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Consumer Perceptions of Digital Ordering and Payment Systems in Restaurants: Sustainability and Efficiency Perspectives

Daniel Schwarz*

University of Library Studies and Information Technologies, Sofia, Bulgaria, Daniel Schwarz, Albisriederstrasse 360, 8047 Zurich, Switzerland

Email: danielschwarz@me.com

Abstract

The advance of digitization has transformed the gastronomy industry. This is particularly evident in digital ordering and payment systems. These systems offer restaurants the opportunity to optimize processes, operate in a more resource-efficient manner, and simultaneously increase customer satisfaction. This study examined the perception and acceptance of such systems, as well as their potential impact on sustainability, efficiency, and decision-making behavior. Using a comprehensive survey, data from over 1300 restaurant guests were collected. The results show a high level of acceptance of digital technologies, particularly in the areas of cashless payments and personalization of orders. Simultaneously, there is the potential to promote guests' sustainable decisions through targeted functions. The analysis also shows that guests increasingly expect information on the sustainability of digital offers and that the use of digital feedback functions is limited to a smaller proportion of users. The study presents specific recommendations for the further development of digital systems, particularly in areas such as increasing efficiency, user friendliness, and sustainable consumer behavior.

Keywords: Gastronomy; Consumer Experience; Digital Order and Pay; Sustainability; Efficiency; Usability; Digitalization.

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* *Corresponding author.*

1. Introduction

The rapid advancement of digital technologies has significantly reshaped the restaurant industry, offering new opportunities to enhance operational efficiency and consumer experience. Among these innovations, digital ordering and payment systems have emerged as critical tools to streamline restaurant operations, reduce labor costs, and meet the evolving expectations of technologically-savvy customers. Simultaneously, increasing public concern for environmental sustainability is driving restaurants to adopt more sustainable practices across their operations, including the way they interact with consumers. Despite the clear momentum towards digitalization and sustainability, the intersection between these two trends remains underexplored, particularly from the consumer perspective. While existing research highlights the operational advantages of digital ordering systems, such as reduced wait times and improved order accuracy, less is known about how these systems influence consumer perceptions of sustainability, and their decision-making behavior in restaurants. Moreover, there is a need to understand whether digital innovations can actively encourage sustainable consumption, such as choosing eco-friendlier menu options. This study addresses these gaps by investigating consumer perceptions of digital ordering and payment systems in relation to efficiency and sustainability in restaurants. By focusing on consumer attitudes and behaviors, this research contributes to a more comprehensive understanding of the opportunities and challenges digital systems present for promoting sustainable practices in the hospitality industry.

2. Literature Review

2.1. Digital Ordering and Payment Systems in Restaurants

The adoption of digital ordering and payment systems has accelerated in the restaurant industry due to their potential to improve operational efficiency, reduce labor dependency, and enhance customer experience [1]. Digital self-ordering kiosks, QR code menus, and mobile payment apps streamline service processes and offer customers greater autonomy. Similar trends have been observed in Central Europe, with the digitalization of gastronomy being seen as a strategic response to increasing customer demands for convenience and efficiency [2]. Theoretical models such as the Technology Acceptance Model (TAM) [3], and the Unified Theory of Acceptance and Use of Technology (UTAUT) [4] offer useful frameworks for understanding consumer behavior toward these technologies. Factors like perceived ease of use, perceived usefulness, and trust significantly influence adoption rates across sectors, including hospitality [5]. However, empirical studies focusing specifically on the acceptance of digital ordering systems within restaurants, particularly from a sustainability perspective, remain scarce.

2.2. Sustainability Practices in the Restaurant Industry

The hospitality sector plays an essential role in promoting environmental sustainability through resource conservation, waste reduction, and responsible sourcing [6]. Within the German context, sustainability efforts are increasingly integrated into operational strategies, including energy and water management, food sourcing, and guest communication [7]. Businesses are not only responding to regulatory pressures, but also to growing consumer demand for environmentally responsible practices [8]. Studies show that consumers value

transparency in sustainability claims, and that effective communication strategies can influence dining choices. However, communicating sustainability initiatives without overwhelming customers remains a challenge. The author in [9] emphasizes the importance of making sustainability efforts tangible and accessible to consumers through simple, honest communication.

2.3. The Role of Digitalization in Promoting Sustainable Consumption

Emerging research suggests that digital technologies can serve as powerful tools to support sustainable consumer behavior [10, 11]. In the hospitality sector, digital menus offer an opportunity to present real-time information about carbon footprints, ethical sourcing, and other sustainability metrics at the point of decision-making. According to the author in [7], integrating sustainability communication into everyday customer interactions, such as through digital receipts or menu labels, can enhance engagement without being overly didactic. Moreover, personalized nudging techniques, originally popularized by the Authors in [12], can be embedded into digital ordering systems to subtly influence customer choices towards more sustainable options. However, current applications of such behavioral interventions in restaurants are still limited. Research by [13] suggests that digital technologies can significantly support green supply chain management, but their usage at the consumer-facing level in restaurants remains underdeveloped.

2.4. Gaps in Existing Research

While there is robust literature on operational benefits and consumer acceptance of digital systems, and separately on sustainability in hospitality, there is little research exploring how digital ordering and payment systems can simultaneously drive efficiency and sustainable behavior. Existing studies largely focus on internal resource management [14, 15] or general consumer behavior toward sustainable food choices [16], but rarely examine how digital technologies can influence these behaviors in real-time customer interactions. Furthermore, most prior research is either highly localized (e.g., studies from Germany, Austria, Switzerland) or sector-specific, without integrating broader findings from digitalization acceptance in adjacent sectors like banking or retail [17, 2]. This study aims to bridge these gaps by analyzing consumer perceptions of digital ordering and payment systems, not only in terms of operational efficiency, but also regarding their potential to foster sustainable consumption behavior in restaurants. The research focuses on consumers in German-speaking countries, specifically Germany, Austria, and Switzerland and in the German-speaking areas of France (Alsace) and Italy (South Tyrol).

3. Methods

3.1. Research Design

This study is based on a quantitative online survey to investigate consumer perceptions of digital ordering and payment systems in relation to sustainability and efficiency in the restaurant industry. The questionnaire consisted of 14 questions in a closed format. The aim was to precisely capture the evaluable proportions and ratings. To cover the broadest and most representative range of opinions possible, the survey was distributed through various channels, including social media, professional hospitality and foodservice newsletters, an index

of restaurant contact mailing lists, and direct invitations to restaurant visitors. An online questionnaire was available for a period of four weeks. Respondents were asked to rate their views on topics such as sustainability, user-friendliness of digital systems, efficiency, and the frequency of use of digital platforms. Participation was anonymous and voluntary to ensure honest responses. The survey included Likert Scale questions with ratings ranging from 1 = very poor to 5 = very good, 1 = not at all to 5 = definitely, and 1 = never to 5 = always.

3.2. Sample Characteristics

The survey was aimed at a broad audience to obtain a diverse and representative sample of 1,346 male and female participants (n = 1,346). There was no upper age limit; however, a minimum age of 16 years was set. The participants were employees, the self-employed, students, and trainees, from Germany, Austria, Switzerland, France, and Italy. These five countries were chosen due to their comparable hospitality structures, advanced levels of digitalization, and relevance in the Central and Western European restaurant market. The survey was conducted in German, which influenced the primary focus on German-speaking regions. The geographic focus ensures that the findings reflect consumer attitudes toward digital ordering and payment systems within diverse but comparable hospitality markets.

