

Retail Chains Under the Food Waste Spotlight: the Case Study Of the Czech Republic

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Abstract

Retail is an intermediary between food producers and consumers and can influence other actors in the agri-food chain. The authors explored the volume of wasted food in the large food stores in the Czech Republic as well as the retail chains' strategies and barriers to reduce it. At the same time, the main reasons for food waste in Czech households were examined. Consumer-oriented retail chain activities were confronted with the reasons for household food wasting and whether a parallel could be found between certain retail and household activities was discussed. Despite the fact that the share of food waste compared to food quantity sold is rather small, the total annual volume of lost food is enormous. The retail chains indicated strategies focused on internal processes as well as toward external entities. The most frequent reason for food wasting mentioned by consumers is over-purchase. Only a negligible portion of them indicated that the reason is purchases made under pressure, such as discounts or child demands. One can consider whether consumers are really not un-pressured when shopping, or if retail marketing policies are so sophisticated that customers buy more than they need without perceiving it. Unfortunately, reducing promotions and discounts as a means of waste reduction was not mentioned by retail chain managers. For further progress, adjustments in legislation are recommended, as well as media education aimed at civic responsibility to increase consumer cooperation.

Key words: retail chains; food waste; prevention strategies; consumers attitudes

Introduction

Food waste becomes a phenomenon in developed countries. Moral human values should lead to minimizing waste to the lowest acceptable level. In the EU the efforts to reduce food waste and to transit to sustainable food system are supported by several legislative acts. Based on the directive EUI,¹ member states should take measures to significantly promote the prevention and reduction of food waste throughout the food chain by 2030. Such a challenge should cover the responsibilities of all actors in the food system.

The methods of obtaining household food supplies have significantly changed over the last several decades in the Czech Republic. Following the previous political change, food assortment displays have been significantly enriched, the retail network expanded, and food purchase has thus been considerably facilitated. What was once a "sacred gift" and often produced by households themselves as recently as the 1980s, simply became one of many consumer categories.

Large food stores (LFS) such as hypermarkets, supermarkets and discount stores are the main food shopping destination for 70 to 90% of Czech consumers, depending on the assortment². Fruits and vegetables were preferably purchased by 90% of consumers in LFS in 2017, for bakery products the share reached 78%, while for meat and cheese the shares accounted for 72% and 90% respectively. All mentioned figures showed a 3 to 5 percentage point increase compared to the previous five years.

There is a rich literature focused on wasted food in households. The authors show that households generate a significant amount of loss – according to the Fusions project,³ about 52% of food waste from the entire food supply chain falls on households; according to Gustavsson et al.⁴ waste amounts to about 40% of food lost at the household level.

Although retail is an important part of the food distribution chain, information concerning food waste from this segment is rare. There are only a few studies which focus on food waste quantification at the retail stage of food supply chains in European countries (see for example Orr and Schmidt⁵ from Germany; Lebersorger and Schneider⁶ from Austria; Eriksson et al.⁷ from Sweden; Cicatiello and Franco⁸ from Italy). In the Czech Republic, so far as we know, the food waste in retail has not yet been quantified. We aimed to fill this gap by focusing our research on this segment. The goal of the study is to reveal the amount of food discarded in the main retail chains in the Czech Republic and to discover the chains' food waste prevention activities with a special attention to consumers related activities. The results should contribute to the understanding of the current state and help to define suitable strategies either for the government institutions or private companies to reduce food waste generated at the retail level.

Materials and methods

We aimed to obtain the data on the amount of food sales and food waste in the LFS of the most important retail chains in the country. After initial communication with their representatives, it turned out that companies considered these data confidential with respect to their marketing strategies and store operations and were not willing to pass them individually. Therefore, we used the traders' association as a communication intermediary, who persuaded some of their members to collaborate. At the meeting with the union and the national headquarters, including representatives of the collaborating chains, we discussed what type of data each company had in their records. Based on this information, we developed a survey of questions on the figures, activities and barriers related to reducing food waste.

The data were obtained from four retailer chains which make up almost 36% of the entire trade sector with fast moving consumer goods and almost 52% of so-called modern trade. Modern trade is formed by both international retail chains with fast moving consumer goods and cash-and-carry stores.

