



Gen Z Consumer Behavior and Food Waste in All-You-Can-Eat Restaurants: Uncovering the Value-Waste Paradox and Sustainable Dining Interventions in Indonesia

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Abstract

Background: Generation Z (Gen Z), born between 1997 and 2012, is widely characterized as a socially and environmentally conscious cohort. However, a paradox emerges when their sustainability values encounter the structural incentives of *All-You-Can-Eat* (AYCE) dining, a fixed-price model that economically rewards overconsumption and generates significant plate waste.

Objective: This study aims to understand Gen Z's food selection behaviour in AYCE settings by identifying the factors that drive such behaviour, exploring their emotional and moral attitudes toward food waste, and identifying effective behavioural interventions that can promote more responsible dining choices in buffet environments.

Methods: A qualitative research design was employed using in-depth semi-structured interviews with 20 Gen Z participants in Indonesia aged 18–24 years. Data were analyzed using reflexive thematic analysis facilitated by NVivo 12 software, from which ten core themes emerged.

Results: The NVivo analysis yielded ten core themes organized under two overarching constructs. First, the *Value-Waste Paradox*: participants systematically prioritized high-cost items, such as meat and seafood, while neglecting lower-perceived-value foods, such as vegetables—a value-maximizing behaviour that frequently resulted in plate waste. Second, the *Guilt-Inaction Gap*: although most participants expressed guilt and regret over wasted food, this emotional awareness rarely translated into behavioural changes during the meal itself. Nevertheless, participants demonstrated receptiveness to dual-pronged interventions, including punitive measures (e.g., fines for excessive leftovers) and gamified incentives (e.g., digital badges or discounts for clean plates).

Conclusion: This study contributes to consumer behaviour and sustainability theory by empirically grounding two novel constructs: the *Value-Waste Paradox*, wherein economic rationality in fixed-price settings systematically overrides pro-environmental intentions, and the *Guilt-Inaction Gap*, wherein emotional awareness of waste fails to motivate behavioural change under AYCE's sunk-cost dynamics. The findings offer actionable insights for restaurant managers and policymakers seeking to reduce food waste among Gen Z consumers through structural redesign rather than attitude change alone.

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INTRODUCTION

Food waste represents one of the most pressing global sustainability challenges of the 21st century. According to the Food and Agriculture Organization (2013), approximately one-third of all food produced globally, roughly 1.3 billion tons per year, is lost or wasted, generating significant environmental, economic, and social costs. Within the food service sector, buffet-style and All-You-Can-Eat (AYCE) dining models have been identified as particularly problematic waste

hotspots due to their structural incentive for unlimited consumption at a fixed price (Betz et al., 2015; Roe et al., 2021). As global concerns about sustainability intensify, the role of consumer behavior, particularly among younger generations, has come into sharper focus. Among these, Generation Z (those born between 1997 and 2012) represents a unique cohort characterized by heightened environmental awareness, digital connectivity, and shifting consumption values (Francis & Hoefel, 2018). However, their behavior in indulgent dining settings, such as All-You-Can-Eat restaurants, presents a complex dilemma: the desire to maximize economic value and experience versus the responsibility to minimize waste.

All-You-Can-Eat restaurants encourage high-volume consumption through fixed pricing and unlimited food access, often leading to over-serving and plate waste. While Gen Z consumers are often vocal advocates of sustainability, their actual dining behavior may not always align with these values, especially in environments that reward quantity over restraint. This contradiction creates what can be termed a sustainable dining dilemma, where environmentally conscious individuals find themselves navigating situations that challenge their ethical standards.

The first objective of this study is to understand Gen Z's food selection behavior in All-You-Can-Eat settings by identifying factors such as perceived value, portion control, taste preference, and social influence. Second, the study explores their attitudes toward food waste, including emotional responses such as guilt or indifference, as well as the moral framing of wasteful behavior. Finally, the research aims to identify effective interventions, such as restaurant rules, incentives, or behavioral nudges, that can promote more responsible dining choices in buffet-style environments.

