Consumer Motivations and Barriers to Food Waste Sorting: The Role of Segmentation in municipal communication

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Summary

Understanding the motivations and barriers consumers face in separating food waste is a prerequisite for effective communication between municipalities and citizens promoting waste sorting. The aim of this paper is to uncover the motivations and barriers across consumer segments, including the identification of segments that can be effectively targeted by municipalities. Using a survey instrument with 1,332 respondents, the study captured consumer attitudes and preferences, which were further complemented by data from a survey conducted among municipalities. A cluster analysis revealed four distinct consumer segments. For all segments, key motivations include the assurance that waste will be properly used and the availability of an adequate number of collection bins. Communication with consumers should emphasize specific examples of waste utilization and address negative externalities that hinder waste collection. Perceptions of barriers to waste collection and sorting vary across consumer segments.

***Keywords**: Food waste, consumer segments, motivations, barriers, municipal perceptions, waste sorting behaviour.*

Introduction

Food waste (FW) has been shown to have a significant environmental impact[1], with associated negative environmental consequences[2]. Nevertheless, from a circular economy perspective, it can be regarded as a resource. For instance, it can be utilised to generate low-pollution energy[3] or to restore nutrients to soil in a natural manner within agricultural contexts[4]. As posited by numerous scholars, food waste is generated throughout the food supply chain[5], with consumers' households playing a major role in this regard1. The majority of extant research indicates that the majority of wasted food comes from households[6, 7]. Some report that approximately half of the food thrown away across the food supply chain comes from households[5].

In order to effectively utilise FW from households as a resource in accordance with the principles of the circular economy, it is imperative to engage as many households as possible in the collection of FW. This prompted our efforts to fill the research gap in food waste recovery research and first determine the willingness of consumers, as well as municipalities that cover waste collection, to engage in a FW collection and sorting system, and then to determine what barriers to FW collection both parties face. The **objective** of the present paper is twofold: firstly, to identify consumer segments depending on their perceived motivation and barriers to participation in the collection and sorting of FW; and secondly, to present recommendations applicable to communication messages of motivational campaigns for FW sorting. It is vital that the FW collection and sorting system and its communication are set up in such a way that the system is acceptable to all waste management actors, both citizens and municipalities.

Literature review

Food waste is defined as uneaten food scraps that are destined for disposal, representing the final stage of the food life cycle[6, 8]. The primary effort should be to minimize avoidable food waste and non-avoidable food waste should be sorted and utilized[6, 9]. Examples of avoidable food waste include baked goods, fruits and vegetables, which account for approximately 50% of avoidable waste, and biological residues and scraps, which constitute non-avoidable waste[6, 10]. It is desirable to use the unavoidable FW,

for applications such as energy or agricultural purposes. Furthermore, it is essential to address food waste through effective sorting for subsequent utilisation. Consumer motivation plays a pivotal role in fostering proper participation in these practices[3].

Four segments of consumers were identified according to their attitudes towards waste sorting and motivation: the frequent waste collection resisters (willing to sort only occasionally, not bio-waste), the sceptics (opponents, distrust in waste recovery), the sorting enthusiastic (positively motivated to sort all types of waste) and the bio-waste sorting resisters (willing to sort all types of waste except bio-waste)[11].

Motivation to sort food waste

In addressing the issue of food waste, a holistic approach is imperative, even within the context of motivating food waste sorting[7]. Consumer waste sorting behaviour is significantly influenced by habitual and motivational factors, including environmentally responsible behaviour[12]. Environmental concern is a primary intrinsic motivator for individuals to sort waste[13], and financial incentives in the form of cost savings from proper sorting can be utilised to motivate consumers to do so[14]. Conversely, intrinsic motivation or extrinsic incentives, such as government publicity, have also been demonstrated to positively influence waste sorting behaviour[15]. Furthermore, the perceived value of sorting, the adequacy of collection facilities, and social interaction have been identified as key factors that can enhance active participation in waste sorting[16].

In the context of food waste, a significant number of contemporary studies have been conducted that focus on the motivations of consumers to reduce food waste[5, 7, 17]. These studies have identified that social norms and personal beliefs play a crucial role in motivating consumers to minimise food waste[11]. The issue of food waste is regarded as ethically problematic for financial reasons, where FW has an impact on wasted money, and for environmental reasons, where it is seen as a burden on the environment[18]. It is acknowledged that environmental awareness is an effective motivator for reducing food waste and should be invoked when eliciting interest in food waste sorting[19]. The aforementioned motivators should also be tested for the possibility of motivating consumers to sort food waste, which is the focus of this paper.

