisted Web Interviewing) method, through a questionnaire developed in Google Forms. It included 21 questions: a filter question, a question regarding the respondent's gender (for automatic redirection), 12 identical questions for men and women, and 6 demographic questions. Participants were automatically directed to the relevant sections based on their answer to the gender question, facilitating comparisons between the two groups.

The study included 187 people from Brasov County and other regions of Romania, who had stayed at least once in a hotel in the last year and had access to the internet. The sampling was non-probabilistic, combining convenience and snowball methods.

Sample Structure by gender and age

Table 1

	Gender	<i>n</i>	%	<i>Valid %</i>	<i>Cumulative %</i>
Valid	Male	88	47.1%	47.1%	47.1%
	Female	99	52.9%	52.9%	100.0%
	Total	187	100.0%	100.0%	
	Age	<i>n</i>	%	<i>Valid %</i>	<i>Cumulative %</i>
Valid	18 – 25 years	44	23.5%	23.5%	23.5%
	26 – 35 years	40	21.4%	21.4%	44.9%
	36 - 45 years	39	20.9%	20.9%	65.8%
	46 – 55 years	51	27.3%	27.3%	93.0%
	56 - 65 years	12	6.4%	6.4%	99.5%
	Over 65 years	1	0.5%	.5%	100.0%
	Total	187	100.0%	100.0%	

Table 1 shows the structure of the sample by gender and age. The distribution is relatively balanced, with a slight predominance of women (52.9%). The most numerous age category is 46–55 years old (27.3%), followed by the 18–25 years old (23.5%) and 26–35 years old (21.4%). The most poorly represented are the categories over 56 years old. Most respondents are married (51.3%) and have graduated from higher education (41.7%) or high school (33.7%), and most are employed (77.5%). In terms of income, the categories 3001–4000 lei and over 6001 lei predominate (25.7% each), and most come from urban areas (77.5%). The information was initially collected in raw format, and was subsequently processed and analysed in detail. IBM SPSS (Statistical Package for the Social Sciences) was used for statistical analysis. The research process included all stages, from questionnaire development to final data interpretation, in a clear and organized manner.

4. Results and Discussion

The results are presented according to the four research objectives, each being analysed based on the corresponding questions in the questionnaire. It should be noted that the structure chosen aims at a clear and relevant interpretation of the data, in accordance with the directions established during the study design stage.

O1 - Assessing tourists' awareness of food waste in hotels;

To assess tourists' awareness of food waste in hotels, the research analysed general perceptions, self-reported awareness and direct experiences. The questions addressed familiarity with the topic, attention paid during the stay and perception of the magnitude of the phenomenon. A question about direct observation of waste was also included, providing additional context on how the issue is perceived individually.

Awareness and observation of food waste in hotels, by gender

Table 2

	Male		Female		Test values		
	Mean	SD	Mean	SD	t-values	df	p-value
<i>Perceived level of awareness regarding food waste in hotels</i>	2.8864	1.21720	2.9596	1.06798	.461	185	.645
<i>How often respondents noticed food waste during their hotel stay</i>	3.1705	1.22389	3.0909	1.28427	.782	185	.435
<i>Perception of the frequency of food waste in hotels</i>	3.6932	1.11394	4.0606	1.15907	1.530	185	.128
Total answers	88		99				

Table 2 highlights perceptions of food waste in hotels, differentiated by gender. The perceived level of information was similar between men ($M = 2.89$, $SD = 1.121$) and women ($M = 2.96$, $SD = 1.06$), with no statistically significant difference, $t(185) = 0.461$, $p\text{-value} > 0.05$. Moreover, the frequency of observing waste during the stay was similar between genders ($M = 3.17$ and $M = 3.09$), $t(185) = 0.782$, $p\text{-value} > 0.05$. In the case of the perception of the general frequency of waste, women reported higher values ($M = 4.06$ vs. $M = 3.69$), but the difference was not significant, $t(185) = 1.530$, $p\text{-value} > 0.05$. These findings support the exploratory nature of the analysis and indicate relatively similar perceptions between genders. The results reveal a relatively homogeneous understanding of food waste in hotels among both women and men, suggesting a comparable level of awareness of the issue across genders. This may point to a broader public consciousness regarding the problem of food waste within the tourism sector.