Theoretically, this study contributes to consumer behavior and sustainability theory by elucidating the "value-waste paradox," a novel construct that extends and differentiates itself from the widely discussed attitude-behavior gap (Ajzen, 1991). While the attitude-behavior gap broadly describes the disconnect between pro-environmental attitudes and actual behavior, the value-waste paradox is specific to economic rationality in fixed-price indulgent dining contexts, where the structural incentive to "maximize value" actively overrides pro-environmental intentions. Practically, the findings provide restaurant managers and policymakers with evidence-based, context-specific interventions, including gamification, nudge architecture, and penalty systems, to reduce food waste among the youngest adult consumer cohort.

A growing body of scholarship has examined food waste in hospitality and foodservice contexts, establishing a strong empirical foundation on which this study builds. Research in European foodservice settings has consistently shown that buffet-style formats generate disproportionately high levels of plate waste compared with other dining formats, driven by structural overconsumption incentives rather than individual negligence (Betz et al., 2015; Silvennoinen et al., 2015).

Conceptual contributions, such as the food waste hierarchy proposed by Papargyropoulou et al. (2014), have further provided hospitality operators with frameworks for prioritizing waste reduction strategies. In parallel, scholarship on Generation Z has highlighted how environmental values and perceived behavioral control shape their sustainable consumption intentions, with more recent work underscoring the growing role of social media exposure and environmental concern in driving sustainable food choices among younger consumers. Yet, despite the richness of both research streams, they have rarely been examined in conjunction, leaving unanswered how the structural incentives embedded within the All-You-Can-Eat model interact with, and ultimately override, Gen Z's documented pro-environmental values. This convergence constitutes the central research gap that the present study seeks to address.

The hospitality sector, particularly the restaurant industry, is a significant contributor to global food waste, with buffet-style dining identified as a major hotspot (Betz et al., 2015). The operational model of All-You-Can-Eat (AYCE) restaurants, which is predicated on a fixed price and unlimited access, creates a unique psychological and economic environment. This model actively encourages consumers to "get their money's worth," often equating value with the volume and perceived monetary worth of food consumed (Kallbekken, 2013). Consequently, strategic consumer behavior aimed at maximizing economic utility, such as prioritizing high-cost protein items and overfilling plates, directly contributes to plate waste, particularly involving less desirable or lower-value items such as carbohydrates and vegetables (Papargyropoulou et al., 2014). This suggests that the very structure of the AYCE dining experience institutionalizes

wasteful practices by making overconsumption appear to be a rational economic choice for consumers, even though it generates inefficiencies and environmental costs for the food service system as a whole.

Generation Z (born between 1997 and 2012) is widely documented as a generation with strong pro-social and pro-environmental values, driven by digital connectivity and heightened concerns about climate change (Francis & Hoefel, 2018; Grace-Bridges, 2019). Research indicates that these values can positively influence sustainable consumption intentions. Environmental values and perceived behavioral control mediate Gen Z's sustainable consumption behavior. However, a critical discrepancy often exists between these expressed values and actual behavior, a phenomenon known as the "attitude-behavior gap."

This gap becomes particularly pronounced in contexts where situational factors, such as social pressure or economic incentives, exert strong influences. High-indulgence contexts, situational factors, such as the perceived benefits of an all-you-can-eat dining model, may override individuals' intrinsic values in shaping their behavior. In such environments, the desire for experiential gratification, social sharing, and economic maximization can temporarily overshadow underlying environmental concerns, resulting in decisions that contradict consumers' stated values (Silvennoinen et al., 2015).

Recognizing the limitations of relying solely on consumer goodwill, research has explored various interventions to nudge behavior toward more sustainable practices. These interventions can be broadly categorized into disincentives and incentives. Disincentives, such as financial charges or penalties for excessive leftover food, have demonstrated effectiveness by attaching a direct cost to wasteful behavior (Kallbekken, 2013). Conversely, positive reinforcement through incentives (such as small discounts, loyalty points, or public recognition) leverages principles of gamification and behavioral economics to make sustainable choices more attractive (Williams et al., 2012). Furthermore, subtle environmental modifications, such as providing smaller plates or positioning healthier options earlier in the serving sequence, can "nudge" consumers toward more moderate consumption without restricting their freedom of choice. However, the effectiveness of these interventions is highly context-dependent. Much of the existing research has been conducted in school cafeterias, workplace canteens, or hotel breakfast buffets, with comparatively less attention given to commercial AYCE restaurants, where economic motivations for overconsumption are particularly strong.