Barriers to sort food waste

Consumers face several barriers to potentially sorting food waste. These include the inconvenience of collection, which includes the effort consumers have to put into sorting, and lack of information, where consumers are unsure how to sort correctly[20]. Lack of knowledge of correct sorting can be a major barrier to waste sorting[21]. Consumers need time to sort waste in addition to the effort involved, and the time required for collection can be an additional barrier[20, 22].

A further barrier to sorting is consumers' uncertainty about the subsequent environmental benefits of waste management, due to a lack of confidence in the recovery of waste[13]. In the sorting process itself, consumers are concerned about the hygiene aspects of sorting, due to the rapid spoilage of food, especially odour[23]. Another barrier to sorting food waste is financial. Consumers are reluctant to invest in the necessary equipment for food waste collection, such as buckets or degradable bags, which could be addressed by financial incentives and subsidies[24].

Communication of efficient sorting of food waste

Clear communication of collection and sorting instructions can be useful in overcoming consumer perceived barriers such as perceived time[22]. The role of policy makers7 is crucial in setting up the communication of how FW is sorted and collected[7, 25]. Residents should first be convinced of the seriousness of the local government's intention to implement this policy and then begin to see waste sorting as a civic duty[26]. Therefore, a simple approach to waste separation[9] should be developed for consumers and properly communicated so that consumers are well informed about the options. In fact, most consumers are motivated to reduce food waste, so simply showing them how to sort properly[27] is enough. Short distances to collection points are needed, as well as easy access to the right information, such as information stickers[28]. Consumer education is needed to provide information on the correct handling and sorting of FW[21, 29]. The utilisation of mass media has the potential to facilitate the communication of strategies aimed at the reduction and separation of food waste. It is imperative that

these messages are adapted to suit the specific age groups and personal values of the audience[30]. The dissemination of information regarding food waste segregation should be conducted through the medium of public service announcements[25].

Data and methods

This study utilised a unique primary dataset, collected via a questionnaire survey among consumers in the Czech Republic during the period September to December 2022, employing the CAWI method. The target respondents were consumers living in housing estates without garden, where the greatest potential for involvement in central food waste collection is seen. A sample of 1,332 individuals was obtained by applying quota sampling with six quota characteristics (see Table 1). The structure of the sample and the baseline were validated against EU-SILC (EU-Statistics on Income and Living Conditions)[31] microeconomic data from 2022, which is representative of the population structure [31]. Disposable household income is expressed in monthly terms and converted from CZK to EUR at the average exchange rate in 2022.

Table 1: Identification of respondents

	Questionnaire, n = 1332, [%]	**EU-SILC [%]**
Gender		
Men	47.9	48.6
Women	52.1	51.4
Age group		
18-24 years	8.5	7.6
25-34 years	17.2	14.8
35-44 years	17.4	18.2
45-54 years	18.8	18.8
55-64 years	15.0	15.0
65 and more years	23.1	25.6
Economic activity status		
Employees	56.7	46.7
Self-employed	8.0	9.5
Retired	24.1	25.9
Unemployed	2.0	2.7
Inactive (students, maternity leave, other)	9.2	15.2
Highest education attained		
Primary	1.7	0.2
Secondary (lower)	12.5	12.0
Secondary (complete)	54.9	66.9
Tertiary (university)	30.9	20.9
Number of household members		
1	18.5	32.1
2	39.5	32.1
3	21.6	16.7
4	17.2	14.9
5 and more	3.2	4.2
Disposable household income		
Less than 30 000 CZK (1170 EUR)	24.5	35.4
30 001 to 45 000 CZK (1755 EUR)	30.3	22.6
45 001 to 60 000 CZK (2340 EUR)	24.4	18.1
60 001 to 75 000 CZK (2925 EUR)	12.2	11.1
More than 75 000 CZK	8.6	12.8

Source: own questionnaire survey, n = 1332; [31]

