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Managerial Practices of Reducing Food Waste in Supermarkets

Christine Moser

Introduction

While the growing literature on food waste has greatly improved our understanding of the front and back end of the food waste chain (Aschemann-Witzel 2016; Parfitt et al. 2010; Parizeau et al. 2015), the crucial middle part occupied by grocery retailers has received limited attention. Producers and consumers are responsible for the majority of food waste (Stenmarck et al. 2016). However, grocery retailers connect yet keep separate producers and consumers and therefore hold a key role in the food chain (Brancoli et al. 2017). Reasons why grocery retailers, especially supermarkets, waste food include inefficient store operations and replenishment rules, excessive requirements for product quality and standards, and demanding customer behaviour (Teller et al. 2018), activities which fall under the responsibilities of supermarket managers. However, studies about the important role of supermarket managers in

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reducing food waste at the store level are still scarce (for exceptions see Filimonau and Gherbin 2018; Mena et al. 2011).

Reducing food waste is typically part of a supermarket's corporate social responsibility (CSR) strategy (Devin and Richards 2018). CSR strategies include actions and policies geared towards satisfying the expectations of diverse stakeholders (Aguinis and Glavas 2012), such as suppliers, governments, or customers. These expectations include economic, social, and environmental performance (Aguinis and Glavas 2012). Managers are responsible for implementing CSR strategies (Maon et al. 2009) and an emerging stream of research on micro-CSR—that is, the individual actions underlying CSR-related activities (Gond et al. 2017)—is evidence of a growing awareness of the important role of managers in CSR implementation. However, existing research has largely ignored the actual practices that managers undertake in order to implement CSR strategies in supermarkets. In an effort to advance the literature on food waste management in supermarkets, the following research question guides the chapter: *How and why do supermarket managers engage in supermarket food waste reduction practices?*

Practices can be described as "(1) understandings (knowledge and tacit cultural templates), (2) procedures (explicit performance rules), and (3) engagements (emotional projects and purposes)" (Schau et al. 2009, p. 35) and are generally understood as accepted and routinised activities (Vaara and Whittington 2012). A practice lens allows for an understanding of food waste behaviour that moves beyond individual actors. Instead, actors are embedded in broader social structures that guide the activities or "doings" (Feldman and Orlikowski 2011) of many individuals. Household and consumer food waste have previously been studied from a practice perspective (Evans 2012; Hargreaves 2011). The current study is one of the first to apply a practice perspective to food waste in the retail sector, adding to the literature on managerial activities that are geared at implementing CSR strategies in supermarkets by reducing food waste (Filimonau and Gherbin 2018; Gruber et al. 2016). The empirical material for this research contains interview data collected in a case study on supermarket food waste reduction practices. The empirical findings identify and describe the

practices of *monitoring, knowledge sharing,* and *external collaborations* through the underlying elements of understandings, procedures, and engagements of supermarket managers.

This chapter contributes to the literature in two ways. First, it demonstrates how supermarket managers engage in micro-CSR practices in the context of food waste in their daily work. It thus shows that a practice lens helps to better understand the individual actions that together drive CSR implementation on the store level. Second, this chapter highlights the important role of understanding and talking about food waste reduction, advancing prior research where a lack of knowledge sharing was found to contribute to food waste (Mena et al. 2011). Building on how prior empirical work has utilised a practice perspective (Mattila et al. 2018; Närvänen et al. 2016; Schau et al. 2009), I illustrate supermarket managers' food waste reduction practices and the associated procedures, understandings, and engagements.

This study provides four implications for practice. First, supermarket managers should share their best practices with regard to food waste in collectives. In addition to corporate strategy, managers can self-organise in local and regional collectives, using for example online platforms. Second, supermarket top management can choose to boost in-company knowledge sharing among managers and employees. This could be done through workshops, courses, and meetings with specific attention for knowledge sharing. Third, collaboration with external partners such as the food bank should be formalised and incentivised. For example, each supermarket should collaborate with food banks, and top management should include the task of collaborating with external partners in the regular task package of managers. Fourth, stakeholders such as governments and non-governmental organisations (NGOs) should urge supermarkets to accept their responsibility in reducing food waste.