Direct observation of food waste in hotels, by gender

Table 3

	Male		Female		Test value		
	yes	No	yes	No	χ^2	df	p-value
<i>Direct observation of food waste in hotels</i>	73.9%	26.1%	73.7%	26.3%	.124 ^a	1	.724
Total answers	88		99				

Table 3 shows that 73.9% of men and 73.7% of women reported having observed food waste in hotels, while 26.1% and 26.3%, reported not having encountered such situations. The differences between the two groups are minimal and statistically insignificant, according to the chi-square test, $\chi^2(1) = 0.001$, $p\text{-value} > 0.05$. This result suggests a common perception of the phenomenon, regardless of gender. Widespread recognition of the problem can be a starting point for developing waste reduction initiatives in the hotel industry.

02 - Analysis of gender differences in tourists' attitudes towards reducing food waste;

The researchers aimed to identify who is perceived as primarily responsible for food waste in hotels, from the perspective of male and female respondents. The descriptive results are presented in Table 4.

Perception of responsibility for food waste in hotels, by gender

Table 4

	Male		Female		Test value		
	n	%	n	%	χ^2	df	p-value
<i>The hotel (staff, management, etc.)</i>	18	20.5%	14	14.1%	2.036 ^a	3	.565
<i>Tourists / customers</i>	25	28.4%	21	21.2%			
<i>Both parties equally</i>	39	44.3%	62	62.6%			
<i>I do not know / I have no opinion</i>	6	6.8%	2	2.0%			
Total answers	88	100.0%	99	100.0%			

Table 4 highlights the respondents' perceptions of responsibility for food waste in hotels, differentiated by gender. The most common option was sharing responsibility between the hotel and tourists, chosen by 62.6% of women and 44.3% of men, suggesting a stronger tendency among women to adopt a balanced perspective. In contrast, men were more inclined to attribute responsibility exclusively to tourists (28.4%) or the hotel (20.5%), compared to women (21.2% and 14.1%, respectively). Moreover, 6.8% of men stated that they had no opinion, compared to only 2% of women, which may indicate a higher degree of involvement among them. However, the differences observed are not statistically significant, the chi-square test indicating $\chi^2(3) = 2.036$, p-value > 0.05. The distribution of responses suggests a tendency for women to adopt a more balanced view of responsibility for food waste, by recognizing the role of both parties – hotel and tourist. Men, on the other hand, seem more inclined to attribute responsibility unilaterally, either to tourists or hotels. Additionally, the lower percentage of women who stated that they had no opinion may indicate a higher level of involvement. Although the differences are not statistically supported, these variations may reflect relevant nuances in perceptions, useful for understanding consumer attitudes. The authors aimed to discover what tourists' opinions are on offering smaller portions in hotels, as a measure to reduce food waste. The results, differentiated by gender, are presented in Table 5.

Tourists' opinions on offering smaller portions to reduce food waste, by gender Table 5

	Male		Female		Test values		
	n	%	n	%	χ^2	df	p-value
<i>Yes, that would be a good idea</i>	16	18.2 %	38	38.4%	14.853 ^a	3	.002
<i>Yes, if I could ask for an extra portion</i>	43	48.9%	54	54.5%			
<i>No, I prefer large portions, even if there is leftover food</i>	29	33.0%	6	6.1%			
Total answers	88	100.0%	99	100.0%			

Table 5 presents the distribution of responses regarding portion sizes in hotels, by gender. Among women, 38.4% support smaller portions, 54.5% agree only if they can ask for an additional portion while 7.1% prefer large portions. Among men, 18.2% accept

smaller portions, 48.8% with the option of supplementation, and 33% prefer large portions. The chi-square test indicated the existence of an association between gender and the responses provided ($\chi^2 (3) = 14.853$, $p\text{-value} = 0.002$). This distribution shows a clear tendency for women to more easily accept portion reduction, while men show a more pronounced preference for larger portions. The result of the statistical test supports the existence of a significant difference between genders in terms of attitude towards this waste reduction strategy. The authors analysed tourists' reactions to a visual message on food waste reduction, with gender differences shown in Table 6.