The application of cluster analysis with the K-means algorithm has been demonstrated to offer advanced capabilities for the identification of consumer segments based on their motivations and barriers to sorting food waste. The K-means algorithm has been selected for the identification of homogeneous groups within a large dataset. The K-means algorithm is an iterative procedure that minimises the function of

$$f_{KP} = \sum_{h=1}^{k} \sum_{i=1}^{n} u_{ih} \|x_i - \bar{x}_h\|^2 \ ,$$

where the $\mu_{ih} \in \{0,1\}$ elements indicate whether the i-th object belongs (value 1) or doesn't belong (value 0) to the h-th cluster and is a vector of average values of the h-th cluster[32]. The following conditions must be met:

$$\sum_{h=1}^{k} u_{ih} = 1 \ for \ i = 1, 2, \dots, n \quad and \quad \sum_{i=1}^{n} u_{ih} > 0 \ for \ h = 1, 2, \dots, k.$$

Following segmentation, the demographics of the respondents assigned to each cluster are quantified in order to identify each segment.

The findings, based on data from the consumer perspective, are supplemented by an analysis of data from the municipal perspective, which was obtained through a subsequent questionnaire survey targeting representatives of municipalities and districts where housing estates without gardens are located. The data collection was carried out in 2023 in the form of CAWI and a dataset of n = 59 was obtained, with 96.6% of the data relating to towns with a population size of 5-99 thousand inhabitants. The data are representative of all regions of the Czech Republic (Table 2).

Table 2: Distribution of respondents in the regions of the Czech Republic

	Absolute	**Relative**
Prague	6	10.2
Central Bohemian	7	11.9
South Bohemian	4	6.8
Plzeň	1	1.7
Karlovy Vary	2	3.4
Ústí nad Labem	4	6.8
Liberec	3	5.1
Hradec Králové	3	5.1
Pardubice	5	8.5
Vysočina	4	6.8
South Moravian	6	10.2
Olomouc	4	6.8
Zlín	3	5.1
Moravian-Silesian	7	11.9
Total	59	100.0

Source: own questionnaire survey, n = 59

The analysis of the research data was conducted using IBM SPSS Statistics 27 software.

Results and discussion

The current level of sorting of household food waste, which includes all food waste (both plant-based and animal-based components of food waste), is first compared with the sorting of other types of waste to which consumers are accustomed. The present study measured the current level of waste sorting by Czech consumers in a questionnaire survey. The scale of measurement used was a seven-point scale ranging from 1 (lowest) to 7 (highest) perceived level of sorting. The results of the survey revealed that consumers sort plastic, paper and glass the most, while food waste is sorted the least (see Table 3).

Table 3: Waste sorting rate of Czech consumers

	Plastic	Paper	Glass	Food waste (plant-based and animal-based waste from kitchen)
Average values on a scale of 1-7	6.06	5.83	5.84	3.12

Source: own questionnaire survey, n = 1332

In response to questions regarding the level of waste sorting in municipalities, municipal representatives provided consistent responses. According to the opinion of municipal representatives, the most established sorting is paper and plastic. Regarding the sorting of food waste, 22% of municipality representatives stated that this waste is sorted in their municipality. Most municipalities report that food waste can currently only be sorted at the level of plant residues into bio-waste.

Consumer willingness to separate food waste

The majority of respondents (86%) expressed a desire to sort food waste; however, 46% of them reported a lack of options regarding how and where to do so. A more detailed analysis of consumer willingness to sort FW (Fig. 1) revealed that one third of consumers (31%) already engage in partial sorting. A negligible percentage of consumers expressed a lack of interest or intention to sort FW. A mere 5% of respondents consider FW sorting to be of negligible importance, while 2% of respondents are reluctant to engage in FW sorting due to concerns regarding FW handling. A modest gender bias is observed (p-value 0.021; Contingency coefficient Phi = 0.106), indicating a marginally higher propensity among women to engage in FW sorting.