The data collected show the in-store waste recorded in the retailers' internal systems. Pre-store waste was not included, as it is wasted by a supplier, not the retailer (in accounting terms). Due to records limitations, similarly to other studies, we did not distinguish between avoidable and unavoidable food waste (see for example Eriksson et al.⁷; Orr and Schmidt⁵). Nevertheless, at the end we present an estimate of what part of the discarded waste could have been used by the chain representatives.

In addition, collected qualitative information helped us analyse the food waste behaviour of retailers, their waste management practices and their potential marketing activities aimed at reducing food waste production on the retail level.

All the data were anonymised under codes A, B, C and D. The ratio indicators were compiled and compared from those figures. The descriptions of the activities and barriers obtained were structured into several thematic parts and discussed. As background information, the wholesale and retail sectors characteristics were compiled.

Consumer-oriented chain strategies have been confronted with consumer responses on responsible food purchase and household food waste. The research addressed a panel of 1,000 consumers across the Czech Republic by an on-line survey, with an inquiry for the reasons for food waste in their household. The sample structure copied the socio-demographic structure of the Czech Republic and the number of respondents guaranteed the samples were representative for the country. We offered consumers nineteen different reasons in total, from which they were invited to choose up to the five most important. The offer of reasons was intentionally wide, so that consumers could identify themselves as much as possible with the options. Therefore, when processing the answers, the reasons were grouped into twelve thematic areas. Each individual reason indicated by each consumer was rated by one point. All indicated reasons from all consumers became the basis (100%) for calculating the share of each of the twelve areas on all responses.

Finally, the activities of chains and the most frequent reasons for household food wasting were compared and we discussed whether a parallel could be found between some activities in retail and households.

Results

Wholesale and retail sector in the Czech Republic

The share of the so-called modern market (which consists mainly of multinational chains) on the total retail market with fast-moving consumer goods in the Czech Republic accounted for more than two thirds in 2019⁹. The additional third was the so-called traditional trade (which consists mainly of Czech retailers with small stores).

The situation for the retail market in the Czech Republic is similar to those situations in the other 13 EU Member States (e.g. the Netherlands, Denmark, France, Germany), where the market share of the top 5 dominant retailing companies (not necessarily the same in each country) exceeds 60%³.

Czech modern trade is formed by eight large international chains, whose individual market shares fluctuate from 5% to approximately 13%. Three of these international chains have market shares larger than 10%, while another account for between 8-9 % and the rest have market shares around 5 – 6%. Market share is estimated based on annual revenues from 2019 (data are publicly available in the Czech commercial register).

Food waste volume

Data attributable to food waste from four different chains (three retailers and one cash-and-carry store) are introduced in Table 1. Supermarket and hypermarket sales formats predominate in all three retail chains.

The total revenues of the retail chains involved in our study are 181.79 billion CZK (= 7.08 billion EUR). More than half of the modern retail market was described (51.5%). The data represent the year 2019 (52 weeks) and were summarized for all operated branches by each retailer.

Table 1: Food waste in retail sector

Categories	Retail						Wholesale	
	Subject A		Subject B		Subject C		Subject D	
	tonnes	%	tonnes	%	tonnes	%	tonnes	%
Food sold [t]	918 052	100	984 101*)	100	617 488	100	479 111	100
Foods donated for human consumption “surplus” [t]	422.0	0.05	107.6	0.01	1 118.0	0.18	801.8	0.17
Food donated as feed “surplus” [t]	1 065.0	0.12	2 103.7	0.21	5 126.0	0.83	-**)	.
Total food waste [t] Food that was not donated but was thrown away ***)	13 079.0	1.42	11 145.4	1.13	4 712.0	0.76	2 675.2	0.56
Estimate of the share of total food waste [%] that was discarded but which was potentially good for human consumption	3 923.7	30	1 671.8	15	1 036.6	22	Minimum	Minimum

Source: own research, 2020

*) Subject B was not able to provide such data, therefore this number was recalculated based on existing statistics which are publicly available.

**) Shops of Subject D are donating food as animal feed but are not able to provide exact amounts because they do not record it.

***) this category does not include the weight of the packaging: subject C – by most categories; subject D – by most categories (such as dairy products, meat, sausages, fish and chilled food) while primary packaging (plastic foil) is included for other foods (dry + fruits & vegetables).

Reported food waste amounts in the retail sector are quite diverse, ranging from 4,712 tons of food waste in subject C to 13,079 tons of food waste in subject A. With regard to proportions of food sold, subject C also reported the lowest and subject A the largest share (while taking into account only retail chains). In the case of wholesale subject D, the proportion of food waste to food sold was quite low (0.56%) but is representative of a wholesale sector with another type of both customers and processes, compared to the retail sector. The total amount of discarded food among the four chains examined is about 31,612.4 tons.