Tourists' attitude toward anti-waste signage, by gender

Table 6

	Male		Female		Test values		
	n	%	n	%	χ^2	df	p-value
<i>I would appreciate the initiative and respect the message</i>	19	21.6%	52	52.5%	11.092 ^a	5	.050
<i>It would make me more attentive, but I do not know if it would influence me too much</i>	14	15.9%	7	7.1%			
<i>It would seem educative and responsible on the part of the hotel</i>	26	29.5%	34	34.3%			
<i>I would ignore the message, I do not think it has any impact</i>	13	14.8%	4	4.0%			
<i>I probably would not pay attention, I am used to such messages</i>	12	13.6%	2	2.0%			
<i>It would bother me, it is not the hotel's job to tell me what to do</i>	4	4.5%	0	0%			
Total responses	88	100.0%	99	100.0			

Table 6 highlights relevant gender differences in reactions to visual messages on reducing food waste. Women showed considerably more positive reactions: 52.5% stated that they would respect the message, and 34.3% considered it educational and responsible. In contrast, only 21.6% of men would respect the message, and negative or indifferent responses were more frequent (33% stated that they would ignore it, would not consider it relevant or would feel disturbed by it), while no women expressed a negative reaction. Following the application of the chi-square test, an association can be observed between the gender of the respondent and the answers provided, $\chi^2(5) = 11.092$, $p\text{-value} = 0.05$. The results indicate a higher receptivity among women towards visual messages on reducing food waste, with women expressing overwhelmingly positive reactions, either by respecting the message or by appreciating its educational character. In contrast, men showed a more reserved attitude, and negative or indifferent responses were considerably more frequent. These differences in perception may reflect a greater sensitivity of women to social responsibility themes, an aspect also supported by the association identified by the chi-square test. The authors explored tourists' preferred food waste reduction measures by gender (Table 7).

Tourists' preferences for food waste reduction measures in hotels, by gender Table 7

	Male		Female				
	n	%	n	%	χ^2	df	p-value
<i>Pre-set, smaller portions</i>	6	6.8%	6	6.1%	5.779 ^a	7	.566
<i>Possibility to choose the quantity (e.g. mindful self-service)</i>	26	29.5%	35	35.4%			
<i>Packaging leftovers for takeaway (e.g. takeaway)</i>	21	23.9%	23	23.2%			
<i>Visible messages in the restaurant encouraging waste avoidance</i>	11	12.5%	7	7.1%			
<i>Using an app or digital system to order the desired portion in advance</i>	17	19.3%	4	4.0%			
<i>Trained staff to provide information on waste reduction</i>	2	2.3%	3	3.0%			
<i>Donating leftovers to charities</i>	5	5.7%	18	18.2%			
<i>No change – I believe the hotel should not get involved</i>	0	0%	3	3.0%			
Total responses	88	100.0%	99	100.0%			

Table 7 presents the preferences of tourists regarding food waste reduction measures in hotels. The main option was the possibility to choose the amount of food (29.5% men, 35.4% women), followed by packaging leftovers. Women more often preferred donations (18.2% vs. 5.7%), and men preferred digital solutions (19.3% vs. 4%). Only 3% of women and no men consider that the hotel should not get involved. It is to be noted that there is no association between the gender of the respondents and the answers provided, $\chi^2 (7) = 5.779$, p-value > 0.05.

