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New perspectives on food redistribution: Evidence from the German Food Bank and other volunteer based organizations

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Federal Association of German Food Banks   German Food Bank

IV. Abstract

The thesis presents four perspectives on food redistribution that focus on the German Food Bank as a volunteer organization. Using a qualitative research approach, it builds on motivation and non-profit theories. The motivations behind involvement of volunteers and food donors in food redistribution, operational effects of food redistribution, food donors' alternatives to and barriers to charitable food redistribution, and interactions among volunteers and other food bank actors are discussed.

V. Summary

Each German citizen produces 82 kg of food waste per year. The German government uses various means to encourage the population to reduce food waste. One approach practiced by various supply chain actors is food redistribution. Retailers, wholesalers, and other donors provide surplus food items to volunteer-based organizations such as Slow Food, Food Sharing, and The German Food Bank for redistribution to people suffering from food insecurity, and to help raise awareness about food security. Each of these three organization are examined in this dissertation, but the main focus is on the German Food Bank. Four new perspectives on food redistribution in the specific organizational context of the German Food Bank are presented.

The first perspective explores the motivations that drive volunteers to serve in organizations such as Slow Food, Food Sharing, and German Food Bank. Further, the motivations of donors to donate to the German Food Bank are discussed. The motivational perspective builds on three different context-specific categorization systems of motivation.

The second perspective discusses the role of volunteers in the food redistribution process, as they carry out the majority of operations in the German Food Bank. The attention is directed to their interactions with other actors in the process, namely users, managers, and retailers. The concepts of boundary spanning and social exchange theory frame this perspective. In the existing body of studies on the German Food Bank, the volunteer role has remained relatively unexplored and thus presented a research gap.

In the third perspective, the effects of organizational operations on the German Food Bank itself as well as on the external organizational environment are addressed. The study builds on the concept of sector blending and explores the benefits and drawbacks of sector blending activities for the organization.

The fourth perspective focuses on donors and their perceptions of alternatives and barriers to the redistribution of surplus food items. This study follows the European food waste hierarchy, and includes an analysis of the legal background of redistribution of non-marketable surplus food items for charitable purposes in Germany. In addition, the incentives behind new practices of marketing and selling produce with visible imperfections (shape, size, blemishes) as alternatives to redistribution to charitable organization are explored.

1 Introduction

For each person in Germany 82 kg of food waste is generated per year (Federal Ministry of Food and Agriculture, 2017). Approximately 11 million tons of food waste per year occur throughout the supply chain from the farm gate to the consumer (Kranert et al., 2012). As quantification efforts are not yet complete (Jörissen et al. 2015; Göbel et al. 2015; Meyer et al. 2017), and the projected numbers are already at a level which is considered unacceptable by society, the Federal Ministry of Food and Agriculture decided in 2012 that this quantity should be halved by 2030 (Federal Ministry of Agriculture, 2017). Kranert et al. (2012) estimated that 65% of the total quantity can be classified as either avoidable or partly avoidable, and that these types of food waste result in costs of approximately 21.6 million Euro per year. Food items that are disposed of although they are still suitable for human consumption are considered avoidable food waste, while partly avoidable food waste is related to such consumer habits as cutting off and disposing of bread crust or apple peel (Kranert et al. 2012).

With respect to avoidable food waste, surplus food items that are discarded by food retailers simply because they are considered to be unmarketable are widely discussed (Aschemann Witzel et al., 2017; Eriksson et al., 2017; Filimonau and Gherbin, 2017). The 'best before' and expiration dates (Gruber et al., 2016, Aschemann Witzel, 2018) and consumers´ expectations of food products in terms of food quality standards, in particular appearance (De Hooge et al., 2017), contribute to the unmarketability of fresh produce and other products when they are not 'flawless' (Cicatiello et al., 2017; Loebnitz and Grunert, 2018). Even small visible imperfections often lead to rejection of the product by the consumer (Göbel et al., 2015). As an alternative to disposing these items, German food retailers can provide them to agricultural operations for use as animal feed, or redistribute the surplus food items to social supermarkets (Holweg et al., 2016;); charitable or other private organizations for human consumption (Gruber et al., 2016).

Food redistribution is widely defined as an activity where food producers, wholesalers and retailers voluntarily provide food that would otherwise be discarded to organizations that carry out food rescue. In the majority of cases, this food is given to recipients of social assistance (Lindberg et al., 2014; Calvo-Porral, 2016). Three organizations, namely Food Sharing (Ganglbauer et al., 2014; Gollnhofer et al., 2017), Slow Food Germany (Rombach et al., 2015a), and the Federal Association of German Food Banks are active in the redistribution of food in Germany (figure 1).

	Food recipient and goal	Relationship with food donor
Food Sharing	**Organizational members** Reduce food waste	**Resource dependency** Organization receives unmarketable surplus food from producers and retailers
Slow Food	**Public** Raise awareness on food culture and food waste	**Resource dependency** Organization receives unmarketable produce from agricultural producers
Food bank	**People in need** Support people and reduce food waste	**Resource dependency** Organization receives surplus food from producers, wholesalers and retailers

Figure 1: Organizations actively redistributing surplus food items in Germany

Source: Author's own illustration

Food Sharing is a non-profit organization founded in 2012 thats main organization goal is to reduce food waste. The organization uses social networks and a private online platform to distribute food items among registered users (Ganglbauer et al. 2014; Blanke, 2015). The food offered comes either from private households that offer their surplus food items on the platform, or from agricultural producers and retailers, who redistribute unmarketable surplus food items to the organization (Rombach and Bitsch, 2015). In the case of food from private households, arrangments for exchange of food takes place via messengers and apps, while the actual exchange occurs in person. The party offereing the food is free to accept or decline a food request (Ganglbauer et al., 2014). In the second case, in which agricultural producers and food retailers provide the food, volunteers from local Food Sharing groups collect and redistribute the surplus food items (Gollnhofer, 2015). Food Sharing volunteers have the right to keep a share of the items they collect for themselves, and generally then redistribute the remaining share either through the online platform or through publicly accessible storage facilities (Food Sharing, 2017). The organizational rules state that members of Food Sharing receive and consume the food at their own risk. The organization has no restrictions with respect to membership, however volunteers need to pass an exam before they can participate in food redistribution, and thus, officially represent the organization (Rombach and Bitsch, 2015).

In contrast to Food Sharing, where the entire organization practices redistribution, the organization Slow Food Germany operates differently: The main goal of the organization is to promote their idea of what constitutes a fair and high quality food culture in Germany.

Food redistribution is a secondary activity that is primarily done by members of the youth sub-branch (Rombach et al., 2015a; Rombach and Bitsch, 2015). Slow Food Germany is a branch of the organization Slow Food, which was founded in 1986 in Italy as a countermovement against fast food. The organization aimed to preserve local Italian food traditions and regional food products. Over time, the Italian organization has developed into an international organization with 100,000 members in about 150 countries around the world (Slow Food, 2017). Slow Food began to operate in Germany in 1992, and currently has 14,000 members in Germany that are organized in 85 local groups (Slow Food Germany, 2017). The Slow Food group in each individual country strives to protect local food culture, and advocates for the production of sustainable local food and small-scale food-related businesses (Slow Food, 2017). Further goals include the preservation of biodiversity and the reduction of food waste. The organizational mission states that food should be good, clean and fair (Jones et al., 2003, Sassatelli and Davolio 2010). Slow Food is restrictive with respect to membership, due to its requirement that members pay a membership fee. The main critique towards the organization is that it is only affordable to wealthy members of the society, as it focuses on expensive gastronomic products (Chrzan 2004, Laudan 2004).

The charitable non-profit organization the Federal Association of German Food Banks (referred to from hereon as the German Food Bank) has a different primary goal. The organization redistributes food in order to support economically and socially disadvantaged people who receive public assistance (Lorenz, 2012a, b). The organization was founded in 1990, and consists at present of 925 local food pantries in which over 50.000 volunteers serve (German Food Bank, 2017). These volunteers sort, prepare or distribute food in food pantries; or collect food items from food donors such as agricultural producers and retailers (Hoffmann and Hendel Kramer, 2011; Von Normann, 2011; Witt, 2011). In addition to redistributing food, the organization offers other services to its users such as, providing assistance with visits to medical practitioners and government offices, as well as tutoring schoolchildren (Becker, 2010; Hoffmann and Hendel Kramer, 2011; Lorenz, 2012a). In addition, the organization provides school meals to children and cooking courses where nutritious low-budget meals are prepared (Görtemacker, 2011).

The individual food pantries are organized in an umbrella structure, and represented at the national level through an elected board of directors, which is supported by a spokesperson and an advisory board (German Food Bank, 2017). At the federal level, elected state representatives represent the organization. For its political representation, the organization has a publically well-known champion, who advertises the organization (German Food Bank, 2017). In terms of membership, the German food bank is also restrictive.

Beneficiaries need to be registered members of the German welfare system, and prove this through official documentation (Becker, 2011a; Von Normann, 2011; Lorenz, 2012b). Volunteers are required to go through an application process, and required to provide assurance that they will be reliably available to perform their volunteer service (Von Normann, 2011). Each organization is well researched (figure 2). Food Sharing is mainly researched in the context of food waste quantification (Blanke et al. 2015) and, from a consumer perspective, in the context of the sharing economy and non-monetary food systems (Gollnhofer, 2015; Gollnhofer et al. 2015; Gollnhofer, 2017; Gollnhofer and Schouten, 2017). Further studies have had a more ethnographic character and have researched Food Sharing as an online community (Ganglbauer et al. 2014).

Recent body of literature	**Food Sharing**	Waste quantification	Online community	Sharing economy & alternative food systems
	Slow Food	Social activism, conflicts related to power & economic growth	Online, media & political presentation	Food culture, gastronomy and tourism
	German Food Bank	Poverty, food insecurity & a user perspective	Public perception of the organization	Problems in the food bank system

Figure 2: Topics discussed in the recent body of literature on the organizations Food Sharing, Slow Food and the German Food Bank

Source: Author's own illustration

Research on the organization Slow Food covers a broad range of topics. Among these are sociological and political studies dedicated to social activism; conflicts related to power, economic growth and political representation (Jones et al., 2003; Leitch, 2003; Hayes-Conroy and Martin, 2010; Sassatelli and Davolio, 2010; Van Bommel and Spicer, 2011). Further studies cover touristic and gastronomic aspects (Heitmann et al., 2011; Yurtseven, and Kaya, 2011; Williams et al., 2015; Lee et al., 2015), the image the organization presents online and in other media (Germov et al., 2011; Frost and Laing, 2013), or explore attitudes and preferences towards slow food products and markets (Nosi and Zanni, 2004; Bazzani et al., 2016). Slow Food Germany as an organization remains relatively little researched. The studies that exist are dedicated to members' knowledge of food waste and fast food (Rombach et al., 2015a), and Slow Food member's motivations and activities, including food redistribution within the organization. Slow Food being has also been investigated with regard to the extent it can be considered part of a food movement (Rombach and Bitsch, 2015). The latter study is presented in this dissertation (Paper 1).

In contrast to research into Food Sharing and Slow Food, in which consumer, economic and organizational perspectives are all explored, the recent body of literature on the German Food Bank is dominated by sociological and political studies. Individual studies have been dedicated to aspects of poverty and food insecurity (Selke 2011a, b), public perception of the organization and its service (Witt 2011), and the user perspective in the context of dignity (Hoffmann and Hendel-Kramer, 2011) and vulnerability (Sedelmeier 2011). Various studies address problems within the organization, such as injustice in the distribution system (Lorenz, 2010a,b; Scherschel et al.,2010; Selke,2010; Gurr, 2011; Molling, 2011a,b; Lutz, 2011; Roscher, 2011; Sedelmeier, 2011; Selke, 2011a, b, c, d, e; Selke, 2012). Hoffmann and Hendel Kramer (2011), Clausen (2011); Klasen (2011); Molling (2011b) and Selke (2012) all share the same critique that the food provided by the Gernan Food Bank does not meet the cultural, dietary and personal preferences of its beneficiaries. With respect to the users, Selke (2016) emphasizes inappropriate treatment of food bank users by food bank volunteers. Poor food quality, unequal distribution of food, and asymmetric power relationships lead to tensions between food bank users and personnel (Becker, 2010; Clausen, 2011; Klasen, 2011, Von Normann, 2011).

1.1   Research aim and rationale

Several aspects of food redistribution remain yet unknown. For instance, the role of German Food Bank volunteers in the food redistribution process has been little explored, whereas interactions between users and volunteers have only been explored from the user perspective, and thus, viewed in a sociological context of power relationships. Further it remains unknown what motivates volunteers to work at the German Food Bank or other organization that redistribute food. Similarly, the recent body of literature provides up to the present no answers to the question of what motivates food donors to choose to collaborate with the German Food Bank given that various other organizations that also redistribute food exist. Also, the operations of the German Food Bank as a redistributor have not been examined up to the present time.

Therefore, the dissertation research presented here aims to fill the research gaps identified above and in so doing to provide new perspectives on food redistribution in Germany. Although Slow Food and Food Sharing also redistribute food in Germany, the main attention in this dissertation is directed to the German Food Bank. In contrast to Slow Food, where only the youth branch actively redistributes food, within the German Food Bank, the entire organization is dedicated to this activity. Further, one could argue that it is more appropriate to explore Food Sharing as an organization, as in contrast to the German Food Bank   and

Slow Food, Food Sharing has no goals other than food redistribution. However, the organizational structures of Food Sharing are not as distinct as those of the German Food Bank, and, at the time of the investigation, the organization was still developing and thus, going through rather rapid changes. In addition, the recent body of literature on the German Food Bank appears to be one dimensional, as perspectives from scholars belonging to disciplines other than Sociology and Political Science are missing.

1.2   Perspectives and structure

This dissertation aims to discuss four new perspectives on food redistribution and volunteer-based organizations in Germany (figure 3). The first perspective is a motivational one, and focuses on the motivations of Slow Food-, Food Sharing-, and German Food Bank volunteers to serve in their respective organizations. Each of these organizations receives otherwise unmarketable surplus food items from food donors for redistribution. Further, the motivations of donors to donate to the German Food Bank are discussed. The motivational perspective builds on Clary and Snyder (1999), Klandermanns (2004) and Anik et al. (2010), each of which present a different context-specific categorization system of motivation.

The second perspective shall provide insight into the role of volunteers in the food redistribution process, as they carry out the majority of operations in the German Food Bank. The attention here is directed to their interaction with other actors in the process, for instance users, managers and retailers. The concept of boundary spanning and social exchange theory - an organizational psychological theory - frame the perspective. This particular focus was chosen, as the pivotal role of the volunteers receives little attention in the recent body of literature on the German Food Bank.

Building on the assumption that volunteers in the German Food Bank, organize and structure the operations, and that these operations affect organizational success, the third perspective addresses the effects of organizational operations on the German food Bank itself and on the external organizational environment. The study builds on the concept of sector blending.

The fourth perspective complements the prior ones, as it looks primarily at donors, and focuses on alternatives and barriers to redistributing surplus food items from the perspective of the food donors. Particular attention is give to the legal environment in which food redistribution of non-marketable surplus food items for charitable purposes in Germany takes place. In addition, incentives behind the development and implementation of new

practices of marketing and selling produce with visible imperfections as an alternative to redistribution through donation to charitable organizations are explored.
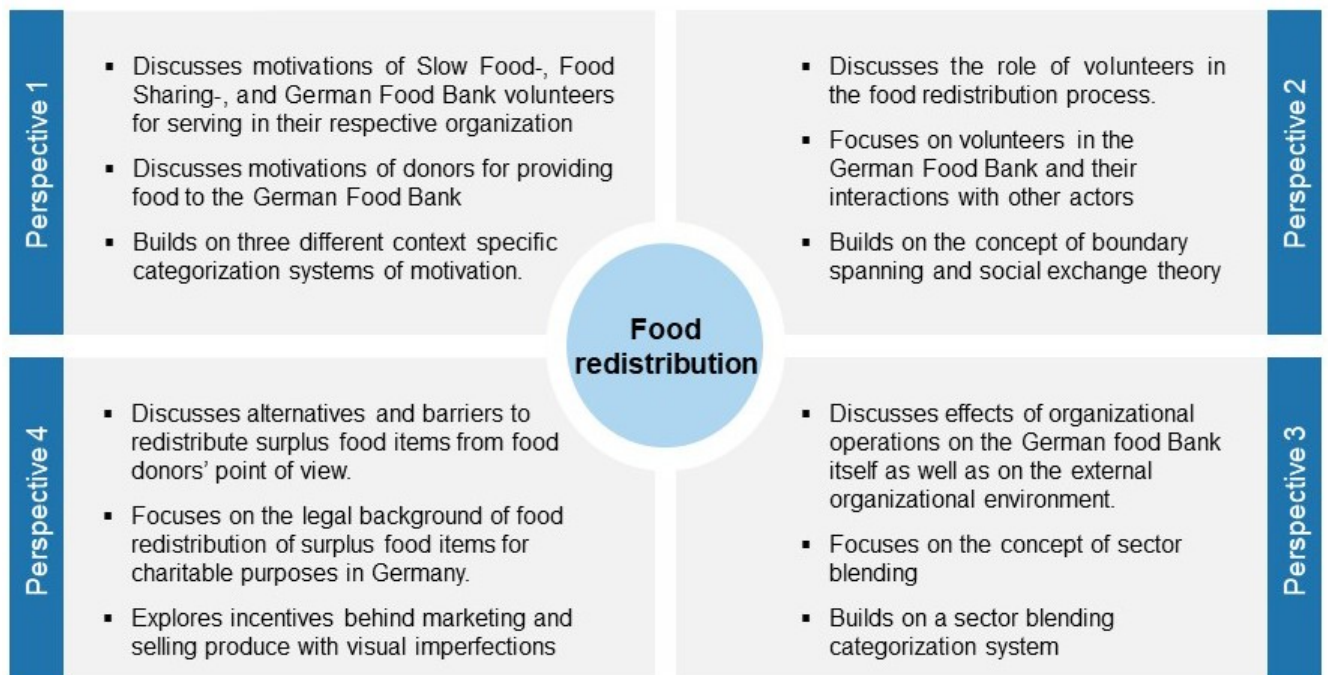
Figure 3: Four new perspectives on food redistribution and volunteer-based organizations in Germany

Source: Author's own illustration

Accordingly, the dissertation is divided into five parts. The introduction in Part One presents the rationale for this study, and is followed by the conceptual and theoretical framework outlined in Part two. In Part Three, methodological decisions and the rationale behind these choices are discussed. Part Four encompasses a publication record and a statement of author contributions. This section also includes summaries of four published papers, which represent the core of this dissertation. The full papers are attached in appendices 1, 2, 3 and 4. Part Five discusses seeks to integrate the most relevant parts of the four individual perspectives described in Part One and more deeply investigated in the papers presented in Part Four. This discussion includes recommendations for volunteer organizations and food donors that result from the analyses conducted, and concludes with suggestions for future research.

2 Theoretical and conceptual background

Although this dissertation is of a qualitative nature, the description of the overarching study is presented in a traditional manner, where the theoretical and conceptual background is presented before the methods and results sections, in order to enhance the understanding of readers not familiar with qualitative research approaches. In the following four subchapters, theoretical foundations for the development of non-profit organizations are presented and the motivations for food donors providing surplus food to redistributing organizations is outlined. Further, the concept of volunteering and volunteers' motivations to serve in redistributing organizations are explained. Building on the motivations identified, the interactions between volunteers and other actors in redistributing organizations are discussed.

21 Development of non- profit organizations

This dissertation is primarily focused on the German Food Bank, which is a charitable organization supporting the food insecure in Germany. Non-profit organizations strive to create value for the society as a whole, but are not expected to (and in many cases, not allowed to) generate profit. The German Food Bank is a private organization, but serves public purposes (Von Normann, 2011). Because the German Food Bank is an association serving non-commercial purposes, the organization is eligible to receive tax-deductible gifts or donations (Von Normann; 2011; Lorenz, 2012b; German Food Bank, 2017). Defining and conceptualizing non-profit organizations consistently is challenging. Research from various European and non-European countries, such as the US and Canada, has shown that the scope and structure of the non-profit sector is heterogeneous in different countries (Salamon and Anheier, 1992; Anheier, 2014; Malhotra, 2018).

However, common theoretical foundations prevail in principle. Four main branches of theory serve as the theoretical foundations of non-profit theory. These theories explain why non-profit organizations develop, and focus on conditions that encourage their growth (Anheier, 2014). The first branch of non-profit theory is public good theory and is widely associated with economist Burton A. Weisbrod (Kingsma, 2003; Silvinski, 2003; Anheier, 2014). According to Kingsma (2003), public good theory related to non-profit organizations is considered a further development of the theory of club goods, the Coase Theorem, and the theory of collective action (Buchanan, 1965; Coase, 1960; Olson, 1965). The theory postulates that a persistent demand for public goods exists, and the state fails to provide these goods. Therefore, non-profit organizations take over this duty and provide these goods (Anheier, 2014). The public good theory is also known as "governmental failure theory" (Anheier, 2014, p. 216). A further development of the theory is heterogeneity theory,

where it is assumed that there is not complete failure, but insufficient diversity is provided (Kingsma, 2003).

In contrast to public good theory related to non-profit organizations, which highlights the demand for public goods and services, entrepreneurship theory uses a supply side perspective to explain the development of non-profit organizations (Anheier, 2014). In this context, James (1987) and Rose-Ackermann (1996) were the main theorists contributing to the development of what has become known as entrepreneurship theory. This theory branch postulates that non-profit organizations are a reflection of demand heterogeneity, and are primarily interested in immaterial value maximization, and monetary profits are only of secondary interest. However, the provision of services can be seen as a way to increase instrumental functioning (Anheier, 2014). Anheier (2014) presents religious organizations as an example. On the one hand, these organizations want to support the poor, and on the other hand they aim to increase their membership.

Following Anheier (2014), interdependence theory is a further theory related to the existence of non-profit organizations, where Salamon (1987) is one of the major theorists. The theory is also known as "voluntary failure theory" (Anheier, 2014, p. 216) and assumes that due to lower transaction costs, non-profit organizations initially surpass governments in providing public goods and services (Anheier, 2014). Yet, non-profit organizations, which rely on the workforce of volunteers, may be limited in terms of working power, time, and efficient organization. Therefore, collaborations between state and non-profit organizations occur, as the state undertakes tasks to complement non-profit organizations. In contrast to public good theory, interdependence theory does not consider non-profit organization as an alternative to state provision. There is no conflictual relationship between state and non-profit sectors. In response to social pressure, synergetic relationships are developed over time (Anheier, 2014).

According to Anheier (2014), social origins theory as another theoretical branch, originates from Anheier and Salamon (1998) and was further developed in Anheier and Salamon (2006). The theory postulates that the growth of non-profit organizations stems from their embeddedness in social, political, and economic dynamics, and cannot be attributed to any individual aspect, such as unmet demand, as in public good theory, or to supply, as suggested by entrepreneurship theory. The emergence of such organizations, rather, relates to structures, classes, and social groups within a society. The theory explains how the composition of classes or social groups encourages or hinders the emergence of non-profit organizations.

While the theories presented help explain why non-profit organizations emerge, the distinctions between the non-profit sector, for-profit sector, and public sector on which they are based are often not so clear, and sector blending takes place. The concept of sector blending is discussed in this dissertation using the example of the German Food Bank (paper 3).

22 Food donors' motivations for providing food to redistributing organizations

The following chapter builds on empirical studies presenting the donor perspective on food redistribution. These studies were conducted in European countries where food systems and retail structures are similar to those in Germany, and are dedicated to dealing with the problem of food waste or promoting charitable giving (figure 4). Further, three literature reviews discuss donors' motivations for providing surplus food items for food aid (Vlaholias et al., 2015a) and donors' motivations for supporting charities (Schokkaert, 2006; Anik et al., 2010). Although literature reviews usually present findings in chronological order, the previous work described here is organized and presented according to the key concepts explored.
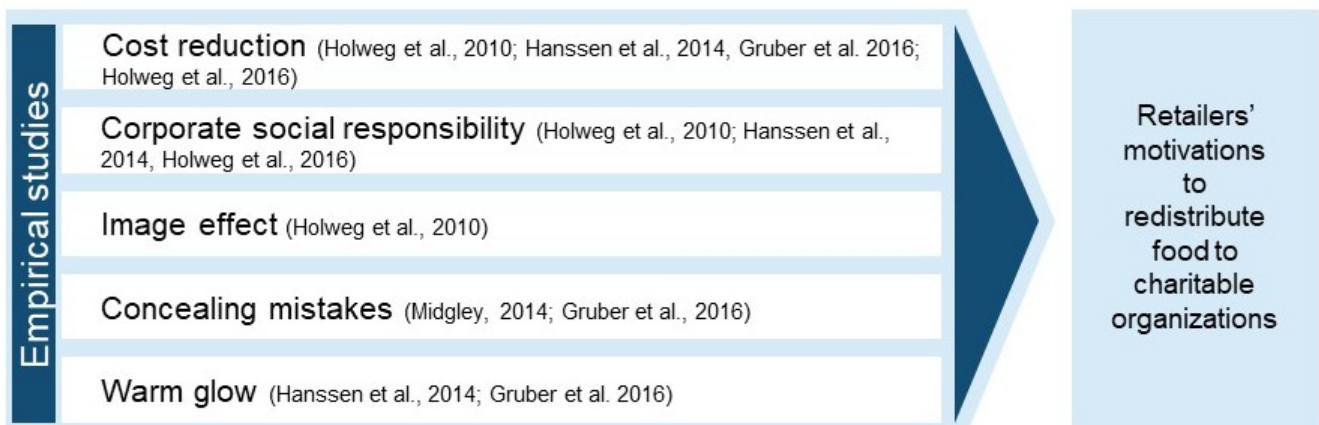
Figure 4: Results from the empirical studies on donors' motivation to redistribute food
Author's own illustration

In Austria, Holweg et al. (2010) explored the perspectives of eighteen retailers towards their collaborations with social supermarkets by conducting in-depth interviews and qualitative content analysis. Social supermarkets are similar to traditional supermarkets and discounters in terms of the products and in-store services they offer. However, they have a more limited product assortment, and prices are 50 % to 70 % lower than in regular Austrian retail outlets. Only people living under the risk of poverty have access to social supermarkets in Austria. The study presented corporate social responsibility and potential

positive image effects, as well as opportunities for cost reduction as motivations for retailers to redistribute food and other household supplies to social supermarkets.