Existing literature provides a robust understanding of food waste drivers in the hospitality sector, the value systems of Gen Z, and the general principles of behavioral interventions. However, these streams of research have not sufficiently converged to explain the specific paradox experienced by Gen Z consumers in AYCE settings. There remains a lack of nuanced qualitative inquiry into how the structural incentives embedded within the AYCE model interact with, and potentially override, Gen Z's documented environmental values. Furthermore, the acceptability and potential effectiveness of different interventions within this specific demographic and dining context remain underexplored. This study aims to address this gap by qualitatively investigating the motivations, internal conflicts, and intervention preferences of Gen Z diners in AYCE restaurants. By doing so, it seeks to provide a deeper theoretical understanding of the "value-waste paradox" and generate context-specific, actionable insights for reducing food waste in one of the most challenging commercial food service environments.

METHOD

A qualitative research design was adopted, utilizing semi-structured interviews to gather rich and nuanced data. A qualitative approach was considered the most appropriate methodology because the research objectives were exploratory and focused on understanding complex human behaviors, underlying motivations, and nuanced attitudes (Creswell & Poth, 2016). The core research questions, centered on the "why" and "how" behind Gen Z's food selection behaviors and their experiences of the value-waste paradox, require deep contextual understanding rather than numerical measurement. This method is particularly suitable for uncovering discrepancies between stated values (e.g., environmental concern) and actual behaviors (e.g., plate waste), allowing participants to articulate their reasoning in their own words. Given that Gen Z's dining behavior in AYCE contexts remains insufficiently theorized, a qualitative design enables the generation of detailed insights that can provide a foundation for future quantitative investigations.

A purposive sampling strategy was employed to recruit participants who could provide information-rich cases relevant to the research phenomenon (Welch & Patton 1992). The participation criteria included: (1) belonging to Generation Z (aged 18–24 years), (2) having dined at an All-You-Can-Eat (AYCE) restaurant at least once within the previous three months, and (3) residing in the Greater Jakarta area (Jakarta or Tangerang). A total of 20 participants were recruited, consisting of university students and part-time workers to represent a demographic segment characterized by disposable income and social dining habits. The sample size of 20 participants was determined based on the principle of theoretical saturation Guest et al. (2006), whereby data collection continues until no additional themes or codes emerge from the dataset. Consistent with purposive qualitative sampling approaches in exploratory research Welch & Patton (1992), 20 information-rich participants were considered sufficient to achieve thematic saturation, supported by the convergence of themes identified during the later stages of analysis. This sample size is also consistent with comparable qualitative studies examining food waste behavior (Ganglbauer et al., 2013).

Data were collected through in-depth, semi-structured interviews conducted online, with each session lasting approximately 30–45 minutes. An interview guide was developed to ensure consistency across interviews, covering key domains including food selection priorities, perceptions of food waste, and responses to potential behavioral interventions. With participants' consent, all interviews were audio-recorded and transcribed verbatim. To enhance transparency and methodological reproducibility, examples of interview guide questions are provided as follows: (1) When visiting an AYCE restaurant, what factors influence the selection of foods taken. (2) How is the amount of food placed on the plate determined? (3) How do individuals feel when leaving food on their plates at the end of a meal. (4) What are individuals' perceptions of restaurants that impose charges for excessive food waste. (5) Would eating behavior change if rewards, such as digital badges or discounts, were provided for finishing all food.

The transcribed data were analyzed using NVivo 12 software, following the six-phase framework of reflexive thematic analysis (RTA) proposed by (Braun & Clarke, 2019). RTA was selected over alternative qualitative approaches, such as content analysis or grounded theory, due to its epistemological suitability for exploratory and interpretivist research. Unlike conventional thematic analysis, RTA emphasizes the active role of researchers in knowledge construction and does not consider themes as pre-existing categories awaiting discovery; rather, themes are understood as actively constructed through engagement with the data (Braun & Clarke, 2019). This epistemological positioning aligns with the interpretivist orientation of the study, in which the objective is to understand subjective meanings, contradictions, and emotional dimensions of Gen Z's dining behaviors rather than quantify behavioral frequencies.