Theoretical Background

Prior studies have identified producers and consumers as being responsible for the majority of food waste (Milieucentraal 2013; Papargyropoulou et al. 2014; Schanes et al. 2018; Stenmarck et al. 2016).

However, supermarkets occupy a key position in between producers and consumers. In this position, supermarkets have considerable power to influence food waste in the food chain (Ribeiro et al. 2018). They aim to do so by developing CSR strategies that typically include strategies to reduce food waste. CSR is defined as "context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social, and environmental performance" (Aguinis and Glavas 2012, p. 933). CSR strategies, accordingly, are geared at redefining the content and direction of corporate strategies in order to accommodate CSR goals (Gond et al. 2018). However, despite ever-increasing efforts of supermarkets to develop and implement CSR strategies, many food retailers seem to fail: food waste is still a major problem for the sector, and food waste reduction targets are usually not met (Smithers 2012).

Prior work has identified root causes of supermarket food waste, including high-quality standards, width of product range, and promotion campaigns by the retailer; delivery issues, product allocation and secondary packaging unit size at the distribution centre; store format and operations, store product categories, and store personnel; and customer in-store behaviour, customer demand patterns, and high customer expectations (Teller et al. 2018). However, one reason for a failure in implementing CSR strategies may be a lack of understanding how managers understand and talk about corporate CSR strategies when expected to implement them in their daily work routines. In other words, research should pay more attention to CSR micro-processes (Aguinis and Glavas 2012) and associated practices. CSR micro-processes are individual actions and interactions underlying CSR-related activities (Gond et al. 2017) and are those processes where corporate CSR strategies are actually translated into daily work routines. The micro-processes can for example include knowledge sharing, communication, and engagement (Gond et al. 2017). Yet, studies about the important role of supermarkets and specifically the role of supermarket managers in implementing food waste strategies are still scarce. One study targeted the supplier-retailer interface in the UK and Spain and specified root causes for food waste such as a lack of knowledge sharing (Mena et al. 2011). Another study of UK retailers shows

that supermarket managers can largely act at their own discretion in interpreting CSR strategies and mitigating food waste (Filimonau and Gherbin 2018). While these studies provide important insights into activities geared at reducing food waste, they leave largely unanswered the question of the actual practices, and particularly reasons for managers to (not) adopt those practices.

Practices are characterised by three components: understanding, procedures, and engagements (Warde 2005). Understandings comprise knowledge and tacit cultural templates; procedures refer to performance rules and tacit cultural templates for action; and engagements are about emotionally charged purposes and tasks to which people commit (Schau et al. 2009). Some forms of practice theory recognise human *and* non-human interaction (Gherardi 2009) as part of practices, ascribing agency to non-human actors as well. In the case of food waste, food itself becomes an active agent because of its distinct materiality. The materiality of food is crucial to understand "the production of social life" (Feldman and Orlikowski 2011, p. 1242) where food is involved, as is the case in supermarkets. For example, vegetables and fruit tend to perish quickly; meat needs to be cooled properly throughout the supply chain; and dairy has a short shelve life. These distinct materialities of food shape to a large extent how supermarket managers have to engage with food.

Prior work has improved our understanding of food waste reduction practices in households (Evans 2012; Hargreaves 2011; Närvänen et al. 2016). For example, Evans (2012) has shown in an ethnographic study how people make sense of transforming food into waste. Hargreaves (2011) also used an ethnographic approach to study behavioural change in food waste reduction practices in a UK construction company. However, studies of food waste reduction practices at companies where food waste is part of the business model—that is, food retailers—(Delai and Takahashi 2013; Mena et al. 2011, 2014) remain at superficial levels. For example, Delai and Takahashi (2013) define practices as internal and external activities that can be integrated into a management system. Their focus is on overarching themes (e.g. if a retailer reports activities against global warming) instead of the social practices of individual managers. Another study identified management practices that

cause food waste (Mena et al. 2014). However, the identified practices (e.g. poor stock management) are informed by a macro-level organisational theory (resource-based view). As a consequence, there is a lack of problematisation of the practice concept, and therefore, the actual practice (e.g. what are the procedures, understandings, engagements of poor stock management) remains unclear. The current study seeks to add to this literature through leveraging the practice concept to better understand micro-CSR practices in supermarkets.