A later study by Holweg et al. (2016), involved 28 retail outlets and four wholesale outlets. Through in-depth interviews and qualitative content analysis, the authors were able to confirm their earlier findings. In particular, the possibility of reducing costs for waste disposal was a strong motivation for Austrian retailers and wholesalers to donate food to redistributing organizations. With the same data used in Holweg et al. (2016), the author group presented further findings related to donor motivation in a book chapter (Teller, et al. 2016). There, authors emphasized legal waiver agreements as a motivation for food donors to cooperate with charitable organization. The waivers are seen as a motivation because they exclude the donors' risk of litigation for incidences in which third parties are harmed by spoiled food. In contrast to the situation in Germany, the use of legal waivers is permitted in Austria (Hermsdorf et al., 2017)

Hanssen et al. (2014) researched food redistribution in Sweden, Finland, Denmark, and Norway. The study followed a mixed-method approach. In-depth interviews with experts working in the area of food safety and surveys of food banks and food donors were conducted. Among the donors surveyed were food retailers, food wholesalers, bakeries, canteens, and farmers. In addition to collecting information related to quantities of food donated and donation frequency, motivations for redistributing food were an important aspect of the surveys. Results from Sweden and Finland are similar to the findings from Austria (Holweg et al., 2010), since the donors' motivations for charitable giving were reduced costs for waste disposal, company policies, and an opportunity to practice corporate social responsibility. In addition, donors had personal motivations such as the happiness they felt when they had done something good for people in need. The study did not report on the motivations of Danish and Norwegian donors.

Another motivation to be involved in food redistribution has been presented by Midgley (2014) who conducted a case study in northern England. In-depth interviews were conducted with actors from five charitable umbrella organizations involved in regional or national food redistribution. The results focused on logistics aspects, and the actors' understanding of food quality. In this context, the study pointed out that one of the main motivations for food donors to collaborate with redistributing organizations is the opportunity to conceal logistics mistakes that have already occurred either in-store or in other parts of the food supply chain.

Gruber et al. (2016) who carried out a transnational study to explore food retailers' perspectives on food waste found the same result. The authors conducted 32 in-depth interviews and analyzed them via inductive qualitative content analysis. The interviewees were managers working for different international and transcontinental retail and wholesale chains or franchise organizations. Gruber et al (2016) found that interviewees were either concerned about the amount of food waste and therefore, practiced food redistribution; or did not show interest in redistribution at all, as they considered food waste to be a side effect of their business practices. Similar to prior studies, the study reported on the aspect of reduced disposal costs, and emphasized morality-based motivations, where retailers reported to enjoy donating, as they feel compassionate for the poor.

Far-reaching and more systemized insights into the topic of food redistribution were provided by Vlaholias et al. (2015a) who presented a general theoretical overview of motivations for food donors to donate surplus food for food aid. Their literature review consists of both European and non-European studies, such as in the U.S. and Australia, dedicated to food waste and redistribution. This review indicated that the awareness of need is essential in charitable giving (Vlaholias et al. 2015a). Vlaholias et al (2015a) problematized the fact that beneficiaries receiving food aid are largely uninvolved in the donation transaction. Consequently, the actual cultural and dietary food needs of recipients remain largely unknown to donors. To overcome this problem, Vlaholias et al. (2015a) suggested that food redistributors communicate the recipients' needs to the food donors. Solicitation has been addressed as a major factor in redistribution. Food banks and other food rescue organizations directly approach food donors and ask for their support, while societal expectations indirectly influence food donors to donate surplus food (Vlaholias et al., 2015a).

In addition to solicitation, reputation is intensively discussed when it comes to food redistribution. On the one hand, food donations are perceived positively by society, and are acknowledged as part of a fulfillment of social commitments. On the other hand, food donors fear that their organization is perceived negatively, as donating non-marketable surplus food items indicates that they are generating large quantities of food waste. Both Midgley (2014) and Gruber (2016) presented the latter argument in slightly different ways. These studies consider huge quantities of surplus food to be "operational mistakes within the supply chain (Midgley, 2014, p. 1877)" or "side effects of the retail business" (Gruber, 2016; p.4;11). For instance, product damage or over-ordering can both lead to surplus food, which is then either discarded or redistributed.

Economic benefits are considered another motivation to donate food (Vlaholias et al., 2015a). Regulatory frameworks in different countries allow for tax deductions for food redistribution (Vlaholias et al., 2015a). Similar to the results reported in empirical studies (Holweg et al. 2010; Hanssen et al., 2014; Gruber et al. 2016), Vlaholias et al (2015a) stated that a pragmatic reason for donating food for redistribution is that donations are usually cheaper than disposal.

Altruism is discussed frequently in the context of food redistribution, as redistributing organizations often have a religious or philanthropic background. However, Vlaholias et al. (2015a) pointed out that altruism is not necessarily a relevant motivation in the context of food donations. Vlaholias et al (2015a) stated that it is unlikely that donors would collaborate with redistributing organizations in the absence of incentives of either a financial (cost-saving) or a personal nature. As personal motivations, the authors presented increased self-esteem, feeling superior, and joy of giving. Even though the motivations are non-material in nature, they still benefit the donor. The concept of pure altruism, however, assumes complete selflessness. The personal donor motivations identified by Vlaholias et al. (2015a) match the findings presented by Gruber et al (2016).

Earlier, Schokkaert (2006) revisited psychological studies into why people donate for social purposes. Schokkaert`s (2006) more general review is relevant for this dissertation, because redistribution for food aid is considered a social purpose. The first type of motivation presented is self-interest. People donate out of self-interest, and hope that they get something back; this can be either material self-interest or a desire for social prestige. The findings related to self-interest are comparable to Vlaholias et al. (2015a) and the empirical studies described above (Holweg et al., 2010; Hanssen et al., 2014, Gruber et al. 2016; Holweg et al., 2016), because economic incentives such as tax deductions and cost reductions are forms of material self-interest. The desire for social prestige can be equated with increased self-esteem, feeling superior, and receiving joy from giving as motivations, as all motivations are of psychological nature.

Schokkaert (2006) further discussed reciprocity, and distinguished this form of motivation from self-interest. While self-interest implies a lack of any regard for the other party, reciprocity relates to a kind of cooperation in repeated interactions, where actors help one another, and at the same time, hope to gain personally from the cooperation. This point of view was inspired by game theory, and was implicitly addressed by Vlaholias et al (2015a), as the authors stated that pure altruism in food redistribution is rather unlikely, because both the donor and recipient need to gain from their collaboration.

Schokkaert (2006) discussed altruism, social pressure, and empathy as motivations that fall under the category of norms and principles. Similar to Vlaholias et al (2015a), he emphasized that donations occur due to social pressure. Donors have a desire to comply with external social norms, to receive social approval, and to avoid blame. He stated that, in particular, empathic people are prone to social and normative pressure, because they are sensitive and often adhere strongly to moral principles. These findings relate to the aspect of solicitation discussed by Vlaholias et al. (2015a).

Anik et al. (2010) presented another literature review building on psychological studies. This study revisited the benefits and costs of charitable giving. With respect to donor motivations, the authors presented a very broad classification system, which distinguishes among economic, social, and psychological motivations. Economic motivations include avoiding costs and receiving tax benefits (Anik et al., 2010). The improvement of reputation, feeling superior, and the joy of giving are examples of psychological motivations. Altruism and solicitation are often influenced by society and common values, and, therefore, can be classified as social motivations. The three forms of motivation are not mutually exclusive and may reinforce each other. All of the empirical studies (Holweg, 2010; Hanssen et al., 2014; Midgley,2014; Gruber et al., 2016; Holweg et al., 2016) and reviews (Schokkaert, 2006; Vlaholias et al., 2015a) examined confirm the findings presented from the work of Anik et al. (2010). Anik et al.'s (2010) classification system combined with Vlaholias's (2015a) review of food redistribution was considered to be a suitable framework to present donors' motivations in this dissertation in order to achieve sufficient depth and conceptualization.

23 Volunteering and volunteers' motivations for serving in redistributing organizations

In addition to donors, volunteers are particularly important actors in the food redistribution process. Within each individual organization, Slow Food, Food Sharing, and the German Food Bank, volunteers carry out the majority of organizational activities. Following Tilly and Tilly (1994) and Musick and Wilson (2000), volunteer work is seen as an activity that benefits both the wider community and the individual volunteers themselves. Volunteers provide their time, skills and labor without receiving any monetary payment. Two different forms of volunteering are distinguishable: formal and informal volunteering (Clerkin and Fotheringham, 2017). Formal volunteering takes place in an organizational context, while informal volunteering is carried out individually, and often takes place in a private context where there is no organizational background (Lee and Brudney, 2012; Taniguchi and Marshall, 2014). Only formal volunteering is discussed in the context of this dissertation.

The literature on volunteering comes largely from four disciplines, economics, sociology, psychology, and political science. Hustinx et al. (2010) presented the main perspectives on volunteering from each of these disciplines. From an economic perspective, it is assumed that volunteers are rational individuals who strive to maximize their own benefits. These benefits are either of a psychological or economic nature, and serve as motivations and incentives to volunteer. Although volunteers are unpaid, they receive private benefits from volunteering such as the opportunity to receive training and acquire skills, or psychological benefits such as "warm glow" (Hustinx et al., 2010, p. 415). Therefore, the authors consider volunteering to be an investment or a form of consumption for volunteers. It is further explained that volunteers are impure altruists, because there are reciprocal benefits.

From a sociological perspective, volunteering is considered a social phenomenon that builds on social relationships and interactions between individuals and groups. Sociological studies are mainly dedicated to questions of social order, solidarity, integration, and social ties within a society. Volunteering is seen as a form of social solidarity that ties a society together. The activity is understood as an act that expresses altruism, compassion, generosity, social responsibility, community belonging and group identity, and contributes to social integration. Therefore, the sociological literature on volunteering identifies socio-economic factors that determine participation or non-participation in volunteering. In addition, the cultural perception and meaning of volunteering are presented, and integration through volunteering is discussed from an individual perspective. A further notion within the

sociological literature is focused on volunteering as an act of social change that serves to empower the disadvantaged, fight social injustice, and call attention to unmet needs within a society or, in particular, in welfare systems (Hustinx et al., 2010).

From a psychological perspective, volunteering is considered a form of pro-social behavior that involves helping others. In contrast to the economic perspective, it is assumed that there are people who will help others regardless of their incentives. These studies aim to distinguish between the personality traits of volunteers and non-volunteers. Psychological studies purport that volunteers tend to possess the following specific traits: social value orientation, empathy, concern for others, self-efficacy, and strong self-esteem (Hustinx et al., 2010).

From a political science perspective, volunteering is considered mandatory for an active society and democracy. Citizens can claim rights, are allowed and able to organize, and ultimately form self-led volunteer organizations. Volunteers assist their communities, generate social capital, and have an intermediate position between citizens and governments. Volunteer action hinders oppressive forms of government and governance, as volunteer organizations, in particular elite-based organizations, often give a voice to small groups. The political science literature shows that volunteers that are organized in churches or other organizations contribute to the active discussion of civic values and therefore, improve democracy (Hustinx et al., 2010).

Based on the four perspectives presented by Hustinx et al. (2010), volunteer motivation classification systems that are appropriate in the context of food redistribution in Germany are presented in what follows. These classification systems serve to frame the empirical work of this dissertation. Informed decision making on the choice of an appropriate classification system required first gaining insight into the perspectives of the different disciplines that contribute to the body of literature on volunteering. Therefore, the perspectives put forth by Hustinx et al. (2010) provided the basis for evaluating the existing motivation classification systems in terms of their ability to inform and explain the key elements in volunteer motivation in the context of food redistribution in Germany.

One classification system that is widely cited across multiple disciplines is the psychological classification system presented by Clary and Snyder (1999). The authors surveyed active volunteers, former volunteers, and non-volunteers. This classification system presents six main motivations for why people volunteer - expressing important values, obtaining a better understanding, enhancement, belonging to social groups, developing skills and career

opportunities, and the so-called protective effect, which attributes volunteering to efforts by volunteers to take their minds off their own personal worries (Clary and Snyder, 1999).

Anheier (2014) presented another classification system, which was a further development of Penner's (2004) and Barker's (1993) work, and discussed motivations from a sociological perspective. This classification system is divided into three types of motivations: altruistic motivation, instrumental motivation, and obligation as motivation. Solidarity with the poor, compassion for the needy, and providing hope to and supporting dignity in the disadvantaged are classified as altruistic motivations. Experiencing new things, gaining skills, and personal satisfaction are presented as examples of instrumental motivations, while desire for political change, repayment of debts to society, and moral or religious duties are presented as motivations of an obligatory nature.

Klandermanns (2004) discussed volunteer motivations from a socio-psychological perspective. This classification system consists of three main motivations for people to volunteer in social movements. Volunteers strive to change their own circumstances, want to act as members of their group or organization, or simply want to express their views. Klandermanns (2004) refers to these three motivations as instrumental, identificational, and ideological. Instrumental motivations relate to psychological and economic incentives, identificational motivations relate to the expression of identification with a group or organization, and ideological motivations relate to the expression of personal views or social values (Klandermanns, 2004).

The individual motivations presented in each classification system are not mutually exclusive. Often volunteers have several motivations for being actively involved in their organizations. The classification system presented by Clary and Snyder is rather specific, but lacks abstraction as it is not guided by overarching themes as those put forth by Anheiner (2014) and Klandermanns (2004) are. Despite this drawback, the system Clary and Snyder (1999) described is widely cited and used in interdisciplinary contexts, and therefore, was included in the dissertation, as its inclusion allows for comparisons to be made with studies of similar context. As Slow Food and Food Sharing can be considered to be social movements, the application of Klandermann's classification system is suitable for this dissertation.

In comparison to Anheier's system, the systems described by both Klandermanns (2004) and Anik et al. (2010) seemed to better fit the specific context of the empirical work undertaken for this dissertation. In the end, Anheier's system was not chosen to frame the empirical work of this dissertation, because the sociological perspective is strongly reflected

in the classification system, and the recent body of literature on The German Food Bank is already dominated by sociological studies.

2.4 Interactions between volunteers and other actors

In the context of food redistribution, the majority of literature that deals with interactions between volunteers and other actors involved has focused on food banks. While the interactions between food bank volunteers and food bank users are extensively discussed, prior knowledge on the interactions among food pantry managers and donors is limited. Prior studies have described cases in which the interactions between volunteers and food pantry users have had undesirable results. When registering in a local food pantry or when receiving food, users have reporting feeling ashamed of their situation, and feeling dependent on the volunteers' good will (Lorenz, 2010a,b,c; Scherschel et al., 2010; Gurr ,2011; Molling, 2011b; Lutz, 2011; Roscher, 2011; Sedelmeier, 2011; Lorenz, 2012; Selke, 2012; Selke, 2011a, b, c, d, e; Lambie-Mumford, 2013; Van der Horst et al. 2014; McIntyre et al., 2016).

One ethnographic study explicitly focused on negative interactions that occurred in Dutch food pantries. This study described incidences of negative interactions between volunteers and food bank users, as well as measures such as rules and a code of conduct intended to shape these interactions in food pantries. (Van der Horst et al., 2014). The study further discussed the ways in which social hierarchies and the aspect of gratitude affect interactions in food pantries. Volunteers expected users to show gratitude and refrain from expressing complaints. However, some food pantry users were reportedly unwilling to show gratitude and follow volunteers' expectations, which in this case led to tension between users and volunteers, despite the existence of an established code of conduct. Shame and distress were emotions that users reportedly experienced during these interactions. Volunteers also perceived these interactions as negative, as they deemed them to be forced due to the rather tense environment in which they took place (Van der Horst et al., 2014).

Studies that took place in both Great Britain and Canada also reported user complaints that led to tense interactions in food pantries. In cases where users complained about the service they received, in particular with regard to the quantity or quality of the food they received, volunteers reported feeling unappreciated. As food supply is usually limited in food pantries, and the quantity and quality of available food is not always consistent, volunteers reported not being able to fulfill all user requests, and thus feeling that these tensions cannot be avoided (McIntyre et al. 2016). However, food bank personnel rejected accusations that they provide second-rate food to what they perceive to be second-class

people as not fact-based, because the food is inspected and there are rules that guide the supply to users (Midgley, 2014).

Other British (Lambie-Mumford, 2013) and German studies (Lorenz, 2010; Von Normann, 2011; Selke 2011a, b, c) also discussed negative interactions between food pantry users and volunteers. In both countries, people who wish to receive food assistance are required to register as users. For this registration, official proof of neediness is required (Von Normann, 2011). Prior studies have reported cases where registration in food pantries was a particularly shameful experience for food bank users, because volunteers did not act accommodating and were rather formal and inattentive (Selke, 2011b, Von Normann, 2011 Lambie-Mumford, 2013).

Becker (2010) researched German food pantries dedicated to serving children and found that providing proof of neediness is also a problem for children. Similar to adult users, children are confronted with humiliation, stigmatization, and exclusion in food banks. Studies in Canada also showed negative interactions, where perceived dependency and limited choices among food items led to tensions between volunteers and food pantry users (Tarasuk and Eakin, 2003; Tarasuk and Eakin, 2005; Wakefield et al., 2013).

Interactions between food pantry managers and volunteers have not been the main focus of any prior research into food redistribution. Only a few studies provide information regarding these kind of interactions, and those that do have a primary focus on factors other than manager-volunteer relations (Tarasuk and Eakin, 2003; Lambie-Mumford, 2013). Each of these studies showed that volunteers did not necessarily follow manager instructions with respect to user treatment, specifically with regard to the quantify of food provided to food pantry users (Tarasuk and Eakin, 2003), or attentiveness to other needs not directly related to food provision (Lambie-Mumford, 2013).

Prior literature indicates that there are long-term collaborations between food pantries and retailers, and that food donations are collected by volunteers (Hoffmann and Hendel-Kramer, 2011; Witt, 2011; Lorenz, 2012a). Still, there is no in-depth information on the interactions between volunteers and food donors up to the present time. As the interaction between volunteers and food donors occurs on a regular basis, and food pantries are dependent on food donations, interactions in which major tensions are absent are particularly important for maintaining stable relationships with donors that support the ongoing work of food banks. Therefore, in this dissertation the research gap concerning interactions between volunteers and donors, as well as between volunteers and managers

is specifically investigated. Interactions between food bank volunteers and food pantry users are also explored in this work, although prior studies have focused on this actor combination. In this dissertation, volunteers are viewed as the link between various actor groups. This perspective is an addition to existing studies.

3 Material and methods

This chapter is divided into eight subchapters. In these subchapters, the methodological background for the empirical papers that make up this dissertation is presented. The discussion focuses on interviewing and interview effects, sampling and recruitment, data preparation and transcription, as well as qualitative content analysis. Further remarks with respect to research ethics and evaluation criteria are included. In this dissertation parallel positivistic criteria have been used (please see appendix 5 for further information).The chapter ends with a methodological reflection that describes the lessons learned from the empirical work, and provides suggestions for improvement in future studies.

3.1 Justification of choices

A broad variety of methods are potentially applicable when exploring activities such as food redistribution. This study followed a qualitative research approach built on in-depth interviews and qualitative content analysis. This method was deemed appropriate due to the involvement of a vulnerable population, namely food bank users, as well as the existence of critical aspects such as volunteer-user interaction and sector blending. In this context, survey work might have led to socially desirable answers or a high non-response rate, and was therefore disregarded. Focus groups were not used due to the intensive organizational efforts of appointment coordination, discussion effects and a potential lack of depth with respect to results as compared to that obtainable with in-depth interviews. Participatory observation within the German Food Bank was considered as an option, but this was also not pursued, as entering the German Food Bank is not necessary a straightforward task. Entering the organization for observation as either a volunteer or a user would have required the official permission of food pantry managers, in order to fulfill the ethical responsibilities of a researcher. Obtaining permission to conduct participatory observation appeared unlikely. Therefore, in-depth interviews were chosen.

3.2 Interviews

A qualitative research interview is a conversation-like interview between at least two interested parties, namely the researcher and interviewee (Bogner et al., 2009; Ryan et al., 2009; Qu and Dumay, 2011). The interviewer proposes topics or open questions, to which the interviewee responds verbally (Scheibelhofer, 2008). Ideally, the responses will be rich in description (Bitsch and Yakura, 2007; Weick, 2007; Tracy, 2010). Interviewers practice active listening, which involves verbalization, paraphrasing and other means to stimulate the conversation (Rapley, 2016). In addition, they need a clear and logical mind, to understand the information provided, and good probing skills (Kaiser, 2014). Ensign (2003) explained that qualitative researchers face the challenge of eliciting rich and   thick

description on the one hand, while at the same time avoiding "voyeurism or "sensationalism" when reporting the results from interviews.

Qualitative research interviews are both flexible and structured, and gather information and facts. They can also uncover experiences, and characterize relationships (Rossetto, 2014). As qualitative research interviews rather follow a conversational flow than strict order of questions, the researcher needs to have good memorization skills, as at certain points, the conversation can change and the interviewer needs to make a mental note, to return later to the point of discussion. An open mind and an honest interest in the interviewee are essential for a successful interview (Kaiser, 2014).

Forty-five qualitative interviews were conducted for this dissertation. The author and four student co-authors on the research papers included in the empirical body of this dissertation carried out the interviews. As several people were involved in this research, biases can be avoided (Bitsch, 2005), and the credibility of the work is enhances due to the presence of investigator triangulation.

In order to promote the aspects of flexibility and structure, interviews were supported by interview guides. Each interview followed the conversational flow and consisted of three main phases that blend into one another: orientation, inquiry and closure (Corbin and Morse, 2003). In the orientation phase, the interviewer and the interviewee get familiar with each other, a privacy policy that guarantees informed consent and confidentiality is signed, and the interview topic is slowly approached (Corbin and Morse, 2003). According to Orb et al. (2001) and Ensign (2003) the awareness and agreement that the interviewee's participation is voluntary and that withdrawing from the interview has no consequence for the interviewee, is an essential part of research ethics. Mutual trust and the interviewee's right as an autonomous person are acknowledged in this manner (Orb et al., 2001; Kvale, and Brinkmann, 2008; Houghton et al., 2010). Further Ravenek and Rudman (2013), emphasize the importance of the orientation phase, as the researcher outlines the benefits gained from the research, and how the interviewee is important to the research. During this phase, both parties realize reciprocal gains that can be realized from the interview (Ravenek and Rudman, 2013).

In the inquiry phase, the main topics of the interview are discussed. In the closure phase, the interview comes to an end, and the interviewer answers any potential questions the interviewee may have (Corbin and Morse, 2003).

Interviews for the papers presented here were audio-recorded and lasted approximately 45-90 minutes. On occasions were interviewees did not agree with the interview being recorded, field notes were taken. Tong et al. (2007) note that audio or video recording have advantages over field notes, as they more accurately reflect the interviewee's point of view. They further explain that the interview duration needs to be clearly stated, when reporting qualitative research, as the length of the interview can determine the quantity and quality of data obtained (Tong et al., 2007).

All interviews were conducted face-to-face, via telephone or video telephone. The face-to-face interviews took place in quiet, neutral rooms, such as offices, library rooms or upon request of the interviewees, in private households. Although some scholars of qualitative research value the importance of non-verbal communication, for instance mimic and gestures (Kvale and Brinkmann, 2008) and thus, are opposed to the use of telephone interviews, this method was included in data collection for this dissertation.

Some interviewees practice dumpster diving, and redistribute the food they obtain from this activity within the Food Sharing network. As dumpster diving is a punishable offense in Germany, only telephone interviews were carried out with these interviewees. The interviewees were asked to present themselves with a nickname, in order to protect their identities. As an illegal activity was part of the research context, research ethics (confidentially and identity protection) outweighed any need to evaluate non-verbal language cues during the interviews. Following Orb et al. (2001) and Townsend et al. (2010) research ethics requires researchers to protect interviewees and the information they share unless crimes are shared which are serious enough to require the researcher to report them to authorities. Cases, such as abuse, would require the researcher to switch off the recording and tell the interviewee that this information cannot be kept confidential for ethical reasons (Guillemin and Gillam, 2004). On the one hand, good practices in qualitative research require the researcher to protect confidentiality; on the other hand, documentation of all activities assures transferability. This may cause an ethical dilemma for the researcher (Orb et al., 2001; Ensign, 2003; Guillemin and Gillam, 2004).