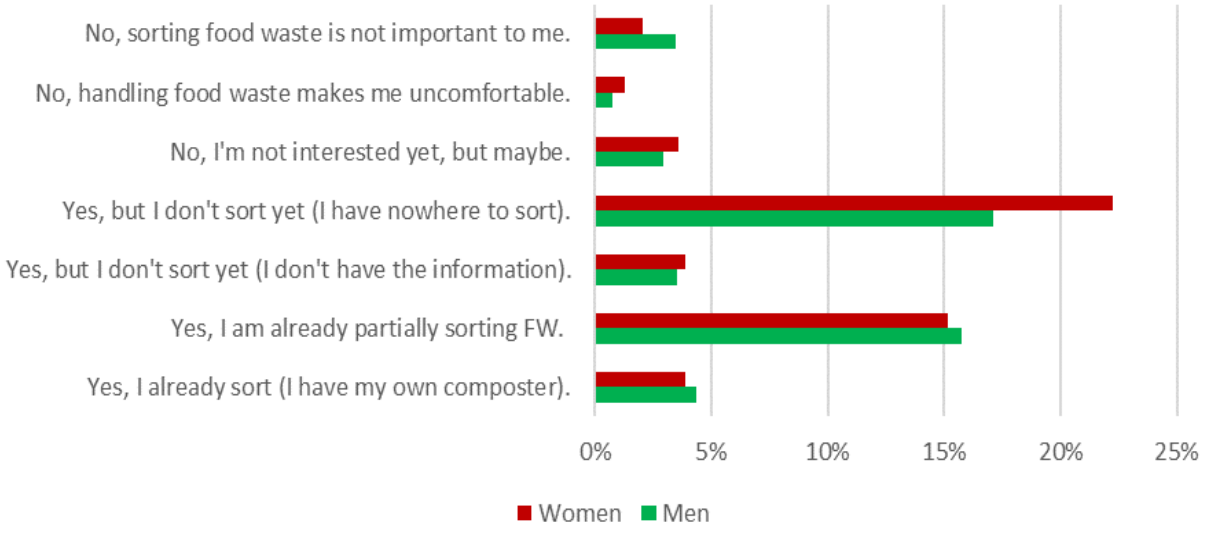

Figure 1: Willingness of consumers to sort FW
Source: own questionnaire survey (n = 1332)

95% of municipalities are willing to introduce a separate food waste system. For a potential food waste collection system to work, the preferences and expectations of municipalities and consumers themselves need to be aligned. Consumers who expressed a willingness to sort food waste (n = 1145) further specified their preferences on how to sort. Most of them are aware of the perishability of this type of waste and prefer to take out FW at frequent intervals (37% of them 1-2 times per week, 36% 3 or more times per week). Municipalities are inclined towards less frequent collection, half of them preferring an interval of 1 time per week. The preferred container for household food waste collection is some bag they find at home or the biodegradable bag, but households are not willing to pay for it (Figure 2).

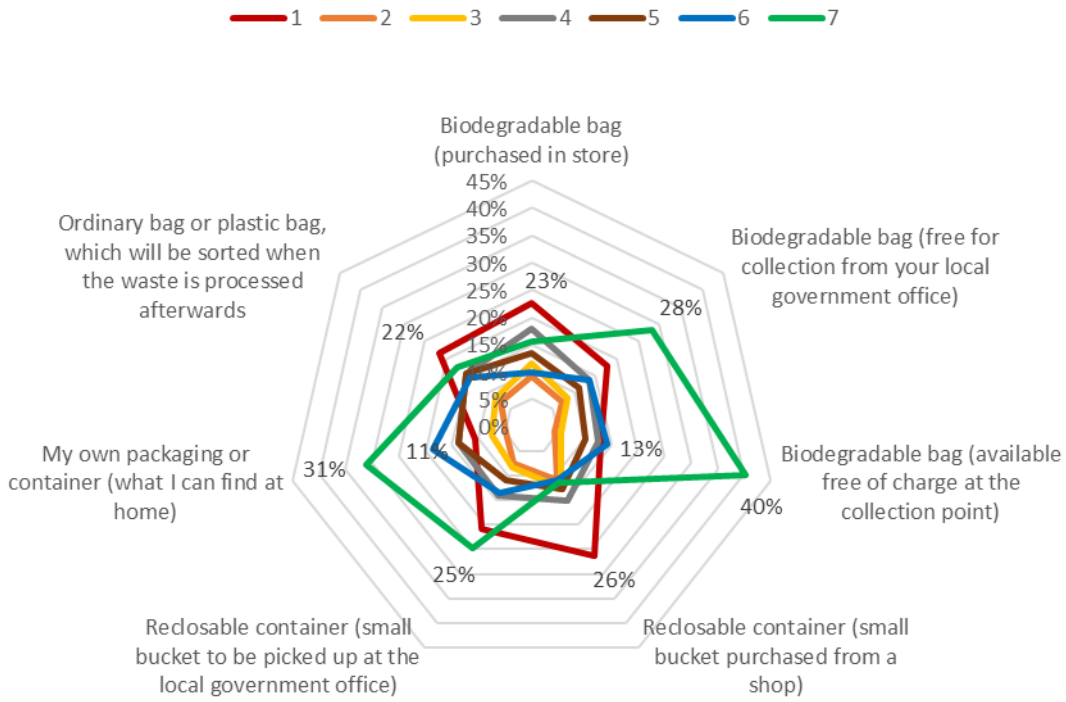

Figure 2: Preferred container for FW collection
Source: own questionnaire survey (n = 1332)