Setting and Methods

Design

The current case study was carried out in 2017 among 20 managers of two Dutch leading supermarket chains. The growing literature on food waste antecedents and complexities has as yet paid limited attention to the actual *practices* of wasting food, particularly in supermarkets. As such, a case study design is appropriate because it moves the attention to "practices common across individuals" (Schau et al. 2009, p. 32). Secondary data sources (documents from websites, the 2016 CSR reports, social media communications on Facebook) have been analysed prior to the interviews, to develop an understanding of the setting. Studying these documents also helped to develop the interview guide which was used for 20 semi-structured interviews (see below) that form the basis for the empirical findings.

Setting and Respondents

The case study was carried out at two leading Dutch supermarket chains, Super Store and Grocery Store. Super Store and Grocery Store are pseudonyms which are used to guarantee the respondents' anonymity. Together, these two supermarkets dominate the market with among them a 54% share of the market.

The data consist in total of 20 interviews with managers from the two supermarket chains. Fifteen semi-structured interviews were carried out with team leaders with managerial responsibilities at Super Store. Team leaders coordinate a team of re-stockers and therefore are intimately involved in food waste reduction practices. From orienting pilot interviews at the beginning of the project, it transpired that the team leaders are the most important link between the supermarket manager and the re-stockers, as such interviewing team leaders would provide most insights for this research. The team leaders who were interviewed for this chapter worked at a large supermarket and were responsible for the segment "ready for sale", and in particular the segments fruit and vegetables and deli (ready-made meals, cheese, and bread). The pilot interviews indicated that these segments are responsible for the largest share in food waste, providing a fruitful source of information about food waste reduction practices. In addition, five supermarket managers at Grocery Store were interviewed. Supermarket managers are ultimately responsible for the supermarket's performance in terms of food waste. Therefore, in order to provide a comprehensive picture on food waste reduction practices, it was important to also understand how the managers perceive the issue of food waste, as well. Managers are responsible for the performance, which is measured daily and monitored by top management. Managers have monthly, sometimes weekly, meetings with region managers who continuously monitor the performance statistics. Interviewing managers was therefore crucial for understanding food waste reduction practices. In the following, I will refer to team leaders and supermarket managers as "managers" because both have managerial responsibilities and are directly involved with food waste reduction practices.

Data and Analysis

An interview guide was derived from the literature discussed in the theory section as well as the secondary data. The interview guide included questions about activities to reduce and prevent food waste, the understanding, communication, and rules about food waste, and

the engagement with food and food waste in the supermarket. All interviews started with general questions to help make the respondents feel at ease. The further questions were formulated in such a way that the procedures, understanding, and engagements of managers were at the centre of attention. *Procedures* were assessed by asking managers about their knowledge of and actual carrying out of CSR strategies. *Understanding* was tied to how managers perceived their and others' responsibility in the food chain and the supermarket. *Engagement* was operationalised as the purposes of food waste reduction and the associated involvement and commitment. The interviews were conducted in a semi-structured fashion, leaving room for respondents to bring up issues that were not included in the interview guide, while ensuring that all listed topics were covered during the interview.

The interviews were recorded and subsequently transcribed verbatim with the consent of the participants. The interviews were analysed in multiple cycles of coding using the "Gioia-methodology" (Gioia et al. 2013). This methodology involves several iterative steps, where the raw data from the interviews were first summarised in 1st order concepts and then categorised in 2nd order themes. Finally, the analysis cumulated in aggregate practices. For example, the quote "The famous fifo, you put the freshest products in the back of the shelves and not in the front of the shelf" was coded as "stacking shelves with fresh products in front" (1st order concept), categorised into the 2nd order theme "fifo", which became a part of the aggregate practice of "monitoring".