Various disciplines such as journalism (Boesman et al., 2017; Price 2017), marketing (Felix et al., 2017), psychology (Knox and Burkard, 2009; Assaf et al. 2017) and agribusiness (Neves et al., 2013; Alpmann and Bitsch, 2017) employ qualitative interviews. In each of those disciplines, different terminologies for qualitative interviews exist (Corbin and Morse, 2003; DiCicco-Bloom and Crabtree, 2006; Jamshed, 2014). Active interview, open interview, unstructured interview, free interview, problem-centered interview and   in-depth

interview are all terms commonly used to describe qualitative interviews. (Corbin and Morse, 2003). Weiss (1994), as quoted in Bitsch (2001), stated that the terminology used reflects the emphasis and specifications of the interview. However, both scholars argue that some terms are misleading. Bitsch (2001) states that the distinction between different forms of interviews is not as obvious as claimed, as there are inconsistencies in the criteria used to discriminate between terminologies

Following Bitsch (2001), in this dissertation, the term in-depth interview is used, as the term relates to the character of the interview, which is primarily focused on obtaining completeness and richness in description and detail. Further, the term indicates a psychological background that aims to explore motivations, opinions and perspectives of the interviewees.

3.3 Interview effects

The success of an interview largely depends on the interviewer (Jacobsson and Åkerström, 2012). Therefore, it is important that the interviewer has the ability to identify situational interview effects, as he/she must be able to respond to these effects (Kaiser, 2014). Kaiser (2014) reports four situational interview effects: iceberg effect, paternalism effect, back-coupling effect, and catharsis effect.

In an interview situation where an interviewee purposefully holds back information, the so-called iceberg effect occurs. The situation typically arises due to mistrust or a lack of interest. Kaiser (2014) reports that the effect is common when an interviewee has not received adequate information about essential aspects of the interview, or if the interviewee realizes the interviewer may be not sufficiently prepared. Bogner et al. (2009) state that a lack of commitment and any self-positioning of the interviewer may also lead to this effect.

If an interviewee questions the competence of the interviewer and shares his/her views on the given topic, in a rather lecturing manner, the paternalism effect can be recognized. If the interviewer is perceived as less than competent, or if there are strong hierarchical differences between the two parties, this effect is common (Bogner et al., 2009; Kaiser, 2014).

Further, Bogner et al. (2009) emphasize the back-coupling effect where the interviewee turns around the interview situation. The interviewee forces the interviewer to answer questions that are of his/her personal interest. Kaiser (2014) states that the interviewer needs to act strategically in this situation, as while the behavior of the interviewee is undesirable, the conversational flow between the two parties should not be disturbed. The

catharsis effect addresses a situation where the interviewee is sharing information that are not necessarily related to the topic, but serve the purpose of self-representation (Kaiser, 2014).

These interview effects are not mutually exclusive. Interviewers need to be aware of the effects, to be able to appropriately respond during the interview, as well as to keep these effects in mind later when interview data is analyzed and evaluated. The situational interview effects relate to an ideal interview situation. An interviewer should carefully consider whether to suppress these effects, or attempt to use their potential to help them obtain more or richer information (Bogner et al., 2009; Kaiser, 2014).

Kvale and Brinkmann (2008) characterize the interviewer as an essential part of the research instrument, and emphasize the importance of phrasing, inflection and awareness of the interviewer's role. The perception the interviewee has of the interviewer can affect the course of the interview (Bogner et al., 2009). Interview dynamics can provide information to the interviewer as to how he/she is perceived in the interview situation (table 1).

Table 1: Interviewer roles and their perception

Role of the interviewer	Interviewee's perception of the interviewer	Cues from the interview dynamics
Expert	As a specialist As competent	Symmetrical interaction situation, counter-questions asked by the interviewee.
Layperson	As a specialist As competent (low)	Symmetrical interaction situation in favor of the interviewee, monologues delivered by the interviewee.
Authority	As an evaluator, superior or specialist As competent (high)	Symmetrical interaction situation in favor of the interviewer, interviewee practices legitimization strategies.
Accomplice	As a person with a shared normative background	Interviewee reveals secret knowledge. Interviewee speaks in a "personal" way
Critic	As a person with a divergent normative background	Brief replies, rejection, critical counter-questions, interviewer´s questions anticipated.

Source: Extracted from Bogner et al. (2009, p.68)

Interview roles were of particular relevance for this dissertation, as people with different backgrounds and roles were interviewed by the author and the trained students. Aligned to the interviewees' background and positions, interviewers aimed to fulfill their role. When talking to food bank users or volunteers, interviewers aimed to appear as a layperson or as an accomplice, in order to receive information. The expert or authority role would have been unsuitable for such an interview setting, as interviewer and interviewee were of similar age, and achieving the interviewees' trust would have been hindered when appearing as an expert or an authority. In particular, in the case of food bank users who are highly dependent on authorities, appearing superior was avoided. In contrast, when talking to managers, the interviewers took the role of either the expert or the layperson. It was believed that appearing to be critical, would be a barrier to receiving information. The role of a layperson is suitable in such an interview situation in which the interviewee is likely to appreciate being admired for his/her expertise. In cases where the interviewee appears to prefer a conversation between equals, the expert role is more appropriate.

All students involved in the research received interview training to develop and improve their interview skills, and to ensure that they were aware of potential situational effects and the various possible interviewer roles. The author of the dissertation trained all students, as at the time of first data collection, she had 2 years prior experience conducting qualitative research, including interviewing, moderating discussions and conducting observations.

Tong et al. (2007) and O'Brien et al. (2014) state that qualitative researchers should discuss their role, background and skills when reporting qualitative research, as they have significant impacts on the research. Researchers need to acknowledge that bias is unavoidable, and consequently, to consciously reflect on potential biases and their own roles. By sharing information about the researcher's background and skills, the author(s) allow readers to understand how these factors may have influenced the researcher`s interpretation of results (Tong, 2007). The transparency of the researcher's role, background and theoretical sensitivity improves the credibility of the research (Bitsch 2005; Elo et al., 2014).

Further, Kaiser (2014) explicitly warns that interviews conducted by students are prone to the paternalism effect, as interview partners in management positions may act in ways that reflect the difference in age and experience. Involvement of the students in interviewing the volunteers proved to be beneficial, as the students were perceived as accomplices, and interviewees thus, felt comfortable sharing personal and confidential information. Following Bogner et al. (2009), all students practiced phrasing questions and probing, using the

following common techniques: asking open questions, associative and comparative questions.

3.4   Sampling and interviewee recruitment

Two types of sampling were practiced to identify appropriate interviewees, namely snowball sampling and purposeful sampling. Both types are common in qualitative research (Tong et al., 2007; Suri, 2011; Robinson, 2014). Snowball sampling builds a sample starting from an initial interviewee who acts as an intermediary and recommends further potential interviewees from his/her social network (TenHouten, 2017). The approach builds on the analogy of the avalanche, where a snowball increases in size as it runs downhill (Suri, 2011; Trotter, 2012). Tong et al. (2007) remark that snowball sampling is potentially less optimal than purposeful sampling, as snowball sampling can lead to sampling bias and the collection of one-sided information. However, snowball sampling was still necessary for this work, as the size and composition of the target populations were not known (Atkinson and Flint, 2001; Noy, 2008; Abrams, 2010 Sadler, 2010; Goodman, 2011; Ellard-Gray et al. 2015).

In 2014, when the data for Paper 1 were collected, the organization Food Sharing was two years old and undergoing rapid development. Hence, it was difficult to estimate the size and composition of the population and the respective sample. In particular, the open nature of the organization, which allows anyone to participate (by obtaining food from local storage facilities) without undergoing any registration process contributes to this problem. All interviewees from Slow Food and Food Sharing were recruited through the social network "Facebook" and subsequent snowball sampling. A similar process took place in 2015 when the data for Paper 4 was collected. Although the number of food retail chains in Germany is theoretically ascertainable, management personal in retail is difficult to reach. In addition, food bank managers make great efforts to protect the identity of food bank beneficiaries. To safeguard against sampling bias, the snowball sampling procedure followed Noy (2008) and Heckathorn (2011) who suggested a multiple referral approach. A multiple referral approach overcomes interruptions in the sampling process. The first interviewee recruited is asked to provide multiple referrals, in particular people with different perspectives. Each new referral is explored and also asked to provide further multiple referrals. The sampling approach leads to a non-linear sampling pattern and access to a broader range of interviewees, as sampling does not take place within a homogenous network (Heckathorn, 2011).

Purposeful sampling was applied in Papers 2 and 3. This technique is widely used in qualitative research to explore phenomena and select cases that are rich in information (Onwuegbuzie and Leech, 2007; Robinson, 2014; Gentles et al.2015; McCrae and Pussell, 2016). Therefore, individuals or groups need to be identified and selected that are especially skilled and experienced with regard to the research topic (Cresswell and Plano Clark, 2011; Suri, 2011; Palinkas et al. 2015). These individuals need to be willing and able to participate and to share their experiences and opinions in a reflective manner (Tong et al., 2007). With respect to the German Food Bank, this approach was chosen, because demographic profiles of volunteers and other food bank actors that would allow representative sampling are unknown and/or inaccessible due to the German Food Bank's efforts to protect the privacy of its members. In terms of selection criteria, interviewees needed to have knowledge of food bank operations, have interactions within and related to the organization, and be willing to share their motivations for working at the food bank. Interviewees were recruited through one of the co-authors of Paper 4, who had volunteered for 3 month at the German Food Bank during the course of her master studies. The volunteering period at the food bank served to improve the credibility of the research, as the researcher stayed sufficient time in the research environment, and was knowledgeable of the specifics of this environment and the actors in it (Bitsch, 2005).

3.5   Interviewees

All interviewees that participated in this dissertation research where informants who were strangers to the interviewers. It is very important that there are no close social ties or friendships between interviewer and interviewee, to guarantee impartiality with respect to questions and to avoid any form of bias. Informants share their perceptions and experience from their life worlds (Spradley, 2016; Young and Tuthill, 2017). They express themselves in their own terms and means, while the researcher adjusts during the interview to this form of conversation (Elliott et al., 1999). Later, during the analysis process, recontextualization takes place: Experiences that interviewees have shared are related to concepts and transferred into scientific language (Shenton, 2004), reduction takes place, keeping the research context and the informant's reality in mind (Malterud, 2001). The ideal informant should be knowledgeable about his or her life world, still active in that life world, available following the interview for clarification and further conversation, and not overly analytical and interpretive (Spradley, 2016;). Information related to the informants, including some demographic data and information about organizational affiliation and experience (for instance, gender, duties and professional role) are provided in Papers 2, 3, 4. The information relevant for Paper 1 is provided in Appendix 6. A detailed description of the sampling process and the interviewees contributes to evaluating the transferability of

research results, and allows for comparison with other studies conducted in similar research contexts (Bitsch, 2005).

3.6 Transcription and data preparation

Data preparation is an essential step before initial analysis. The researcher must decide how to achieve the best results and how data preparation affects this decision. For qualitative research based on interviews, transcription is an essential step in data preparation, as suggested by Ochs (1979). According to Davidson (2009), other scholars consider transcription to be an analytic procedure (Hutchby and Wooffitt, 1998), a form of analysis (Duranti, 2006), or an analytical tool (Bucholtz and Du Bois, 2006; Hammersley, 2010). There is disagreement among scholars from different disciplines e.g. anthropology, linguistics, psychology, sociology and economics as to whether it is considered data or whether it is analysis (Davidson, 2009; Hammersley, 2010).

Kvale and Brinkmann (2008), Davidson (2009) and Miles and Hubermann (2014) describe transcripts as constructions that transfer content from an oral to written mode of communication. This implies a first step of data reduction, as the researcher decides how to transcribe the audio recordings. The following aspects need to be considered:

1.   Inclusion of nonlinguistic observations in the transcript (e.g. gestures, body language)

2.   Execution of a verbatim transcript

3.   Identification of specific speech patterns, intonations, or emotions

Patton (2015) and Zhang and Wildemuth (2009) suggest taking into account the research aim, time constrains and costs when deciding whether to carry out the analysis based on full verbatim transcription or on summaries based on the interviews. Regardless of discipline, two main methods of transcription are the most common (Tessier, 2012). Davidson (2009), Mero-Jaffe (2011) and Silverman (2017) distinguish naturalized transcription and denaturalized transcription. Naturalized transcription is a detailed form of transcription. In addition to the words spoken, this method focuses on the details of the conversational discourse, such laughter, mumbling, body language and pitches of the voice. In contrast, denaturalized transcription does not include these details. Mero-Jaffe (2011) and Tessier (2012) state that most researchers use a combination of the two types.

In addition to the different types of transcription, some authors suggest the use of labeling within transcriptions. McLellan et al. (2003) propose separating sections of interviewer and interviewee speech. McLellan et al. (2003), Witcher (2010) and Johnson (2011) further

emphasize challenges that face researchers during the transcription process, such as incomplete sentences, overlapping speech, a lack of clear-cut endings in speech, background noise and poor quality of the recording. Building on Drisko (1997), McLellan et al. (2003) suggest a denaturalized verbatim transcription for studies that analyze knowledge, attitudes, values, beliefs, or experiences of individual or groups. The authors argue lengthier units of text need to be included in the transcript, as researchers want to identify patterns and variations in impressions, experiences, and relationships in the context of a particular social phenomenon.

The interviews conducted for the research presented here were transcribed using the software F4. A denaturalized transcription following the rules put forth by Dresing and Pehl (2013) was performed. This form of transcription requires verbatim transcription that is focused on the content of the interview (Oliver et al., 2005). Attention is given to substance - for instance, experiences, perceptions and meanings shared during the interview - rather than to particular patterns of language, as is required for naturalized transcription (Oliver et al., 2005). The research aim and objectives of the papers that form the basis for this dissertation did not require phonetic analysis, as none of the individual studies had a linguistic background. Moreover, Oliver et al. (2005) state that the use of denaturalized transcription is common in ethnographic research or studies involving text analysis, such as grounded theory or content analysis. Following the approach presented by Dresing and Pehl (2013) was considered appropriate, as the transcription rules they suggest are a direct response to the challenges discussed in the recent body of literature on denaturized transcription (Oliver et al., 2005 Davidson, 2009; Witcher, 2010; Mero-Jaffe, 2011). In the case of the research conducted here, this included translating dialect into standard German; disregarding pitches of the voice; and.adjusting the translation to accommodate interruptions in sentences that occur, either through questions from the interviewer, or through the thought process of the interviewee.

Data preparation, including transcription, was carried out by masters students employed by the Chair of Economics in Horticulture and Landscaping for that purpose. Each student was instructed to follow LeCompte and Schensul (1999) with respect to data preparation. The following adjusted steps of data preparation were executed:
1.   Storing copies of all important materials
2.   Ordering field notes and transcripts following an actor and data file scheme
3.   Using the labeling system suggested by Dresing and Pehl (2013)
4.   Indexing all documents
5.   Using the University server for safe storage of all materials;

6.   Checking data for completeness and indicating missing data

7.   Following the transcription rules put forth by Dresing and Pehl (2013)

3.7   Qualitative content analysis

The interviews were analyzed using qualitative content analysis. Qualitative content analysis is a method for analyzing text and interpreting its meaning (Sandelolewski, 2010; Schreier, 2012, Cho and Lee, 2014). As a research method, it is a flexible and systematic way to describe social phenomena or a topic under investigation (Downe-Wamboldt, 1992; Elo and Kyngäs, 2008, Schreier, 2012). During the analysis process, the text is systematically reduced to concepts that describe a social phenomenon or topic under investigation. The aim of the study commonly determines which type of qualitative content analysis should be used (Hiesh and Shannon, 2005; Bengtson, 2016).

In cases where only limited previous knowledge or theory is available, an inductive approach is often recommended (Thomas, 2006). The same can be done in cases where prior studies and theory exist, particularly if the desire to extend or reshape theory is present. Hsieh and Shannon (2005) propose using a deductive approach in the latter case, but deductive approaches are regarded critically and are often rejected in many traditions of qualitative research (Humble, 2009). These researchers argue that content analysis can only be conducted inductively due to the nature of the process (Humble, 2009; Schreier, 2012). While an inductive approach strives to generate theory or knowledge, a deductive one is designed to confirm existing theory beginning from an initial hypothesis (Bengtson, 2016).

Following Elo and Kyngäs (2008) and Cherrstorm et al. (2017), both inductive and deductive content analysis processes consist of three main steps that blend into one another:
  1) Preparation
  2) Organization
  3) Writing and reporting

When carrying out an inductive approach, in the first phase the researcher works his/her way through the data and tries to make sense of the text through carefully reading it several times (Bengtson, 2016). In the second phase, the data is systematically broken down through coding, creating categories, and abstraction. In the last step, the results are reported (Elo and Kyngäs, 2008; Bengtson, 2016).

In the reporting phase, patterns that have developed out the establishment of categories are used to describe the social phenomena or topic under investigation (Bengtson, 2016; Jonsen et al., 2017). The process of deductive content analysis is somewhat similar. The main difference occurs in the second step. Instead of using categories that are developed from the raw data, a pre-shaped categorization scheme directs the analysis process. This categorization scheme usually comes from existing theory or prior studies. All other steps of the analysis remain the same (Hiesh and Shannon, 2005).

For this dissertation, an inductive approach was used as little prior knowledge existed (see Paper 1, 2, 4), and in one case, extension of the literature was the main aim of the study (see Paper 3). All field notes, transcripts and other materials were carefully read several times. During the coding process, labels were assigned to text fragments. These labels reflected the key thought behind each text fragment (Elo and Kyngäs, 2008). Throughout the analysis process, codes were reconceptualized and relabeled. The coding process linked all relevant interview excerpts with codes and their corresponding definitions.

During category establishment, codes were grouped according to their meaning. According to Elo and Kyngäs (2008), establishing categories cannot be thought of as a simple step of bundling codes that are similar or related; it is, rather, a classification of patterns. The researcher must decide through interpretation which codes belong in the same category. Accordingly, each category was named using content-characteristic words and then defined. Category definitions do not consist of only one key thought; they are comprised of all related codes and their definitions. Qualitative content analyses were carried out using the software package Atlas.ti which allows the researcher to systematically analyze text and other documents. Atlas.ti includes tools for locating, coding and annotating data material (Muhr, 1991, Schreier, 2012).

Analysis was an iterative and recursive process based on constantly comparing and contrasting the data material. Comparing and contrasting is an essential part of qualitative analysis, because it supports a structured analysis process and increases the credibility of the analysis (Boeije, 2002; Bowen, 2008 Corbin and Strauss, 2014). Ultimately motivation, authority and interaction pattern (Papers 1, 2, and 3) or food waste reduction strategies (Paper 4) were identified and assigned conceptual codes. In order to ensure a transparent analysis process, the analytical steps that are important during a qualitative content analysis are presented (table 2). For each analytical step, the analysis activity and its aim are outlined and the respective forms of results for each paper are indicated. The presentation

of this information enhances the confirmability of this work, as the steps taken within the research process becomes transparent (Bitsch, 2005).

Table 2: Analytic steps

Progression of analysis	Analysis activity	Aim	Form of results
Within a single interview	• Open coding • Summarize basic content • Discussion to find consensus among coders	Researchers become acquainted with the text material and develop an understanding for the data	• Summary of the interviews • Preliminary coding scheme
Within the same actor group	• Axial coding • Compare and contrast • Merging codes • Add new aspects to summaries • Discussion to find consensus among coders	Identifying differences and relationships that arise from the initial coding scheme	• Further developed coding schemes • Preliminary categories
Between different actorgroups	• Axial coding • Compare and contrast • Merging codes and categories • Add new aspects to summaries • Discussion to find consensus among coders	Developing definitions for categories and their respective codes	• Emerging patterns
Comparison between transcribed interviews and field notes	• Triangulation of data material	Validity Understanding different dimensions of the topic	• Showing authenticity of knowledge

Author's own elaboration. Builds on Boeije (2002), Corbin and Strauss (2014)
Note: The analytic steps depicted merge into one another, because the analysis process is iterative and recursive

3.8   Retrospective methodological reflection

Reflecting on the empirical work of this dissertation, some lessons learned for future research are presented in the following. One aspect that could be approached differently in future food bank studies is the aspect of sampling. While in the present study, the purposeful sampling strategy applied was criterion sampling (Patton, 1990, p.176, 182), in future work this might be only the first step in a sampling strategy within the qualitative research process. Depending on the data gathered and the context of the study, it can be useful to combine criterion sampling with extreme case sampling or homogenous sampling in order to broaden and deepen findings (Patton, 1990, p.182). Purposeful sampling allows the researcher to be reflective and to decide on further steps in response to the results obtained and theory development (Emmel, 2013; Guetterman, 2015). This is due to the iterative and recursive nature of the research process. Qualitative research is not intended to generalize (sample and population), but to explore and interpret a social phenomenon (Emmel, 2013; Guetterman, 2015). Consequently, sampling is not a matter of statistical representativeness, but a matter of information richness. The previously suggested combined sampling strategy may help achieve the desired information richness.

In addition to sampling that strongly directs the research process, a second activity that accompanies the analysis process is memo writing. The memos in this study were written freely, but in future studies a more structured manner would be preferable. To systemize the memo writing and thus, achieve more comprehensive reflection on the research and potentially speed up the analysis process, memo writing following Rossman and Rellis (2003) could prove more effective. Rossman and Rellis (2003) propose beginning the memo writing process with a focus on the researcher as the research instrument and the researcher`s theoretical sensitivity. Accordingly, in the very first memo the researcher should reflect on him/herself. This reflection should be repeated over time as changes occur. In the early memos, researchers should also reflect on the practical and ethical nature of the research, as this allows financial, ethical and time constraints to be identified. The researcher should reflect on how s/he plans to carry out or further proceed with the research, and what consequences for the research could occur as a result of the decisions made (Rossman and Rellis (2003). Ultimately, the researcher should regularly reflect on the analysis process and critically evaluate assumptions, findings and interpretations. The approach advocated by Rossman and Rellis (2003) helps avoid rigidity which can lead to poor conceptualization within the memo writing process, as they do not propose the imposition of strict rules as was the case in the early work of Glaser (1978). Glaser himself reconsidered his own memo rules in 1998, and stated that overly strict and rigid rules can

hinder the research process. In order to balance the need for structure and still ensure flexibility, the approach put forth by Rossman and Rellis will be used to guide future work.

The reflection on quality criteria in qualitative research is best described by the metaphor of opening Pandora's Box. The use of "appropriate" quality criteria is an unending debate among scholars (Walby and Luscombe, 2017; Symon et al., 2018). The use of quality criteria is largely dependent on the research paradigm the researchers follow, as well as the particular qualitative school to which the researcher adheres (Seale, 1999; Morrow, 2005). One piece of work that aimed to systematize quality criteria is that of Lincoln et al. (2011). Their work presented different paradigmatic point of views, such as positivism, post-positivism, feminism, constructivism and the postmodern perspective. For each paradigmatic perspective, the inquiry aim, the nature of knowledge and quality criteria are presented and compared (Lincoln et al., 2011).

In addition to the debate over which criteria are appropriate to use, there are qualitative researchers who completely reject the use of quality criteria. These scholars often follow a postmodern approach (Steinke, 2004). The author of this dissertation is opposed to this practice, as she believes that the rejection of quality criteria runs the risk of supporting random and arbitrary qualitative work. This may lead to critique and problems of recognition within the wider scientific community, in particular in agricultural economics and agribusiness. The "parallel positivistic criteria (Bitsch, 2005, p.81)" used in this research are widely accepted by qualitative researchers within the social sciences and, in particular, in the field of agricultural economics and agribusiness. Acceptance of these criteria is likely due to their comparability to positivistic criteria for rigor, which are, for the most part, followed in research in Agricultural Economics and Agribusiness (Bitsch, 2001; Bitsch, 2005; Peterson, 2011).

Both Bitsch (2005) and Peterson (2011) have contributed to the acceptance of qualitative research and quality criteria within these two disciplines. In her habilitation thesis, Bitsch (2001) explained qualitative research methodologies and justified the use of quality criteria for their evaluation, as she compared positivistic and parallel positivistic criteria. Further, she provided examples of good practice. Peterson (2011) elaborated on three paradigms that are particularly relevant for Agribusiness scholars. He outlines positivistic thinking, industry thinking, and the way of thinking required to conduct qualitative research, in particular, for the use of grounded theory. Peterson (2011) emphasized the stretching that is necessary for Agribusiness scholars pursuing qualitative research, in order to achieve acceptance from peers and industry scholars. In this context, he points out the importance

of balancing practical relevance with science. As parallel positivistic criteria serve to make the scientific approach transparent, they contribute to the acceptance of qualitative methods in Agriculture Economics and Agribusiness. Therefore, the author of this dissertation has chosen to follow parallel positivistic quality criteria, in order to achieve acceptance in her discipline.

Yet, the author also appreciates inter-paradigmatic approaches to establishing rigor in qualitative research such as those put forth by Tong et al. (2007), Tracy (2010), and Walby and Luscombe (2017); all of whom revisited work from various disciplines coming from scholars with different paradigmatic approaches. The rather practical orientation of the work of these scholars guided the initial stages of the research presented here, and contributed to a deeper understanding of methodological work. For instance, the 32 items listed in GioTong et al. (2007) are easily relatable to established quality criteria. In addition to inter-paradigmatic approaches, multi-paradigmatic approaches are also promising methodological alternatives for food bank studies. Apart from the investigations conducted for this dissertation, the German Food Bank as an organization has, for the most part been researched from a sociological perspective. Therefore, a multi-paradigmatic approach, for instance in a case study setting, could potentially generate new findings to augment the somewhat one-sided body of existing literature. Multi-paradigmatic perspectives are particularly useful for organizational studies (Gioia and Pitre, 1990).