3.3. Challenges with the Sample

In addition to the efforts to reach a broad target group, there were several challenges, one of which was ensuring that all relevant age and professional groups were sufficiently represented. For example, older participants (aged 64 years and older) were somewhat underrepresented, possibly because this age group is less active on digital platforms. Another problem was the self-selection of the participants. People with strong opinions on digital systems might have been disproportionately represented, whereas those with neutral attitudes were less likely to participate. This could have influenced the results regarding general digital acceptance. Furthermore, the survey was distributed online, excluding people without email addresses, without internet access, or with little digital literacy. This limitation might have led to the underrepresentation of the oldest population group.

3.4. Data Analysis and Validation

Data evaluation was performed in several steps: 1. Data cleansing: Invalid or incomplete answers were excluded from the analysis. These included empty fields and duplicate entries. 2. Calculation: The answers were presented in the form of actual numbers and percentages. These methods provided an overview of the tendencies, majorities, and minorities in the answers. 3. Rounding: Percentages were rounded to whole numbers (without decimal places). 4. Visualization: The results were processed into diagrams to present them vividly. To ensure the functionality of the questionnaires and the receipt of results, test runs were conducted with a smaller group of six people to identify potential misunderstandings of the questions. The Likert Scale questions were standardized to allow comparability between the different subject areas.

3.5. Ethical Considerations and Informed Consent

This study was conducted in full accordance with ethical guidelines for research involving human subjects.

Participation was voluntary, anonymous, and confidential. No personally identifiable information was collected. The data were stored securely and used exclusively for the purposes of this research study. Participants were informed that by submitting the questionnaire, they consented to the publication of anonymized aggregated data.

4. Results

4.1. Demographics

The participants in this study had a broad demographic profile. In terms of gender, 56% of the respondents were female, 43% male, and 1% diverse. The age structure showed that 65% of the respondents were between 25 and 44 years of age, 16% were in the 45-64 age group, while only 13% were younger than 25 years, and 1% were older than 65 years. In addition, 62% of the respondents were employees, 5% were self-employed, 25% were students or otherwise in education, and 7% were other – including unemployed/jobseekers and retired (see Table 1 & Appendix Figure 1). This broad distribution indicates a diverse and representative sample.

Table 1: Demographic Characteristics

	Categories	**Percentage**
Gender	Female	56%
	Male	43%
	Diverse	1%
Age	Under 25	13%
	25–44	65%
	45–64	16%
	65 and older	1%
Employment Status	Employed	62%
	Self-employed	5%
	Student / In education	25%
	Other (unemployed, retired)	7%

4.2. Frequency of Restaurant Visits

The research found that 36% of the respondents eat out two to three times a month, 23% eat out weekly, whereas 17% do so only once a month. Another 15% eat out more than once a week, while 9% reported eating out less frequently than once per month (see Table 2 & Appendix Figure 2). These results underscore the importance of food service establishments in the daily lives of many consumers.

4.3. Importance of Sustainability in Restaurants

Sustainability is a key topic for diners: 71% of respondents rate a restaurant's sustainability efforts as "important to very important," 22% have a neutral view on the topic, whereas only 7% report that sustainability plays no or little role in their restaurant choice. Awareness of environmentally friendly practices is particularly pronounced

in the 25-44 age group (see Table 2).

Table 2: Frequency of Restaurants Visits and Importance of Sustainability

	Categories	**Percentage**
Frequency of Restaurant Visits	Two to three times a month	36%
	Weekly	23%
	Once a month	17%
	Less than once a month	9%
	More than once a week	15%
Importance of Sustainability in Dining	Important to very important	71%
	Neutral	22%
	Little or no importance	7%

4.4. Importance of Sustainable Food and Products

Similar to the general sustainability in the previous question, the importance of sustainable food and products is also rated as "important to very important" by 71% of respondents. Meanwhile, 20% are neutral (moderately important), and 9% report little to no relevance (see Appendix Figure 4). These results illustrate consumers' increasing expectations for environmentally friendly and fair production conditions.

4.5. Preference of Digital vs. Analog

Guest preferences for digital and analog offers show an almost even distribution (see Table 3 & Appendix Figure 5). While some guests prefer traditional methods (46%), such as printed menus and cash payments, others see clear advantages in digital ordering and payment systems (54%). This polarity indicates different expectations and the acceptance of a flexible offer.

4.6. Acceptance of Digital Ordering and Payment Systems

The digital ordering and payment systems are rated as "good to very good" by 67% of respondents, while 25% are neutral (moderate), and 8% show lower acceptance (very poor and poor. See Table 3 & Appendix Figure 6). The results indicate that an intuitive and user-friendly system design is crucial for acceptance.

4.7. Acceptance of the Digital Ordering Process

The digital ordering process via apps, websites, and easy/self-ordering stations received approval from 72%, with 22% rating it as neutral, and 6% as less positive (see Table 3 & Appendix Figure 7). The high level of acceptance shows that many guests appreciate the convenience and efficiency of these systems.

4.8. Acceptance of the Digital Payment Process

With 82% positive ratings, the digital payment process is the highest-rated part of digital systems. Only 6% of respondents still prefer cash, while 12% have a neutral (moderate) view (see Table 3 & Appendix Figure 8). These results clearly show the trend toward cashless payment options.

4.9. Perceptions regarding the Efficiency of Digital Ordering and Payment Systems

A large proportion (65%) of respondents find digital systems more efficient than traditional methods, 23% are neutral and 12% see no efficiency advantage (see Table 3 & Appendix Figure 9). The time saved by the automated processes is particularly emphasized.

Table 3: Perceptions of Digital Systems

Aspect	Positive	Neutral	Negative
Preference (digital vs. analog)	54%	-	46%
Digital ordering & payments system acceptance (general)	67%	25%	8%
Digital ordering system acceptance	72%	22%	6%
Digital payment system acceptance	82%	12%	6%
Perceived efficiency	65%	23%	12%

4.10. Perception regarding the Sustainable Impact of Digital Ordering and Payment Systems

The survey shows that 58% of guests believe that digital ordering and payment systems have a positive impact on sustainability in terms of restaurants conserving resources and reducing waste, 26% are neutral, whereas 16% see no direct connection (see Table 4 & Appendix Figure 10).

4.11. Perception regarding Information about Sustainability

Only 36% of respondents feel better informed about the sustainability of the food offered (e.g., origin, transportation, packaging, and CO2 footprint) through digital menus and ordering systems, while 33% are neutral, and 31% indicate that they lack relevant information (see Table 4 & Appendix Figure 11).

4.12. Decision-making toward Sustainable Options

A minority of diners (19%) report that digital systems influence their decision in favor of more sustainable dishes, 26% are neutral, whereas the largest group (55%) claims that digital systems have not influenced their choices so far (see Table 4 & Appendix Figure 12).

4.13. Potential for Personalization use

The option to personalize orders – for example, by adding or removing ingredients – is rated as “good to very

good" by 72% of guests, whereas 22% are neutral (moderate), and 6% see no great added value (see Table 4 & Appendix Figure 13).

4.14. Frequency of Feedback Use

Of those surveyed, 44% use digital platforms occasionally (sometimes) to leave feedback or ratings, 15% do so regularly, whereas 41% use these functions rarely or not at all (see Table 4 & Appendix Figure 14). These results show that restaurants are still insufficiently encouraging the use of this valuable feedback.