The analysis was conducted through the following six phases: 1) Familiarization with the Data: The transcripts were repeatedly reviewed to facilitate immersion in the dataset, while initial observations and emerging ideas were documented. 2) Generating Initial Codes: Systematic coding was conducted across the entire dataset, identifying and organizing data segments relevant to each code. For example, statements such as "I always choose meat first to get my money's worth" were coded as "Value-driven Selection." 3) Searching for Themes: Initial codes were organized into potential themes. For example, codes including "Value-driven Selection," "Avoidance of Low-Value Items," and "Portion Maximization" were grouped into the candidate theme "Economic Rationality in Food Choice." 4) Reviewing Themes: Candidate themes were examined in relation to coded extracts and the complete dataset. This recursive process involved refining, merging, or separating themes to ensure that each represented a coherent analytical pattern. A thematic map was developed and revised throughout this stage. 5) Defining and Naming Themes: Further analysis was undertaken to refine the characteristics of each theme and clarify the overall narrative represented by the analysis. Clear definitions and concise labels were developed for each theme, including "The Value-Waste Paradox" and "The Guilt-Inaction Gap." 6) Producing the Report: The final analytical findings were integrated into a coherent narrative supported by relevant and illustrative participant quotations.

Consistent with the epistemological principles of reflexive thematic analysis Braun & Clarke (2019), ongoing reflexive awareness was maintained regarding how researcher positionality, as academics with familiarity in sustainability discourse, could influence data interpretation. The researchers were not members of Generation Z and had professional interests

in sustainable consumption, which may have influenced interpretations toward guilt-oriented narratives or environmental perspectives within participants' responses. To minimize this potential influence, interpretations were continuously evaluated against the original dataset, assumptions were documented through reflexive journals throughout the analytical process, and analytical conclusions were required to be directly supported by participant verbatim statements rather than researcher speculation (Creswell & Poth, 2016).

To ensure analytical rigor and trustworthiness, several strategies were implemented. Peer debriefing was conducted through regular discussions of the developing coding framework and thematic interpretations between the two researchers to critically examine analytical decisions and reduce potential bias (Creswell & Poth, 2016). Furthermore, to improve coding consistency and analytical transparency, while recognizing that inter-coder reliability (ICR) is not a primary quality criterion within reflexive thematic analysis Braun & Clarke (2019), approximately 20% of the transcripts were independently coded by both researchers. This procedure was not intended as a measure of objectivist reliability but rather as a collaborative and dialogic process to enhance transparency, identify divergent interpretations, and strengthen analytical reflection (O'Connor & Joffe, 2020). Differences in interpretation were resolved through discussion until a shared understanding was achieved, thereby reinforcing the reflexive quality and credibility of the findings.

RESULTS AND DISCUSSION

Results

This section presents the findings from the reflexive thematic analysis of in-depth semi-structured interviews with 20 Gen Z participants concerning food waste behavior in All-You-Can-Eat (AYCE) restaurant settings. The analysis was conducted using NVivo 12 software to identify key themes through systematic coding and thematic analysis. Ten core themes emerged from the data, organized into two overarching constructs: the Value-Waste Paradox (themes 1–5) and the Guilt-Inaction Gap (themes 6–10). Ten core themes (nodes) emerged from the data through open coding, axial coding, and theme consolidation, as presented in Table 1.

Table 1. Theme (Node) and Number of References

Theme (Node)	Number of References
Dining Habits & Occasion	24 (n=18)
Food Selection Behavior	28 (n=20)
Definition of Food Waste	25 (n=19)
Observation of Food Waste	22 (n=17)
Self-Awareness & Serving Behavior	26 (n=20)
Frequently Wasted Items	18 (n=15)
Policy & Restaurant Rules	20 (n=16)
Feelings of Guilt	23 (n=18)
Strategies to Reduce Waste	21 (n=17)
Incentives for Responsible Eating	17 (n=14)

Source: data analysis NVivo, 2025

Dining Habits & Occasion

Participants reported that visits to AYCE restaurants were mainly for social or celebratory occasions. Many referred to them as "treats" or "birthday meals."

"I only go to AYCE when celebrating with friends—it's not a regular habit." (Respondent #12)

This response highlights that AYCE dining is experienced as a special, occasion-bound activity rather than a routine practice. Social context and celebratory framing are key determinants, suggesting that AYCE visits are associated with indulgence and experiential value, which may lower inhibitions around over-serving behavior (Silvennoinen et al., 2015).