4 Body of dissertation papers

In the following subchapter, each paper of the present dissertation is summarized briefly, and the respective contributions of each coauthor are indicated. The summaries focus on key findings and main scientific contributions.

4.1 Publication record

Paper 1: Rombach, M., and Bitsch, V. (2015). Food movements in Germany: Slow food, food sharing, and dumpster diving. *International Food and Agribusiness Management Review* 18 (3), 1-24.

Paper 2: Rombach, M., Kang, E., and Bitsch, V. (2018). Good deeds revisited motivation and boundary spanning in formal volunteering. *International Review on Public and Nonprofit Marketing 15* (1), 105-126

Paper 3: Rombach, M., and Bitsch, V. (2017). Rombach, M., and Bitsch, V. (2017). Sector blending: evidence from the German Food Bank. *International Food and Agribusiness Management Review*, 181-200.

Paper 4: Hermsdorf, D., Rombach, M., and Bitsch, V. (2017). Food Waste Reduction Practices in German Food Retail. *British Food Journal* 119 (12), 2532-2546.

4.2 Authors' contributions

This dissertation consists of four empirical research papers (see Papers 1, 2, 3 and 4). Rombach has been the corresponding author for all four, and the first author of three of the four papers (1, 2, 3). Rombach trained and supervised four master students, namely David Hermsdorf, Eunkyung Kang, Matthias Salomon and Amelie Nellen, in data collection and transcription for the empirical papers. Hermsdorf (Paper 4) and Eunkyung Kang (Paper 2) co-authored two of the publications. Similarly, Salomon and Nellen participated in an early version of Paper 1, which focused on dumpster diving and was published in *Acta Horticulturae* (see Rombach et al., 2015b). The contribution of Matthias Salomon and Amelie Nellen to data collection and transcription was gratefully acknowledged in Paper 1. Of the 45 interviews conducted for this dissertation, Rombach conducted 11. The remaining 34 where carried out by Hermsdorf, Eunkyung Kang, Salomon and Nellen. For Papers 1, 2, and 3, Rombach analyzed the data, composed and wrote the first draft of each manuscript. Eunkyung Kang contributed ideas and concepts to paper 2. For Paper 4, Hermsdorf and Rombach analyzed the data, and Hermsdorf also contributed to writing the first draft of the paper. Co-author Vera Bitsch contributed to the design and content of each of the four papers, by giving scientific advice, detailed feedback and discussion, and conducting critical revisions and extensive editing of each of the manuscripts.

4.3 Abstracts

Paper 1: Rombach, M., and Bitsch, V. (2015). Food movements in Germany: Slow food, food sharing, and dumpster diving. *International Food and Agribusiness Management Review* 18 (3), 1-24.

Abstract:

This study investigates the motivations that lead volunteers to participate in food movements, as well as the activities of and level of knowledge regarding food waste of active food movement members in Germany. The study builds on motivation and social movement theory. Twenty-five in-depth interviews with volunteers from the organizations Slow Food and Food Sharing, as well as with dumpster divers were recorded, transcribed, and analyzed using qualitative content analysis. Interviewees originated from north, west, south and east Germany, and were from 20- 35 years old. An interview guide supported each interview.

This study uses a qualitative approach, as the number of studies on German food movements is very limited. A further justification for the methodological choice is that dumpster diving is considered criminal activity in Germany, and consequently, a particularly sensitive and confidential approach to the investigation is required. Participation in the movements rests upon instrumental, ideological, and identificational motivations. Knowledge regarding food waste differs between participants in the three movements. All movements strive to raise awareness of food waste and aim to reduce it. Their activities are a form of social happening that fulfills specific needs of the members. At the same time, these activities are a form of activism that fosters change in accordance with the movements' goals. All movements show tendencies towards anti-consumption attitudes. This also indicates that alternative consumption groups are gaining influence in Germany. The study provides recommendations for how producers and marketing managers of German food retail chains should approach food movement activists as consumers, and makes suggestions for policy makers as to how to deal with the problem of food waste in German food retail. The study fills a research gap in the literature on German organizations other than the German food bank that actively fight food waste and practice food redistribution. The study builds on social movement theory.

The paper underwent two rounds of double blind review in the period from January 2015 to September 2015. Two anonymous reviewers as well as the managing editor provided feedback for the improvement of Paper 1. The paper is attached in Appendix 1.

Paper 2: Rombach, M., Kang, E., and Bitsch, V. (2018). Good deeds revisited: motivation and boundary spanning in formal volunteering. *International Review on Public and Nonprofit Marketing 15* **(1), 105-126.**

Abstract:

The study investigates the motivations that lead volunteers to serve in facilities of the Federal Association of German Food Banks, and also examines volunteers' interactions with food donors, food pantry managers and users. Social exchange theory is used as a frame to investigate volunteers' interactions in the context of boundary spanning. Twenty in-depth interviews were recorded, transcribed and analyzed using inductive qualitative content analysis. An interview guide supported all interviews. The sample consisted of five food pantry managers, four food pantry users, five volunteers, a spokesperson for the German Food Bank, and five retail food donors.

Volunteers are predominantly socially motivated to work at the German Food Bank, but this is not necessarily reflected in all of their interactions with food pantry users. Although the authority in these interactions rests with the volunteers, they still feel uncomfortable in some interactions. Volunteers' interactions with managers are essential, because managers tell volunteers which tasks to carry out in which manner. Nevertheless, the volunteers do not necessarily respect these instructions in all cases. Interactions with food donors are negatively affected through a mismatch in the perceptions of authority amongst the parties to the collaboration. In some interactions, both parties believe they have authority within the interaction, even though they are actually rather equal partners. The study provides best practice recommendations for training volunteers to avoid interaction problems with food pantry users and donors.

The originality of this paper lies in its focus on the interactions volunteers have with actors within the food bank other than food bank users, because interactions between volunteers and food pantry managers and food donors have been neglected in prior studies. Further, the theoretical framing – namely, social exchange theory - combined with the concept of boundary spanning provide new perspectives on the role of volunteers.

The paper underwent a double blind review from October 2017 to January 2018. Two anonymous reviewers provided feedback for the improvement of Paper 2. The paper is attached in Appendix 2.

Paper 3: Rombach, M., and Bitsch, V. (2017). Sector blending: evidence from the German Food Bank. *International Food and Agribusiness Management Review,* **181-200.**

Abstract:

This study investigates forms of sector blending practiced by the Federal Association of German Food Banks in their organizational operations, as well as benefits and drawbacks for the organization that emerge from these activities. The study builds on a sector blending categorization system presented by another author. Twenty in-depth interviews with food bank actors are recorded, transcribed, and analyzed using qualitative content analysis. In addition, webpage materials from German food retailers and press releases from the German Food Bank are analyzed. The sample of interviewees consists of five food pantry managers, four food pantry users, five volunteers, one spokesperson of the Federal Association of the German Food Bank, and five donors representing German food retail chains.

Imitation, interaction and industry creation are the forms of sector blending found. The sector-blending activities identified in the operations of the German Food Bank are largely beneficial to the organization in both economic and social terms. Sector blending increases the ability to generate funds and resources, provides the flexibility needed to adjust to increased demand by users, contributes to the professional appearance of the organization and enhances social capital. Drawbacks are mostly of a social nature, because the German Food Bank only serves people who are already receiving benefits from the social welfare system. However, as the organization has neither lost its charitable character nor significantly jeopardized its mission, its activities benefit the German society overall. The study provides a background for informed decision making among agricultural producers and marketing managers of German food retail chains who must decide whether the German Food Bank is a suitable collaboration partner for them. In addition, suggestions for future German and international studies are made. The study fills a research gap in the literature on the German Food Bank, as prior studies analyzed operations of the German Food Bank from either a sociological or a theological perspective, and disregarded the organizational view.

The paper underwent two rounds of double blind review during the period from February 2017 to September 2017. Two anonymous reviewers provided feedback for the improvement of Paper 3. The paper was presented prior to publication at the 27th IFAMA World Conference in Miami 2017. In June 2017, the paper was awarded the best paper

prize (first place) from the International Food and Agribusiness Management Association based on an evaluation by a committee headed by Prof. Jaques Trinekens. The paper is attached in Appendix 3.

Paper 4: Hermsdorf, D., Rombach, M., and Bitsch, V. (2017). Food Waste Reduction Practices in German Food Retail. British Food Journal 119 (12), 2532-2546.

Abstract:

The study investigates food waste reduction practices of food retailers in Germany. The focus is on selling and redistributing agricultural produce with visible imperfections and other surplus food items. In addition, drivers and barriers to the implementation of waste reduction practices are explored. Twelve in-depth interviews with managerial actors in the food retail sector and a food bank spokesperson are recorded, transcribed and analyzed through qualitative content analysis. In contrast to organic retailers, conventional retailers are reluctant to include agricultural produce with visible imperfections in their product assortments, due to fears of negative consumer reactions. Another obstacle identified are EU marketing standards for specific types of produce. In organic retail, produce with visible imperfections is not considered as a problem, as organic consumers associate the unique appearance of the produce with its naturalness.

All retailers interviewed engage in redistribution of surplus food. Providing surplus food for human consumption, rather than donating it to agricultural producers was preferred by retailers, all of whom donate to the German Food Bank. In terms of their motivations to donate to the German Food Bank, retailers wish to support people in need, but in contrast to prior studies, they express a desire to keep their commitment to doing so unknown to the public. All motivations found were classified according to an existing motivation classification system that stems from a general donation context. Logistics issues and the influence of the regulatory framework are the main barriers to food redistribution.

The results of the study are the foundation for providing recommendations to German food retailers, policy makers and charitable food organizations. The present study adds to the existing body of literature on food waste reduction practices, as it explores selling produce with visible imperfections, and elaborates on the legal background of food redistribution in German retail. Presenting and clarifying the legal background for food redistribution is an additional contribution of the paper.

The paper underwent two rounds of double blind review in the period from June 2017 to September 2017. Two anonymous reviewers provided feedback for the improvement of Paper 4. The paper is attached in Appendix 4.

5 Discussion and conclusions

The present dissertation provides insights into the process of food redistribution from four different perspectives. In the following, each perspective is discussed individually, and interconnections between these perspectives are pointed out. The chapter includes implications and recommendations for actors relevant to the study, as well as suggestions for future research based on the overarching discussion. This chapter follows the paper numeration presented in the publication record of this work. When references to the thesis papers are made, each of the studies will be referred to as Papers 1-4 in parentheses.

Paper1: Rombach, M., and Bitsch, V. (2015). Food movements in Germany: Slow food, food sharing, and dumpster diving. *International Food and Agribusiness Management Review* 18 (3), 1-24.

Paper 2: Rombach, M., Kang, E., and Bitsch, V. (2018). Good deeds revisited: motivation and boundary spanning in formal volunteering. *International Review on Public and Nonprofit Marketing* 15 (1), 105-126

Paper 3: Rombach, M., and Bitsch, V. (2017). Rombach, M., and Bitsch, V. (2017). Sector blending: evidence from the German Food Bank. *International Food and Agribusiness Management Review* 21 (2), 181-200.

Paper 4: Hermsdorf, D., Rombach, M., and Bitsch, V. (2017). Food Waste Reduction Practices in German Food Retail. *British Food Journal* 119 (12), 2532-2546.

5.1 Motivations for involvement in food redistribution

The motivational perspective presented volunteers' motivations to become active in an organization involved in redistributing surplus food in Germany. The volunteers are members of Slow Food and Food Sharing (Paper 1), as well as the German Food Bank (Paper 2). The focus of perspective 1 one was extended by uncovering food donors' motivations to provide surplus food to the German Food Bank (Paper 4). As shown in Paper 1, Slow Food and Food Sharing members had ideological (e.g., acting against food waste, changing agricultural systems or market systems) and identificational (e.g., desire to be a part of their organization, promote food culture) motivations. In addition, Slow Food members had instrumental motivations such as remaining in good health conditions through eating high quality food and obtaining pleasure from volunteering in their organization. Instrumental motivations were not found among Food Sharing members. For both groups of volunteers, their motivations were consistent with their organizations' philosophies and activities.

The motivations were categorized according to Klandermanns (2004), because Slow Food and Food Sharing are interconnected as organizations and as food movements. Volunteers within both organizations are active and raise awareness against food waste (Paper 1). The alignment of motivations and organizational philosophies is beneficial for both organizations, as they aim to change current food culture according to their understanding. Volunteers in both organizations use somewhat radical means, such as boycotting and demonstrating, since such means are common in social movements. Therefore, it can be expected that the volunteers carry out the operations and activities in the best interest of their organizations, which aim to foster change.

With respect to motivations of German Food Bank volunteers, community participation, personal values and a desire for enhancement are the main motivations members are active within their organizations (Paper 2). On an international level, these findings confirm prior research, as studies from other European countries have also discussed the motivations of volunteers who serve at food banks (Lambie, 2011; Do Paço, and Agostinho, 2012) and presented similar findings. With respect to the specific German Food Bank context, it is a new finding and an addition to Von Normann (2011 p. 106) who states an approximate number of food bank volunteers in Germany. The study further presented required skills, attitudes, and volunteers' expectation regarding their work at the German Food Bank (Von Normann, 2011).

The categorization of German Food Bank volunteers' motivations presented in Paper 2 of this dissertation follows Clary and Snider (1999).The motivations of food bank volunteers directly and indirectly correspond to the organizational philosophy of the German Food Bank. No volunteer explicitly states having a desire to reduce food waste, but volunteers do explicitly express an interest in counteracting the effects of poverty. Fighting poverty is in accordance with the organizational philosophy, since the German Food Bank aims to alleviate food insecurity in Germany. Approximately 20% of the German population are food insecure (Eurostat, 2015). Community participation is a motivation that corresponds with the organizational goals more indirectly. The volunteers become members of an organization that consists of smaller units that are united under an umbrella organization. Therefore, volunteers become members of a community where they can interact with other volunteers, food bank managers, users, and food donors. Volunteers, who cite personal values among their motivations, agree with the organization's philosophy indirectly, as these volunteers are interested in helping other people or in sharing their personal wealth. In fact, volunteers with such motivations are desirable to the organization, as it is likely that these volunteers fulfill the charitable mission in the German Food Bank's best interest.

Enhancement as a motivation may at first glance not appear desirable; however, the learning that comes along with volunteering is both rewarding for the volunteer and beneficial for the organization, as the performance of these volunteers likely increases over time.

The donors' motivations for providing food to redistributing organizations followed the categorization scheme put forth by Anik et al. (2010); this scheme came from a general donation context (Paper 4). Anik et al. (2010) presented economic, psychological, and social motivations. Interviewed retailers (Paper 4) had also social motivations but were unwilling to communicate them to the public. Economic motivations are not mentioned. These findings were rather unexpected, as prior studies state that financial incentives and an enhanced public reputation are common motivations among donors (Kolm, 2006; Holweg and Lienbacher 2011; Lorenz, 2012a,b; Vlaholias 2015a, b) . The absence of stated economic motivations could be due to a social desirability bias. Overall, motivations seem to be altruistic, since retailers do not express interest in gaining benefits for themselves. Because food waste is considered undesirable by German society, retailers may be hesitant to reveal the amount of waste their operations generate. In addition, they might not want to emphasize interactions with food banks, due to potential negative perceptions by specific groups among their regular customers. Therefore, reputation may be an issue for retailers, although it is not explicitly stated. Psychological motivations are indirectly mentioned by retailers (Paper 4).

The motivations of German Food Bank volunteers and retailers are partially aligned with one another. The volunteers' personal values that result in a willingness to help or share wealth, complement the retailers' willingness to redistribute without communicating their efforts. Both parties show altruistic motivations in this sense. The intension behind these motivations can be seen as a desire for change, either to act against poverty or waste. Therefore, at least an implicit connection to Slow Food and Food Sharing volunteers is evident as well.

Knowing the motivations of volunteers and donors is relevant for managers within the German Food Bank and other volunteer organizations. Knowing volunteers' motivations is particular important in the recruiting process in order to decide whether potential volunteers are suitable for the organization. Further, motivations influence how people perform tasks; and therefore, knowing volunteers' motivations is relevant when assigning them duties. Potentially, a volunteer who likes to help other people may appreciate working with users; while a volunteer who is interested in enhancement, may like to experience different working

areas in the redistribution process. Knowing donors' motivations is relevant, as it provides direction as to how to approach future donors when seeking resources.

In addition to a discussion of the practical implications of the results found based on the motivational perspective, a reflection on the categorization systems chosen is necessary. Within the research process, the motivation schemes chosen appeared appropriate, as they were relevant to the context and widely accepted among scholars in the respective fields from which they emerged. The schemes developed by Clary and Snyder (1999) and Anik et al. (2010) have a lower level of abstraction than that of Klandermanns (2004). When comparing the three motivation schemes, Clary and Snyders' scheme showed the lowest level of abstraction, and Klandermanns' scheme the highest. Enhancement as defined in Clary and Snyder (1999) can be seen as an instrumental motivation in Klandermanns' scheme, as it expresses a psychological desire for growth and development. Similarly, Clary and Snyder's presentation of personal values reflect the ideological motivation in Klandermanns' (2004) scheme; as culture, values, norms, and meaning underlie ideologies. Community participation is an identificational motivation, as it shows the willingness to belong to a group or community. Similarly, the categorization of Anik et al. (2010) corresponds to Klandermanns' (2004), since economic and psychological motivations are two forms of instrumental motivation. Social motivations reflect ideological ones, as both types of motivation relate to norms and values. As Klandermanns' scheme (2004) shows the highest form of abstraction, and the other two schemes were reflected in it, it is likely that the scheme can be used effectively not only in a social movement context, but could also be adapted for use in a wider variety of contexts.

5.2 Interactions and roles of volunteers in the German Food Bank

The interaction and volunteers' role perspective discussed how German Food Bank volunteers and other organizational actors - namely users, managers, and donors - interact with one another. These interactions are generally positive. However, interactions between volunteers and food bank managers are sometimes tense, as volunteers disregard managers' authority.

As shown in paper 2, interactions between volunteers and food panty users are affected by minor subliminal conflicts. Volunteers report feeling uncomfortable in interactions where they can not completely fulfill food pantry users' wishes, for example, by providing them with extra food. The reason for the volunteers' discomfort can be found in their own perceptions of their role and their personal preferences. One the one hand, volunteers are an authority to users, on the other hand they also fulfill a serving role. Likely, volunteers prefer the role

of serving users over the authority role. In contrast to prior studies (Selke, 2011a,b,c; Lambie-Mumford, 2013; Von der Horst, 2014) users do not explicitly state feelings of humiliation or indicate being poorly treated by volunteers. Such critiques are only indirectly expressed (Paper 2).

A commonality with other prior studies is the particular understanding of need present in food banks. Users who are not regular visitors to the food bank are not considered by volunteers to be needy (Poppendieck, 1998; McIntyre et al., 2016), although different forms of need exist (McIntyre et al.; 2016). Irregularity in food bank visits can reflect a distinct form of need, as these users may be unable to manage daily routines (Lutz, 2012; Paper 2). Interactions with donors are affected by both parties' role perceptions and their perceived authority within the collaboration. Even though the actors are equal partners, both believe they have authority in the collaboration, which can lead to dissatisfaction in their interactions (Paper 2).

Taken as a whole, the findings on volunteers' interactions and their role can be seen as a complement to the recent body of literature on the German Food Bank. The findings of this dissertation add to Lorenz (2012b) whose habilitation thesis was dedicated to food bank users and food donors as food bank actors. Yet, volunteers were not considered in his work. Von Normann (2011) addressed the topic of volunteers, but provided only a factual description of the volunteer situation in the German Food Bank. While Von Normann's study presented expectations of volunteers towards their work at the German Food Bank - for instance, physical and psychological expectations - volunteers' interactions with other actors and a profound discussion of the volunteer role were missing.

The following recommendations can be derived from the interaction and volunteers' role perspective: As stated some volunteers possess two rather conflicting roles within the organization. Thus, both the volunteers' personal understanding and the organization's understanding of their dual roles should be clarified as soon as they start to volunteer, or latest, at the point where they begin to perform both roles. Volunteers who act as boundary spanners fulfill the double role. These volunteers have authority when interacting with both food donors and food pantry users, as they represent the German Food Bank as an organization and are expected to act in its best interests. At the same time, they have a serving role in relation to both of these parties but still need to respect and follow the instructions given to them by food pantry managers. In order to avoid conflict, clear guidelines for deciding in which situations the authority or the serving role is most appropriate are necessary. Also, managers should evaluate to what extent volunteers are

comfortable fulfilling the various roles, and assign duties accordingly. Furthermore, volunteers should receive training on how to act in tense interactions with donors and users. Proper interactions with food donors are essential for the organization and the process of food redistribution, because the German Food Bank is resource-dependent and reliant on the gifts of food donors (Paper 2).

Appropriate interaction with users is also necessary, as users are dependent on the organization, and the German Food Bank has a strict code of conduct with respect to user treatment. This code of conduct calls for respect, dignity, and equal treatment. Role-plays and simulations may help volunteers to train for these situations. Although users only implicitly express dissatisfaction with the way they are treated, it should be taken seriously for reputational reasons (Paper 2).

In contrast to prior sociological and ethnographical studies that explored the role of volunteers in other charitable organizations - for instance, in the health sector - by either using resource orientation theory or role theory (Einolf and Chambré, 2011), the work completed for this dissertation combined the concept of boundary spanning with social exchange theory. The chosen approach brings a new perspective to bear on the topic, but also allows for connections to prior theory. Combining the concept of boundary spanning with social exchange theory revealed that volunteers act out multiple roles. The volunteers' dual role can be evaluated using role theory and resource orientation theory, as these theories state that the volunteers have various roles and resources originating from other parts of their lives that affect their performance in the volunteer role. According to role theory, the private and professional roles that individuals possess, affect their perceptions and thus, the execution of their roles as volunteers (Einolf and Chambré, 2011). In the case of resource orientation theory, it is not roles but personals skills that individuals have acquired in other areas of life that affect their performance in the volunteer role (Musick and Wilson, 2007; Einolf and Chambré, 2011). The key difference between prior theories and the theoretical background chosen to inform the work in this dissertation is that role perceptions and execution come from the volunteering context itself. They originate from the actual volunteer role and not necessarily from roles and skills in other areas of the volunteers' lives.

5.3 Operational effects on food redistribution within the German Food Bank

In an effort to deepen the knowledge on food redistribution, Paper 3 left the individual perspective of food bank actors and focused on the overall operations of the German Food Bank. The paper acknowledges a demand and supply problem within the German Food

Bank, as well as the aspects of legitimacy and organizational survival. The study followed Dees and Battle Anderson (2003) and applied their sector blending categorization system to investigate the organization's operations. The study examined evidence of sector blending, more precisely, which forms of sector blending were employed by the German Food Bank, and which potential benefits and drawbacks emerged from sector blending. Imitation, interaction and industry creation were forms of sector blending found. The organization's failure to serve people who are not registered in the German social security system, such as the homeless, is the main drawback found. Efforts to obtain a more professional image for the organization and the acquisition of funds and resources were the most important aspects of sector blending reflected in the operations of the German food bank, as these can help food pantries adjust to the increasing number of people in need (Paper 3).

Paper 3 added a new perspective to the body of literature on the German Food Bank, with regard to four issues that are frequently critiqued by other scholars doing research related to the German Food Bank. These issues are insufficient resources for too many users, legitimacy, operations that are dedicated to things other than food redistribution as a means of organizational survival, and the potential for mission drift. (e.g., Kessl and Schoneville, 2010; Lorenz 2010 a, b, c; Möhring-Hesse, 2010; Becker, 2011a, b; Hoffmann and Hendel-Kramer, 2011; Rohrmann, 2011; Selke, 2016).

Analyses of the German Food Bank from the field of sociology criticize the economic activities it undertakes as they indicate the government's failure to fulfill its responsibilities as the primary social support for the needy, and can potentially have negative effects on the poor. This perspective corresponds to that put forth by public good theorists who assume government failure leads to the emergence of non-profit organizations that take over the roles formerly fulfilled by governmental social programs (Anheier, 2014).

In contrast, the concept of sector blending used in Paper 3 is rather rooted in interdependence theory. This branch of non-profit theory argues against a conflictual relationship between the German state and the German Food Bank. Interdependence theory assumes that the non-profit and public sectors grow in parallel and in cooperation with one another (Anheier, 2014). This development represents a response to the social pressure of food insecurity in Germany. Anheier (2014) states that in many cases the public and the non-profit sector complement one another, which is the case for the German state and the German Food Bank. The German state provides income support, and the German

Food Bank additionally redistributes food to those people in need that are registered in the system.

In contrast, studies framed by public good theory do not acknowledge the aspect of collaboration, and therefore, classify the German Food Bank as a "gap filler". Interdependence theory, however, recognizes the organization's contributions and benefits for the German welfare system. The detailed categorization system put forth by Dees and Battle Anderson (2003) appears to be consistent with this branch of theory. This is reflected in the results described in Paper 3, for instance, imitation of the public sector, and the presence of collaboration with public, other non-profit and for-profit organizations. The categorization system further allows in-depth evaluation of the German Food Bank's contributions to the German welfare system and identification of where changes and improvements can be made.