Table 4: Sustainability Impact and Consumer Behavior

Aspect	Positive	Neutral	Negative
Digital systems promote sustainability	58%	26%	16%
Better informed about sustainability	36%	33%	31%
Influenced to choose sustainable dishes	19%	26%	55%
Use of personalization features	72%	22%	6%
Regular/occasional digital feedback usage	44%	15%	41%

5. Discussion

5.1. Sustainability Awareness among Consumers

The results of this study demonstrate that sustainability is a significant consideration for a majority of restaurant guests, aligning with findings by the Author of [8], who emphasize the growing consumer demand for environmentally responsible practices. Approximately 71% of participants rated sustainability efforts as "important to very important" when choosing restaurants, confirming that sustainable practices are not merely a trend, but a decisive factor in customer decision-making. However, while general sustainability awareness is high, the results indicate a gap between sustainability expectations and digital system contributions. Only 36% of respondents felt better informed about sustainable options via digital ordering systems, suggesting that current digital menus and platforms are underutilized as tools for promoting sustainable behavior. This supports author's [9] assertion that sustainability communication must be simple, visible, and action-oriented to effectively engage consumers.

5.2. Acceptance of Digital Ordering and Payment Systems

The high acceptance rates of digital ordering (72%) and payment systems (82%) reinforce previous findings that digital technologies can enhance service efficiency and customer satisfaction [1]. Particularly in the hospitality sector, convenience, speed, and perceived ease of use are critical drivers of technology adoption [5]. Nonetheless, the polarized preference for digital versus analog experiences (54% versus 46%) highlights the necessity of hybrid solutions, as recommended by the Authors of [18]. Not all consumers are ready to fully transition to digital interactions, and restaurants must offer flexibility to cater to diverse expectations.

5.3. Efficiency Gains and Operational Implications

Approximately 65% of participants perceived digital ordering and payment systems as more efficient than traditional methods. This aligns with prior research in service industries where digitalization leads to faster service delivery and improved resource management [15]. However, the 12% who did not perceive efficiency gains reveal that implementation quality matters significantly. Poorly designed or malfunctioning systems could negate potential benefits, indicating the need for continuous system optimization and staff training.

5.4. Influence on Sustainable Decision-Making

One of the critical insights from this study is that only 19% of guests reported that digital systems influenced their choice of sustainable menu items. This limited impact suggests that while digital systems have potential, they are currently not effectively leveraged to nudge sustainable choices. Comparatively, the Authors in [12] nudge theory has shown that small design changes in choice architecture can significantly influence behavior in sectors such as banking and retail. Adapting these principles to restaurant ordering systems, such as through sustainability labels, carbon footprint indicators, and incentive mechanisms, could help bridge this gap [19].

5.5. Feedback Culture and Customer Engagement

Despite the increasing use of digital platforms, the frequency of leaving feedback remains moderate, with 59% providing occasional or regular feedback. Similar to findings in earlier hospitality research [18], this indicates that active strategies are required to encourage feedback collection. Reward mechanisms, personalized follow-ups, and simplified feedback interfaces could increase guest engagement, and provide valuable insights for restaurants.

5.6. Further Discussion regarding Existing Studies

In line with the work of [11], this study underscores the persistent attitude–behavior gap, where positive sustainability attitudes do not necessarily translate into sustainable dining choices. The modest influence of digital tools on sustainable decisions suggests that awareness alone is insufficient without active digital engagement strategies. Furthermore, the alignment with the Author of [18] indicates that visual sustainability cues such as carbon labels can significantly shift behavior when properly integrated into digital menus. Compared with the Study of [1], the present results confirm that perceived efficiency depends heavily on usability design and contextual implementation. Similar to [5], training and user education remain essential factors for maximizing technology acceptance.

6. Conclusion

6.1. Summary and Key Findings

This study provides important insights into consumer perceptions of digital ordering and payment systems in the restaurant industry, with a particular focus on their relationship to sustainability and operational efficiency. The findings reveal a high level of acceptance of digital systems, especially regarding digital payment options,

confirming the growing role of digitalization in hospitality service. Furthermore, sustainability emerges as a significant concern for diners; however, the current use of digital systems to promote sustainable choices remains limited. While digital platforms offer operational efficiencies, their potential to actively influence sustainable consumption behaviors is not yet fully realized. The evidence supports the need for restaurants to adopt hybrid solutions, improve sustainability communication within digital interfaces, and leverage behavioral nudging techniques to better align with evolving consumer expectations.

6.2. Practical Implications for the Restaurant Industry

Communication of sustainability: To communicate sustainability efforts effectively, restaurants should use digital menus to provide clear and appealing information. Recommendations:

- Carbon information: Display the carbon footprint of each dish to make it easier for guests to make sustainable choices.
- Declaration of origin: Highlight regional, seasonal, and organic products to promote trust and transparency.
- Interactive features: Integrate videos or animations that illustrate sustainable processes in the business, such as the use of renewable energy or recycling measures.

Expansion of personalization features: Individual customization options increase satisfaction and acceptance of digital systems. Recommendations:

- Flexibility when ordering: Allow guests to add or remove ingredients to accommodate individual preferences (e.g., allergies, low-fat, or vegan options).
- Recommendation systems: Use AI-based algorithms to offer personalized recommendations based on past orders or preferences.
- Nutritional filters: Offers filter options for specific diets, such as gluten- or lactose-free, directly on the digital menu.

Improve user-friendliness: The intuitive design (the so-called user experience) of digital systems is crucial for their acceptance. Recommendations:

- Easy navigation: Optimize user interfaces so they are easy to understand, even for less tech-savvy guests.
- Accessibility: Ensure that digital platforms can also be used by people with disabilities, for example, using larger font sizes or voice control.
- Fast loading and response times: It is important to ensure that digital menus and ordering systems operate smoothly and without delays.

Incentivize sustainable choices: Nudging can be used to encourage guests to make sustainable choices. Recommendations:

- Discounts for sustainable dishes: Offer discounts for climate-friendly menu options to increase demand

for these dishes.

- Reward systems: Implementation of a point system in which guests are rewarded for sustainable decisions (e.g., not using disposable items, choosing the meat-free option).
- Transparent education: Communicating to guests the positive impact their decision has on the environment, e.g., by displaying messages such as "Your choice saves X liters of water or X tons of CO2."

Strengthening the feedback culture: Well-organized feedback management helps strengthen guest loyalty and optimizes the processes. Recommendations:

- Automatic reminders: Send guests a personalized invitation to provide feedback after their visit.
- Incentive systems for feedback: Reward guests for leaving reviews, e.g., with a small discount for their next visit.
- Qualitative evaluation: Systematic analysis of open feedback comments to identify trends and potential for improvement.

Clarification of digital payment systems: Information campaigns can reduce reservations about digital payments. Recommendations:

- Data protection transparency: Clear communication to guests regarding how customer data are protected and what security measures are implemented.
- Security information: Provide information on the security of digital payments to minimize uncertainties, especially among older guests.
- Training of staff: Training and further education of employees to competently help guests with questions about digital payment systems.

Strategic integration of digital systems: The holistic integration of digital technologies is crucial to ensure long-term benefits for businesses. Recommendations:

- Hybrid solutions: This involves combining digital and analog systems to meet the needs of all guest groups.
- Pilot projects: Testing new digital features in selected restaurants before rolling them out and implementing them on a large scale.
- Continuous development: Investing in regular updates and improvements to keep pace with technological developments.