03 - Determining the factors that influence tourists' involvement in reducing food waste;

The authors aimed to identify the factors that motivate tourists to reduce food waste in hotels, with gender differences presented in Table 8.

Factors motivating tourists to reduce food waste in hotels, by gender Table 8

	Male		Female		Test values		
	n	%	n	%	χ^2	df	p-value
<i>Care for the environment</i>	15	17.0%	42	42.4%	6.058 ^a	4	.195
<i>Desire to set a positive example</i>	13	14.8%	17	17.2%			
<i>Respect for the work of hotel staff</i>	41	46.6%	33	33.3%			
<i>Hotel policies (posters, rules)</i>	18	20.5%	6	6.1%			
<i>No factor would motivate me</i>	1	1.1%	1	1.0%			
Total answers	88	100.0%	99	100.0%			

Table 8 shows that men are more motivated by respect for the work of hotel staff (46.6%) and hotel policies (20.5%), while women are mainly influenced by care for the environment (42.4%) and respect for staff (33.3%). The differences are not statistically significant, $\chi^2 (4) = 6.058$, $p\text{-value} > 0.05$, but suggest a more ecological orientation among women and a more practical one among men. The number of unmotivated respondents is very low in both groups (approx. 1%). The authors examined whether symbolic rewards could influence tourists' involvement in reducing food waste, with gender differences shown in Table 9.

Tourists' response to symbolic rewards for food waste reduction, by gender Table 9

	Male		Female		Test values		
	n	%	n	%	χ^2	df	p-value
<i>Yes, definitely</i>	25	28.4%	59	59.6%	7.970 ^a	2	.019
<i>Maybe – it depends on the type of reward</i>	55	62.5%	15	15.2%			
<i>No, I do not think it is necessary</i>	8	9.1%	25	25.3%			
Total answers	88	100.0%	99	100.0%			

Table 9 highlights significant gender differences in responsiveness to symbolic rewards, $\chi^2 (2) = 7.970$, $p\text{-value} < 0.05$. Women were more open (59.6% “yes, definitely”), while men preferred the conditional option (62.5% vs. 15.2%). Refusal of the reward was more common among women (25.3%) than men (9.1%).

O4 - Identifying tourists' preferences regarding strategies implemented by hotels to reduce waste;

The authors aimed to analyse to what extent the existence of an officially recognized “anti-waste hotel” label could influence tourists' decision when choosing an accommodation unit. The responses, differentiated by gender, are presented in Table 10.

Impact of the “Anti-Food Waste” label on hotel choice, by gender Table 10

	Male		Female		Test values		
	n	%	n	%	χ^2	df	p-value
<i>Yes, it would matter in my choice</i>	13	14.8%	29	29.3%	9.978 ^a	3	.019
<i>It would be an advantage, but not decisive</i>	51	58.0%	51	51.5%			
<i>I would not be interested</i>	22	25.0%	8	8.1%			
<i>I do not know / I am not sure</i>	2	2.3%	11	11.1%			
Total answers	88	100.0%	99	100.0%			

Table 10 highlights significant gender differences regarding the impact of the “anti-waste hotel” label, $\chi^2 (3) = 9.978$, $p\text{-value} < 0.05$. Women were more influenced by the existence of the label (29.3% vs. 14.8%), while men were more frequently uninterested (25% vs. 8.1%). For most respondents in both groups, the label would represent an advantage, but not a decisive one. Therefore, the differences suggest that women attach

greater importance to the “anti-waste hotel” label, while men tend to be less influenced by it. The label is perceived positively by most respondents, but it is not a decisive factor in choosing a hotel.