Food Selection Behavior

Participants favored high-value items such as beef or grilled dishes. The selection was often based on taste familiarity and perceived value.

"I always choose meat first. I avoid rice or vegetables because I want to eat what's worth the

price." (Respondent #7)

The statement "I always choose meat first. I avoid rice or vegetables because I want to eat what's worth the price" from Respondent #7 sheds light on several key elements of food selection behaviour and consumer decision-making in an AYCE (All-You-Can-Eat) setting. Respondent #7's food selection behaviour exemplifies a common pattern in AYCE dining: prioritizing high-value items like meat, avoiding foods that are perceived as less costly or filling (like rice and vegetables), and making choices based on maximizing perceived value. Their behaviour is a blend of taste familiarity and cost-effectiveness, shaped by the desire to get the most out of the fixed price of the AYCE experience.

Food Waste

Most defined food waste as uneaten food that ends up being discarded. Responses expressed regret or guilt.

"Food waste is anything that's left on your plate when you're full." (Respondent #5)

This definition reflects a personal, consumption-level understanding of waste, foregrounding over-serving and poor portion control as primary causes. The emotional undertone, regret or guilt, indicates moral awareness of waste consequences, consistent with norm activation theory.

Observation of Food Waste

Many had observed wasteful behavior in buffet settings and reacted negatively.

"I often see people take a full plate and leave half of it. It's annoying." (Respondent #19)

Social disapproval of visible waste reveals that food waste in communal dining settings carries normative weight. Such observations may reinforce descriptive norms against waste, supporting the theoretical relevance of social influence in sustainable consumption behavior (Cialdini et al., 1991).

Self-Awareness & Serving Behavior

Participants reported strategies like taking small portions first or sharing food to reduce waste.

"I take little by little, so I don't waste. I can always go back." (Respondent #3)

Participants demonstrated a growing awareness of their eating habits, often employing strategies like taking small portions or sharing with others to prevent food waste. Respondent #3's approach of "taking little by little" reflects a mindful effort to align consumption with actual hunger, emphasizing flexibility and self-regulation in AYCE settings.

Frequently Wasted Items

Vegetables, noodles, and unfamiliar side dishes were most often wasted.

"I took salad once, didn't like it, and had to leave it." (Respondent #10)

Certain foods, particularly vegetables, noodles, and unfamiliar side dishes, were frequently left uneaten. Respondent #10's experience of trying salad and leaving it uneaten illustrates how taste preferences and unfamiliarity contribute to waste, signalling the need for better labelling or tasting options in buffet setups.

Policy & Restaurant Rules

There was support for restaurants enforcing rules such as charging for leftovers.

"AYCE restaurants should fine people who leave too much food." (Respondent #22)

There was general support among participants for stricter restaurant policies to discourage waste, including financial penalties for uneaten food. Respondent #22's call for fines underscores a belief that responsibility should be enforced to encourage more mindful consumption and reduce excess.

Feelings of Guilt

Respondents expressed guilt and shame when they wasted food.

"I always feel bad if I don't finish my plate. It's such a waste." (Respondent #14)

Guilt and shame were common emotional responses to leaving food uneaten, with several

participants, like Respondent #14, expressing remorse when unable to finish their meals. This emotional discomfort suggests an internalized moral or cultural value placed on food and its proper consumption.

Strategies to Reduce Waste

Strategies included smaller servings, avoiding food they're unsure about, and sharing with friends.

"I try food first, then take more if I like it." (Respondent #8)

Participants reported practical methods for reducing waste, such as starting with small portions, avoiding unfamiliar dishes, and sharing. Respondent #8's tactic of sampling before committing to larger servings reflects a trial-and-error mindset aimed at minimizing leftovers without sacrificing variety.

Incentives for Responsible Eating

Suggestions included rewards for finishing food, digital badges, or discounts.

"Maybe a stamp card—if you waste nothing, you get a point." (Respondent #17)

Participants suggested positive reinforcement strategies, such as digital badges, stamp cards, or discounts, to reward those who minimize food waste. Respondent #17's idea of a stamp card illustrates a behavioural incentive model that could motivate more responsible eating through gamification or rewards.