6.3. Limitations

While this study provides important insights into consumer perceptions of digital ordering and payment systems in restaurants, several limitations must be acknowledged. First, the sample was skewed toward younger, digitally literate participants, which may have led to an underrepresentation of older age groups and individuals

with lower digital competence. This demographic imbalance limits the generalizability of the findings, particularly for customer segments less engaged with technology. Second, the self-selection nature of survey participation may have introduced bias, as individuals with stronger opinions regarding digitalization and sustainability were likely more motivated to respond. Third, the cross-sectional design of the study captures a snapshot in time, preventing the analysis of evolving attitudes and behaviors as digital technologies and sustainability trends progress. In addition, this study did not include research for potential confounding factors such as restaurant type (for example quick service versus fine dining) or digital literacy level, which could influence perceptions of efficiency and sustainability. The reliance on self-reported measures could also introduce response bias. Future studies may benefit from mixed methods approaches, combining behavioral data with qualitative interviews to validate these perceptions. Finally, since the data collection was focused primarily on European countries such as Germany, Austria, Switzerland, France, and Italy, the findings may not fully reflect consumer perceptions in other cultural or regional contexts, where technology adoption and sustainability values could differ.

6.4. Future Research Directions

Building on the current findings, future research could pursue several promising directions. Longitudinal studies are needed to track changes in consumer attitudes toward digital systems and sustainability practices over time, particularly as technological innovations continue to reshape the hospitality industry. In addition, qualitative methods such as interviews or focus groups could provide richer insights into the motivations behind consumer behaviors and uncover more nuanced perspectives that structured surveys may miss. Experimental designs testing specific digital nudging interventions – such as displaying carbon footprint information, offering sustainability incentives, or using targeted sustainability messaging – would be valuable to assess the actual behavioral impact of such strategies in restaurant settings. Future research should also aim to explore broader geographical regions beyond Europe, capturing cultural diversity in technology acceptance and environmental consciousness to develop globally relevant recommendations.

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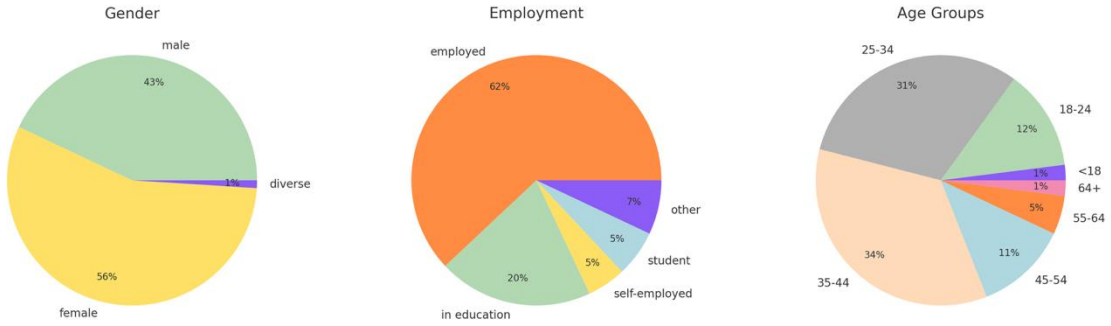

Figure 1: Demographics (by the Author, 2025)

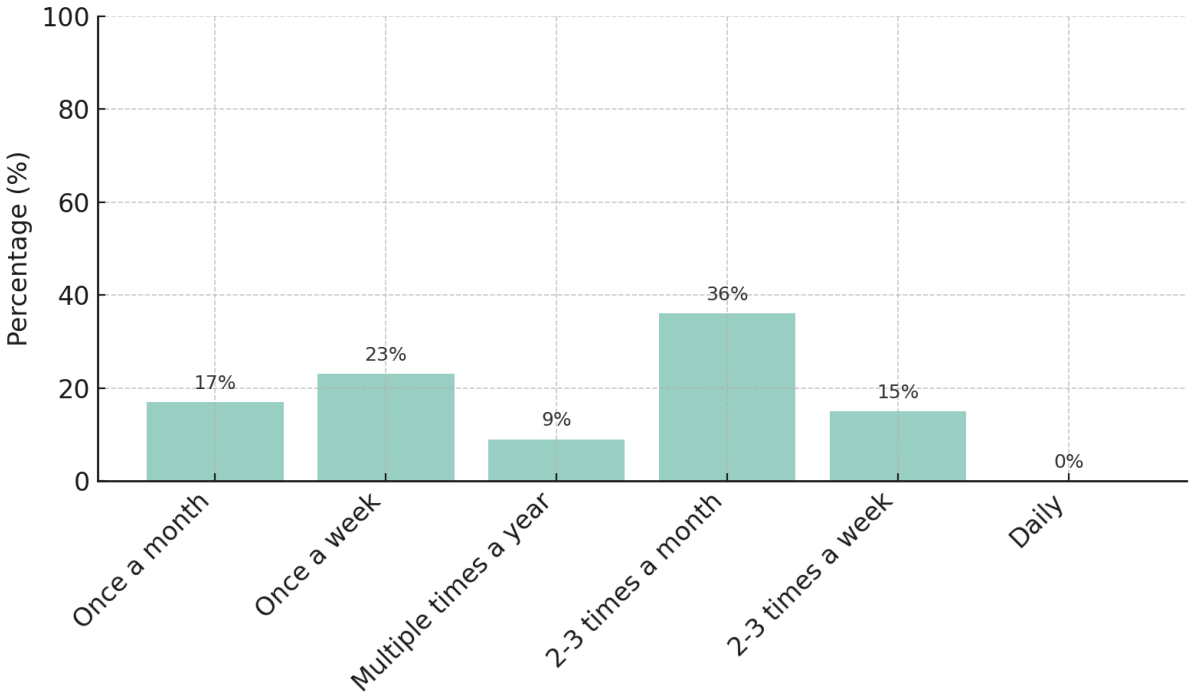

Figure 2: Frequency Restaurant Visits (by the Author, 2025)

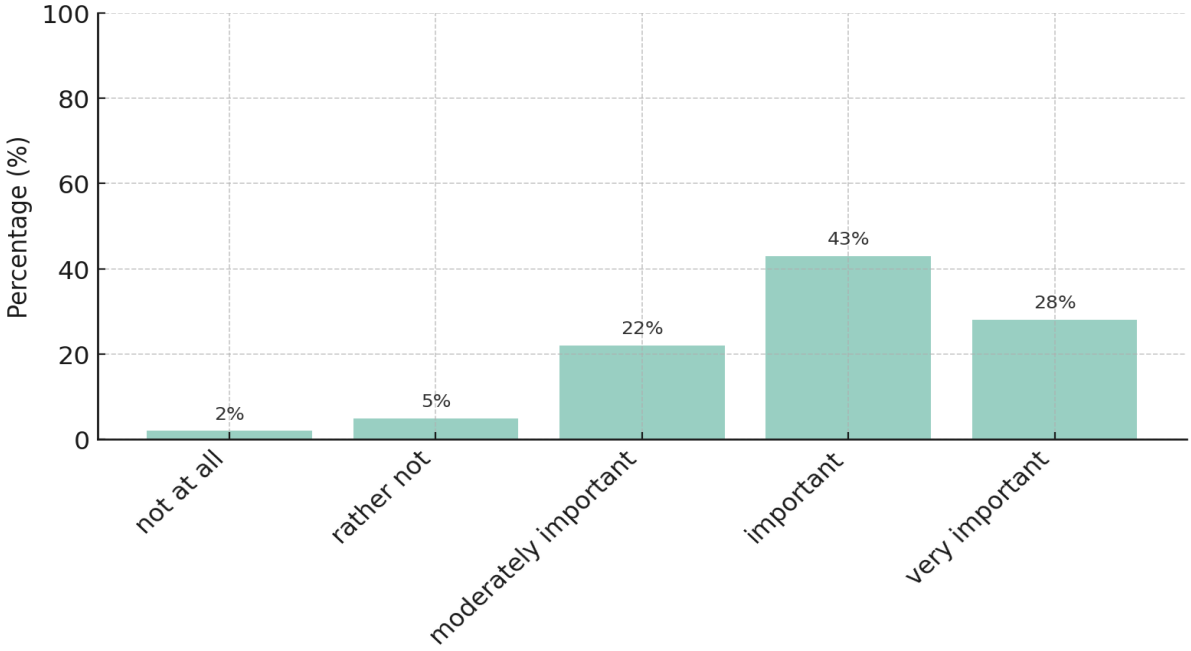

Figure 3: Importance of Sustainability in Restaurants (by the Author, 2025)