Findings

The data clearly show that managers dislike the practice of wasting food. They talk about this practice in terms of a "dead sin" and "against one's principles": "My father was a true greengrocer, wasting [food] is a sin, we didn't do that at home and one didn't do it in the shop, either" (Respondent 16, Grocery Store). At the same time, the respondents recognise that their personal preferences are sometimes difficult to match

with the company strategy. Supermarkets have to perform commercially, while individual managers might have deviating personal points of view. However, they are often motivated to engage in practices that allow them to reduce food waste in the supermarket. The findings section that follows presents the three identified food waste reduction practices: *monitoring, knowledge sharing,* and *external collaboration* and discusses the understandings, procedures, and engagements as part of those practices.

Monitoring

Procedures

Food has distinct materialities that require supermarket managers to carry out specific procedures. A frequently used procedure to reduce food waste is to "sticker" food that has almost reached its expiration date. This food receives a sticker that indicates a reduced price, for example, a sticker indicating a reduction (e.g. "20% off") or a fixed price sticker. In order to be able to sticker correctly, managers have to coordinate a procedure that is coined "code book walking". This "walk" entails that employees check the shelves for products that have almost reached their expiration date, these products are then stickered. An important procedure that enables stickering is that of "fifo filling" (first in—first out): here, products with the shortest expiration date are placed in front on the shelves: "The famous fifo, you put the freshest products in the back of the shelves and not in the front of the shelf" (Respondent 17, Grocery Store).

Products that are not anymore of optimal quality are taken from the shelves and used in different ways, which is referred to as "quality rounds". For example, fruit, vegetables, cheese, or meat products that look not quite perfect anymore or are soon to reach their expiration date are offered to customers for tasting. Quality rounds are frequently done when products are delivered, in addition to the regular quality rounds for products already in the shelves.

Understandings

During the quality rounds, managers not only rely on the expiration date as discussed in the prior section. Rather, they also trust their own judgement about the quality of the products in determining which products should be removed from the shelves. The managers rely on their background knowledge which is required to carry out the practice of monitoring.

> So, when you come in you do immediately a quality round and [take] everything that is over code, which means that it's perished or over the sell-by date, out [of the shelf]. Or you see a banana with mould. Or a rotten tomato, you remove those and throw them away. (Respondent 14, Super Store)

In their understanding of how food waste could be reduced, managers acknowledge and experience the difficulties of carrying out food waste reduction procedures. They feel that consumers should be responsible, too. Supermarkets put great efforts in marketing campaigns, for example, with offers such as "buy 1, get 1 for free". Yet, the managers are convinced that it is ultimately the consumer who is responsible for their purchasing behaviour and subsequent household food waste. Their conviction of consumer responsibility is part of their tacit understanding of the limits of reducing food waste through monitoring procedures: "We have responsibility for ourselves, what the consumer does at home […] that is not our job" (Respondent 20, Grocery Store).

Sometimes, supermarkets aim to facilitate consumers in reducing food waste, for example, by offering smaller portion sizes. However, managers know from experience that offering smaller portion sizes brings with it a new problem: the existing shelves will still have to be filled. Therefore, offering smaller sized containers and packages might reduce consumer food waste, yet increase supermarket food waste even in case of optimal monitoring procedures:

The shelve stays the same size, we really can't offer so many varieties because in the end […] this will lead to much [food] going to waste, even if you have ever more choice, people in the end won't eat more […]. (Respondent 18, Grocery Store)

Engagements

Many managers are committed to the monitoring practice and in this way try to engage customers in reducing food waste. They emphasise the importance of the code book walking, fifo and quality rounds. Only if these activities are carried out frequently and diligently, they believe, is the practice of monitoring effective. The following quotes underscore how different procedures that are aimed at reducing food waste are intertwined and that managers care about carrying out the practices: "Ultimately all of the processes are linked to each other. You notice if you do them well that you waste less" (Respondent 14, Super Store). "These are all issues you have to deal with and you pay attention to them because otherwise it's liquidation of capital" (Respondent 17, Grocery Store).