One of the key challenges in implementing a FW collection system is the financial burden, which municipalities are often reluctant to fully assume. In the present study, only a third of municipalities were willing to finance biodegradable bags, while 57% expressed willingness to provide resealable containers and again the preferred form of distribution at the municipal office or home delivery prevails. In terms of the food waste collection system, a small container or bucket seems to be a suitable option for food waste collection, where the waste is collected in the household and then taken to a larger collection container. The utilisation of biodegradable bags in food waste management faces challenges of contamination of food waste as well as the persistence of residues that could affect the desired properties of the waste[33].

To address these financial constraints, many European countries have introduced economic instruments such as the "Pay-As-You-Throw" (PAYT) system, which aligns with the "polluter pays" principle[34]. PAYT is designed to incentivize waste reduction by charging households based on the amount of non-recyclable waste they generate, encouraging greater participation in FW sorting[35, 36]. Different models exist, including volume-based pricing, weight-based schemes, or prepaid bag and tag systems, each tailored to local conditions[37]. In some European cities, PAYT has been integrated with digital tracking tools, such as smart waste bins or prepaid collection bags, ensuring both efficiency and

fairness in waste management[38]. While the system has successfully reduced FW generation in countries like South Korea[39], its effectiveness depends on additional supportive measures, including clear communication strategies and public trust in waste processing infrastructure[40]. Given the financial concerns expressed by municipalities in this study, a well-designed PAYT scheme could provide a structured and equitable way to distribute costs, ensuring that FW collection remains accessible while maintaining public support for sorting initiatives.

Consumer segments by motivation and barriers to food waste collection

Segmentation criteria related to perceived motivations and barriers from the perspective of consumers entered the cluster analysis. These are their statements on the issue of motivation and barriers, rated using a scale of 1 (no motivation/barrier)-7 (high motivation/barrier). The resulting segmentation contains four segments that capture the variability in consumer data (Table 4). In the case of five or more segments, the differences between some segments become blurred. The most frequently perceived motivation is environmental improvement (M1) followed by motivation in waste treatment and recovery awareness (M2). This is in line with another study reporting that consumer perceived environmental value of sorting supports consumer intention to sort[41]. Other motivations include reducing fees for collecting mixed municipal waste (M4), ensuring sufficient bins/containers (M5) and ensuring a clean collection environment (M6). Segments 1 and 4 attach high importance to most motivators, with segment 4 also attaching importance to most barriers other than lack of time to sort. Segments 2 and 3 feel lower motivation, which will need to be supported by appropriate forms of communication. Segment 2 also shows importance for almost all barriers.

Table 4: Segmentation by motivation and barriers to food waste sorting

	Segment 1	**Segment 2**	**Segment 3**	**Segment 4**
M1: environmental improvement	6	5	5	6
M2: awareness of the subsequent treatment of waste	6	5	5	6
M3: social pressure of the environment – most sort	6	4	5	6
M4: reduction of fees for collection of MSW in smaller volumes	6	5	5	6
M5: sufficient number of containers	6	5	5	6
M6: clean environment at the collection point	6	5	5	6
M7: less frequent collection of MSW	4	3	3	3
M8: limiting the number or volume of MSW containers	4	3	2	3
M9: possibility of disposing of food in its original packaging	5	5	4	5
B1: odour	4	6	4	6
B2: insects	4	6	3	6
B3: rodents	3	5	4	6
B4: multiplication of harmful micro-organisms	3	5	3	6
B5: lack of containers	5	6	4	6
B6: lack of knowledge about the use of FW	4	5	4	5
B7: lack of time to sort waste	2	4	3	3

Source: own questionnaire survey (n = 1332)

The following table (Table 5) provides the segment identifiers. The last column contains the structure of the whole sample under study and the values with the most frequent categories within the segment are marked in bold. By comparing these values against the entire set, the specificity of the segment can be ascertained. In Table 5, above-average values are highlighted in bold, i.e., the above-average occurrence of a certain category of respondents in a segment.