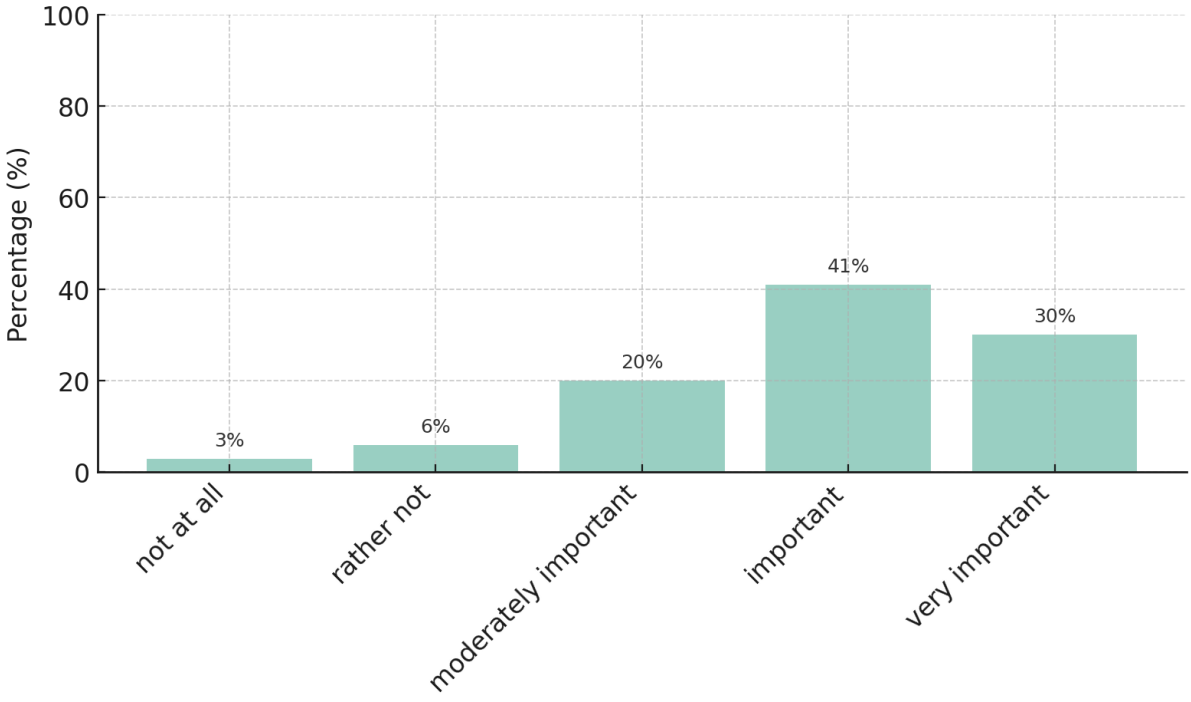

Figure 4: Importance of Sustainable Food & Products (by the Author, 2025)

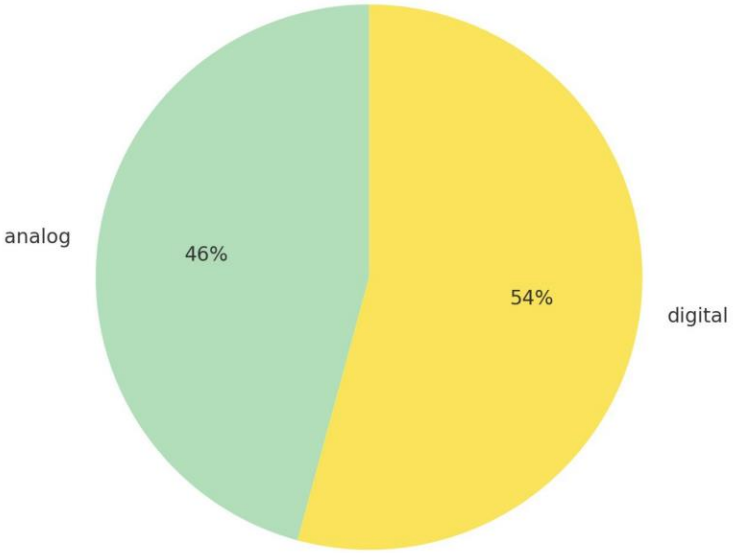

Figure 5: Preference for Digital vs. Analog (by the Author, 2025)

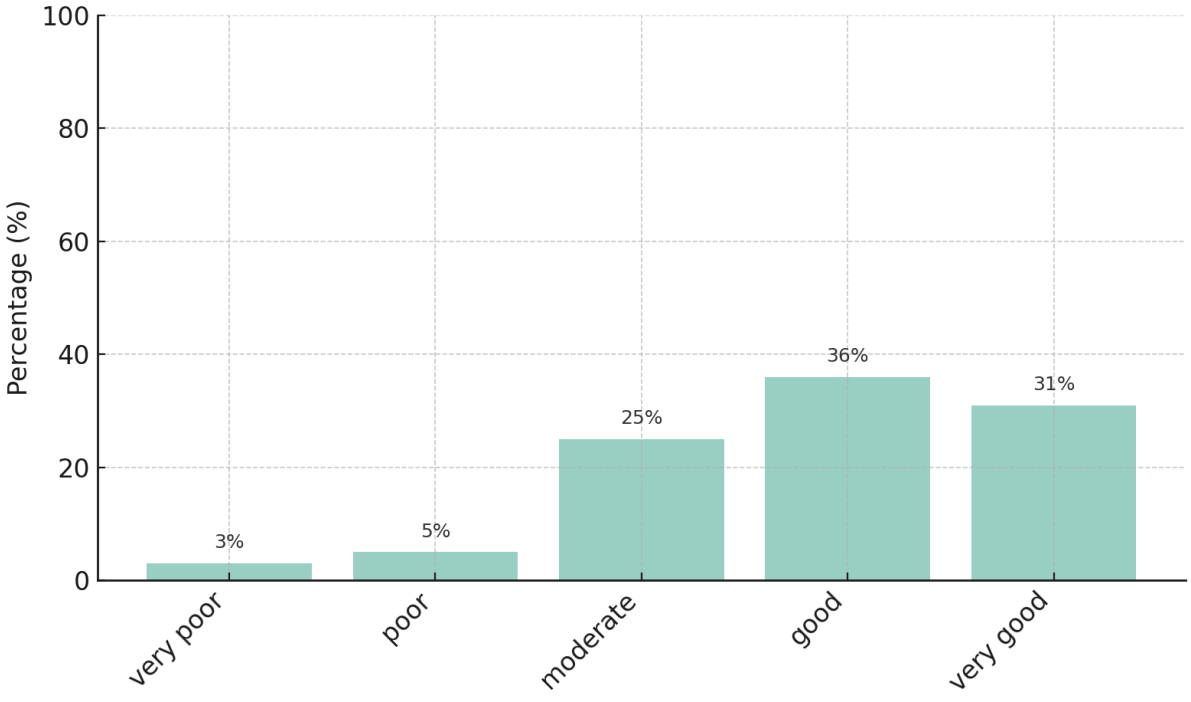

Figure 6: Acceptance of Digital Ordering & Payment Systems (by the Author, 2025)