Another concern in understanding the practice of food waste reduction is that raising awareness for food waste would be counterproductive in terms of the commercial goals that supermarkets have: "We have different stakes, ultimately a supermarket aims at selling as much as possible, so I don't see [the need of] reducing food waste of the consumer" (Respondent 20, Grocery Store).

The drive to perform is evidenced by the managers understanding of providing "full shelves": they are urged by top management to provide full shelves all day long, also shortly before closing time. Especially in case of fresh and easily perishable food (vegetables, meat, dairy, bread), full shelves increase food waste: food that has not been sold before closing time often goes to waste. One manager described this trade-off as a "balancing act" that can never fully satisfy diverging demands.

Knowledge Sharing

Procedures

Managers share knowledge about food and food waste with each other, for example, in meetings with other managers, team or department meeting and other settings. Managers refer to written regulations and the supermarket's intranet, where they can search for example for information, procedures, and courses about food's distinct materialities. Knowledge sharing about food waste becomes important when performance targets are not met, that is, targets with regard to waste and write-offs: "It all costs money […] and we're held responsible for that. It is simple when the numbers are insufficient […] Numbers are very important nowadays" (Respondent 14, Super Store).

Knowledge sharing mostly happens in formalised, monthly and weekly meetings with managers. In addition, managers share knowledge during shift change, discussing the most important topics of that day. More informal knowledge sharing is mostly related to food waste reduction practices. For example, whenever a manager notices that shelves were not restocked in the "fifo" manner, or there was more waste than usual, they would discuss this and offer knowledge and advice about the problem. "There is always internal knowledge sharing, for example, talks with your store manager, department managers, responsible managers" (Respondent 17, Grocery Store).

The interviews reveal that information technology plays an important part in knowledge sharing about reducing food waste. Managers usually use a Whatsapp group to share more general knowledge and sometimes specific knowledge about avoiding food waste. Another important channel for sharing food waste-related knowledge is the intranet. Here, managers search for information about new products, how to write off products correctly, or food waste processes in general. The intranet allows them to share knowledge asynchronously, that is, they can leave messages which will receive reactions at a later point in time. This is convenient, because managers have different shifts and are frequently busy with activities other than browsing the intranet. Other channels for knowledge sharing are e-mail, phone, and Facebook.

Understandings

Managers state that they need more knowledge and information about how to go about avoiding food waste. They express a desire for a better and deeper understanding of the root causes of food waste, including a better understanding of food's materialities and reasons why food is thrown away in the first place. This is expressed in the following quote: "We could explore in more depth how this comes? What is the reason for what we throw away, or is it because last week we only returned two crates instead of three or four?" (Respondent 3, Super Store).

Another way that managers' understanding is expressed is through the use of jargon, which is most prominently visible in the use of abbreviations often included in handbooks, work instructions, and content on the intranet. In addition, managers develop their own jargon which enables them to more efficiently work towards a common goal. Examples for jargon are *afboeking* ("write-off", a term used for food that is going to waste), *codebook* ("codebook", a list of products that need to be controlled for reaching the expiration date), *fifo* ("first in first out"), and *cvr* (*controle voorraad*, which means controlling the current stock). Jargon enables the managers to efficiently communicate with each other, including communication about food waste. Even so, miscommunication can occur, leading to misunderstandings and potential increased food waste. Managers report that this mostly happens when using Whatsapp. Resolving misunderstandings is most effectively done in face-to-face communication: "It's best if I talk to them [employees] personally, on the work floor, better than on Whatsapp. That can be unclear every now and then. Or people can understand things very differently" (Respondent 15, Super Store).

Knowledge sharing between managers may be subject to slightly different understandings, which find their roots in three possible differences between managers. First, there is a difference between full-time and part-time employees. Part-time managers are less knowledgeable about work processes in general, and food waste reduction practices in particular. For example, only full-time managers are made responsible for collaborating with external partners such as a restaurant that receives

edible food that has reached the expiration date. One part-time manager acknowledges this divide in the following way: "The fulltimers simply know much more than I do. This is because some tasks are done by fulltimers, I never had to do those tasks" (Respondent 15, Super Store).