In an effort to accommodate findings of the operational perspective and the interaction and volunteer role perspectives, it is noteworthy that volunteers shape operations through their interactions with users, mangers and donors. To guarantee that services provided by the German Food Bank improve in areas where tensions occur, human resource management and operational management are equally important for remaining on good terms with users, and particularly with collaboration partners such as retailers. This is necessary due to the fact that the main resource dependency problem identified – namely, insufficient food for the present number of users - is now even more severe than in the years 2010-2012 when sociological scholars first discussed this problem. In addition to serving German citizens, the German food bank also serves refugees living in Germany as is the case for food banks in many other European countries (Paper 3). In January 2018, the German Food Bank received negative public attention in this regard (Sueddeutsche Zeitung, 2018a), as a particular food pantry in north-west Germany put a freeze on the admission of refugees and migrants as new pantry users (Sueddeutsche Zeitung, 2018b). The reasons stated were insufficient food quantities and difficulties in volunteer-user interactions, as well as tensions among different user groups (Washington Post, 2018). The ban on admissions was lifted in April 2018 [Sueddeutsche Zeitung, 2018c). Up to the present (May 2018) the initial demand and supply problem has not been solved, although the number of food donations increased during the period the admission ban was in effect (Welt, 2018).

5.4   Alternatives and barriers to charitable food redistribution

Alternatives and barriers to food redistribution were explored from a donor perspective (Paper 4). The study was mainly focused on the redistribution of nonmarketable surplus food items to charitable volunteer organizations such as the German Food Bank.   Donors

interviewed for this paper, such as food retailers and wholesalers, mention the option of redistribution of surplus food to employees and a recent trend of selling produce with visible imperfections as potential alternatives. The main barriers within the food collection process identified are lack of sufficient storage space, cost for storage, and sorting food items prior to donation (Paper 4). Furthermore, donors fear being held liable for instances when recipients of the food are harmed. The legal situation in this matter is still unclear to food donors, although many of them have collaborated with the German Food Bank for years. Retailers state that they would rather donate to charitable organizations than provide the food items to their employees, as they fear it may foster inappropriate behaviors, such as stealing or purposeful damage to receive food items for free (Paper 4). In line with a current trend, mainly organic food retailers sell produce with visible imperfections. In contrast to organic retailers, conventional retailers are rather hesitant to market this kind of produce, as they fear a negative response from their customers. Organic retailers are in favor of the practice, because organic consumers like the natural appearance of the produce with visible imperfections. The study was framed using, the food waste hierarchy (Paper 4).

The findings presented in Paper 4 can be seen as an expansion of Lorenz (2012b) who investigated why food donors provide food to the German Food Bank, and critically discussed whether the collaboration is really a win-win situation or not. Lorenz' (2012b) discussion was framed in the context of reputation and sustainability and presented only opportunities. Barriers were not considered (Lorenz, p. 246-270). Knowing the barriers to donors collaborating with the German Food Bank is valuable information for managers in the organization, as it shows where processes can be improved and where changes on behalf of the organization need to be made. Process adjustments are possible to all but one barrier, which is the legal background with respect to food redistribution.

The need for clarification of the legal background for food redistribution to charitable organizations in Germany is an additional outcome of Paper 4. Even though the legal situation is seemingly obvious, as the Federal Ministry of Food and Agriculture (2014) provides instructions and advice in this regard (Paper 4), confusion results from such things as waiver agreements that are forbidden in Germany. In other German-speaking countries such as Austria, waivers are legal and common practice within the food redistribution process (Holweg and Lienbacher, 2011). A further aspect that leads to ambiguity for food retailers is that some redistributing organizations are still operating with waivers, as described in Paper 1. Since there is no common European regulation concerning food donations for charitable purposes, there were misunderstandings among German retailers and German-speaking scholars.

A further question that arises from this perspective is whether the trend of selling produce with visible imperfections has negative effects for resource acquisition at the German Food Bank. Building on the already severe resource dependency problem addressed (paper 3), this question connects the current perspective with the operational perspective. Given that few conventional retailers are actually considering selling produce with visible imperfections (Paper 4), and major food retail chains collaborate with the German Food Bank (Lorenz, 2012a; Paper 3), it is unlikely that resource acquisition is negatively affected. Although donors interviewed for this dissertation (Paper 4), did not want to publicly reveal their social commitment to the German Food Bank, many German food retail chains do so, as the analysis of retailers' homepage materials (Paper 3) and prior studies show. In contrast to the individual food retail store managers, German retail chains use the collaboration with the German Food Bank to show social commitment and to enhance their reputation at the corporate level (Witt, 2011; Lorenz, 2012b). A further argument against potential negative effects is a development in Austria, where the marketing and sale of produce with visible imperfections and other surplus food is already more established. There are entire supermarkets, so-called social supermarkets, which sell only items that are not marketable through traditional channels (Holweg and Lienbacher, 2011). Simultaneously, Austrian Food Banks are still actively supported by other food retail chain actors who prefer to continue supporting the Austrian Food Bank than to switch to supporting social supermarkets. Future research is, however, ultimately needed to clarify whether there are negative effects of these trends for Food Banks (Germany: selling produce with visible imperfections; Austria: support of social supermarkets).

5.5   Recommendations for future research

The present dissertation discussed four new perspectives on food redistribution with the main attention dedicated to the German Food Bank. From this dissertation, the following recommendations can be derived: Prior literature as well as parts of this dissertation describe tensions between food bank volunteers and users due to interaction problems, behavior, authority, and asymmetric relationships. These tensions are related to inappropriate treatment, shame and need, when receiving food. The particular understanding of need many volunteers have was found in this dissertation and in prior studies (Lambie-Mumford, 2013; Paper 2) to be a factor leading to interactional tensions between volunteers and users. Thus suggests a problem in the German Food Bank's redistribution logics. Therefore, an investigation based on institutional logics is suggested. Exploring the underlying logics of justice that determine the food redistribution process to users will help to clarify whether the causes of tensions in the German Food Bank can be

attributed to human interactions between Food Bank users and Food Bank personnel, to logics and regulation, to other reasons, or to combinations of these factors.

Concerning the operational effects of food redistribution and the various critiques of the German Food Bank from sociological scholars, an in-depth understanding of the organizations' self-concept would be helpful in judging the validity of these critiques. A future study could build on McIntyre et al. (2016) who categorized food bank critiques by presenting problems occurring in food banks worldwide. Although McIntyre et al. (2016) revisited English and French literature, the literature related to the German Food Bank was mostly not considered as it largely published in the German language. Therefore, a future study could revisit the German literature, categorize the problems following McIntyre et al. (2016) and compare them with the organization's self-concept to understand whether critiques should be considered as valid by the organization, and how potential improvements can be implemented.

Following the perspective of alternatives and barriers to charitable food redistribution, marketing produce with visible imperfections and other surplus food items is a current trend in Germany. As there are both monetary and nonmonetary systems operating at present, a future study could compare these systems and explore their economic, ecological, and social potential. A comparison among the monetary systems, building on stationary, online, and hybrid business models would be particularly interesting.

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7 Appendix

Appendix 1: Rombach, M., and Bitsch, V. (2015). Food movements in Germany: Slow food, food sharing, and dumpster diving. *International Food and Agribusiness Management Review* 18 (3), 1-24.

Appendix 2: Rombach, M., Kang, E., and Bitsch, V. (2018). Good deeds revisited: motivation and boundary spanning in formal volunteering. *International Review on Public and Nonprofit Marketing 15* (1), 105-126

Appendix 3: Rombach, M., and Bitsch, V. (2017). Sector blending: evidence from the German Food Bank. *International Food and Agribusiness Management Review*, 181-200.

Appendix 4: Hermsdorf, D., Rombach, M., and Bitsch, V. (2017). Food Waste Reduction Practices in German Food Retail. *British Food Journal* 119 (12), 2532-2546.

Appendix 5: Parallel positivistic evaluation criteria

Appendix 6: Appendix 6: List of informants (Paper1)

Food Movements in Germany:
Slow Food, Food Sharing, and Dumpster Diving

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Abstract

The study investigates the motivation to participate in food movements, as well as the activities and knowledge regarding food waste of active food movement members in Germany. The study builds on theories of social movements. A total of 25 in-depth interviews with activists of the Slow Food organization, the Food Sharing organization, and with dumpster divers were recorded, transcribed, and analyzed through qualitative content analysis. Participation in the movements rests upon instrumental, ideological, and identificational motivations. The knowledge of food waste differs between the three movements. Sharing, food waste, and tendencies of anti-consumerism play a strong role in all movements.

Keywords: activism, food waste, in-depth interviews, qualitative content analysis, social movements

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Introduction

In Germany, food waste occurs in agricultural production, post-harvest, processing and private households (Gustavsson et al. 2011). Food waste is estimated at 11 million tons per year; about 65% of which are avoidable and partly avoidable. The term avoidable refers to food waste that is still safe for human consumption at the time of disposal. Partly avoidable relates to consumer habits such as cutting off bread crust or apple peal. The amount of avoidable and partly avoidable food waste results in approximately 21.6 million Euro per year (Kranert et al. 2012). Governmental and political initiatives address food waste through awareness campaigns and targeted projects (Kranert et al. 2012, Lebersorger and Schneider 2014). In addition, individuals and non-governmental groups aim to reduce food waste. Food movements targeting the reduction of food waste include the Slow Food organization, Food Sharing, and dumpster diving.

In 1987, Slow Food was founded as a countermovement against fast food in Italy to preserve local Italian food traditions and regional food products. Over time the local organization developed into an international organization with 100,000 members in about 130 countries around the world. Membership is organized in local sections, which are coordinated at the international headquarter in Italy (Sassatelli and Davolio 2010). In Germany, Slow Food started in 1992 and currently has 12,000 members organized in 80 local sections (Slow Food 2015). In each country, Slow Food advocates the production of sustainable local food and small-scale business. Further goals include the preservation of biodiversity and the reduction of food waste. The organizational mission states that food should be good, clean and fair (Jones et al. 2003, Sassatelli and Davolio 2010). Slow Food is criticized to be affordable only by wealthy members of the society, since it focuses on expensive gastronomic products (Chrzan 2004, Laudan 2004) and presents rurality in a nostalgic and romantic view (Jones et al. 2003).

Food sharing occurs in various forms, for instance in underground restaurants, or within an organization called Food Sharing. In both cases, it involves using a social network or an online platform to distribute food items among registered users (Kera and Sulaiman 2014, Ganglbauer et al. 2014). In Germany, Food Sharing has approximately 28,000 registered members, exchanging food items through a platform without paying fees (Ganglbauer et al. 2014). Shared food items are leftover foods from private households, as well as groceries donated by local retailers or growers (Lubeck 2014). Ganglbauer et al. (2014) explain that the food is collected by volunteers that offer the items on the platform. Exchange with members requesting the items takes place mainly in person. The offering side is free to accept or decline a food request. Retailers and producers have legal agreements with the organization that the consumption of the donated food is the personal risk of the Food Sharing member (Lubeck 2014). In Germany, the organization has been active since 2012. It resulted from two independent initiatives against food waste. The idea of an internet platform to share food was developed by in the context of the movie "Taste the Waste," while at the same time a student group together with a journalist developed a similar idea. Both initiatives collaborated and the Food Sharing organization and platform were realized through crowdfunding (Food Sharing 2015).

Dumpster diving is an activity that occurs in many developed countries, for instance in parts of Europe, in the U.S., and in Australia (Fernandez et al. 2011). Dumpster diving involves opening

commercial garbage containers and collecting food items. Despite considered unmarketable by the owners, dumpster divers perceive many food items as still suitable for human consumption. Dumpster diving is often socially marginalized and a result of poverty. Depending on the country and its legislation, the activity can be a punishable offence. In Germany, dumpster diving is illegal (see German Criminal Code §123, §242, §244, and §303). Nevertheless, the situation is handled differently in practice. Dumpster divers are either not reported, since retailers fear negative media attention or courts treat it as neglectable. Hours of community service were so far the hardest punishment in Germany; the majority of cases were dropped due to pettiness (Noack et al. 2014). Dumpster divers collect food either as individuals or in groups. Dumpster diving can be considered as a form of anti-consumption (Nguyen et al. 2014), and as an act to reduce food waste and to oppose current food systems (Fernandez et al. 2011). The phenomenon of dumpster diving is likely to have been present in developed countries all along, but since the mid-2000s it is receiving public and scientific attention (Eikenberry and Smith 2005, Edward and Mercer 2007).

Food movements are a form of social movements. Social movements are defined by their shared normative orientation, collective identity, orientation toward change of political or cultural conditions, and shared actions related to their change program (James and Van Seeters 2014). One of the common denominators of the three movements analyzed is aiming at the reduction of food waste. The study investigates what motivates members to become active in their respective movement, how active members of each movement perceive their contribution to the reduction of food waste, as well as their knowledge about food waste and about other movements. As food movements and their activities are gaining popularity in Germany, managers in agrifood chains will benefit from understanding the movements, since they are impacting consumer trends relevant to value chains in the agrifood industry, as well as their image in the society. This understanding will be useful in developing strategies and addressing current trends and media critique.

Literature Review

Social movement theories explain that people participate in social movements based on three main motivations, namely instrumental motivation, identificational motivation, and ideological motivation (Klandermans 2004). Motivation refers to the accomplishment of goals. It includes an impetus or an inspiration to extend efforts to reach that goal. Motivation theory distinguishes the level of motivation and the orientation of motivation. The orientation of motivation refers to the underlying attitudes and goals, which explains how people are driven to act (Ryan and Deci 2000).

Social movements and, in particular, activities being organized through the movements, depend on member commitment. Commitment theory distinguishes between three types of commitment, namely continuance commitment, affective commitment, and normative commitment. Affective commitment is based on emotional attachment to an organization or movement. It implies a member's wish to be a part of the movement. Identification with the goals and values is likely. Continuance commitment implies a fear of loss, and considers advantages and disadvantages of being part of a movement. The fear of loss can relate to monetary, as well as social aspects.

Normative commitment relates to an obligation to be part of a movement. The three types of commitment affect participation, and are not mutually exclusive (Allen and Meyer 1990).

The existing body of literature on the three food movements analyzed concentrates on political and organizational aspects. Only a small number of studies focus on members, their interests, motivations, and activities (see Figure 1). Germov and Williams (2008) researched visitors' experience with Slow Food during an annual Slow Food festival in Melbourne (Australia). They conducted in-depth interviews with 33 Slow Food members, which they analyzed through qualitative content analysis. Interviewees associated Slow Food with good, healthy, local, and fresh produce, and hand-made production processes. All interviewees considered the Slow Food mission as very important, and some even incorporated components in their daily routines. Interviewees engaged in food production highlighted the Slow Food network as main motivation to join the organization. In addition, they mentioned economic and social benefits.
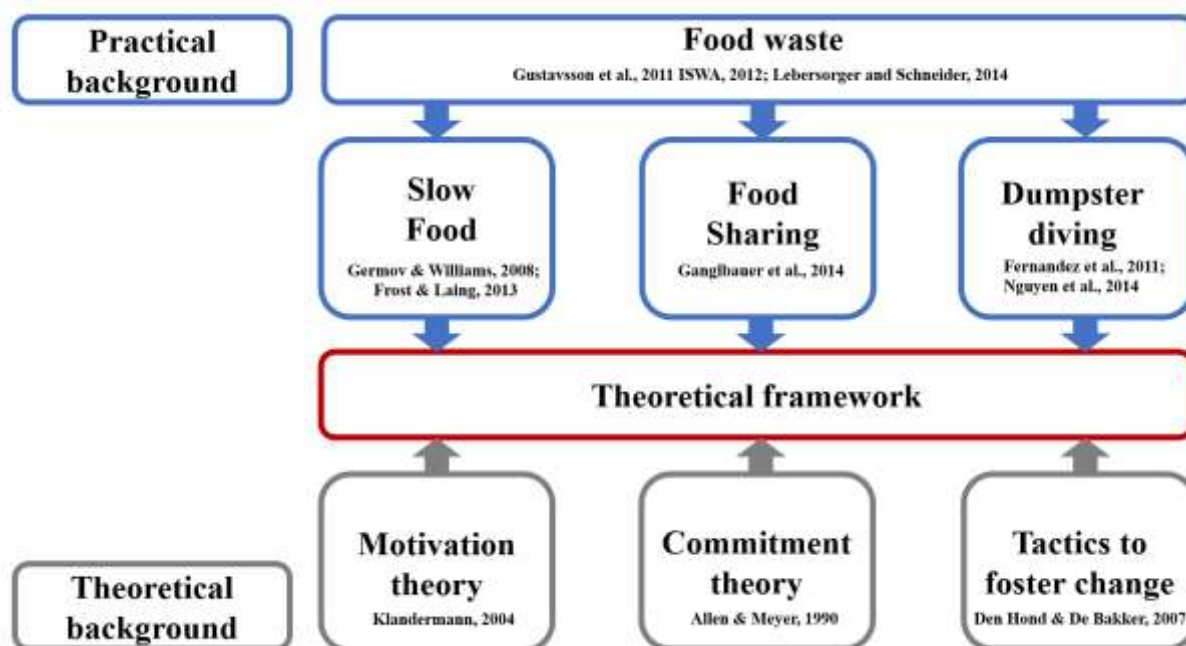
Figure 1. Theoretical Framework of the Study

With respect to the benefits, the Slow Food network plays an important role since it facilitates consumer-producer interaction and members feel valued and belonging to the community. For Italy, Leitch (2003) emphasized the Slow Food network, since it unites consumers and producers due to its unique principles of consumption, environmentalism, and social activism. However, Germov and Williams (2008) showed that the Australian interviewees had little interest in social and political activism, even if part of their interests was to change the prevailing consumption practices. These findings confirm a study by Gaytan (2003) who found a lack of interest in political activism among Slow Food members in Northern California.

Frost and Laing (2013) investigated the nature of Slow Food events in Italy, Australia, and New Zealand. Their multiple case study focused on five Slow Food events, namely Salon del Gusto, Terra Madre, Barossa Slow, Festa della Vendemmia, and Marchfest. The websites of the events were analyzed through a discourse analysis approach. The events showed characteristics of activities performed in social movements. The movement character is highlighted through the use of political or evocative language to promote the link between politics, food, and their regional identity. Also, the use of political imagery, for instance, people associated with uprising, such as Che Guevara, indicates the desire to promote change. Further evidence of the movement character is provided through the promotion of the events by Carlo Petrini, the founder of Slow Food, or well-known locals. The champions are meant to have an exemplary function and represent the change. The use of a champion is common practice within social movements. Considering food waste, the Slow Food website (2015) states that the organization is particularly concerned about food waste. Up to now, this claim has not been substantiated by scientific papers. Food waste related activities of Slow Food, including the members' perception of those, as well as the knowledge of food waste, and of other food movements addressing the issue are so far unexplored.

Ganglbauer et al. (2014) researched the online interaction of Food Sharing members. Their media analysis covered 3,242 comments from members active on Facebook and on the Food Sharing homepage. The qualitative content analysis brought up frequently discussed topics, such as dumpster diving, agriculture, gardening, food sharing experiences, food, and food waste. The researchers identified social, ecological, and economic motivations to participate in Food Sharing. The social and ecological motivations are mainly related to responsibility, for instance supporting people in need or preventing food from being wasted. Members perceive their actions, e.g., sharing of food and avoiding food waste, as a contribution to society and the environment. Few members admitted to economic motivations, stating that Food Sharing is needed to sustain their living. Olson (1965) argued that people will participate in a social movement, if they know their contribution is valuable for the movement or if they can benefit from the efforts of others (free riding). In contrast to other organizations or movements, free riding is not perceived as negative among Food Sharing members (Ganglbauer et al. 2014). They accept the use of the network to access food without contributing. In this context, Ganglbauer et al. (2014) underlined the social motivations of Food Sharing participants.

The topics discussed by Food Sharing members, e.g., dumpster diving, indicate knowledge of other food movements. The organization's motto "Food sharing instead of wasting" implies that members are knowledgeable with respect to food waste. Due to the absence of classical free riding, the organizational activities show the underlying characteristics of a social movement, fostering change. Ganglbauer et al. (2014) do not provide explicit information on activities, knowledge of food waste, and other food movements, since their paper focused solely on online interactions.

Fernandez et al. (2011) researched dumpster diving as a part of an anti-consumption movement in New Zealand, and found strong economic motivations. The study was based on 14 in-depth interviews and two participatory observations of dumpster diving activities. The participating divers were recruited via online communities. Fernandez et al. (2011) found the following main

motivations to dumpster dive. Survival and earning or saving money were presented as economic motivations. Ideological motivations included a hero identity, since participants believed their activity is a beneficial contribution to the society, because it reduces food waste. Further ideological motivations were resistance to the market system, the avoidance of employment, and not contributing to the market. Psychological motivations were participation in the community, enjoyment, and surprise. The economic motivations are in line with previous findings by Eikenberry and Smith (2005) who researched dumpster diving by low income groups and homeless people. Differently, Fernandez et al. (2011) included participants from various social status groups.

Also, Nguyen et al. (2014) investigated activities of dumpster diving groups in the U.S. The study was based on a mixed method approach. Methods of investigation included participatory observation of dumpster diving activities, interviews, and text analysis. Besides dumpster diving as an activity, the study also analyzed diving dinners. Diving dinners are meals prepared with food collected from dumpsters. The study identified themes of anti-consumption, the estheticization of trash, resource reversal, and the importance of sharing. The estheticization of trash includes the cleaning and processing of food coming from dumpsters, in order to let it appear as regularly purchased food. The underlying reasons are either shame or pride. Some divers want to present their activities since they are proud that they can prepare full meals from collected food items; other divers want to hide their activities, since they fear negative reactions and stigma from their social environment (Nguyen et al. 2014). Resource reversal had a deep meaning for dumpster divers who participated in the study. The society regards food items coming from dumpsters as not valuable. In contrast, dumpster divers consider this food as means of living that still provides pleasure and nutrition. Therefore, they reuse the items as an act against waste and unnecessary disposal. The aspect of sharing is closely connected. Since dumpster divers perceive the items as still good for consumption, they share the "reclaimed" groceries with friends and family, or donate them to soup kitchens (Nguyen et al. 2014). In general, sharing represents an act of solidarity (Belk 2014, Kera and Sulaiman 2014, Nguyen et al. 2014).

Judging from the previous studies discussed, motivations to participate in food movements reflect the categorization made by Klandermans (2004), differentiating instrumental, identificational, and ideological motivations. Psychological and economical motivations of dumpster divers (Fernandez et al. 2011) can be summarized as instrumental motivation, since individuals have pragmatic interests to be part of the movement. With respect to Food Sharing members, motivations are similar, but the context is different (Ganglbauer et al. 2014). Intrinsic motivation represents a form of ideological motivation, since members wish to comply with social values. The need to sustain a living is an instrumental motivation. In addition, evidence is presented that Slow Food, Food Sharing, and dumpster diving are food movements and related activities are in line with activities in social movements fostering change. Since this evidence is not sufficient to evaluate whether members engage in the activities to fulfill their individual needs, or as a form of social activism, a typology of interaction tactics, developed by Den Hond and De Bakker (2007), is applied in order to identify the nature of activities.

As activities in social movements are meant to foster change (James and Van Seeters 2014), action tactics can be based on damage or gain as the intended outcomes. Damage and gain refer to the disturbance or support of the operations of decision makers, e.g., governmental authorities or firms. Further distinctions are symbolic versus material damage or gain. Material damage and gain refer to resources or technologies, whereas symbolic damage and gain refer to dominant meanings, ideologies, and discourses. Symbolic damage includes writing protest letters, rallies, petitions, and negative publicity. Symbolic gain refers to voluntary action and positive publicity. Examples of material damage are sabotage, lawsuits, and boycott. Intended purchase in one shop over another (so called "buycott") and cooperation are examples of material gain (Den Hond and De Bakker 2007).

Methods

The study follows a qualitative research approach and is of an explorative nature. Qualitative research approaches allow an in-depth exploration of new research topics, and to develop theory and propositions for later studies (Bitsch 2005). Up to now there is a very limited number of studies on German food movements. Although there are several studies on the amount and composition of food waste, food waste and food movements have not been put in context, yet.

In line with the qualitative approach, in-depth interviews allow the exploration of a phenomenon from the point of view of the research participants. In-depth interviews are often used if the perception and experience of individuals are researched. In addition, in-depth interviews are considered useful if a sensitive topic is discussed (Hsieh and Shannon 2005). Since the study focuses on the experience and opinions of food movement members, in-depth interviews are suitable. For illegal activities, such as dumpster diving, few other data collection methods are available. In addition, the method allows interviewees to freely express themselves based on their own perspective (Neves et al. 2013). Using a quantitative tool, e.g., a survey questionnaire, participants must choose from a pool of prepared answers, which would be a drawback in this context. According to Bitsch and Yakura (2007) in- depth interviews as a qualitative research tool, allow to provide rich and detailed information, which are a requirement for a study being framed in social realities and cultural context.