As demonstrated in Table 5, the initial segment is distinguished by a higher-than-average proportion of younger age groups (18-44 years) and slightly elevated incomes in comparison to the whole population. Notably, there is a higher representation in the category of CZK 45,001 to 60,000. The analysis further reveals that two-person households are predominantly represented, though there is an above-average proportion of three- and four-person households in comparison to the entire sample. In the second segment, the middle-aged population is most often represented (above-average numbers of respondents aged 35 – 54) with an above-average representation of university-educated individuals. In terms of the number of household members, it includes a slightly below-average number of two-person households and, conversely, a slightly higher number of four-person households.

The third segment is characterized by a male preponderance and also an above-average incidence of self-employed individuals. In terms of other categories, it almost follows the structure of the total population. The fourth segment is mainly represented by women and an above-average representation of the 65 and more year's age category and economically active retirees. This segment exhibits a below-average income profile (Table 5).

Table 5: Identification of segments

	Segment 1	**Segment 2**	**Segment 3**	**Segment 4**	**Total**
Gender					
Men	48%	**52%**	**59%**	38%	48%
Women	52%	48%	41%	**62%**	52%
Age group					
18-24 years	**12%**	8%	10%	6%	9%
25-34 years	**21%**	16%	**22%**	13%	17%
35-44 years	**20%**	**22%**	18%	13%	17%
45-54 years	18%	21%	16%	19%	19%
55-64 years	11%	14%	13%	**19%**	15%
65 and more years	18%	19%	21%	**30%**	23%
Economic activity status					
Employees	**60%**	**61%**	55%	52%	57%
Self-employed	9%	7%	**10%**	7%	8%
Retired	21%	21%	22%	**32%**	24%
Unemployed	1%	2%	3%	2%	2%
Inactive and others	9%	9%	10%	7%	9%
Highest education attained					
Primary	1%	2%	3%	1%	2%
Secondary (lower)	11%	14%	11%	13%	13%
Secondary (complete)	**57%**	50%	54%	**58%**	55%
Tertiary (university)	31%	**34%**	32%	28%	31%
Number of household members					
1	16%	20%	16%	20%	19%
2	38%	36%	**41%**	**42%**	40%
3	23%	22%	23%	20%	22%
4	**20%**	**19%**	18%	14%	17%
5 and more	3%	3%	2%	4%	3%

Disposable household income					
Less than 30 000 CZK	21%	24%	22%	**28%**	25%
30 001 to 45 000 CZK	30%	29%	29%	**32%**	30%
45 001 to 60 000 CZK	**27%**	24%	**26%**	23%	24%
60 001 to 75 000 CZK	12%	13%	13%	11%	12%
More than 75 000 CZK	10%	10%	10%	6%	9%

Source: own questionnaire survey (n = 1332)

The followed identification of segments is based on the values that occur most frequently in Table 5. The creation of personas for each segment is then undertaken, with the aim of representing typical members of the segment (see Table 6). Each segment is also assigned a name according to the motivations and barriers that have been identified in Table 4.

There is a need to educate citizens on proper waste sorting. Table 6 also summarises the communication intentions that need to be communicated to the segments as part of the education campaign. The important role of educating consumers on the correct way to sort waste using appropriate communication channels is also underlined in other research[17, 21, 27].

Table 6: Design of personas for segments

	Segment 1	**Segment 2**	**Segment 3**	**Segment 4**
Segment Characteristics	Sorting inclined	Distrustful	Unafraid	Worried
Persona identification	Female, 38 years, employed, full secondary education, household with husband and 2 children, disposable income 48 thousand CZK	Male, 43 years, employed, university educated, household with wife and child, disposable income 73 thousand CZK	Male, 33 years, self-employed, secondary education, two-person household, disposable income 70 thousand CZK	Female, 69 years, retired, secondary education, two-person household, disposable income 28 thousand CZK. CZK
Communication intent	Inform about practical aspects of sorting (existing motivation sufficient, barriers proportionally low)	Mitigate barriers (especially insects and smells), encourage motivation with information (on waste utilisation, etc.)	Promote motivation by providing information (on waste recovery, impacts of sorting, etc.)	Provide information to mitigate barriers and remove concerns (especially odour, pests, number of containers, etc.)