Second, another important difference that influences knowledge sharing is the work schedule. Part-time employees usually work on fixed weekdays, but food waste reduction practices vary across weekdays. For example, Saturdays are mostly very busy, requiring large quantities of supplies, including fresh food, meat, and dairy. Those products can easily perish if not handled correctly. It follows that part-time managers who never work Saturday shifts gain less food waste-related practical knowledge and therefore less experience in reducing food waste. Third, managers differ with regard to their prior experience with reducing food waste. Regardless of employment or work days, some managers have previously gained relevant experience in the food sector. This prior experience enables them to carry out food waste reduction practices better, more efficiently, or more creatively. The importance of experience is mirrored in the following quote: "I think that some managers know more about certain things than others. For example, I previously was a vegetable farmer for Super Store. So then you notice that you have a better understanding of the vegetable section" (Respondent 14, Super Store).

Engagements

Trust plays an important role when managers share knowledge about food waste reduction. In order to be able to carry out their tasks, including managing food waste, they depend on each other. This interdependence is characterised by a feeling of shared identity, and some managers are even friends: "We are like boys, every now and then like a bunch of toddlers. We have a good relationship in the group" (Respondent 3, Super Store).

Trust in the group is important for the managers to work with each other. For example, the morning shift is expected to carry out their tasks according to the rules, so that the afternoon shift can take over

smoothly. The managers report that they trust each other in that respect and frequently go for beers after work: "We all know what is expected from us, and what our responsibilities are. For that, you need work trust. You actually trust that the [manager] runs the shift as it should be" (Respondent 2, Super Store).

This work trust makes it possible for managers to share waste-related knowledge. This is especially important in case something went wrong, or prior agreements were not fulfilled. For example, when in one shift food that is almost spoiled (i.e. the expiry date is close) has not been "stickered" properly (i.e. discount stickers are missing), managers who trust each other will share this information. The manager of the next shift can then take care of stickering the food, so that it can be sold instead of going to waste. Shared trust thus enables managers to engage with the problem and work towards solving it, instead of trying to brush it under the carpet. Trust is especially relevant in the context of food waste, because reducing food waste requires more effort and commitment than wasting food.

External Collaboration

Procedures

A last food waste reduction practice is collaboration with external partners, including restaurants and food banks. Those partners source from the supermarkets products that the supermarkets are unwilling to sell anymore, for two reasons. The first reason for supermarkets to take products out of shelves and give them to external partners is related to the distinct materialities of food: products might almost have reached their expiration date and spoil, and they might look not quite perfect anymore. The second reason for giving away products is that there might be too much stock in the store to be sold before the products reach their expiration date. Collaborating with external partners usually leads to additional work for the managers. Nevertheless, they embrace the opportunity to reduce their food waste: "Before we collaborated with [the restaurant…] we put it on write-offs and sent [products] back

[to the distribution centre…]. Once we started on the [collaboration] trajectory it went very fast" (Respondent 3, Super Store).

While recognising the benefits of collaboration, managers are sometimes wary of the additional work, specifically of the additional administrative tasks that they have to carry out. Oftentimes, external partners like food banks require quality assurances which have to be documented and/or formalised. This documentation adds to the workload of the managers, discouraging them from more and more frequent collaboration with external partners:

> The quality insurance department of Grocery Store, they carry out certification and you have to score "green" on those, so fulfil all hygiene and administrative [requirements] before you can collaborate with the food bank. We [in our shop] always score below [the high green score] because we have a mice plague. (Respondent 18, Grocery Store)

Some managers have even aborted the collaboration with food banks, because of the "administrative fuss" (Respondent 18, Grocery Store). Endless discussions with food banks about requirements, procedures, and rules prevent some managers of investing more time and effort in external collaboration. They feel that food banks are too critical about the products, both in terms of type of product and in terms of quality. Food banks' specific ideas about what supermarkets should have available not always match what a manager can offer:

> They [the food bank] say that they need so and so many kilos of chicken tomorrow, but that doesn't work because I don't know what I have [that is] expired, if I have one package then it is one package, but then it [the collaboration] doesn't work, like it or not. (Respondent 19, Grocery Store)

Understandings

Collaborating with external partners such as the restaurant mentioned in the previous section requires knowledge and an understanding of the partner's needs. Some managers are already experienced in working with

the restaurant; and others rely on an account manager that is sent by the restaurant to help them develop an understanding of the respective needs and preferences: "We have, from the restaurant, an account manager who visits the shops and explains the process a little bit. And we get tips from our internal network" (Respondent 2, Super Store).

In addition to concrete collaborations with external partners where the partners use leftover food, supermarket manager is convinced that NGOs are important external stakeholders. Recent successes of NGO campaigns show that if the general public united through NGO activities comes in action, many supermarkets increase their efforts to reduce food waste. For example, the Dutch NGO Wakker Dier has led a campaign against *plofkip* ("bursting chicken"), drawing attention to the severe problems of mass chicken farming. Their multiannual campaign resulted in a new and widely adopted meat quality label that indicates the living conditions of animals that are raised for consumption. One manager summarises this perceived power of the public: "Under pressure of the public opinion it [selling "bursting chicken"] has changed, and […]it is the same issue with food waste, if they think it's wrong" (Respondent 18, Grocery Store).

Relatedly, the managers point out that food waste responsibility should be shared in the whole food chain. Rejecting sole responsibility as a key player in the market, other stakeholders such as suppliers, producers, and the government should be held responsible, as well.

Engagements

Managers often see external collaborations as an important purpose in their efforts to reduce food waste. Some describe how they give to the food bank products that cannot be sold anymore or products that are left over from promotions or national holidays, such as Easter. Many managers loathe to waste food. Collaborating with external partners adds a dimension of purpose which is rewarding to the managers: "It is simply a sin, the amounts that we throw away. Some of our [waste] goes to the food bank, luckily, so that gives me some satisfaction" (Respondent 15, Super Store).

As a consequence of the above-outlined understanding of external collaboration, wasting less food in the supermarket should be more important in the public opinion, according to the managers. This is because they believe that as long as the general public pays scant attention to the issue, the sector as a whole will be reluctant to change routines and business models. The managers perceive the supermarkets to be driven by demand and supply, where supermarkets react to consumer demand. Therefore, embracing a pioneering role in reducing food waste is currently not a viable option.

Discussion

Implications for Theory

In this study, I provide an answer to the question *how and why do supermarket managers engage in supermarket food waste reduction practices?* In showing the understandings, procedures, and engagements of food waste reduction practices, this chapter contributes to the literature in two ways. First, it identifies practices that are aimed at reducing supermarket food waste. Prior studies on supermarket food waste have made a start on identifying relevant practices. For example, Delai and Takahashi (2013) used "practice" as an umbrella term including sustainability practices, internal practices, and daily practices; however, these practices were undertheorised. Similarly, Mena and colleagues (2011, 2014) identified "management" or "best practices" without further theorising the meaning of a practice, as has been done in the sociological literature on household food waste (Evans 2012; Hargreaves 2011). Building and advancing this prior research, the current study is the first to identify food waste reduction practices in supermarkets, utilising important insights from the practice literature (Schau et al. 2009).

Second, this chapter highlights the important role of micro-CSR, which captures managers' understandings and engagements in CSR, specifically in reducing supermarket food waste. Prior work has identified individuals' attributes towards CSR (Gond et al. 2017) which often

precedes how they practise CSR. The current study adds to this work and shows how managers' understandings and engagements about procedures inform their food waste reduction practices. Moreover, identifying knowledge sharing as a food waste reduction practice adds to prior studies that have identified knowledge sharing as crucial in reducing food waste (de Waal et al. 2017; Mena et al. 2011). The current study provides insights into the conditions that influence knowledge sharing and thus adds to our understanding of how knowledge sharing can help to reduce food waste.