In 2014, twenty-five in-depth interviews were conducted in Germany. Of the ten Slow Food members interviewed, five were actively involved in leading roles, up to the board of directors. The interviewees with leading roles were between 30 and 50 years old and came from different professions, including the computer industry, film industry, finance, education, and gastronomy. Another five interviewees were part of the Slow Food Youth movement and between 20 and 40 years old. Three interviewees were students; two came from education and gastronomy. Slow Food Youth members lived in larger cities in Germany. Of the fifteen dumpster divers interviewed, five also were active volunteers at Food Sharing. They participated in dumpster diving on a regular basis, as individuals or in groups. The dumpster divers interviewed came from urban, as well as rural areas. They were between 20 and 30 years old. Among the interviewees were students, professionals, as well as unemployed and homeless people. The dumpster divers who were also Food Sharing volunteers were predominantly skilled workers or from lower social classes.

Interviewees were recruited through social networks on the internet, and through the personal networks of the researchers. All interviewees of the Slow Food and Food Sharing organizations were recruited through social networks, such as Facebook. As both the Slow Food and Food Sharing organizations rely heavily on social networks and on their online presence, this type of recruiting seems appropriate. Since dumpster diving is considered illegal in Germany, interviewees were recruited through the researchers' networks and subsequent snowball sampling. Alternative ways of sampling would not have been possible, since the total number and composition of German dumpster divers and active Food Sharing participants remains unknown.

Each interview lasted 45 to 90 minutes, and took place face-to-face or over the phone, depending on the interviewees' preferences. Fifteen face-to-face interviews took place in neutral quiet locations, such as offices or the university library, or in private rooms of the interviewees. The other ten interviews were held over the phone. A semi-structured interview guide, outlining the topics of discussion, was used in each interview. As an example, the set of questions used for Food Sharing members is provided in the Appendix. Topics were addressed through open-ended questions, and were discussed following the conversational flow of the interviews. The questions asked were adjusted to the individual case during each interview. The first author, as well as two trained students conducted the interviews.

Interviews were audio-recorded, transcribed verbatim, and analyzed through qualitative content analysis. Qualitative content analysis can be seen as a process that allows transforming and pooling raw text into categories and themes based on inference and interpretation. The analysis is based on inductive reasoning, where ultimately themes arise from the data through constant comparison. Steps of the analysis included open coding and establishment of categories, and finally, the identification of motivations and action patterns for individual interviewees. Furthermore, within movements and between movements results were compared and contrasted.

During the process of open coding, labels that describe the key thought of a statement have been assigned to text fragments. Therefore, the transcripts were carefully read word by word several times. Afterwards, the codes were reconsidered and renamed, in a manner that they represent also the underlying meaning, and not only the key thought. In the next step, the codes were grouped together in categories with respect to their meaning, links, and relationships. For both steps, the software package Atlas.ti was used. Atlas.ti allows analyzing the raw text in a systematic and structured manner since it provides tools to code, annotate, and retrieve text. Each code and category was defined, and supported with original statements coming from the raw data. Categories and statements served for further interpretation. Table 1 shows three examples of categories, including their definition, and an interview excerpt as an example.

Table 1. Examples of Coding for Motivations to Participate in Food Movements

Category	Definition	Statement
Instrumental motivations	Motivations of members to participate in their respective movement are in line with economic and psychological benefits. These benefits are of a pragmatic nature for the individual members.	*"As a student, of course you are not blessed with a high budget. So, it is lucrative if you eat well, but you pay nothing [...]" (Dumpster diver, Munich, male, 20-30 years old, student).*
Ideological motivations	Motivations of members are in accordance or in contrast to social norms and values; includes political and social viewpoints with respect to the market system, consumption, and food waste.	*"I eat every day (laughs). So that's an existential human thing that you just have to eat something. And, somehow, nobody wants that one's means of satisfaction bring harm to others. And that is otherwise unfortunately often the case" (Slow Food Youth member, Düsseldorf, female, 20-30 years old, student).*
Identificational motivations	Intrinsic motivations of members are in line with the goals and principles of their respective movement.	*"But this is such a big amount of food. We need to distribute every-thing. In shared flats, to my friends, acquaintances, on the road sometimes directly to the citizens or to the homeless, to the beggars. I walk around and really distribute it directly to the people, to make them aware. That is an impressive experience [...]" (Food Sharing member, Stuttgart, male, 20-30 years old, actor).*

Results and Discussion

The result section consists of four parts. The first part discusses motivations to participate in food movements. The findings are compared to and contrasted with prior studies, and presented according to the classification into instrumental, ideological, and identificational motivations. The second part focuses on members' knowledge of food waste and other food movements, which addresses a research gap. The third part presents activities to reduce food waste. The last part analyzes the nature of activities carried out by members of food movements in the context of social movements, and fostering change.

Motivations to Participate in Food Movements

Slow Food members highlight health, pleasure, good food, and concerns about agricultural production practices and animal welfare as motivations to participate in Slow Food. In addition, they have an interest in the organization's activities, seek for social activism, and have a strong

interest in reducing food waste. Further motivations are to promote local food, to change the value of food within the German society, to reduce over-consumption, and get away from a "hectic" lifestyle. These findings are in line with the existing body of literature, and with the organization's goals and principles (Leitch, 2003, Sassatelli and Davolio 2010, Germov et al. 2011, Frost and Laign 2013). Different from Germov and Williams (2008), interviewees show high interest in activism. The statements below exemplify the motivations of interviewees to be actively engaged in Slow Food, and in particular, involved in activities to reduce food waste.

"I would like that more people are aware of this issue. The fact that we have to act, that we do not face the situation, where I have the option to say, I cannot do anything. This is perhaps a bad situation, but retreat is not a solution. It is also not an excuse to say politics takes time to do something. I think food is a political act everyone does several times a day, and so I get involved politically. So, I can do something" (Slow Food Youth member, female, Regensburg, 20-30 years old, teacher).

"In order to make people more aware of what is thrown away. I think food waste actually arrived in many people's minds. So many people know this, but if you look at the aspect of appearance. It still tastes good and you can feed quite a few people if you simply consider this mountain of vegetables that would have been otherwise just thrown away. This picture provides another connection to the people" (Slow Food Youth member, Essen, female, 20-30 years old, student).

The study included members of Slow Food Youth, which were intensively involved in activism with regard to food waste and food commensality. These interviewees were young adults with occupations that allowed for time to participate in the movement, e.g., students. Other members had a professional background that provided them the opportunity to integrate their activities regarding food waste in their professional activities. For example, teachers organized class trips and meetings with experts, where students had an opportunity to gain direct insights into the food waste problem. Participants in the study by Germov and Williams (2008) were mature agricultural producers that were running their own businesses. Compared to agricultural producers, teachers and students are more likely to have leisure time for Slow Food activities. The occupational background of interviewees can be seen as an explanation for the differences between the two studies. Also, when comparing within the movement, Slow Food Youth members have higher interest and involvement in contributing to public awareness and related activism, e.g., demonstrations and events that attract public attention, than members in leading roles. Interviewees with leading positions were more interested in activities related to high quality food. This result is surprising, since members in leading roles have committed to representative, organizational, and administrative duties, which would be expected to coincide with a strong interest in publicity.

German Food Sharing members have similar motivations as Slow Food members. Their motivations are to reduce food waste, to act against overconsumption, and to promote the value of food and food commensality within Germany. In contrast to Ganglbauer et al. (2014), instrumental motivation was not found. The interviewed members state that instrumental motivations are also undesired by the organization. Saving money or material gain are exclusion

criteria from the organization. The difference can be explained by the fact that this study interviewed volunteers who collect items from markets, retailers, and growers. The volunteers are required to follow the organizational philosophy since they have a representing role. Ganglbauer et al. (2014) analyzed posts from all members registered on the Food Sharing website. Accordingly, their study included members that do not volunteer, but use the network for their benefit. These ordinary members do not need to follow the code of conduct. Volunteering at Food Sharing requires identification with the organization, ideological motivation, and commitment. It requires an integration of these activities in the individuals' weekly routines. In addition, members must show efforts to obtain the status of volunteers who collect the food items, the so-called food savers. Volunteers representing the organization in public are known as a food ambassadors.

"To me it is very clear that each Wednesday and Saturday I am at the market to collect the items. This is part of my appointment book. Well, this is standard" (Food Sharing member, Munich, female, 20-30 years old, student).

"All food savers are trained. You are required to sign a waiver, so the whole thing is legal. You need to pass a quiz to show that you understand what you are doing. Yes, and then you will be verified. You must have done three test collections with an ambassador or a more experienced food saver" (Food Sharing member, Ulm, male, 20-30 years old, actor).

Both statements emphasize the importance of commitment in food movements. As discussed by Allen and Meyer (1990), organizational commitment, in this case commitment to Food Sharing, relates to the affinity of Food Sharing members towards their organization. The wish to belong, and the efforts made by interviewees to attain volunteer status are not based on moral obligation or normative pressure. Members' affective commitment is a sign of a strong identification with the movement.

Dumpster divers want to save money, believe they contribute to the common good through saving food from going to waste, and want to take a stand against the market economy. Some enjoy the stimulation from performing illegal activities. Among the dumpster divers interviewed instrumental and ideological motivations are dominant.

"Due to being in need. If you have almost no money or no money, then you have to stop thinking. You just try it because you are hungry"(Dumpster diver, Munich, male, 20-30 years old, student).

Some dumpster divers reported as their motivation to sustain their living as a student. Others underlined their unwillingness to work, and regarded dumpster diving as an opportunity to access free food (see also Fernandez et al. 2011). Other interviewees stated not to be in need themselves, but being in contact with homeless people or retirees who improve their living through dumpster diving. These findings confirm the study by Eikenberry and Smith (2005) who identified dumpster diving as a common practice among low-income groups. Our study adds that also retirees are among low-income groups that rely on dumpster diving to improve their living.

Considering the ideological motivation, some dumpster divers outlined that they dislike the market system and the prevalence of consumption within the society. They blame "mindless consumers" and retailers for food waste. They consider dumpster diving as acting against the system and advocate the reduction of consumption (see also Nguyen et al. 2014). Another group is mostly concerned about food waste and wants to actively act against it, as well as raise awareness in the society.

"But now I'm no longer excited when I go to the dumpster. This became a routine for me. Moreover, I do this on public garbage cans, right on the roadside. That is nothing to me, even if ten people pass by. In addition, I want to do it in public, so people know, okay, there is somebody who is not in need but still does it. I used to work, for example, in the municipality, I am a relatively well-known face, and many people know me. I want to send a signal. People, there is so much inside, food, that is incredible" (Dumpster diver and Food Sharing member, Stuttgart, male, 20-30 years old, actor).

Divers with strong ideological motivations to act against food waste, turned out to also be active members of Food Sharing, and in addition, some were closely connected to Slow Food. These interviewees were dumpster divers first, but through reflecting on their motivation, they joined other organizations, which they perceive as more committed to political activism. Other divers are interested in community aspects, such as diving dinners or group diving. According to Nguyen et al. (2014), social motives, such as sharing and companionship, play an important role. The current study confirms these findings only in parts, since the motivation to join group activities also has an instrumental nature, as shown by the following statements of two dumpster divers.

"I have not done it in a larger group. I usually go alone or with my roommate. Since I miss the contact with a larger group, which has actually been one reason why I made this Facebook page, so I will get in touch with such a group. Of course, I cannot say in public, come here, we go dumpster diving" (Dumpster diver, Munich, male, 20-30 years old, student).

"I think that within the group, you know better which food people want. And you can even better search for it. In addition, of course, the success rate that you get what you need is probably higher, eight eyes see more than two eyes" (Dumpster diver, Munich, male, 20-30 years old, student).

In all food movements, the motivations presented by Klandermans (2004) could be found. Table 2 presents the motivations of food movement members categorized into instrumental, ideological, and identificational motivations. Among Slow Food and Food Sharing members, ideological motivations, for instance, the reduction of food waste for the good of the society, and identificational motivations were prominent. The motivations of dumpster divers were of instrumental and ideological nature. The dumpster divers interviewed, stated economic motivations, such as saving money, and ideological motivation, e.g., acting against consumption and waste. Identificational motivations were not found. In contrast to Slow Food and Food Sharing members, dumpster divers have no organizational background. The organizational background, and the contact with other members throughout the organization might have had an

influence on members' motivations. Instrumental motivations of Slow Food and Food Sharing members were rather of psychological nature, and did not include economic benefits.

Table 2. Motivations to participate in food movements

Food Movement	Instrumental motivations	Ideological motivations	Identificational motivations
Slow Food	▪ Health ▪ Pleasure	▪ Act against food waste ▪ Concerns about agricultural practice	▪ Promote food value and commensality ▪ Be a part of Slow Food activities
Food Sharing	Not found	▪ Act against food waste	▪ Promote food commensality ▪ Be part of Food Sharing activities
Dumpster diving	▪ Save money ▪ Fulfilling a need ▪ Enjoyment ▪ Stimulation	▪ Act against the market system ▪ Consumption and waste	Not found

Knowledge of Food Waste and Other Food Movements

Knowledge related to food waste differs widely among members of the three movements. Slow Food and Food Sharing members explain the various causes of food waste within the supply chain. They mention the problem of standards and norms within food production, and discuss the usefulness of the-best-before date in retail. Further, they perceive the expectations of German consumers with regard to the availability of every product at any time as too high. They wish that supermarkets offered only seasonal and regional products. The aspect of product availability reveals anti-consumption tendencies (Nguyen et al. 2014). The desire for seasonal and regional products, reflects the goals of their organizations. The interviewees correctly identified that a substantial amount of food waste occurs on the household level, and furthermore a considerable amount of produce gets sorted out due to EU-norms on the agricultural production level. A German study estimates that 59% of the food waste occur on the household level, 7% are attributed to retail, 17 % to processing, and 17% to hospitals and other large scale consumers (Kranert et al. 2012, 184). This estimate excluded the production level.

The amount of food waste occurring in German agriculture is yet to be determined. A Swedish study aiming to quantify the amount of waste occurring in agricultural production identified the difficulties involved. One reason for the lack of data on the production level is that produce intended for the food industry can be affected by diseases and then will not be defined as food. In addition, produce remains in the field if the cost of harvest and other processing cannot be recovered (Eriksson 2012). The interviewees might have addressed the level of production, since they are familiar with agricultural production through their activities within the movement. In addition, interviewees provided detailed suggestions for the reduction of food waste on the household level and for the gastronomy sector. They suggested decreased sizes of meals, and a system that requires consumers to pay additional money for what they waste. Furthermore, they highlighted the importance of food knowledge and cooking skills. Interviewees believe that food

is wasted on the household level, since people do not know how to cook fresh produce, or do not have time for cooking.

Slow Food and Food Sharing members are aware of each other as food movements, since they collaborate for certain events. Examples of other organizations that interviewees know are the German Farmers' Association and food banks. Both movements appreciate governmental campaigns with regard to food waste, but criticize that awareness is not enough; they ask for changes in policies. The knowledge of regular dumpster divers who are not also members of other food movements is mostly limited to the retail and the household level. They are neither aware of governmental campaigns nor of other food movements, such as Slow Food or Food Sharing. Only four of the five dumpster divers who are active members in Food Sharing and in contact with Slow Food have comprehensive knowledge on the topic. Since dumpster divers do not lack education, as many of them are students, the organizational background of Slow Food and Food Sharing may explain part of the knowledge gap.

Activities to Reduce Food Waste

Interviewees participate in and organize activities to reduce food waste within their movements. Slow Food members believe that their movement contributes to the reduction of food waste through public events. The events have both an educational and a social character. Particularly, Slow Food Youth members underline their activities to reduce food waste. Examples are "Eat ins", "Disco soup," and a yearly demonstration against food waste and current agricultural practices in Berlin, the German capital. The demonstration is organized during a well-known agricultural trade fair, the International Green Week, and therefore reaches many people and garners media attention. For "Disco soup", Slow Food Youth members collect vegetables from local growers that do not meet EU standards, in terms of their appearance. Slow Food Youth members and other people who join the event prepare and cook the vegetables together. The event is accompanied by disco music. With the event, Slow Food Youth members want to raise awareness that too much food is wasted in Germany, and that the produce that does not comply with standards is still a pleasant tasting meal. An "Eat-in" is a common dinner, where each member prepares food, and all dishes are shared among the participants. In addition, parts of the Eat-in can come from dumpsters or Food Sharing. This example shows that Slow Food Youth members are connected with other food movements.

Further Slow Food events are food markets, as well as, cooking with children, students, or adults. During these events, Slow Food members teach how to plan grocery shopping and meals, how to prepare fresh fruits and vegetables, and promote local food. Interviewees emphasize that they enjoy cooking and eating together, but that these events should prevent food waste. Slow Food members believe that if they pass on the knowledge how to plan shopping and teach cooking, less food will be wasted. In addition, Slow Food members consider their campaigns as an inspiration to society, and perceive them as a contribution to increased awareness of food waste.

Food Sharing members collect unmarketable food items, daily or weekly from markets or shops and offer them on online platforms. The platforms also serve as discussion forums. Interviewees emphasize further activities, for instance the installment of local spots. Spots are rooms or refrigerators, where shared food is open to the public. Their activities include cooking events,

where volunteers and guests prepare meals with the collected items. Interviewees note that part of the goals of the activities is to demonstrate the importance of food. Food Sharing members want to underline that the value of food cannot be reduced to its retail price. Part of the Food Sharing philosophy is to consider food as means of living.

"No, it is free. That is give or take. Therefore, there is no exchange, everything works without any money. In addition, of course, and there is not a direct swap. This is also an important factor in food sharing, that we want to exclude food from all exchange factors, especially money. We just want to bring back the ideological value of food. And that's it. For example, if you throw away an apple, you do throw away only the value of the good, 60 or 80 cents. However, you throw away this apple, with all its resources, with labor, with transportation costs, and so on. The apple was watered and fertilized and automatically all this goes to the bin. Moreover, this we want to put into the spotlight, food is a mean of living. And this is actually one of the most important tasks of Food Sharing. That is why, even if you take from somewhere, you need not give back. It is for the cause that food is saved" (Food Sharing member, Stuttgart, male, 20-30 years old, actor).

Some dumpster divers emphasize the benefits and disadvantages of the activity itself, and underline the communal aspects of the activity. Other divers see their activity as a contribution to reduce food waste, and as a measure, which increases awareness within the society. Group divers report on joint cooking afterwards. Furthermore, divers share surplus items through social networks and the Food Sharing website. Similar as reported by Nguyen et al. (2014), dumpster divers clean food in order to wash away the stigma of their activities, or simply for hygienic reasons. Some interviewees report to fear diseases or the reaction of their closest social environment. The divers stated that they would not offer food coming from a dumpster to anyone without telling them. While motivations to dumpster dive are generally of an instrumental nature, which implies self-centered motivations, divers act social among each other. Interviewees reported that they let people in need take the food items from the dumpster before they help themselves.

Considering the activities of the three movements, they raise public awareness and contribute to the reduction of food waste on a small scale. Still, the effectiveness needs to be questioned, considering the extent of the problem. Besides the activities to reduce food waste, an important activity in all movements is the sharing of food.

Food Movement Activities in the Context of Fostering Change

As outlined by James and Van Seeters (2014), the desire for change is a defining characteristic of a social movement, and activities aim to foster change. Therefore, the typology of Den Hond and De Bakker (2007) is applied to activities of Slow Food, Food Sharing, and dumpster diving (see Figure 2).
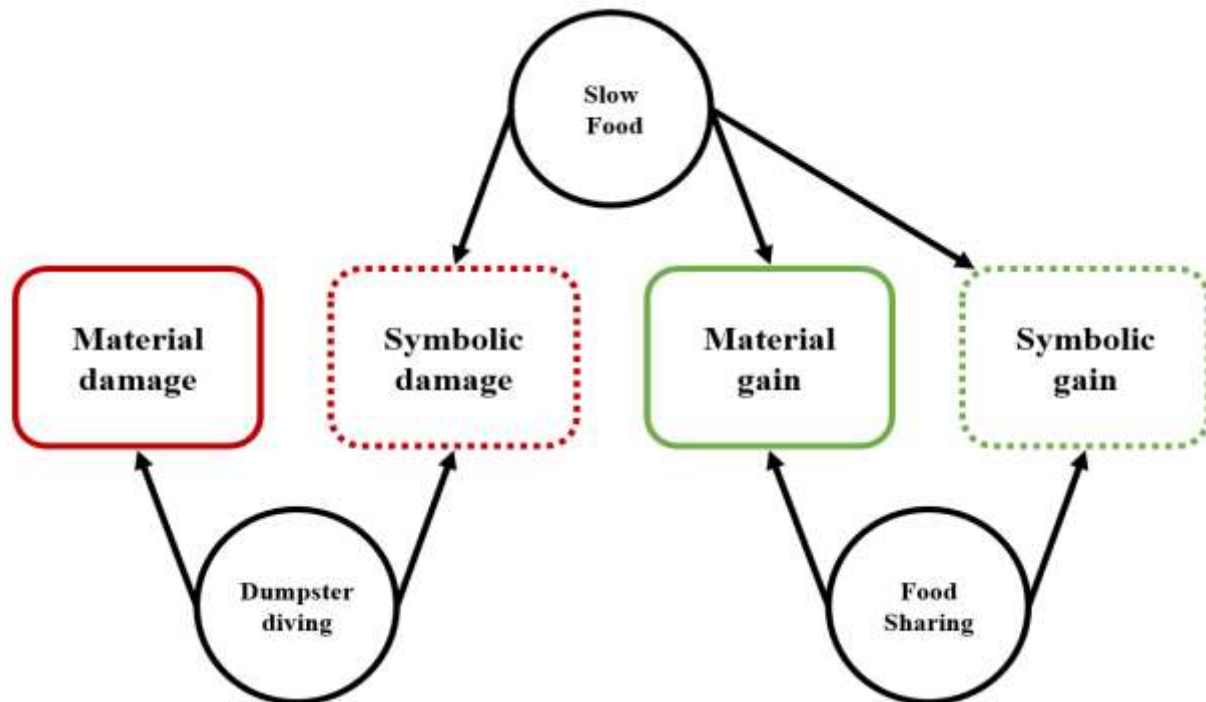
Figure 2. Tactics to Foster Change in German Food Movements

Slow Food members use material gain as tactics to foster change in the society. Interviewees prefer small-scale, local food providers over others, which is a form of "buycott." Slow Food relies on collaboration with other food movements, e.g., Food Sharing, as well as cooperation with governmental authorities. Furthermore, Slow Food members volunteer at events or other organizational activities, which is a form of symbolic gain. Symbolic damage may occur as a side effect of their public campaigns, and is one of the goals of the annual demonstrations in Berlin.

Similarly, Food Sharing members prefer local food and avoid global food retail chains. In that regard members even note that the activities within their organization strongly influence their actions in a private context. Members identify themselves with the organization and value it. Accordingly, they adjust their behavior and values towards the organization's philosophy.

"I try to buy in small shops. In small health food stores or where I know that they produce locally. If I need a loaf of bread, then I go to the bakery" (Food Sharing member, Munich, female, 20-30 years old, student).

"I told my friends not to give me anything material for my birthday or for Christmas. Just something to eat or drink" (Food Sharing member, Hamburg, female, 20-30 years old, nurse).

Moreover, Food Sharing as an organization collaborates with Slow Food, which also represents material gain. Both organizations have similar goals, and partly support each other's activities. For example, Food Sharing members help to collect food from farmers and retailers for events such as "Disco soup". As outlined by Den Hond and De Bakker (2007) volunteering belongs to

the tactics of symbolic gain. With respect to Food Sharing, this is a very dominant tactic of the movement. Since Food Sharing strives to be independent from financial means, members volunteer for the organization and are involved in events and activities without financial compensation. Food Sharing does not use symbolic or material damage as tactics to foster change.

In contrast, dumpster divers cause symbolic damage and, at the same time, material damage. This is due to the nature of the activity and can be explained by the individuals' motivations to dumpster dive. Since the motivations of regular dumpster divers who are not also members of Food Sharing are more self-centered, and of an instrumental nature, dumpster divers have little interest in collaboration with other food movements. This could explain the absence of any forms of gain as tactics. In addition, the lack of an organizational background might be another explanation why forms of gain were not found. By taking food items from dumpsters, the divers believe to move outside the market economy. Their actions can also be framed as a boycott of regular shops. In this interpretation, dumpster diving is not only a practical activity to reduce food waste. According to Nguyen et al. (2014), dumpster divers view the current society as too strongly focused on consumption. Therefore, their activities have to be conceived as form of protest against a consumer society.

Comparing the activities of the three movements, it is noticeable that different from the dumpster diving movement, Slow Food and Food Sharing do not use material damage as a tactic to foster change. Since Slow Food and Food Sharing are movements that are still growing, and desire to increase membership numbers and acceptance within the society, material damage does not appear as an appropriate tactic, since it would reduce the reputation of the organizations. With respect to symbolic damage, it must be considered that Food Sharing is a rather young movement. It is still establishing membership and structure, and fully relies on volunteers. The organization does not have the financial background and capacities to organize campaigns and demonstrations to use symbolic damage as a tactic.