Although in percentage terms, food waste appears to be minimal compared to total sales, in volume terms the importance of food waste is highly visible. To convey the idea of volume, we used a comparison with the weight of a consumer food basket. In the Czech Republic in 2020¹⁰, the total annual consumer food basket weighed 796.5 kg per capita, including waste. Considering a theoretical value without food waste of 720 kg, the discarded food among the four chains examined would cover the annual consumption of around 44,000 consumers. This is not only an incentive for thought but should also inspire the greatest possible effort to prevent food waste.

Food waste causes

The main causes of food disposal in the retail sector related to customer demand, logistic operations and replenishment practices. Specifically, high customer requirements regarding the quality and freshness of selected food categories (mainly fruit, vegetable and pastry) were mentioned in combination with difficulties in maintaining the freshness of fast-moving consumer goods (fruit and vegetables), human and system errors in the logistics chain and the short shelf-life of some food categories.

The most problematic categories of food which are thrown out are fresh food categories - most often fruits, vegetables and pastries, mostly due to more demanding supply chain processes and more complex handling practices, as well as efforts by retailers to offer customers fresh foods and pastries in the evening. Also dairy products, meat, fish and ready-meals were classified by retailers as problematic categories. Subject B also has problems with markdowns because of goods with missing / damaged labels, food with damaged packaging or incomplete information on the label. Goods with such flaws cannot be sold because of Food Law and therefore subject B is donating such food to a foodbank.

The chains indicate several specific periods when it is particularly difficult to estimate consumer demand and waste usually increases. These periods vary from chain to chain. This aspect of food waste behaviour is highly connected to stock-management practices, planning and forecasting of replenishments. For example, for subject A it is more difficult to adjust planning of orders in the summer, because some categories of food are grown by customers for their own use and the main holidays also take place in this part of the year – children are out of school and therefore their parents do not prepare snacks for children to such normal extents. For subject C, most problems occur at Christmas and Easter holidays. Subject D also perceived the Christmas period as relatively demanding, together with the following winter period up until spring. Spring months, on the other hand, were called "the lowest" in terms of food waste production by subject D.

Food waste prevention strategies

Retail chains undertake a relatively diverse range of activities to prevent food waste in this stage of food supply chain. We structured the activities preventing food waste into three areas – i) activities within the company, ii) activities focused on external companies or institutions and iii) activities focused on customers (consumers or gastronomy sector customers). In summary, food waste prevention strategies within the company include better cooperation among their own distribution centres, precise planning of orders and work with food assortment, waste measurement and staff information as well as staff trainings and others.

Strategies related to external institutions comprise, on the one hand, cooperation with suppliers and, on the other hand, donating food to food banks, farms and associations dealing with animals. Consumer (or customer) oriented strategies are based on marketing aimed at sales promotion of food approaching its expiration date (special discounts with call to customers for not wasting food) and the education of consumers, including waste reporting or even implementing training programs for customers in the B2B sector. Subject D, for example, introduced monthly reports in their stores of food waste and donations to

food banks. They also use a waste measuring indicator which affects the monthly remuneration of employees and other mainly internal activities preventing food waste. Surveyed chains also prepare training modules for their employees (subject C, D) or customers (subject D). A summary of activities preventing food waste occurrence in the retail sector is shown in Table 2.