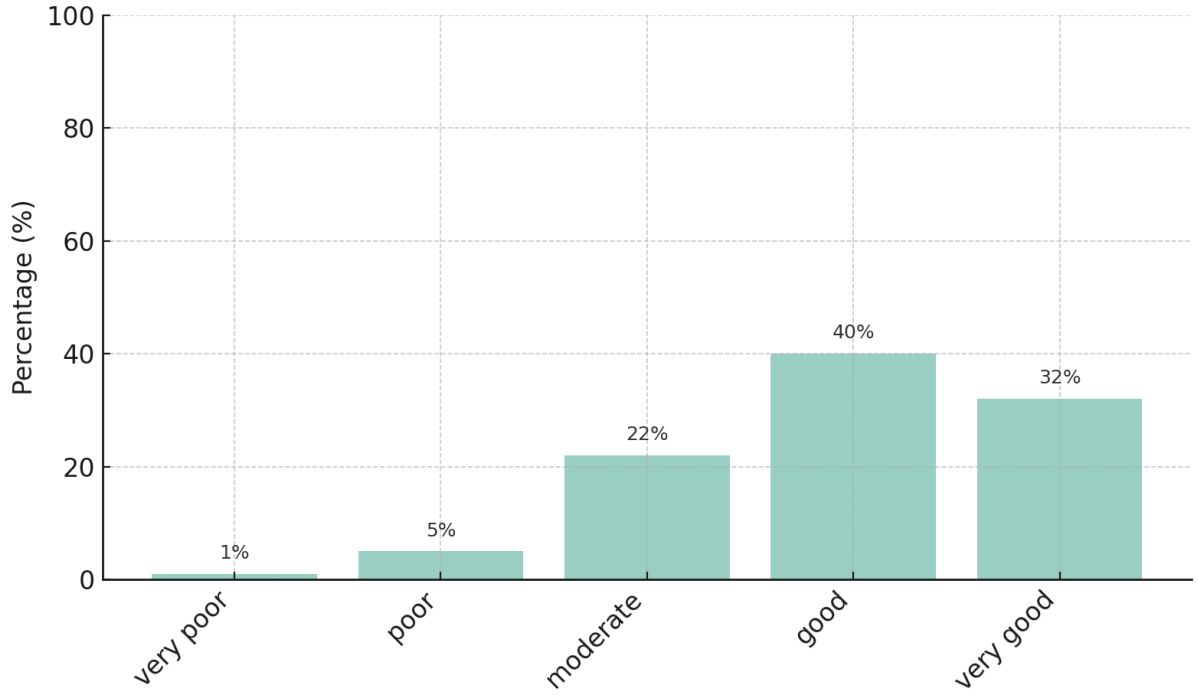

Figure 7: Acceptance of Digital Ordering Process (by the Author, 2025)

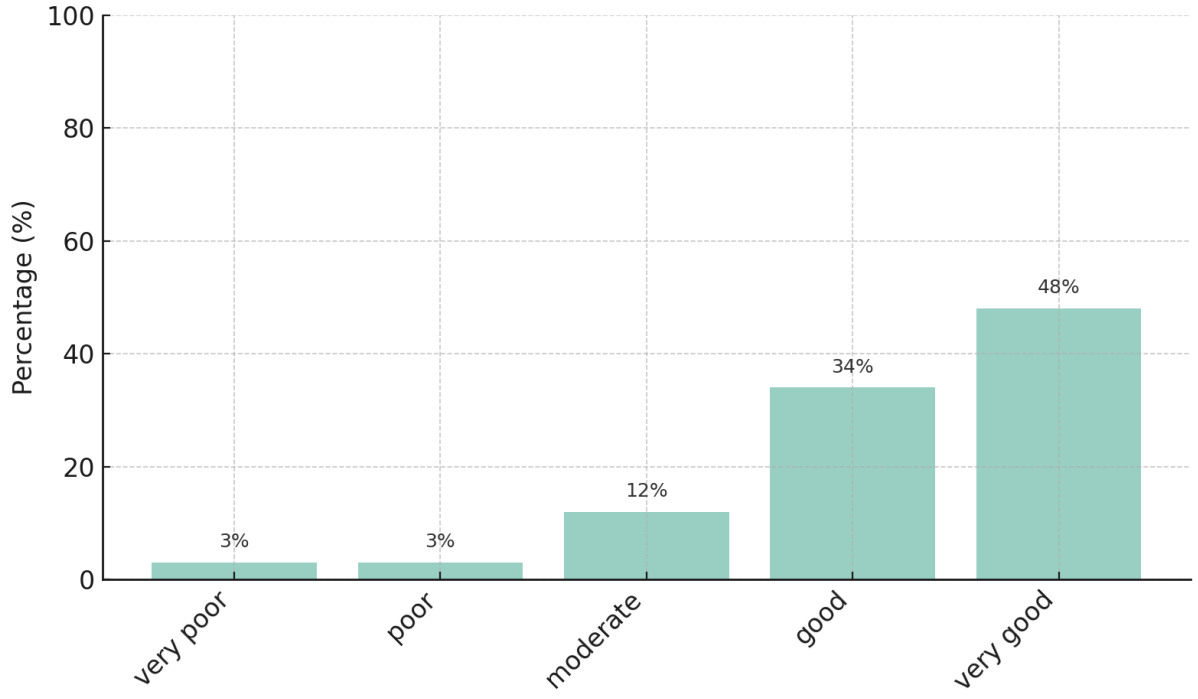

Figure 8: Acceptance of Digital Payment Process (by the Author, 2025)