Material gain in the context of Slow Food and Food Sharing refers to the activities of the organizations. Since interests and activities of both organizations are overlapping, a collaboration is of value for both organizations. "Buycott", as a further tactic of material gain, is rather related to individual members' choice than to the entire organization. However, since the organizations' philosophy might influence this choice, it is present for both Slow Food and Food Sharing members interviewed. With respect to the adaption of symbolic gain as a tactic, both, Slow Food and Food Sharing members volunteer for their organization. By considering the organizational model and the organizational philosophy of Food Sharing, it becomes obvious why members volunteer, because Food Sharing aims to become an organization independent of financial inputs. Therefore, they have adopted symbolic gain as a tactic. The Slow Food philosophy is rather the opposite. The valuation of Slow Food products and services is reflected in prices. Consequently, members are asked to pay membership dues. However, members also volunteer. This activity reflects the importance of the organizational goals and the members' desire to accomplish change.

Conclusions

Results underline a strong social component in the activities of German food movements. All movements strive to raise awareness of food waste and aim to reduce it. Their activities are a form of social happenings, which fulfill the needs of the members. At the same time, the activities are a form of activism that fosters change in accordance with the movements' goals. All movements show tendencies of anti-consumption. This also indicates that alternative consumption groups are gaining influence in Germany.

Marketing managers should not ignore food movement members as consumer target groups. Slow Food and Food Sharing members seem to be highly educated consumers who do not wish to share mainstream trends. In order to address these consumers' wishes, marketing strategies that positively emphasize the unique appearance of fruits and vegetables could be a solution. Austrian and Swiss marketing campaigns, such as "Weirdo" and "Unique" (ZEIT 2015; COOP 2015, REWE 2015) can provide an orientation. In both cases, retail chains included misshaped produce in their assortment, and the shelves with those products found acceptance among consumers. In 2015, the Swiss retail chain COOP extended this part of their assortment (COOP 2015). A similar strategy might be promising to retailers in other countries, since it could contribute to a more positive image. An indication of the acceptance of this kind of produce, as an additional food segment in German food retail, are successful startups, such as "Ugly Fruits – the shop for special fruits," which exclusively sells misshaped produce (Federal Ministry of Food and Agriculture 2015).

Alternatively, growers could sell their fresh produce not meeting EU standards as processed products via farm sales. For example, drinks and jams can depict the appearance of the misshaped produce on the packaging. In this way, the products might attract consumers favoring local produce and also children. Alternatively, growers could market the product with a marketing strategy, emphasizing that the ingredients are products that would have been wasted since they do not comply with norms.

Furthermore, politicians might consider adjusting laws and regulations with respect to food waste. Regulations that encourage the donation of unmarketable food items to social organizations would support people in need and spare them from having to rely on practices such as dumpster diving. In an effort to reduce food waste, the government could focus on providing unequivocal information to food retailers that donating unmarketable food items to charitable organization does not constitute an act of unfair hindrance (see the Act against Restrains of Competition §20(4), German Federal Law Gazette), since this is still misunderstood by some retailers.

In addition, the best-before-date requires critical reflection. In order to avoid food waste, consumers must understand that the best-before-date is not an expiration date. For retailers, the best-before-date is a critical point, since offering food items passed the best-before-date might not be in line with the quality expectations of consumers. A further aspect concerning the Act against Restrains of Competition §20(4) requires evaluation. §20(4) prohibits discrimination and unfair hindrance among German food retailers. The sale of food products below the price of purchase (see §2(2) of the German Food and Feed Code) is sanctioned. Similar to other

European countries, such as Switzerland and Norway, German retailer could be allowed to offer food products near to the best-before-date at a reduced price. This might be a reasonable strategy for retailers to reduce food waste, and to avoid drastic changes in regulation, as have currently been enacted in France. In May 2015, the French parliament implemented an amendment regarding food waste in the French food retail sector. Retailers are not permitted to discard food items. They have to provide the products for further utilization, for instance animal feed and other agricultural purposes. Stores with a size of 400 square meters and above, must support educational or charitable institutions with the food items that could not be sold (New York Times 2015).

With respect to the alternative use of food waste, Food Sharing could consider a more intensive exchange with food banks. As found in this study, as well as by Eikenberry and Smith (2005), low-income groups, such as homeless people, rely on dumpster diving in order to sustain their living. Cooperation between both organizations could help to prevent food waste and to support people in need.

Considering the movements' strategies to contribute to the reduction of food waste, a change in the focus of actions could be beneficial. The majority of activities are small scale, while the bigger picture of the problem remains untouched. Accordingly, Slow Food and Food Sharing, as food movements with an organizational background, could cooperate even more actively. Both organizations share common goals, and apparently, their members share motivations and interests. Joint events with a focus on prevention of food waste and education could take place. Since Food Sharing members already support events such as "Disco soup", they could also be part of events, where students and children learn how to cook and avoid food waste. Food Sharing members would enrich these activities with their practical knowledge and experience.

Through cooperation, both movements would reach larger audiences. Moreover, a collaboration between Slow Food, Food Sharing, and the Federal Ministry of Food and Agriculture could increase the awareness of food waste in Germany. The bundled skills of both movements to reach people and to raise awareness could be an asset to official campaigns and other measures to reach the public. The activities of the movements and using members' experiences could help develop authentic media and awareness campaigns.

Further research will investigate the process of change in food movements more deeply. A focus can be set on how individual members in food movements contribute to change within the movement and vice versa, how the organization contributes to change of the individual members. A comparison between Slow Food and Food Sharing seems promising, since both movements share an organizational background and there are some similarities with respect to their activities and concerns.

Acknowledgements

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Appendix. Interview Guide for Food Sharing Members

Icebreaker
Please introduce yourself.
Are you member in a community or in a club? Please tell me something about this community or club. Please describe your role in that community or club.

Food waste
What do you know about food waste? Please tell me about food waste in Germany.
Please share your opinion, on the causes of food waste in Germany.
What do you think, what kind of measures must be applied to reduce food waste in Germany?
Please explain to me, who should carry out the suggested measures and why?
What do you do personally to reduce food waste? Please think about different situations in your daily routines.
How about food waste, if you eat outside home?
What do you think about governmental campaigns?

Food Sharing
How did you get to know Food Sharing?
What was on your mind, when you started becoming active in the organization?
What are your duties within the organization?
Please explain the situation, including your feelings when you saved food for the very first time.
Please explain the situation, including your feelings when you save food today.
Please share an experience regarding your activities that influenced you the most?
What happens to the food? Please explain us the entire process of food saving. If you reflect your activities in food saving today, compared to the beginning, what is the outcome?
Do you know other reasons why people save food?
What do you think, what are barriers, why other people do not join Food Sharing?

Other food movements
Do you know other organizations or actors concerned about food waste?
Can you tell me something about (actor/organization being mentioned)? What do you think about their activities?
How does Food Sharing interact with (actor/organization being mentioned)?

Change
Please reflect, how did your activity within Food Sharing affect your attitude towards food waste? Please reflect, did you also notice any change in your behavior with respect to food waste?
With respect to food waste, where do you see room for improvement?
Where do you see further potential for Food Sharing and their collaboration with other actors?

Wrap up
Is there anything that we have not discussed, that you would like to address?
Is there anything that you would like to ask me?

CrossMark

Good deeds revisited: motivation and boundary spanning in formal volunteering

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Abstract The study investigates the motivation of volunteers to serve at the Federal Association of German Food Banks and volunteers' interactions with food donors, food pantry managers and users. Social exchange theory is used as a frame to investigate volunteers' interactions in the context of boundary spanning. Twenty in-depth interviews were recorded, transcribed and analyzed through qualitative content analysis. Volunteers are predominantly socially motivated to work at the German Food Bank, but this is not necessarily reflected all their interactions with food pantry users. Even though the authority in these interactions rests with the volunteers, they still feel uncomfortable in some interactions. Volunteers' interactions with managers are essential, because managers tell volunteers, which tasks to carry out in which manner. But the volunteers do not necessarily respect the instructions in all cases. The interaction with food donors are negatively affected through a mismatch in the perception of authority within the collaboration. In some interactions, both parties believe they have authority within the interaction, even though they are rather equal partners. The study provides best practice recommendations on how to train volunteers to avoid interaction problems with food pantry users and donors.

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1 Introduction

In Germany, food waste and food insecurity are frequently discussed problems. Each year, approximately 11 million tons of food waste occur (Kranert et al. 2012) and at the same time, 8% of the population suffer from food insecurity (Pfeiffer et al. 2011). The number includes the share of the population living below subsistence level with a food budget of 100–199 Euro per month as well as homeless people. Food insecurity refers to the condition, where people do not have secure access to a sufficient quantity of nutritious food to assure an active and healthy life. Reasons for food insecurity can be the unavailability of food, insufficient financial means, inappropriate distribution or inadequate use of food at the household level (FAO 2015). In developed countries, such as Germany, food insecurity rather occurs due to inequality or poverty than due to food scarcity (Tinnemann et al. 2012; Pfeiffer et al. 2015; Vlaholias et al. 2015; Baglioni et al. 2017).

As both issues are undesired by the German society, government, individuals and organizations work to address them actively. One of the organizations counteracting both food insecurity and food waste is the Federal Association of German Food Banks (abbreviated in the following as German Food Bank). Both issues are featured prominently in the organization's goals (German Food Bank 2017; Lorenz 2012). The German Food Bank is a nonprofit volunteer-based organization collecting and distributing donated food items to people in need (Selke 2011a). Further services are handing out meals in soup kitchens, providing breakfast to schoolchildren, distributing second hand clothing and supporting users' medical, bank and authority visits (Lorenz 2012).

These services are provided by free and associated food pantries listed under the umbrella of the German Food Bank. Free pantries are in contact with the umbrella organization but independent in their operations. Associated pantries are following the organizational standards of the federal association in their operations. According to Von Normann (2011) and Lorenz (2012), the number of food pantries is steadily increasing in Germany since 1993. There are around 940 local food pantries across Germany (German Food Bank 2017) with 50,000 volunteers. Among these volunteers 46,800 are unpaid and approximately 3200 receive a maximum monthly income of 400 Euro for small-scale employment. Volunteers usually work 20 h a month and have been described to be highly committed and competent (Von Normann 2011). In Germany, approximately 1.5 million people rely on food assistance provided by the German Food Bank. Around 30% are children and teenagers, 53% unemployed adults and 17% retirees (Assig 2012).

In free as well as in associated food pantries, food pantry users need to provide documentation of their eligibility to receive food (Lorenz 2012), and volunteers hand out quantities adjusted to the users' poverty level. The food is provided by a wide range of donors, from small bakeries to large food retail chains (Lorenz 2012). Items are usually nonmarketable, such as items close to the best-before-date, excess seasonal produce, items with packaging flaws or incorrectly labeled (Midgley 2014). Since the food reaches the food pantries often in large quantities, volunteers inspect the items and sort them into serving sizes (Von Normann 2011). Each year the German Food Bank collects and redistributes approximately 120,000 tons of food (Lorenz 2012). Food pantry operations are overseen by food pantry managers who typically lead in a cooperative and participative manner. Delegation is supposed to be part of their

management approach to motivate volunteers and staff members. However, with respect to food safety, food transportation and food preparation, laws as well as the umbrella organization require managers to provide precise directions and enforce these (Von Normann 2011).

The current body of literature on the German Food Bank as well as on food banks in other European countries and the U.S. is rather diverse. Mostly, the literature discusses food assistance as a societal problem, since food banks are gaining importance due to reductions in social welfare systems (Riches 2002, 2011; Warshawsky 2010; Lutz 2011; Thuns 2011; Dowler 2014; Poppendieck 2014; Silvasti and Riches 2014). In addition, prior studies present political perspectives, for instance, on the establishment of food banks (Koc 2014; Tang et al. 2014). Prior research also has addressed the user perspective (Lorenz 2012; Van der Horst et al. 2014), managerial challenges (González-Torre and Coque 2016) and logistical issues (Baglioni et al. 2017). With respect to the latter two aspects, Poppendieck (1998) and McIntyre et al. (2015) criticized food pantry operations as dysfunctional. The critique addresses barriers to food access, food being unequally distributed, food provided not being nutritious or not meeting cultural needs, using food pantries as a shameful experience, and food pantry services as being less efficient than governmental support such as food stamps. Further studies focused on food insecurity (Davis and Tarasuk 1994; DeLind 1994; Anderson and Cook 1999; Gareau 2004; Vitiello et al. 2015) as well as the perspective of donors and their motivations to cooperate with foodbanks (Lorenz 2012; Vlaholias et al. 2015; Gruber et al. 2016). Research on the volunteer perspective has been limited to demographic profiles and motivations (Agostinho and Paço 2012).

Among studies on the German Food Bank, volunteer work has not yet been studied in-depth. German studies were focused on sociological and political aspects of poverty and food insecurity (Selke 2011a, b), public perception of the organization and its service (Witt 2011; Häuser 2011) and the user perspective in the context of dignity (Hoffmann and Hendel-Kramer 2011) and vulnerability (Sedelmeier 2011). The present study explores the perspective of volunteers, including their motivations to serve at the German Food Bank, and the interactions between volunteers, food pantry users, food pantry managers and food donors. In a sense, volunteers take on the role of boundary spanners within the German Food Bank, as their tasks connect the organization with actors in the external environment. The organization relies on volunteers' time, physical and mental work as well as their social, cultural and human capital. Volunteers greatly influence the services provided. Therefore, the present study builds on social exchange theory and the concept of boundary spanning to better understand the nature of the interactions and the effects of volunteering on the German Food Bank as an organization providing services to people in need.

2 Literature review

Similar to other charitable organizations, the German Food Bank operates mostly with volunteers (Von Normann 2011; Selke 2011c). Most of the responsibilities of the volunteers include connecting the organization with actors in the external environment (Selke 2011c). Therefore, they can be considered as boundary spanners. Boundary spanners are individuals within an organization with the role of linking the

organization's internal networks with its external environment (Aldrich and Herker 1977; Williams 2002; Ernst and Yip 2009; Holmes and Smart 2009; Isbell 2012). They have two basic functions, information processing and external representation (Heath and Frey 2004). Information processing relates to evaluating the amount and sources of support for the organization's goals (Holmes and Moir 2007). In addition, boundary spanners have the authority to act and communicate on behalf of the organization, because they act as representatives of the organization in the external environment (Aldrich and Herker 1977). When interacting with the external environment to contribute to the organization's goals, boundary spanners can either show willingness to compromise or choose a manipulative approach to successfully fulfill their duties (Isbell 2012). The latter approach is rather uncommon for boundary spanners when acquiring resources. In resource acquisition, boundary spanners must follow the organizational policies and act in the interest of the organization (Aldrich and Herker 1977; Brown 2005; Isbell 2012). They are required to maintain the organizational image and enhance its social legitimacy when in contact with the organizational environment (Aldrich and Herker 1977). In the case of the German Food Bank, the concept of boundary spanning is of particular relevance for volunteers serving food pantry users as well as picking up food donations from retailers or producers. Up to present, boundary spanning has not been applied and discussed in prior food bank studies.

Independently of volunteers taking on the role of boundary spanners, they provide time and skills to the organization, which results in adding value to its services (Tilly and Tilly, 1994 in Wilson and Musick 1997). Since volunteering at the German Food Bank takes place within organizational structures, it is considered formal volunteering (Wilson and Musick 1999; Thoits and Hewitt 2001). Formal volunteering refers to unpaid work without strict obligations. Informal volunteering takes place outside of organizational structures. Wilson and Musick (1997) extended the definition of formal volunteering and characterized it as follows:

- Volunteering is a productive activity and must be considered equal to work, because there is a market for volunteers, and similar to any other labor market, qualification and performance matter in the market for volunteering.
- Formal volunteering involves collective action. Volunteering within organizational structures is often carried out on behalf of a shared idea or cooperative purpose, where benefits are not limited to those involved, but extend to society as a whole.
- The volunteer-recipient relationship is ethical and regulated by incentives. Even though volunteers may have self-centered motives for their involvement, they still freely provide their time and skills. Moreover, volunteering is often framed within social and behavioral norms which have to be followed.
- Different types of volunteer work are related to each other. Even though formal volunteering limits volunteers' leisure time, prior studies show that people who are committed to formal volunteering, are likely to also provide informal help (Gallagher 1994).

Since formal volunteering is often unpaid, motivation plays a crucial role (Do Paço and Agostinho 2012). According to Haivas et al. (2012), prior studies on motivation to volunteer found that volunteers are motivated to serve at organizations corresponding to their personal motives. The general motivation to volunteer has been investigated in

several studies. These studies showed that people volunteer because of altruistic or egoistic motives, e.g., helping others or achieving goals (Cnaan and Goldberg-Glen 1991; Clary et al. 1996; Thoits and Hewitt 2001; Peterson 2004; Burns et al. 2006; Pajo and Lee 2011; Ferreira et al. 2012; Do Paço et al. 2013; Vázquez et al. 2015). Further motives included personal dispositions, such as empathy or prosocial attitudes (Clary et al. 1998; Davis et al. 1999; Penner 2002; Hustinx and Lammertyn 2003; Peloza and Hassay 2006). One of the most comprehensive approaches to understanding motivation to volunteer was proposed by Clary and Snyder (1999). They identified six motives, namely expressing important values, obtaining a better understanding, enhancing self-esteem, belonging to social groups, developing skills and career opportunities as well as the so-called protective effect, when volunteers strive to take of their mind off personal worries. For example, Agostinho and Paço (2012) found that volunteers in the Portugese Food Bank perceived personal development through volunteering as a motivation. Further, protective motives were found, since some volunteers appreciated working at the Portuguese Food Bank because they could forget their own problems. The main motives stated by volunteers was to help other people and the appreciation of the organization being built on values the volunteers shared.

Motivations influence how people perform tasks and interact with others. The German Food Bank relies on volunteers (Lorenz 2012) and how they carry out their tasks, e.g., collecting food from donors, sorting and repackaging food items and distributing food to the food pantry users (González-Torre and Coque 2016; Baglioni et al. 2017). These tasks involve interaction with donors, managers and users. Due to their role as boundary spanners, the volunteers' motivation and interactions need to be understood to evaluate the quality of service.

Lopes et al. (2004) defined interaction as any occasion with at least two people, where both are associated with one another and adjust their behavior in response to each other. Within organizations, such as food banks, numerous interactions take place. Van der Horst et al. (2014) researched interactions in Dutch food banks and found that interactions between food pantry users and volunteers are not always positive. In some cases, interactions led to negative emotional reactions of food pantry users, since they felt volunteers expected them to act gratefully. The expected gratitude resulted in feelings of shame and distress for food bank users. Volunteers also perceived these interactions as negative, since it was a forced interaction with both parties obliged to interact with each other. Prior studies in the U.K. (Lambie-Mumford 2013) and in Germany (Von Normann 2011; Selke 2011a, b, c), also presented examples of negative interactions between food pantry users and volunteers. To use German and British food pantries, users must prove that they are poor to qualify for food assistance. For instance Selke (2011b) and Lambie-Mumford (2013) report cases where volunteers were rather inattentive in the registration situation and acted in a formal manner. This resulted in feelings of humiliation for the users and in users rejecting the services of the food bank, even though they were in need. An earlier study in Canada also showed negative interactions, where dependency and limited choices among food items led to tensions between volunteers and food pantry users (Tarasuk and Eakin 2003).

The interactions between food pantry managers and volunteers have not been researched per se. However, Tarasuk and Eakin (2003) and Lambie-Mumford (2013) shed light on these interactions. Tarasuk and Eakin (2003) showed that volunteers did

not necessarily feel responsible if the quantity of food distributed was not sufficient to meet the users' needs. In these cases, volunteers were asked by food pantry managers to provide a small amount to each user as a symbolic gesture. Also, Lambie-Mumford (2013) found that volunteers were required to be attentive to food pantry users' problems, aside from being poor. Volunteers are asked to consider the pantry users' problems and connect them to other institutions that could potentially provide further help to individual problems.

In all types of interactions within the German Food Bank, interpersonal authority is present. As boundary spanners, acting on behalf of the organization, volunteers can be regarded as an authority to food pantry users. Similarly, food pantry managers are an authority to volunteers, as volunteers are hierarchical subordinates to managers. In any task that volunteers fulfill, they must follow the rules and instructions of paid staff members and managers González-Torre and Coque (2016). Accordingly, the volunteer-manager interactions are greatly influenced by accountability. The volunteer-donor interactions can be expected to be of a similar nature, given that the volunteer is a representative of the German Food Bank, and the organization depends on donations. Even though the boundary spanner role provides volunteers with authority to represent the organization, food donors are not in a subordinate position to volunteers. Both parties command similar authority because the German Food Bank and the donating party are collaborating with each other.

According to social exchange theory, a theory that serves to understand workplace behavior (Cropanzano and Mitchell 2005); people are motivated by self-interest in their interactions with others. People engage in or end relationships depending on the advantages and disadvantages of being in that relationship compared to alternative options (Blau 1964). Transferring this to organizations, people evaluate and react to authorities and their decisions in terms of what they gain and lose from the authorities' decisions. One important factor regarding the evaluation of authorities is legitimacy (Tyler and Lind 1992). Whether authorities' decisions or procedures are perceived as legitimate is closely connected to whether they are favorable for the individual who will interact accordingly (Cropanzano and Mitchell 2005; Agneessens and Wittek 2012). Social exchange theory and evidence from volunteers' motivations discussed provide the framework for understanding how volunteers' interactions with other actors at food bank effects the services of the German Food Bank.

3 Methods

As the study seeks to explore motivations and interactions within the German Food Bank and their effects on the organization's service, a perspective which have not been previously studied in detail, a qualitative research approach is employed. According to Bitsch (2005), a qualitative approach is suitable when a theory is developed, an unknown research topic to be explored, or a new perspective added to a well-investigated topic. Furthermore, Bitsch (2005) stated that a qualitative research approach is suitable when a study focuses on the perspectives and experiences of actors in their lifeworld. It allows the identification of cultural framings and social realities (Bitsch and Yakura 2007). Since exploring the implications of interactions within the German Food Bank requires an understanding of multiple perspectives (Darbyshire

et al. 2005; Perera et al. 2016), and the consideration of a vulnerable population (Hsieh and Shannon 2005), the food pantry users, in depth interviews were used for data collection. A quantitative tool such as a survey questionnaire would have been disadvantageous, since its preset wording would have hindered the interviewees expressing themselves in their own terms (Brand and Slater 2003).

Twenty in-depth interviews were conducted between the fall of 2015 and the spring of 2016. Of the twenty interviewees, five were food pantry managers, four were food pantry users, five were volunteers, one person was a spokesperson of the German Food Bank, and five were retail food donors. All interviewed managers were staff members and receive regular wages. They had been working for the food pantry between three and ten years. In addition, the spokesperson of the German Food Bank is a paid staff member. Volunteers were usually unpaid; only one volunteer interviewed was also a marginally employed staff member, receiving a wage of 400 Euro a month. This interviewee had administrative duties and was involved in food delivery as a truck driver. Two volunteers were short-term volunteers who had served three to twelve months. All other volunteers were long-term volunteers serving for five to ten years. Both groups of volunteers were obliged to volunteer regularly, depending on their agreements with the managers; volunteers came at least twice a week to the pantry. Four food donors were long-term collaboration partners, providing weekly donations, since five to ten years. These donors were large scale food producers or food retail chains. One small scale donor provided food only upon request, but was also a long term collaboration partner. The users interviewed were temporary and permanent users. Among them were migrants, short or long-term unemployed as well as people receiving only small retirement benefits.

Following Suri (2011) and Cleary et al. (2014), a purposeful sampling approach was used for the study. The approach requires researchers to select interviewees with a particular rationale and a specific purpose related to the research question in mind (Collingridge and Gantt 2008). With respect to the German Food Bank this approach was chosen, because demographic profiles of volunteers and other food bank actors that would allow representative sampling are not available. With respect to the selection criteria, interviewees needed to have knowledge on food bank operations, interactions within and related to the organization, and be willing to share their motivation to work at the food bank. Due to interviewees' specific roles and responsibilities there are variations in the information sought from interviewee groups (Table 1).

Interviews lasted 60 to 90 min each and were carried out by the second co-author and a graduate student. All interviewers received interview training, which included active listening, probing and paraphrasing, reflecting on their role and skills as an interviewer as well as being aware of interviewer effects. Interviews were either carried out face-to-face or by phone, depending on the interviewees' preferences. An interview guide outlined the topics of the interview. Topics were addressed through open-ended questions and asked according to the interview flow. The initial interview guide focused on food redistribution and volunteering at the German Food Bank. During the research process, the interview guide was further adjusted based on the input of early interviewees. Further modifications resulted from the interviewees' different backgrounds and activities related to food redistribution by German food retailers or to specific duties within the food pantries. This approach is in line with qualitative research procedures (Corbin and Strauss 2015; Bitsch 2005).

Table 1 Purposeful sampling approach

Group of interviewees	Duties within/related to the organization	Information sought from interviewees
Managers	Manage food bank operations, in charge of volunteers, representative role in the umbrella organization	Information about food bank operations, and about volunteers' motivation; information about managers' interactions with volunteers and about volunteer-user interactions, as well volunteer-food donor interactions
Spokesperson	Official communication	Information about food bank operations and interactions within the organization
Volunteers	Serve food bank users, sort and pack food, collect food from retail chains	Information about food bank operations as well as their own motivations and their interactions with users, managers and food donors
Users	Come regularly to the food bank to receive food, clothing and other services	Information about food bank operations related to food and service provision; information about their interaction with volunteers
Food donors	Cooperation with local food pantries, provide food donations	Information about their interactions with volunteers

Authors' elaboration

Eighteen of the twenty interviews were audio recorded and transcribed verbatim before data analysis. On two occasions, the interviewees did not agree to audio recording and, therefore, field notes were taken. These field notes as well as all interview transcripts were analyzed through qualitative content analysis. The analysis was carried out in integrative steps, since the process is iterative and recursive. During the analysis process, the interview transcripts were systematically fractured and common themes were extracted through constantly comparing and contrasting the data material. Ultimately motivations, interactions and authority patterns were identified.