Source: own elaboration based on results from Table 5

Another research interest is to identify the attitudes of public administration representatives. The primary motivation for municipalities is to reduce the amount of landfill waste in the vicinity of the municipality, which corresponds to consumer motivation regarding the improvement of the environment in the vicinity. In addition, citizen satisfaction and the use of food waste in a biogas plant would be motivating factors for municipalities.

Municipalities see the biggest barrier to FW collection as financial. At the same time, however, most municipal representatives said that the municipality would be willing to share the cost of collecting food waste to a composting plant. Furthermore, municipalities perceive the difficulty of ensuring a clean collection environment and are concerned about the poor sorting of waste by citizens.

The municipality has determined that the most efficacious means of disseminating information regarding the collection of messages is through the medium of the local newsletter, an article on the municipality's website, and simple social media posts. The majority of consumers in all segments would prefer to learn about the sorting process at the point of sorting, directly on the collection bin label (70% of consumers).

The subsequent most favoured method of information dissemination across all segments is the distribution of an information brochure in the mailbox (46% of consumers). In the fourth segment, there is an indication of the importance of the message in the local newsletter, while in the first segment there is a higher-than-average response for social media compared to the other segments. The detail of the preferred communication results (Figure 3) shows how many respondents in a given segment chose a particular option as their preferred form of communication.

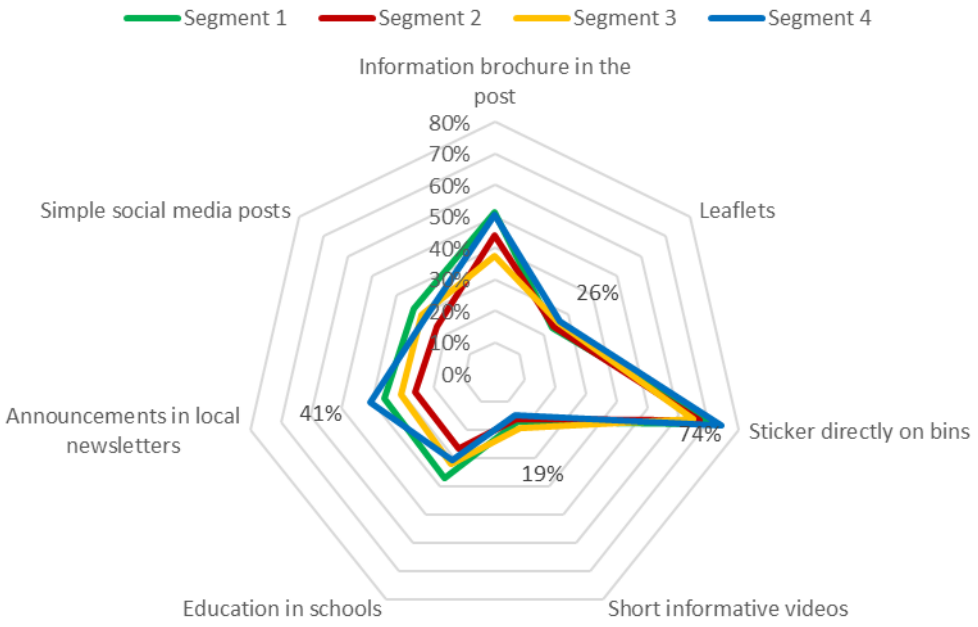

Figure 3: Preferred form of communication of information on waste sorting
Source: own processing of the questionnaire survey, n = 1332

Conclusions

Households are encouraged to consume and reduce waste responsibly. However, unavoidable waste, including unavoidable food waste (peelings, trimmings, etc.), is and will continue to be generated in households[6, 10]. In the Czech Republic, consumers have not yet adopted the practice of sorting food waste. However, a positive finding is the willingness of citizens and municipalities to sort food waste. This potential is not fulfilled in the Czech Republic, as half of the consumers willing to sort state that they do not have the means to sort FW.