Tourists’ reaction to restrictive food waste reduction measures, by gender Table 11

	Male		Female		Test values		
	n	%	n	%	χ^2	df	p-value
<i>I would support this approach</i>	9	10.2%	28	28.6%	1.973 ^a	4	.741
<i>I think it would be a good step, but perhaps too restrictive</i>	23	26.1%	28	28.6%			
<i>I would prefer softer measures, based on conviction, not rules</i>	42	47.7%	36	36.7%			
<i>I would disagree – it risks affecting the tourist experience</i>	12	13.6%	7	6.1%			
<i>Other</i>	2	2.3%	0	0%			
Total responses	88	100.0%	99	100.0%			

Table 11 shows that women are more open to restrictive measures to reduce food waste (28.6% vs. 10.2%). In both groups, preference for softer solutions, based on conviction rather than rules, prevails (47.7% men, 36.7% women). Men more frequently expressed opposition to restrictions, citing possible negative effects on the tourist experience (13.6% vs. 6.1%). However, the differences between genders are not statistically significant, $\chi^2 (4) = 1.973$, p-value > 0.05. The results indicate a greater openness of women to restrictive measures, while men prefer solutions based on conviction and show a more pronounced opposition. Although the differences are not statistically supported, they highlight differences in attitudes that may influence the acceptance of food waste reduction policies.

5. Conclusion

The present study aimed to explore the perceptions of Romanian tourists on food waste in hotels, with a focus on gender-based differences. The results obtained provide a broad picture of tourists’ attitudes, preferences and motivations, contributing to the understanding of the consumer profile in the context of hotel sustainability. Although the statistical analysis did not aim to test confirmatory hypotheses, the data were interpreted with an exploratory purpose, in support of future directions of research and practical intervention.

The results indicate a similar general level of awareness regarding food waste, both among women and men. The majority of respondents reported having observed food waste in hotels, which suggests a common awareness of the problem, regardless of gender. This is in line with the literature that highlights the increase in the general interest in sustainability among tourists (Juvan et al., 2017; Kim et al., 2022). However, women's perceptions tend to be slightly more accentuated, which may reflect the higher level of involvement observed in other studies (Šenková et al., 2020; Yao et al., 2024).

Gender-based differences were more pronounced in attitudes towards specific food waste reduction measures. Women were generally more receptive to smaller portion sizes, responded positively to visual messaging and preferred strategies such as donations and collaborative efforts between hotels and tourists to reduce waste. In contrast, men tended to prefer larger portions, displayed a more reserved response to messaging, and were more inclined to shift responsibility for food waste onto others, either hotels or fellow tourists. These trends are consistent with previous research on motivational and behavioural differences between genders (Filimonau et al., 2021; Wang et al., 2020). Although not all observed differences reached statistical significance, they hold practical relevance for tailoring communication and intervention strategies.

Motivations for reducing waste differ by gender. Women are more strongly influenced by environmental concerns, whereas men tend to respond more positively to internal policies or a sense of respect for staff. Receptivity to symbolic rewards was also notably higher among women, who indicated affirmative responses to a significantly greater extent. These findings align with the existing literature on gender-based differences in behavioural motivations, which suggests that empathy and ecological responsibility are more commonly observed among women (McKercher et al., 2011; Hunter & Shaw, 2007).

It was found that women pay more attention to labels such as “anti-waste hotel” and are more open to restrictive measures, while men prefer persuasion-based measures and show a stronger opposition to rules. This may indicate a difference in the decision-making style, which is worth taking into account in the development of public policies or in tourism awareness campaigns. Even if not all responses showed statistically significant differences, the observed trends are relevant for the design of differentiated strategies, as suggested by the specialized literature (Zhu & Liu, 2024; Pearson et al., 2025). The results are largely in line with the theoretical framework highlighted in the specialized literature, confirming the idea that behaviours and perceptions regarding food waste are influenced by social, demographic and cultural factors, especially gender.

The study reconfirms the active role of the tourist in reducing waste, but also the need to adapt hotel strategies according to the characteristics of the target audience.

Given the exploratory nature of the research, the conclusions drawn are not generalizable; however, they offer a valuable foundation for future confirmatory studies employing larger samples and experimental designs.