Table 2: Summary of activities preventing food waste

Activities preventing food waste	Subject A	Subject B	Subject C	Subject D
Activities within the company	<ul style="list-style-type: none"> - <u>Work with assortment of goods</u> <ul style="list-style-type: none"> - identification of products for mark-downs, - adjustments of the baking plan, - adjustment of the assortment of goods according to stores needs, - optimization of the assortment with regards to minimizing damage 	<ul style="list-style-type: none"> - <u>Control</u> <ul style="list-style-type: none"> - Detailed control of freshness and quality of goods during receiving in the warehouse and control of stock at logistics canters - Close cooperation of logistics centers with departments of sales promotion and of purchase - Compliance with the cool chain 	<ul style="list-style-type: none"> - <u>Work with assortment of goods</u> <ul style="list-style-type: none"> - Using AI system for mark-downs before the expiration date - Prevention of surpluses by optimizing orders and supply - <u>Measurement of waste</u> <ul style="list-style-type: none"> - Transparent waste data and informing own employees - <u>Staff training</u> 	<ul style="list-style-type: none"> - <u>Work with assortment of goods</u> <ul style="list-style-type: none"> - The employees of the chain are led to adhere to the so-called pyramid of waste: sell goods for full price - sell goods for reduced price - donate goods to food banks/feed purposes - dispose of goods - <u>Control</u> <ul style="list-style-type: none"> - Use of automated ordering systems - Building a logistics networks within the Distribution Center - <u>Measurement of waste</u> <ul style="list-style-type: none"> - Use of indicator of the amount of waste in stores affecting monthly remuneration of employees - Setting up a monthly report about amounts of food waste and donations to food banks - Appreciation of stores which are most successful in minimizing food waste or surpluses - <u>Staff training</u> <ul style="list-style-type: none"> - Employee training (how to prevent food waste at home) - Each store has a named employee who is in charge of communication with food banks on a daily basis - Introduction of new position of sustainability manager at headquarters
External activities focused on other companies and institutions	<ul style="list-style-type: none"> - <u>Cooperation with suppliers</u> <ul style="list-style-type: none"> - Better cooperation and relationships with suppliers - <u>Donation</u> <ul style="list-style-type: none"> - Sub-optimal food to own employees or further processing of this kind of food at the point of sale. - Donation of surplus to food banks, donation of transport to food bank - Fresh food unsuitable for human consumption are donated to farms and - associations dealing with animals 	-	<ul style="list-style-type: none"> - <u>Cooperation with suppliers</u> <ul style="list-style-type: none"> - The chain works with a wide range of partners, including suppliers (FoodCloud, own suppliers) - <u>Donation</u> <ul style="list-style-type: none"> - donate goods to food banks/feed purposes 	<ul style="list-style-type: none"> - <u>Donation</u> <ul style="list-style-type: none"> - donate goods to food banks/feed purposes - dispose of goods - Coordinating cooperation with Czech federation of food banks in regions
External activities focused on customers	<ul style="list-style-type: none"> - <u>Discounts</u> <ul style="list-style-type: none"> - Sales promotion of products with approaching expiration date (stickers on product with information "Help us not to waste" with a 30% discount a 50% discount in the category of pastries used 2 hours before closing stores) - <u>Education</u> <ul style="list-style-type: none"> - Effort on better communication with customers, public education 	-	<ul style="list-style-type: none"> - <u>Education</u> <ul style="list-style-type: none"> - Transparent food waste data publication 	<ul style="list-style-type: none"> - <u>Discounts</u> <ul style="list-style-type: none"> - Sell goods for reduced price within the so-called pyramid of waste - <u>Training</u> <ul style="list-style-type: none"> - Training modules for customers from gastronomy sector (economics of operations, food waste prevention, proper food storage)

Source: own research, 2020

The C chain has a policy most open to the public and builds on the publicity of its activities. At the same time, according to the data of its own, it reaches the lowest share of the three examined chains. The B entity does not rely on publicity, while it is clear from the list of activities that it deals with the issue very intensively and, according to its own data, has minimal waste.

Barriers to food waste prevention strategies

The main problem, mentioned by all examined chains, is the constantly increasing demand of customers for freshness and appearance of fruits and vegetables. Other barriers relate to limited capacity of subjects in redistribution systems, especially with regard to chilled and frozen food (mentioned mainly by the D chain) or strict requirements of food laws concerning redistribution processes. The impossibility of improving the forecast of customer demand was also identified as a barrier, and methods for improving the situation were not explicitly mentioned. Either the improvement of the forecasting system is hindered in some control measurements (such as automatic ordering at the subject D) or this is considered a difficult problem to solve. For subject D, big difficulties arose from the Covid pandemics, as some customers were gastronomic establishments that were either closed because of restrictions, operated in restricted mode or have gone bankrupt – the situation was unpredictable, which complicated demand forecasting.

Some suggestions for system changes which might be implemented by state authorities were also mentioned. All the subjects would welcome simpler legal environments in the area of food donation, minimizing the bureaucracy involved and amendment of the tax law for food donated; state authorities could also establish databases of feed processors, associations of hunters, or other type of associations that might be interested in food surpluses.