In order to establish a successful functioning system for the collection of sorted food waste, it is necessary to identify the preferences of all waste management actors, starting with consumer preferences, as consumers need to be effectively motivated to participate in the collection system and informed in the right way about the possibilities to sort waste. The results of the study demonstrate that consumers prefer to collect and dispose of food waste in a biodegradable bag, which will be available free of charge at the collection point, or in any container they find at home. The study found a high level of willingness to sort food waste; however, this must not incur a financial cost for consumers. Only a third of the municipalities surveyed are willing to bear the financial burden of purchasing biodegradable bags,

and more than half of the municipalities would be willing to purchase a reusable bucket for household food waste collection.

The predominant motivation consumers perceive for engaging with a food waste sorting system is to contribute to environmental enhancement and to be assured of the subsequent utilisation of the waste. The most prevalent perceived obstacles pertain to the unfavourable externalities associated with this particular type of waste, namely odour and entomological concerns. Nevertheless, distinctions emerge among diverse consumer demographics, a phenomenon that is further delineated by the segmentation analysis.

Segmentation of consumers is recommended for the effective motivation of FW collection and the accurate targeting of communication in terms of form and content. The segmentation identified four consumer segments, the first of which is characterised by a 'sorting inclined' tendency, representing the younger population under 44 years of age. This segment requires communication specifying operational practical information on how to sort FW (with an emphasis on communication of the correct contents of the collection container). The utilisation of mobile applications or online maps to indicate the nearest available bins, complemented by regular updates on social media which are often used by this age group, can also be recommended. The **second segment**, comprising mainly the middle-aged, slightly above-average-income, university-educated population, is less trusting. It is therefore recommended that the subsequent use of waste to this group of citizens be explained (specific examples in the surrounding area), for example by showing how the treated waste contributes to the production of compost or energy in a local biogas plant. In particular, the use of online communication channels can be recommended to encourage motivation for collection and to reduce perceived barriers. The involvement of interactive educational tools such as videos or webinars to further clarify the meaning of FW sorting is also recommended.

The **third segment** is dominated by younger men who are basically unworried. They are not afraid of obstacles to FW sorting. Communication messages targeting them should support their motivation to participate in the collection system. It is appropriate to focus on competitive elements (e. g. rewards for sorting) and simple communication directly at the collection point (e. g. visual signs or QR codes with additional information), possibly in combination with online channels. The **fourth segment** is constituted predominantly by retired women who perceive numerous barriers to FW collection. In this segment, it is recommended that barriers should be reduced through effective communication, for example by the provision of easily accessible containers in close proximity to their residences, the elimination of odour and insect problems, and the dissemination of regular information on the hygienic treatment of collection points. Motivation is sufficient in this segment; however, it is imperative that barriers do not become overwhelming. The most appropriate method of communication with consumers in this segment is through traditional channels (leaflets, newsletters, etc.) or through community events or meetings that explain the importance of sorting.

The current limitation in implementing a food waste collection and sorting system is the unresolved financial burden of the collection system. Consumers demand convenience and zero costs associated with FW sorting, yet only some municipalities are willing to bear the costs of collection, and usually only partly. This opens up scope for further research in terms of the distribution of the financial burden of the collection and sorting system between municipalities and other waste management actors.

List of symbols

FW Food Waste

MSW Municipal Solid Waste

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Motivace a bariéry spotřebitelů k třídění potravinového odpadu: Role segmentace v komunikaci municipalit

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Souhrn

Poznání motivace a bariér spotřebitelů k třídění potravinového odpadu je prerekvizitou k úspěšné komunikaci obcí s občany. Cílem tohoto příspěvku je odhalit motivaci a bariéry spotřebitelských segmentů včetně identifikace segmentů využitelné pro cílení komunikace obcí s občany. S využitím výzkumného instrumentu ve formě dotazníkového šetření mezi spotřebiteli o velikosti 1332 respondentů bylo možné poznat postoje a preference spotřebitelů, které byly následně doplněny o data z dotazníkového šetření mezi municipalitami. Aplikovaná shluková analýza identifikovala čtyři segmenty. Pro všechny spotřebitelské segmenty je důležitá motivace v podobě vědomí, že bude odpad následně zpracován a zajištění dostatečného množství sběrných nádob. Se spotřebiteli je vhodné komunikovat konkrétní případy využití odpadu a také se vypořádat s negativními externalitami znesnadňujícími sběr odpadu. Percepce bariér sběru a třídění odpadu se napříč spotřebitelskými segmenty liší.

Klíčová slova: *Potravinový odpad, segmenty spotřebitelů, motivace, bariéry, vnímání municipalitami, chování při třídění odpadu.*