6. Limitations and Future Directions

The study presents certain methodological limitations, including the use of a non-probabilistic sample and the possible selection bias associated with the CAWI (Computer-Assisted Web Interviewing) method. In addition, the statistical tests used had an exclusively exploratory role, without the explicit formulation and testing of confirmatory hypotheses, an aspect justified by the general nature of the hypotheses and the exploratory nature of the research. Therefore, the results should be interpreted within this framework, without attributing causal significance to the observed relationships and taking into account the specificity of the analysed sample. Future research could include probabilistic sampling, extending to more diverse groups of tourists and applying

qualitative methods to deepen the perceptual dimensions. At the same time, it is recommended to investigate in more detail the impact of visual messages and sustainable policies implemented in hotels, as well as testing the hypotheses in a confirmatory framework, with appropriate methodological tools.

References

- Bhaskara, G. I., Filimonau, V., Kusumawardhana, I., Putra, I. N. D., Yanthy, P. S., and Hakim, I. N. 2024. Environmental habitus of chefs and food waste management in hospitality operations. *Journal of Sustainable Tourism*.
- Cardenas, M., Schivinski, B., and Brennan, L. 2024. Circular practices in the hospitality sector regarding food waste. *Journal of Cleaner Production*, 472, 143452.
- Chenfeng, K., and Shih, Y. 2016. Gender differences in the effects of education and coercion on reducing buffet plate waste. *Journal of Foodservice Business Research*, 19(5), pp. 396–410.
- Goh, E., Okumus, B., Jie, F., and Djajadikerta, H. G. 2022. Managing food wastage in hotels: Discrepancies between injunctive and descriptive norms amongst hotel food and beverage managers. *British Food Journal*, 124(12), 4666–4685.
- Hunter, C., and Shaw, J. 2007. The ecological footprint as a key indicator of sustainable tourism. *Tourism Management*, 28(1), pp. 46–57.
- Itthiophakorn, D. 2020. Tourist's perception of buffet's food waste in hotels in Bangkok. *Dusit Thani College Journal*, 15(1), pp. 83–98.
- Juvan, E., Grün, B., and Dolnicar, S. 2017. Biting off more than they can chew: Food waste at hotel breakfast buffets. *Journal of Travel Research*, 56(3), pp. 326–340.
- Kim, W., Che, C., and Jeong, C. 2022. Food waste reduction from customers' plates: Applying the Norm Activation Model in South Korean context. *Land*, 11(109), pp. 1–17.
- Koiwanit, J., and Filimonau, V. 2025. 'Wasting food is normal!': How food waste can become the (new) norm in casual dining restaurants. *Journal of Hospitality and Tourism Management*, 62, pp. 1–13.
- McKercher, B., Pang, S. F. H., and Prideaux, B. 2011. Do gender and nationality affect attitudes towards tourism and the environment? *International Journal of Tourism Research*, 13(3), pp. 266–300.
- Pearson, N., Davies, I., Nuttall, P., and Yalabik, B. 2025. Influencing others to prevent hospitality food waste: The reception of food waste messages by hospitality employees. *International Journal of Hospitality Management*, 126, 104042.
- Sulong, S. N., Ramli, Z., and Ahmad, S. N. 2022. Handling food waste in the hotel industry. *Malaysian Journal of Social Sciences and Humanities*, 7(11), e001926.
- Wang, L., Filimonau, V., and Li, Y. 2021. Exploring the patterns of food waste generation by tourists in a popular destination. *Journal of Cleaner Production*, 319, 128588.
- Zhu, Q., and Liu, P. 2024. Integrating TRA and SET to influence food waste reduction in buffet-style restaurants: A gender-specific approach. *Sustainability*, 16(8999), pp. 1–17.
- Šenková, A., Vavrek, R., Kravčáková Vozárová, I., and Halášová, R. 2020. Gender differences in perception on sustainable tourism – Case study applied to the PU in Prešov. *GeoJournal of Tourism and Geosites*, 32(4), pp. 1285–1290.