Consumers attitudes

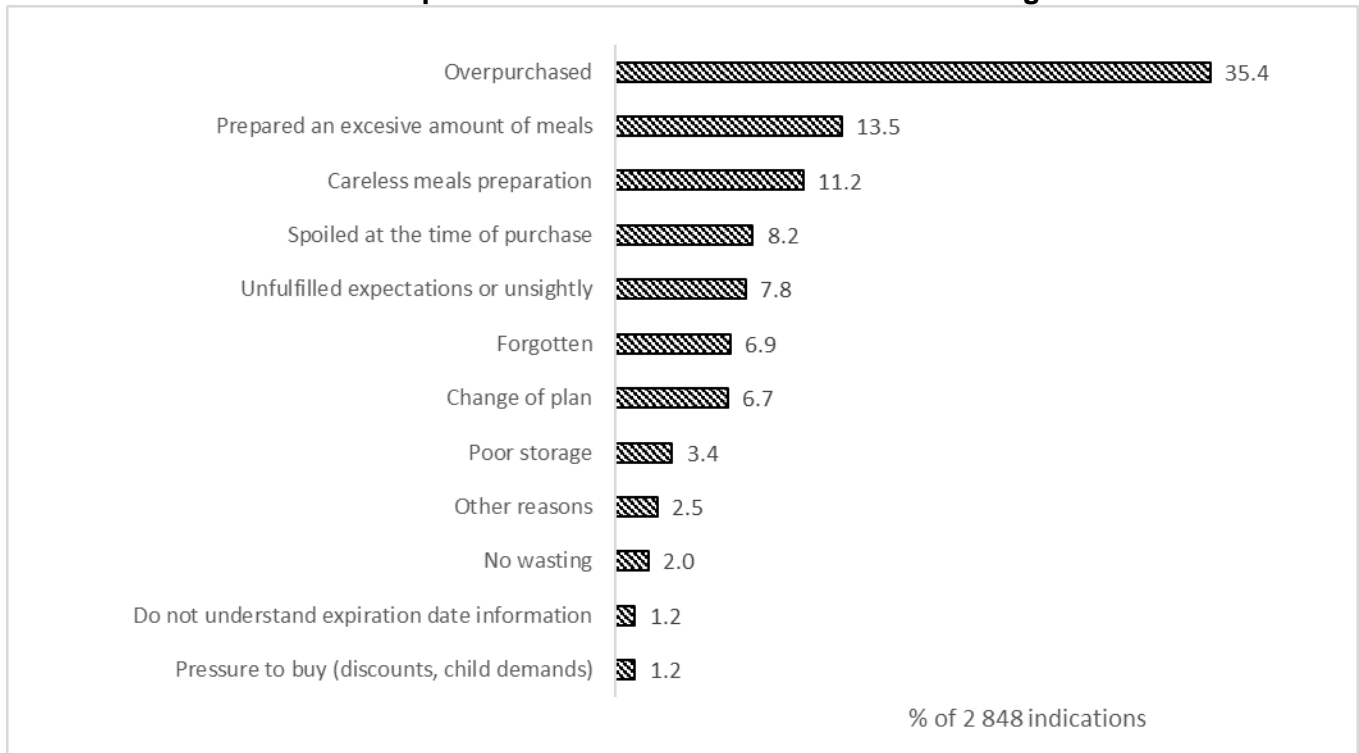
The retail chains policies have the potential to influence consumer behaviour. Therefore, we aimed to find common points in chain strategies and consumer behaviour, which give hope to a successful reduction of waste.

We examined consumers' answers to the question "*what is the cause of household wasting*" and looked for connections with retail chains. The reasons and their frequencies are recorded in Graph 1. The most frequent reason, mentioned in 35.4% of all 2,848 indications of any reason, is consumer over-purchase. This combines three response options: i) we bought more than we consumed; ii) food spoils before we can eat it, and iii) we throw away only what we don't consume right away, store it for the next time, and then find it spoiled. In fact, all three options mean that respondents bought more than they could store and consume. Those who chose the first answer are well aware of the wasting cause, but the share of this option in the reasons group was only 6.7%, while the second and third options accounted for 50.1% and 43.2% respectively. It is worth considering whether over-purchase stems from the retail chains efforts to maximise their sales, or poor shopping planning in households, or a combination of both factors. It is worth mentioning that only 1.2% of responses declared that the reason for food wasting is a purchase under pressure, such as discounts or children's demands. One can consider whether consumers are not really subject to pressure when shopping, or the retail chains marketing policies are so sophisticated that customers buy more than they want without perceiving it, and "*buying under pressure*" is in fact hidden in the "*overpurchased*" answers.