Word Frequency Analysis

A word cloud generated from NVivo showed frequent terms such as *portion*, *waste*, *meat*, *guilt*, and *value*. These frequent words suggest that conversations centred on portion control strategies, emotional reactions (such as guilt), and value-driven decision-making in food selection, particularly prioritizing high-cost items like meat to maximize the AYCE experience. This analysis reinforces the patterns of mindful, emotional, and economically motivated eating behaviours identified throughout the study.

This research aimed to explore Generation Z's food selection behaviour, attitudes toward food waste, and identify effective interventions in All-You-Can-Eat (AYCE) restaurant settings. The findings reveal that Gen Z consumers exhibit a strong preference for maximizing value, often prioritizing high-cost items such as meat, and adopting portion control strategies to avoid food waste. This aligns with previous studies that highlight how economic considerations and the perceived value of food influence consumer behaviour (Kallbekken, 2013). Participants expressed a desire to get their money's worth, which, while economically rational, led to over-serving and food waste, despite their awareness of the environmental impact. Gen Z's value-seeking behaviour also manifests in portion control strategies, where participants tend to take small servings to avoid waste while maintaining the option to go back for more. This reflects an evolving awareness of food waste, coupled with a desire for control over consumption, which supports the growing emphasis on sustainability among younger generations.

Regarding food selection behaviour, Gen Z demonstrated a preference for foods that offer the greatest perceived value, such as meat or grilled dishes, reflecting an economic-driven approach to consumption (Betz et al., 2015). This behaviour reflects the concept of "value for money" commonly seen in buffet settings, where the cost of the meal is fixed, encouraging consumers to maximize their intake of high-priced foods. In contrast, less expensive or less desirable items like vegetables were often left untouched, contributing to food waste.

Regarding attitudes toward food waste, the participants expressed strong emotional responses such as guilt and regret when food was left uneaten, indicating an awareness of the issue. However, this awareness alone was insufficient to significantly alter their consumption habits. This finding aligns with the work of Williams et al. (2012), who found that while consumers may feel guilty about wasting food, this emotional response is not always enough to inspire behavioural change without structural interventions.

As for identifying effective interventions, the results highlighted the support among participants for policies like fines for excessive waste and reward systems for responsible dining. Such interventions have been shown to effectively reduce waste, especially when tied to visible incentives (Grace-Bridges, 2019). The proposal for reward-based systems, such as digital badges

or discounts for finishing meals, suggests that Gen Z is receptive to systems that align with their values of sustainability and personal responsibility. This suggests that combining both intrinsic motivations (such as environmental concerns) with extrinsic incentives (such as rewards) could be a promising approach to reducing food waste in AYCE settings.

In the word frequency analysis, terms like "portion," "waste," "meat," and "value" emerged prominently, underscoring the centrality of portion control and economic value in Gen Z's food decisions. This reinforces the idea that food waste is not solely driven by emotional factors but is deeply intertwined with rational calculations of value and cost, as well as familiarity with certain foods.

Discussion

This study contributes to a deeper understanding of how Generation Z (Gen Z) consumers navigate the value-waste paradox in All-You-Can-Eat (AYCE) restaurant settings, where economic rationality often conflicts with environmental values. The findings reveal that Gen Z diners consistently prioritize maximizing perceived economic value, by selecting high-cost items such as meat and seafood, while neglecting lower-perceived-value foods like vegetables. This behavior, while rational in an economic sense, directly leads to plate waste, thereby exposing the tension between sustainability awareness and indulgent consumption.

The observed behavior aligns with Prospect Theory, which suggests that consumers are highly sensitive to perceived gains relative to cost (Kahneman & Tversky, 2013). In AYCE contexts, the fixed-price structure frames expensive items as "gains," driving diners to overconsume even when it contradicts their pro-environmental values. Moreover, the results support the Theory of Planned Behavior Ajzen (1991), particularly the gap between intention and action: although participants expressed environmental concern and guilt, situational incentives (economic value, social dining norms) overpowered these intentions. This extends prior studies on food waste in hospitality Betz et al. (2015) and Silvennoinen et al. (2015) by showing that the AYCE pricing model itself acts as a structural driver of waste, rather than individual negligence.