Limitations and Future Research

The case study approach of the current study puts boundaries on its generalisability. Therefore, future research should consolidate the current findings and elaborate on practices to reduce food waste in supermarkets. In addition, future research should broaden the scope of this study. For example, it might be worthwhile to investigate supermarkets in countries other than the Netherlands. Local differences in food waste legislation may change the way that managers carry out food waste reduction practice in their stores.

Second, future research should investigate the procedures, understandings, and engagements of/with food waste reduction practices in more detail. For example, some approaches towards studying micro-CSR adopt a practice-based perspective. For example, Gond and colleagues (2018) describe how managers and employees engage in practices of making work strategic. Such a nuanced approach of studying practices might help to better understand the intricacies of food waste reduction practices in supermarkets. Similarly, the extant work on the role of social ties suggests that interpersonal relationships matter greatly for knowledge sharing (Hansen 1999; Uzzi and Spiro 2005). Investigating how social ties influence knowledge sharing about food waste might be an important step forward in better understanding how food waste reduction practices can be improved.

Implications for Practice

This study of food waste reduction practices in Dutch supermarkets points towards several measures that supermarkets and their managers can take to reduce their food waste.

Share Food Waste Best Practices in Local Collectives

This study has identified several practices that supermarket managers currently engage in. However, those practices are not always formalised, nor shared between supermarkets (let alone between supermarket chains). While across Europe some initiatives emerge where round tables and declarations of intent are initiated, the actual practices are far removed from corporate strategy makers. A practical solution for this distance between strategy development and implementation is for managers to better organise themselves in local or regional collectives. In these collectives, which might be organised using an online platform, managers could share best practices with regards to reducing food waste.

Boost In-Company Knowledge Sharing

In addition to encouraging the sharing of best practices, supermarket top management can choose to boost in-company knowledge sharing among managers and employees. The current study clearly supports prior work on the importance of knowledge sharing and shows how it can help to reduce food waste. Boosting knowledge sharing could be done through workshops, courses, and meetings with specific attention for knowledge sharing. Formalised attention for knowledge sharing during annual appraisal talks can also help to better motivate managers to engage in knowledge sharing. Another solution might be for each supermarket to establish an online group on their intranet, with the specific goal to share knowledge about food waste reduction practices.

Formalise and Incentivise Collaboration with External Partners

The managers that were interviewed for this study emphasised the importance of collaborating with external partners such as restaurants and food banks for reducing food waste. However, the managers also report that such collaboration is at their own discretion, often informal and not particularly steered by top management. One way to intensify collaboration with external partners might be for top management to formalise and incentivise such collaboration. For example, each supermarket should collaborate with food banks, and top management should include the task of collaborating with external partners in the regular task package of managers.

Urge Supermarkets to Take Responsibility

This study shows that supermarkets hesitate to take a lead role in CSR responsibility for food waste. However, supermarkets have considerable power to influence others in the supply chain, including producers and consumers. Therefore, stakeholders such as governments and NGOs who represent the general public should urge supermarkets to adopt a more proactive stance. For example, governments could pledge supermarkets to report their food waste statistics in annual reports. The resulting transparency might spur competition among supermarkets as to which chain performs best with regard to food waste. Similarly, recent successes by NGOs (see the *plofkip* example above) are evidence for the ability of stakeholders to effectively influence supermarket CSR practices. NGOs have the power to voice the concerns of the general public and channel their efforts in targeting supermarkets.

Conclusion

This study set out to answer the question *how and why do supermarket managers engage in supermarket food waste reduction practices?* The findings from a qualitative case study in Dutch supermarkets show that

supermarket managers use a set of practices geared at reducing food waste: monitoring, knowledge sharing, and external collaborations. The managers clearly acknowledge their responsibility in reducing food waste. Yet, they are convinced that supermarkets are not solely responsible: other stakeholders, notably the government and consumers (the general public) should also be accountable. In adopting such a passive stance, supermarkets pursue their commercial goals. At the same time, individual managers are driven by their personal motivation to waste less food.

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