The reasons "*spoiled at the time of purchase*" and "*unfulfilled expectations or unsightly*" might reflect some shortcoming on the part of retail chains or at least some discrepancy between supply and expectation. Together 16.0% of all indications contained the first or the second reason. These statements express customers somehow doubting the quality of what they bought; either they consider it poor, or their choice was not well made. Whether the quality was in fact good or not, consumers perceive it as inadequate. This is in line with the retail chain statements that customers' expectations on quality and freshness are high and arrangements to meet them without food wasting are a real challenge for operational managers.

On the other hand, a high proportion of consumers declared their willingness to reduce food wasting. When answering the question "*do you mind the food wasting?*" 74% of respondents chose the option 'yes' and "*I'd like to reduce it*", while 9% didn't mind wasting and 16% thought that the reduction of food wasting was not possible in their household.

Graph 1: Reasons for households' food wasting



Note: results of multiple choice
Source: own research, 2019

Discussion

The volume of food waste in the examined retail chains ranged from around 0.76% to 1.42% of the weight sold and slightly less (0.56%) in cash-and-carry chains. These figures are in line with findings of Katajajuuri et al.¹¹ who quantified the average amount of food waste in the retail sector in Finland at 1 - 2% and identified the most sensitive products to be fruits and vegetables, as well as bread, followed by dairy products, fresh meat, fish and convenience foods. Beretta et al.¹² estimates the share of unsold food in retail chains in Switzerland at 2.2% on average, while in individual food categories the unsold volume ranges between 0% and 12%. For vegetables, in-store waste accounted for 8% – 12%, while the out of store processes, such as logistics centres, plus sorting due to inadequate quality and transport, show about 0.4%. Both authors also experienced a reluctance on the part of retail chains to communicate waste data. The percentage values from the Czech Republic are lower than those from Switzerland. The reason may not only be well-set processes, but it should be noted that the more the composition of the assortment is shifted to perishable foods, the more difficult it is to reach low waste. Increasing consumer demands for food freshness are likely to push the retail offer for this type of food in the future, which would make waste reduction even more difficult.

Our research showed that retail managers focus on controlling and optimizing goods flows, waste measurement, staff training, consumer education, discounts and redistribution to prevent wasting. Similar strategies have been found by other authors such as Cicatiello et al.¹³ for Italy, Hermsdorf et al.¹⁴ for Germany, Filimonau and Gherbin¹⁵ for the United Kingdom. While implementation of measures focused on internal food waste causes are controllable, external causes depend on the agri-food chain stakeholders. Identified external barriers originate partly at the consumer side (especially in their high expectations) and partly in legislation (mainly concerning conditions for redistribution).

Gruber et al.¹⁶ emphasises that retail is a good policy target, especially for its high concentration. This tendency of regulation of both retail and wholesale sectors could also be seen in the Czech Republic as, for example, Czech retail or wholesale stores larger than 400 square meters are obliged by Czech food law to provide surplus food to food banks or other charities (see Act no. 110/1997). However, retailers perceive this measure as uncomplete and they propose to amend the legislation towards better

conditions for the obligation implementation. The biggest barrier to redistribution systems was the regulatory framework dealing with redistribution system or Food law in general. It is in line with findings presented by Hermsdorf et al.¹⁴ who identified the same problems in redistribution systems in Germany.

Customers high expectations on quality and freshness were identified as one of the food waste causes and barriers. This cause of food waste was also identified by Teller et al.¹⁷ and Mena et al.¹⁸. In our questionnaire, almost every sixth consumer declared his dissatisfaction with quality or unfulfilled expectations as the reason for the waste. It is possible to point out the long-term need for consumer education towards sustainable behaviour. It is also to question the role of the retail chain and the government in this process.

Is it necessary to continue raising standards according to growing customer requirements or to look for a reasonable solution? De Hooge et al.¹⁹ points out that traders can set aesthetic food standards, such as product weight, size and shape that determine consumer expectations and thus effect wasting. The basic standards for selected types of commodities (such as fruit and vegetables, wine, dairy products and others) at the EU are defined by the EU Regulation²⁰ establishing the common organization of the markets and marketing standards. We can assume that the adjustment of standards to reasonable levels and their adoption could affect the reduction of waste in the store, as well as subsequently in other parts of the agri-food chain.