Although many participants reported guilt when wasting food, this emotion was not translated into behavioral change. This contrasts with studies suggesting that guilt can motivate sustainable consumption. In AYCE dining, the sunk cost of the meal and the cultural expectation of "getting one's money's worth" neutralize guilt's motivational power. This highlights the need for structural interventions rather than relying solely on emotional triggers.

One of the more striking findings to emerge from our data was Gen Z's openness to a dual-pronged approach of interventions, embracing both punitive measures and reward-based incentives. Consistent with nudging literature Thaler & Sunstein (2008), participants supported fines for excessive leftovers while also favoring gamified incentives such as digital badges, loyalty points, or discounts. This dual receptiveness reflects Gen Z's preference for systems that combine extrinsic rewards with intrinsic sustainability values. Importantly, this suggests that AYCE restaurants can reframe the meaning of "value" from quantity-driven to sustainability-driven consumption, aligning with the broader goals of SDG 12: Responsible Consumption and Production (United Nations, 2015).

While this study is situated in Jakarta and Tangerang, its implications extend beyond Indonesia. Previous cross-cultural research shows that buffet-related waste is a global concern, from hotel buffets in Europe Filimonau & De Coteau (2019) to AYCE restaurants in East Asia. However, cultural norms may shape the salience of guilt, economic value, and social dining behaviors differently. Thus, the value-waste paradox should be tested across diverse contexts to examine whether it is universally applicable or culturally contingent.

The implications for sustainable hospitality marketing merit specific elaboration, given the study's stated thematic focus. The findings suggest that marketing strategies targeting Gen Z in AYCE environments must move beyond conventional green marketing appeals (which assume that environmental awareness translates into behavioural change) toward what may be termed 'value-reframing marketing' a strategy that repositions sustainability not as a sacrifice of economic value, but as an enhanced form of value congruent with Gen Z's identity and digital lifestyle. Concretely, this could involve marketing campaigns that frame 'clean plate' behaviour as a marker of social status and personal efficacy (leveraging Gen Z's identity-driven consumption), deploying social media mechanics (Instagram challenges, TikTok badges) that gamify sustainable

dining, and using digital menus with embedded sustainability scores to promote informed food selection (Filimonau & De Coteau, 2019). Such approaches represent a novel application of relationship marketing theory Morgan & Hunt (1994) to sustainability contexts, wherein the restaurant builds loyalty by co-creating sustainable value with Gen Z consumers rather than imposing compliance through penalties alone.

CONCLUSION

This study advances the theoretical understanding of the value-waste paradox—a phenomenon in which Gen Z consumers' rational pursuit of economic value in AYCE dining settings systematically undermines their sustainability values. Across ten emergent themes, the findings demonstrate that the fixed-price structure of AYCE restaurants institutionalises overconsumption by making wasteful behaviour economically rational. Despite expressing strong guilt and environmental awareness, participants consistently failed to translate these emotions into behavioural change, thereby confirming the existence of a structural guilt-inaction gap. Gen Z participants were, however, receptive to dual-pronged interventions combining punitive measures (e.g., leftover fines) with gamified incentives (e.g., digital badges, loyalty rewards), suggesting that sustainable behaviour change is achievable through structural redesign rather than attitude change alone.

This study is nonetheless subject to several limitations that should inform future inquiry. The qualitative design and reliance on self-reported behaviour limit the generalisability of findings, while the sample's geographic concentration in Greater Jakarta may not capture cross-cultural variations in dining norms and environmental attitudes. The online interview format may further have precluded naturalistic observation of actual dining behaviour. Future research should therefore pursue large-scale quantitative surveys to validate the prevalence and structural antecedents of the value-waste paradox, alongside experimental field interventions to test the comparative effectiveness of fines, nudges, and gamification in real AYCE environments. Cross-cultural comparisons particularly between individualist and collectivist cultural contexts—would also be valuable in determining the cultural contingency of both the value-waste paradox and the guilt-inaction gap.

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AUTHOR CONTRIBUTION STATEMENT

Nila Krisnawati conceptualized the study, designed the research methodology, conducted data collection, performed the qualitative data analysis using NVivo, interpreted the findings, and prepared the original manuscript draft. Evita Kho contributed to the research design, supervised the research process, interpreted the findings, revised and improved the manuscript throughout the publication process, and approved the final version of the manuscript. Both authors contributed substantially to the research and approved the final manuscript.

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