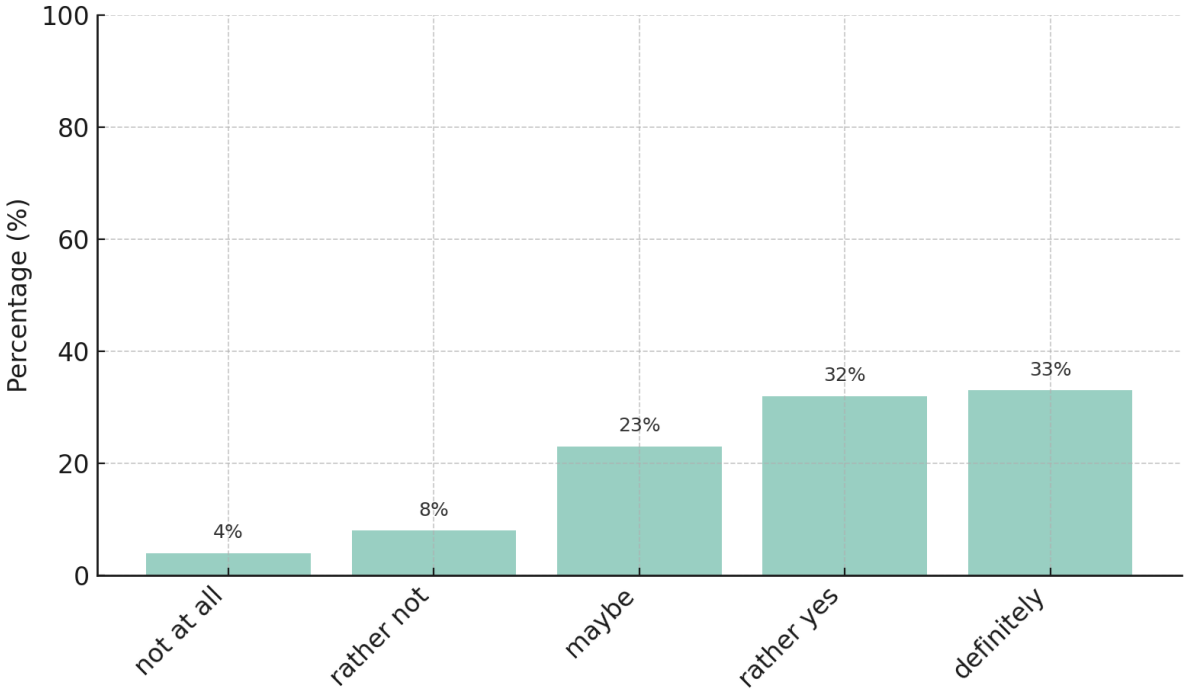

Figure 9: Perception Regarding Efficiency of Digital Ordering and Payment Systems (by the Author, 2025)

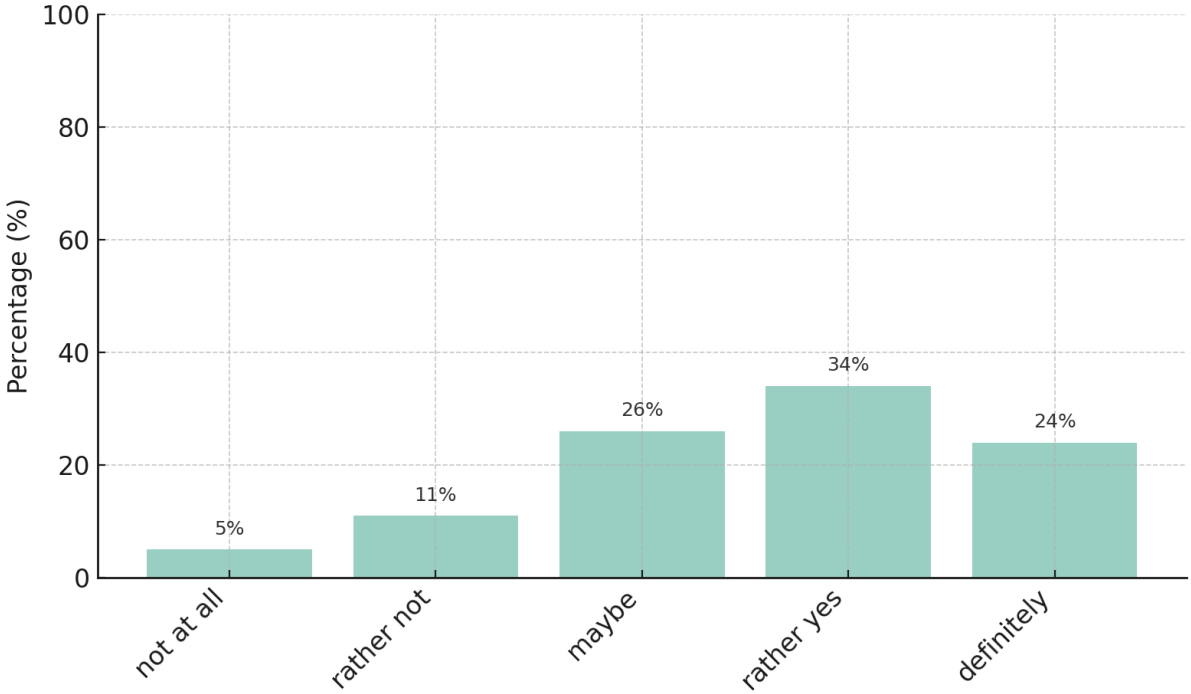

Figure 10: Perception Regarding Efficiency of Digital Ordering and Payment Systems (by the Author, 2025)

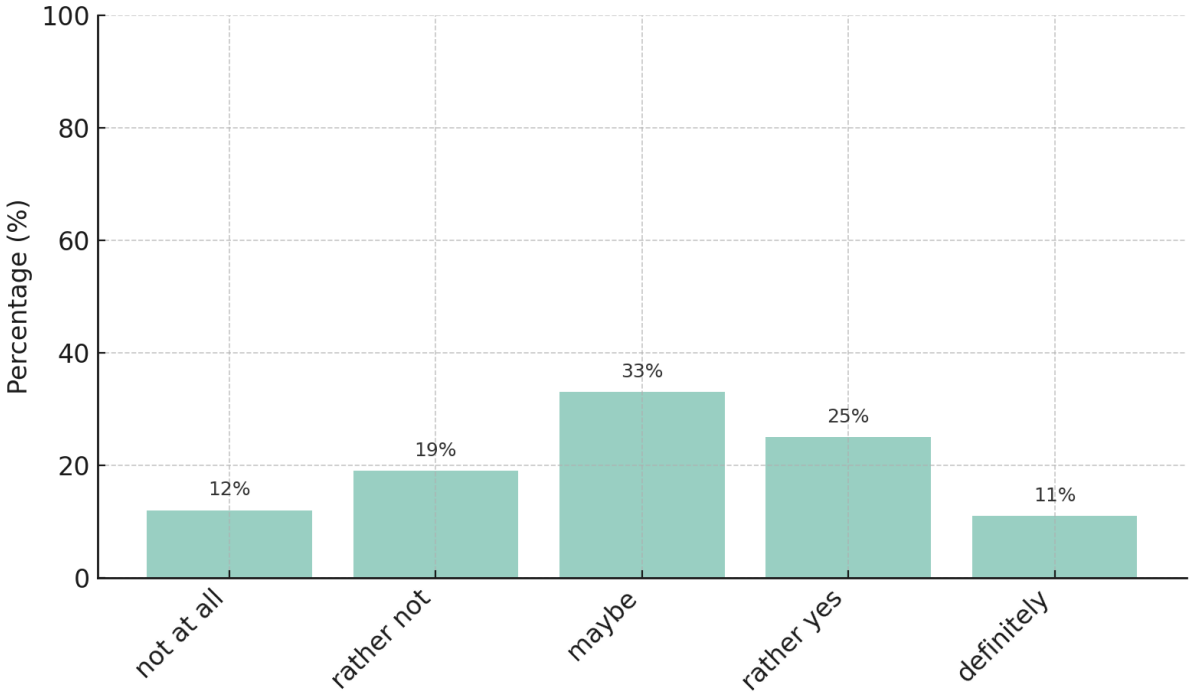

Figure 11: Perception Regarding Information About Sustainability (by the Author, 2025)