More than one third of the reasons for household wasting is over-purchase. There is no consensus among the authors about the positive relation of marketing policy and consumer food waste. Schmidt²¹ says that, based on research by German consumers, shopping at promotions is an antecedent of food waste. Ganglbauer et al.²² claims for Austrian and British consumers that buying more at a lower price will result in more waste in homes. A similar positive relationship has been shown by research in Finland (Silvennoinen, et al.)²³, Italy (Setti et al.)²⁴ and in other countries.

On the contrary, in the research in Sweden (Williams et al.²⁵), Canada (Parizeau et al.²⁶) or Katajajuuri et al.¹¹ the relationship has not been confirmed. Tsalis²⁷ concludes that about half of the authors found a positive relationship between promotions and household waste, while the other half did not confirm this. At the very least, the finding by some authors that promotions have an unfavourable effect on wasting, is a reason to consider those strategies the retailers should focus upon in order to mitigate wasting. Unfortunately, the topic of reducing promotions and discounts as a means of waste reduction was not mentioned by managers. From a purely economic point of view, against the efforts for food waste minimization, there arose the need to withstand competitive pressure, attract customers and offer them the best shopping convenience even in perishable food.

Conclusions

Our results show that the share of food waste on the quantity sold is rather small but the annual volume of lost food is enormous. Retail chains indicated that the most sensitive foodstuffs are fruits, vegetables and pastry, followed by meat and meat products as well as dairy products.

For traders, food waste is not only an ethical issue, but of course also an economic loss. One can imagine that an economist will calculate whether it is advantageous to reduce customer convenience (e. g. by limiting the offer before the end of working hours) and herewith reduce fruit, vegetable or pastry waste, or whether full customer convenience generates more shoppers and higher profits to cover related economic loss.

From a social point of view, however, such a situation is no longer acceptable. The continuing visibility of environmental issues deepens its social acceptance and requires the retail chains to market on eco-friendly policies. Thus, promotions should emphasize their contribution to the environment and food waste reduction. Companies going down this path would, in fact, change the commercial service by offering an additional service to consumers - a contribution to the conservation of resources and the sustainability of agriculture and food production.

For this policy retail chains need the cooperation of external actors. Research has shown which government measures the chains would be able to use. Also, a significant part of consumers declared their willingness to reduce food wasting. Retail chains are continuing to build their environmentally friendly policies, and with the support of legislative measures, together with media education and consumer cooperation, further progress in food waste reduction can be accomplished.

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Maloobchodní řetězce ve světle plýtvání potravinami: případová studie České republiky

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Souhrn

Maloobchod je prostředníkem mezi výrobcí potravin a spotřebiteli a může ovlivňovat další aktéry v zemědělsko-potravinářské vertikále směrem nahoru i dolů. Autoři se zabývali objemem plýtvání potravinami ve velkoplošných prodejnách maloobchodních řetězců v České republice, a strategiemi i bariérami maloobchodních řetězců ke snížení plýtvání. Současně byly prověřeny hlavní důvody plýtvání potravinami v českých domácnostech.

Spotřebitelsky zaměřené strategie a aktivity obchodních řetězců byly konfrontovány s důvody vyhazování potravin v domácnostech a bylo diskutováno, zda lze najít paralelu mezi některými aktivitami v maloobchodě a domácnostmi. Přestože podíl potravinového odpadu na prodaném množství potravin je poměrně malý, roční objem ztracených potravin je enormní. Strategie obchodních řetězců je zaměřena na interní procesy i směrem k externím subjektům.

Nejčastějším důvodem plýtvání potravinami u spotřebitelů je nákup nadměrného množství. Jen zanedbatelná část spotřebitelů však uvedla, že důvodem plýtvání potravinami je nákup pod tlakem, jako jsou slevy nebo přání dětí. Je třeba se zamyslet nad tím, zda spotřebitelé při nakupování skutečně nepodléhají tlaku, nebo je marketingová politika obchodních řetězců natolik propracovaná, že zákazníci nakupují více, než chtěli, aniž by to vnímali. Bohužel téma omezování akcí a slev jako prostředku snižování odpadu manažeři obchodních řetězců nezminili. Pro další pokrok se doporučují úpravy legislativy a mediální edukace zaměřená na občanskou odpovědnost ke zvýšení spolupráce spotřebitelů.

Klíčová slova: maloobchodní řetězce; potravinový odpad; preventivní strategie; přístupy spotřebitelů, plýtvání.