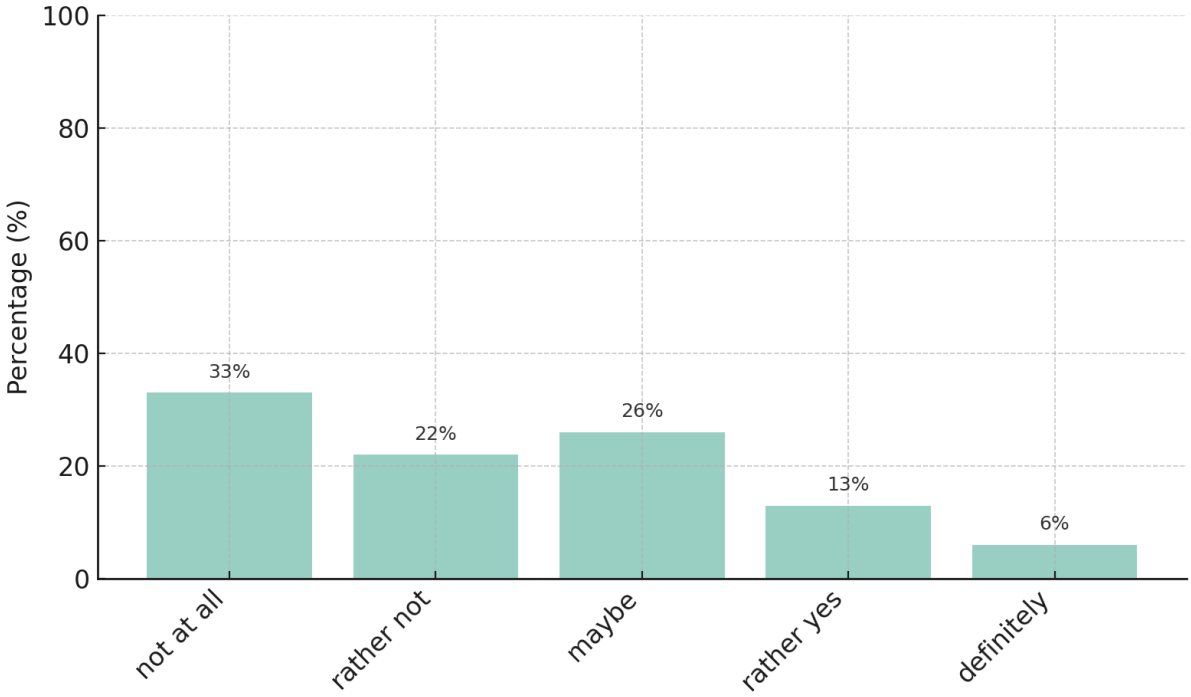

Figure 12: Decision Making Toward Sustainable Options (by the Author, 2025)

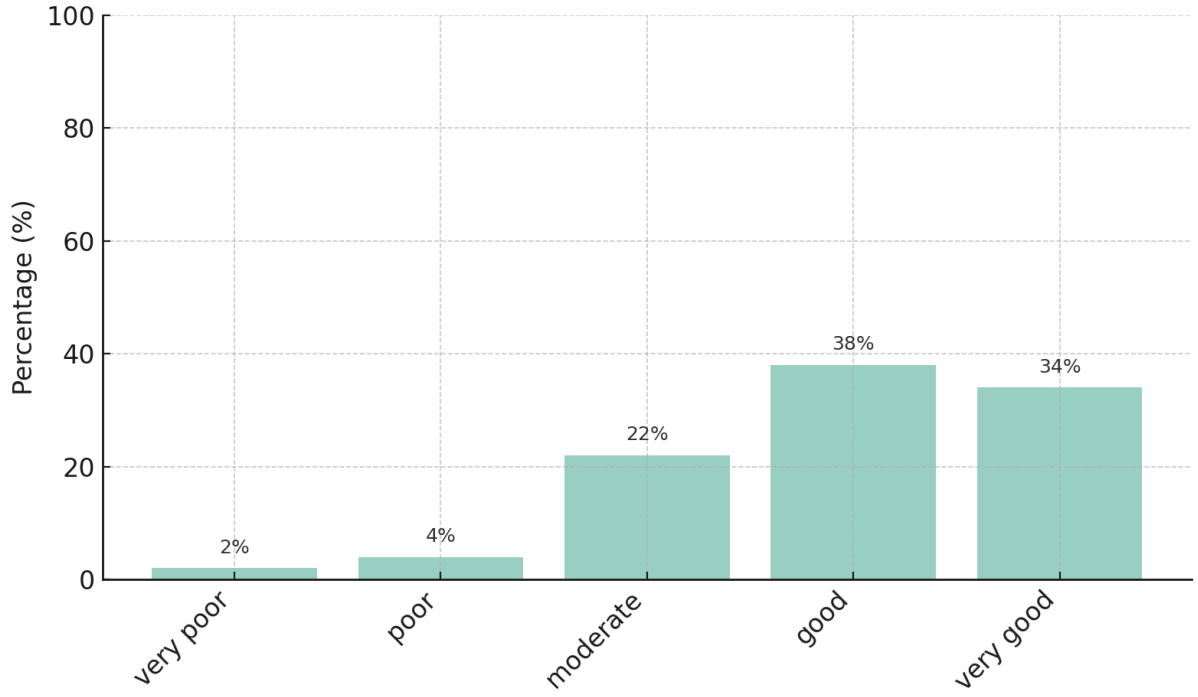

Figure 13: Potential for Personalization Use (by the Author, 2025)

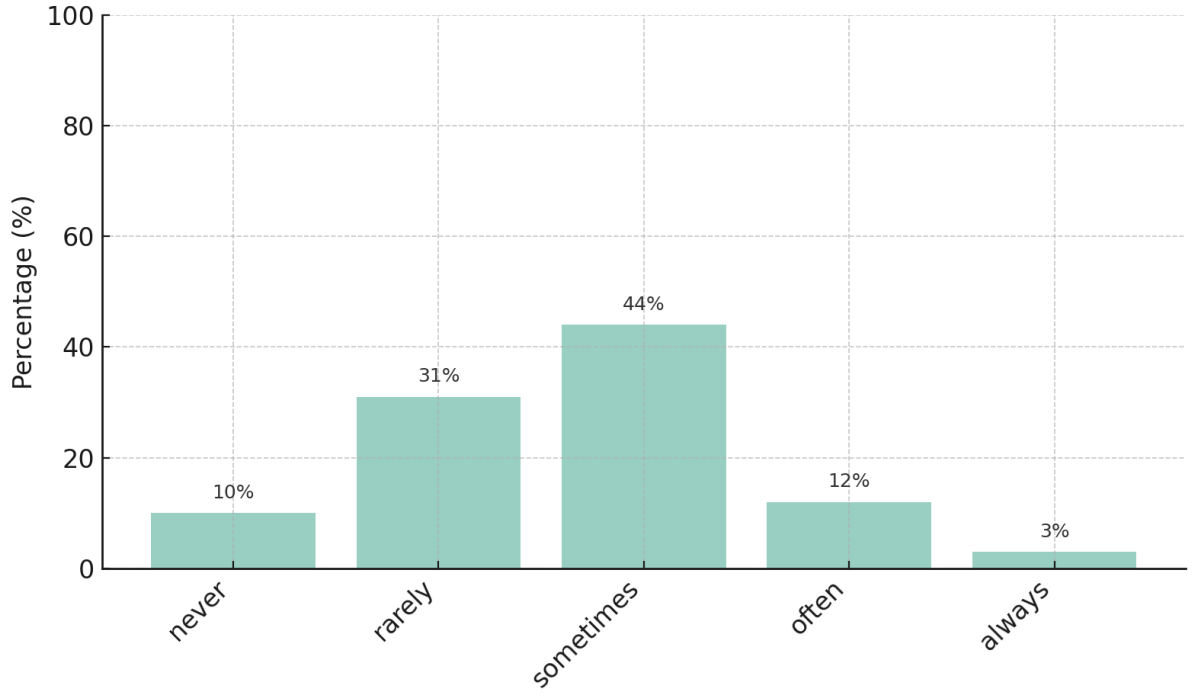

Figure 14: Frequency of Feedback Use (by the Author, 2025)