The analysis process consisted of two main steps: open coding and the establishment of categories. During open coding, labels were assigned to text fragments. These labels were defined and reflected the key thought behind each text fragment. In the coding process, field notes and transcripts were carefully read several times. Throughout the reading process, codes were reconsidered and relabeled. The coding process linked all relevant interview excerpts with codes and their corresponding definitions (Table 2).

In the next step, categories were established. For this purpose, codes were grouped according to their meaning. According to Elo and Kyngäs (2008), establishing categories cannot be considered as a simple step of bundling codes that are similar or related; it is rather a classification of patterns. Researchers must decide through interpretation, which codes belong into the same category. Accordingly, each category was named by content-characteristic words and then defined. Category definitions do not consist of only one key thought; they are comprised of all related codes and their definitions. These main parts of the qualitative content analysis were carried out using the software package Atlas.ti. The software package allows to systematically analyze text and other documents. It includes tools to locate, code and annotate qualitative data material.

Table 2 Codes for the category "Volunteer motivation" with examples of interview excerpts

Code	Example of an interview excerpt
Motivation related to social or religious values* Motivation of volunteers in accordance with or in contrast to social or religious values; includes altruism or benevolence	"*I think that the most important thing is to help other people*" (Volunteer, female, 20–30 years old, student).
Motivation related to enhancement* Motivation of volunteers in accordance with or in contrast to psychological or mental development; includes the interest to learn a new skill or experience something new	"*My motivation is, I want to learn something. I want to do something that I am able to do*" (Volunteer, female, 60–70 years old, retiree).
Motivation related to community participation* Motivations of volunteers in accordance with or in contrast to social interaction; includes the establishment of formal and informal networks	"*I like to be contact with people. I do enjoy being around my guests [food pantry user]. I know most of them. We greet each other, are friends, and are friendly to each other*" (Volunteer, female, 60–70 years old, retiree).

Authors' elaboration

*Denomination of codes follows Clary and Snyder (1999)

4 Results and discussion

The first part of this chapter identifies volunteers' motivation to serve at the German Food Bank, as a basis for the analysis of volunteers' interactions with other food bank actors. It is important to understand volunteers' motivation, since motivations influence how volunteers perform their responsibilities and solve problems in interactions. The second part focuses on the interpersonal interactions between volunteers and the respective other groups, food pantry managers, users and food donors, because in their role as boundary spanners they greatly affect the organization's services.

5 Motivation to volunteer at the German Food Bank

Volunteers highlighted helping people in need, serving the community, being involved in a social network, and continuing to be part of the workforce after retirement as motivation to be involved in the German Food Bank (see Fig. 1). The most dominantly stated motivation by all interviewees was helping people in need.

"*My motivation is not really related to the food, neither to waste, nor the food insecurity issue. I just want to help people who need help*" (Food pantry volunteer, male, 50-60 years old, manager of a company).

"*Well, I thought, this semester, I have a little bit more time. So, I was thinking about what I want to do with my time and I think it was partly the so called refugee crisis. Refugees were coming. I think it was Germany's turn to care about them. I picked up the sprit 'You need to help.' You cannot just let the state do*

Fig. 1 Overview of volunteers' motivations to serve at the German Food Bank; Notes: Yellow box: [1]Classification according to Clary and Snyder (1999), White bubble: Own findings

everything. That is not how it works. It is nice that the state does a lot, but you have to do something as well" (Food pantry volunteer, female, 20-30 years old, student).

The first statement highlights the explicit desire to help, but rejects interest in food insecurity or waste. The organization's slogan "Food where it belongs" as well as the organizational goals to act against food waste and food insecurity strongly emphasize both issues (German Food Bank 2017). However, the redistribution of unmarketable food that would otherwise become waste is only one of several charitable activities performed by the German Food Bank. According to Lorenz (2012), food pantries also distribute clothing, do counselling and support users with medical, bank and authority visits.

Both statements show volunteers have a desire to help, and care about the community where they live. Similar to permanent volunteers at the Portuguese Food Bank (Agostinho and Paço 2012), the German volunteers interviewed also had strong social and philanthropic motivations. However, in contrast to the Portuguese volunteers, German Food Bank volunteers expressed no career-related motivation. An explanation might be the age of the volunteers interviewed. Many volunteers were older, close to retirement or in retirement, and had already established a career.

"I think it is wonderful. It really sustains me. Working at the German Food Bank really sustains me, because of the structure. It is never boring. I can bring my own ideas. This is very important to me" (Food pantry volunteer, female, 60-70 years old, homemaker).

> "*I left my job, and afterwards, I needed some kind of activity. I did not allow myself just to sit around. That is when I started to become interested in the German Food Bank*" (Food pantry volunteer, male, 60-70 years old, retiree).

These older volunteers were interested in community involvement and being part of a social network. They wanted to feel that they could still do useful work after retirement. These results confirm Wei et al. (2012) emphasizing subjective well-being as an important aspect in providing service among older volunteers. Building on Lorenz (2011), these motivations reflect a social development in the German society. Lorenz (2011) highlighted that parts of the German society are socially not integrated or became redundant as workforce. This development does not only apply to food pantry users as stated by Lorenz (2011), but also to volunteers and others excluded from gainful employment. In contrast, other older volunteers, socially integrated and wealthy, wanted to share part of their wealth with the community.

> "*I just feel I am really blessed and I would like to share some of my wealth, with other people and just want to do something good and help to make others feel rooted and aware*" (Long term food pantry volunteer, male, 50-60 years old, manager of a company).

Besides philanthropic motivation, the statement shows the motive of poverty awareness. The volunteer is aware of food insecurity in Germany while he feels blessed and satisfied with his personal situation. But at the same time he is aware that his situation is not the standard. The statement confirms findings of Vlaholias et al. (2015) that awareness of need is an essential requirement for any type of philanthropic behavior.

Motivations found correspond to the classification proposed by Clary and Snyder (1999). However, volunteers interviewed expressed fewer self-centered motivations than found in prior studies. Their motivations were rather social and community centered. Reasons may be connected to the nature of the organization. As Haivas et al. (2012) stated, the organization where volunteering takes place is of central importance to volunteers, because their personal values and motives are reflected in the organization.

6 Volunteers' interactions with food pantry managers, food pantry users and food donors

When volunteers carry out their service at the German Food Bank they interact with food pantry users, mangers and food donors. Each type of actor described positive as well as negative interactions affecting the services provided by the German Food Bank.

6.1 Volunteers and food pantry users

At the surface, interactions between food pantry users and volunteers interviewed were mostly positive. Both volunteers and food pantry users mentioned emotional interactions with each other. The users interviewed explained that they were

happy with the service and products provided and did not explicitly mention feelings of shame or humiliation.

> "*I do not have any bad experience with the German Food Bank. I am satisfied. I like the people inside. They are very polite. There are very nice people at the German Food Bank*" (*Food pantry user, female, 30-40 years old, homemaker*).

> "*I was very surprised, everyone is so very nice and friendly. If I were to be treated differently, I would not come to the German Food Bank anymore*" (*Food pantry user, female, 80-90 years old, retiree*).

These statements seemed to contrast with previous studies (Lambie-Mumford 2013; Van der Horst et al. 2014), where interactions between food pantry users and volunteers were described as negative, and dependency and helplessness of food pantry users and unfriendliness or reservedness of volunteers were criticized. The explanation for these differences is the strict code of conduct within the German Food Bank as an organization. Food pantry users must be treated respectfully, similar to guests in a restaurant; also, an open friendly atmosphere is required. However, the second statement implicitly indicates that the code of conduct is not practiced in every food pantry in Germany. The elderly woman says, she was surprised about the friendliness and if she were treated differently she would not continue to use the service. The implicit message is in line with Lambie-Mumford (2013) mentioning that British food pantry users refused to visit food pantries due to improper treatment. Another issue resulting in negative interactions emphasized by both volunteers and users was the understanding of neediness.

> "*If they are not coming without any excuses, that they are sick or on holiday, whatever […]. If they are not coming without an excuse, they are dropped out from the list. Then a new person is coming. The waiting list is long. We suppose they are not in need*" (*Food pantry volunteer, female, 60-70 years old, retiree*).

> "*You cannot just say 'Yeah or I do not want it.' I do not know […]. I think with a little more charm and being nice they like you better. With a laugh or smile, they are nicer and you can get a potato more for example*" (*Food pantry user, female, 30-40 years old, homemaker*).

The statements emphasize a particular understanding of neediness. Only users that come regularly are considered needy and therefore deserving to receive food assistance. When volunteers refuse to provide food to food pantry users coming irregularly or provide more food to some users, their behavior confirms prior findings of unequal treatment of food pantry users and barriers to food access (Poppendieck 1998; Lambie-Mumford 2013; McIntyre et al. 2015). The particular understanding of neediness and the respective volunteer behavior is also in line with the critique by Poppendieck (1998) and McIntyre et al. (2015) that different degrees of neediness are not considered. The issue of expected gratefulness (Tarasuk and Eakin 2003; Van der Horst et al. 2014) was found, but only implicitly as the user statements emphasized that volunteers appear more responsive to users showing gratitude but expected gratefulness was not addressed by volunteers and users in a direct manner.

In contrast to prior research (Tarasuk and Eakin 2003; Lambie-Mumford 2013; Van der Horst et al. 2014), the present study found examples of volunteers feeling helpless or weak in the interaction with food pantry users. Volunteers stated that they felt helpless, when they were unable to provide requested help or had difficulties to deny food pantry users' requests for extra food, and therefore acted against organizational rules. Volunteers had to negotiate the conflicting interests of the organization and the users, where following the request of one party can lead to dissatisfaction or distrust of the other. Therefore, in situations where volunteers did not follow the rules, they had to cope with the feeling of guilt. According to Van Schie et al. (2014) volunteers' perception of their own role and the perception of their task might have caused the feeling of guilt. Tasks that are subjectively perceived as unnecessary or unreasonable, have a negative emotional effect on volunteers.

Even though Wilson and Musick (1997) claimed relationships and interactions between volunteers and food pantry users as being ethical in every aspect, in practice that is not always the case. Interactions appear to be superficially respectful and polite, and in line with the German Food Bank's code of conduct. However, when explored at a deeper level, interactions were affected by volunteers' decisions and good will. In some cases, volunteers interviewed felt morally guilty and weak during the interactions, especially when acting against the rules, e.g., providing extra food according to user requests. Even though volunteers felt to be the weaker party in the interaction, the authority actually rests with them.

As boundary spanners, volunteers have authority to act on behalf of the organization and are asked to provide information to the German Food Bank concerning the specific needs of food pantry users. In addition, through the lens of the theory of social exchange, the authority rests with the volunteers in all interactions. The social exchange theory can serve as an explanation why interactions were still evaluated positively by food pantry users, even though there were underlying tensions. As the food pantry users (subordinate) benefitted from the volunteers' (authority) decisions, food pantry users considered volunteers as legitimate authorities and were ultimately satisfied.

6.2 Volunteers and food pantry managers

Interactions between volunteers and food pantry managers appeared mostly positive. Furthermore, volunteers followed managers' instructions and the German Food Bank's code of conduct in the majority of cases. This included using recommended language and fulfilling the tasks required.

"We are asked to remind the guests, your card will expire on x of June, so you should bring the documents from the government. So they can prove that they are eligible to get help from our pantry. Then the head of the food pantry will re-issue the card and they can stay on the list, and people can continue to get the food from us" (Food pantry volunteer, male, 20-30 years old, student).

"If the desk is not clean, there would be a penalty for the station manager. But fortunately I have reliable people [refers to volunteers in charge of an assigned food station, where users get served]" (Food pantry manager, male, 50-60 years old).

Both statements show that volunteers have to follow instructions by food pantry managers, for instance, using the requested terminology for people using the German Food Bank's services. Because food pantry managers wish that food pantry users are treated with respect, volunteers are required to call them customers or guests. Food pantries acting as food distribution centers where the users are provided with groceries call their users "customers." Food pantries with soup kitchens, where warm meals are handed out, call their users "guests." In addition to following such instructions on how to address food pantry users, volunteers need to complete tasks responsibly, this concerns hygiene, food safety and duties where food pantry users depend on them and ignoring instructions potentially has negative consequences for users.

Besides positive interactions, in some case the interactions between food pantry managers and volunteers were affected by inefficient and inappropriate work behavior of volunteers, for instance ignoring managerial instructions, the organizational hierarchy and the chain of command.

> "*I am kind to our volunteers. They are not paid. But sometimes I need to play hardball with them, if things get out of control*" (Food pantry manager, male, 50-60 years old).

> "*I have a problem right now in [Name of a city]. I was called by a female volunteer who said that there is a customer who receives goods that he is not allowed to have because he isn't eligible. Well, she cannot agree that [Name of a city] carries on distributing that to him. My question to her was, why don't you speak directly with the manager in [Name of a city]? Then she said that she could not, because she has problems with him. Well, she has a problem with her manager; these are the things that I have to deal with as a state representative*" (Food pantry manager and also elected state representative, male, 60-70 years old).

Even though food pantry managers command the authority through their hierarchical position in the work relationship, volunteers do not respect that in all situations. This form of defiance led to conflict between both parties. While the first statement addressed conflict between managers and volunteers. The second statement referred to conflict with a third party involved. The statement refers to a situation where a volunteer asked the state representative for help in solving a business problem, because the work relationship with the manager in her pantry was tense. The volunteer required the state representative to make a decision whether to provide food to a user who was not eligible to receive food. Thus, the organizational hierarchy and the chain of command was ignored, since a state representative was asked for a decision and not the food pantry manager in charge. Another aspect of the interviewee's statement is that the he was not only required to help with the business problem, but also with the interpersonal problem between the volunteer and the food pantry manager. Since the state representative held a higher hierarchical position than a local food pantry manager, he was expected to mediate between the two parties.

These findings add to Van der Horst et al. (2014) who presented negative interactions between volunteers and food pantry users. In a similar manner, the interactions between volunteers and food pantry managers were negatively affected, if instructions

or the chain of command was not followed. According to social exchange theory, following instructions would be considered beneficial for volunteers, since they can refer back to the authority's word, if they need to perform unpleasant tasks. Furthermore, it would be beneficial for volunteers to be on good terms with the authority, because volunteers on good terms can expect to receive responsible and pleasant tasks. In addition, they do not run the risk of losing their position as a volunteer.

6.3 Volunteers and food donors

Interactions between volunteers and food donors showed both positive and negative interactions. Food donors were either satisfied or dissatisfied with the behavior and operational procedures of the volunteers.

> "*Also, the problem with the German Food Bank was always that they did not have that many people, and they couldn't collect daily. Because some things must be collected daily. And they were always laying around here for a week. And especially in the summer the goods do not get better then. Because they also cannot always be refrigerated*" (Owner of an organic supermarket, male, donates upon request of the German Food Bank).

The statement shows that the collaboration between the German Food Bank and the food donor required an extra effort by the food donor, regarding the selection and storage of food items. The German Food Bank does not accept products containing alcohol or products past the best-before-date. While some donors are dissatisfied with the volunteers' appearance and behavior, other shared positive experiences.

> "*We cannot stand them anymore; this is not correctly put. Well, those people came again and again. They always came back and said, 'This is not all right. We only take this with us, but that one we don't.' But it depends on the person [volunteer collecting the food items]. Now we donate it all to the [Name of a city] Youth center. This does not hurt me, because I think, now the food it with someone who is very active in youth work, and the kids are very happy, even though the chocolate is expired*" (Manager of a German food retail chain, female, used to donate to the German Food Bank once a week).

> "*The collaboration with the German Food Bank is something very positive. All of them are volunteers, very nice people. They usually come on Tuesday mornings, we are used to it. They usually wait until I am available to provide them with the selected food items. Things are great, without any stress*" (Manager of a German food retail chain, male, donates to the German Food Bank once a week).

Dissatisfied donors complained about volunteers not maintaining a low profile or that the volunteers collecting the food changed too often and they could not build a trusting relationship. These negative findings contrast with prior studies (e.g., Devin and Richards 2016) presenting mainly positive collaborations between retailers and organizations collecting surplus food. Satisfied donors were happy that volunteers came on the agreed upon day, and adjusted their operations accordingly.

The perceived differences of the interactions can be explained by social exchange theory and both parties' perception of their role and respective authority within the interactions. In the cases of perceived positive interactions between volunteers and food donors, both parties acknowledged each other as equal partners in the collaboration. Volunteers respected the authority of the food donors, because donors provided the resources needed by the German Food Bank. The role as boundary spanners requires volunteers to acquire food items and collect information with respect to the available quantities. Their role provides them the authority to act in the best interest of the organization. Accordingly, they are on time and collect food in a manner that respects donors' needs. Similarly, food donors acknowledged the volunteers as representatives of a collaborative organization. As donors also benefit from the collaboration, they approach volunteers supportively, for instance pre-sorting food items. When the interaction was perceived negative, each party believed that the authority rested only with them and the respective other party was in an inferior position. From the donors' perspective, the authority rested on the donor's side because the donor provides food items that the German Food Bank needs. From the volunteers' perspective, the authority rested with their organization, since the German Food Bank takes items, which would be discarded for costs otherwise. The dissatisfaction occurred due to differing perceptions of authority (Bondy 2008); in terms of authority, both parties are independent. Both parties should be willing to compromise since they depend on each other and their collaboration is beneficial for both.

7 Conclusions

Results support the notion that volunteers' interactions with food pantry managers, users and donors affect the services provided by the German Food Bank considerably, both in terms of how services are performed and how the organization is perceived by food pantry users and food donors. The theory of social exchange is applicable to all the interactions identified. Volunteers reported having predominantly social motivations, but these motivations are not necessarily reflected in their interactions with food pantry users in all cases; since some interactions seem to result in users' reluctance to continue to take advantage of the Food Bank's services. Further, the understanding of neediness causes tensions in volunteer-user interactions. The mismatch between motivations based on volunteers' good intentions, and interactions that suggest inappropriate use of authority over users, leads to the assumption that volunteers may not be fully aware of the importance of their organizational role as boundary spanners and the ensuing responsibilities.

To improve services provided by the German Food Bank and to remedy the potential interaction problems hinted at in the present study, food pantry managers need to develop more awareness among volunteers on food insecurity and related problems and how to overcome them. Volunteers should receive training on food insecurity and its effects on living conditions, as well as psychological training to better understand users' problems and needs. Such training is necessary since neediness takes different forms. In contrast to the volunteers' perception of need and food bank policies, coming irregularly is rather an indication of being in need, as it shows inability to manage daily routines. Following Kinnane et al. (2011), volunteers should receive formal and

practical training. The authors researched training programs for volunteers in the Australian health sector, being exposed to emotionally challenging tasks, and emphasized the value of simulations and role plays in volunteer training. They stated that volunteers value the reality of the training situation as well as the support and safety provided by the training. Similar training practices should be promising for volunteers interacting with food pantry users.

As another way to reinforce the practice of the German Food Bank's code of conduct (respect, dignity and choice), the German Food Bank could follow examples in the U.S., where some food pantries have been transformed into supermarket-like locations where users can choose more freely among available items. Because food pantry users perceive registration and requirements for proof of neediness particularly humiliating, free pantries could consider following the U.S. model where some pantries allow registration on an honorary basis.

In addition to effects from volunteer-user interactions, interactions between food pantry managers and volunteers also affect the services provided. Managers set the rules that govern how volunteers carry out their duties. One point of conflict between the two parties is that volunteers do not necessarily respect the chain of command, and thus may ignore the rules in some cases. Most likely, their role as boundary spanners contributes to these interaction problems, as the role provides extensive authority, which can be misunderstood. Consequently, the role as boundary spanners should be explained to volunteers explicitly when they begin to serve at the Food Bank. The boundary spanner role gives volunteers the authority to act on behalf of the organization, but volunteers are expected to act in the best interest of the organization and follow managerial instructions. A formal memorandum of understanding may be helpful to both parties.

With respect to the interactions between food donors and volunteers, it is important that volunteers perform their boundary-spanning role in a manner that shows willingness to compromise, because tensions can occur when one party imposes on the sensitivities of the other. No party has authority over the other, but the German Food Bank relies on retailers and vice versa, with regard to redistribution. The complexity of this relationship requires sensitivity in interactions. Accordingly, inexperienced volunteers should receive training from more experienced volunteers, and accompany them when collecting food donations. When collecting food, volunteers should make sure that the collection fits the schedules of the retailers involved. Volunteers should avoid collection during busy times as it may be disruptive to retailers' operations. Moreover, having the same volunteers pick up each time at a particular retail outlet could help to develop routines and foster trusting relationships. Volunteers should be trained to be discrete, because not every retail chain or manager wants customers to know that they cooperate with the Food Bank.

Future research should further explore the role of volunteers in food pantries. As boundary spanners, volunteers are granted a certain authority, but in many ways they fulfill a serving role, in which they need to adhere to their authorities' orders. Building on Netting et al.'s (2005) study of how volunteers with multiple role profiles, perceive their duties and roles in faith based organization, further studies should investigate the role perception of volunteers in food pantries, as they are required to fulfill various professional roles. Insights into the volunteer's perception of their own role may help to assign them to tasks in the pantries as well as improve their services. This can help

alleviate some of the problems regarding users, managers and donors addressed in this study. Also the focus on volunteer-user interactions can be deepened in future research, following Rombach and Bitsch (2017) a focus on the interaction with refugees in food pantries is suggested, as interactions with this group of users may be particularly difficult for volunteers due to cultural differences and language barriers.

As this work provides insights into interactions of German Food Bank actors and donors, future work could deepen the knowledge on other relevant actors and their interests in the organization through a more complete stakeholder analysis. Stakeholder analysis allows the identification of individuals or groups that affect or are affected by operations of an organization, and classifies them according to their impacts on the organization and the impacts the organization will have on them. In addition to the actors addressed in the present study, further external stakeholders, such as local governments and other societal groups should be investigated. Analysis of interactions with organizations that compete with the German Food Bank for resources, such as the Food Sharing organization, would add to an integrated perspective.

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Sector blending: evidence from the German Food Bank

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RESEARCH ARTICLE

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Abstract

This study investigates forms of sector blending practiced by the Federal Association of German Food Banks and respective benefits and drawbacks emerging for the organization. The study builds on a prior sector blending categorization system. Twenty in-depth interviews with food bank members were recorded, transcribed, and analyzed using qualitative content analysis. In addition, webpage materials from German food retailers and press releases from the German Food Bank were analyzed. Imitation, interaction and industry creation were forms of sector blending found. The main drawback found was that the food bank fails to serve those outside the German social security system, such as the homeless. Benefits include a more professional image of the organization, and the enhancement of social capital. Overall, the additional generation of funds and resources were the most important aspects of sector blending efforts in the German food bank, as it helps food pantries adjust to an increasing number of people in need.

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1. Introduction

The Federal Association of German Food Banks (abbreviated in the following as German Food Bank) is a charitable nonprofit organization that redistributes surplus food items to people in need (Lorenz, 2012). Founded in Berlin in 1993 as a social movement, the German Food Bank developed into a federal association with an umbrella structure since then (Federal Association of German Food Banks, 2017). The organization consists of 900 local food pantries spread across Germany staffed with about 50,000 volunteers (Von Normann, 2011). The local pantries elect a representative for each of the 16 German states (Selke, 2011a; Federal Association of German Food Banks, 2017). These state representatives form an executive board, which is supported by a head office and an advisory body (Federal Association of German Food Banks, 2017; Selke, 2011a). According to the homepage of the Federal Association of German Food Banks (2017), all representatives meet once a year in a general assembly where the executive board is elected.

Local pantries differ in size, financial resources and operational structure (Von Norman, 2011). The webpage of the Federal Association of German Food Banks (2017) distinguishes between free and associated food pantries. While free pantries are independent in terms of their operating policies and procedures, they maintain close contact with the umbrella organization. Associated pantries, in contrast, are required to follow the umbrella organization's policies and procedures.

Food pantries in Germany served 1.5 million users in 2016 (Federal Association of German Food Banks, 2017). Pantry users are socially disadvantaged people suffering from food insecurity (Selke, 2011a). The main goal of the German Food Bank is to form a bridge between socially and economically disadvantaged people and food retailers who provide surplus food items which cannot be sold in retail outlets. The items could be mislabeled, out of season or have defects in packaging, but must be safe for consumption (Federal Association of German Food Banks, 2017). In addition to this bridging function, the German Food Bank actively fights food waste (Lorenz, 2012). Both goals are explicitly stated in the organizational motto 'Food, where it belongs' (Federal Association of German Food Banks, 2017). The German Food Bank's activities can be seen as efforts to avoid food items being discarded. Further services provided by the German Food Bank are handing out meals in soup kitchens, providing breakfast to school children, distributing second-hand clothing and assisting users with medical appointments, banking tasks, dealing with government authorities and similar tasks (Lorenz, 2012; Reiniger, 2011; Von Normann, 2011).

The German Food Bank and its activities have been well researched. Existing studies focus on the sociological and political aspects of poverty and food insecurity (Selke, 2011a), the food bank user perspective in the context of dignity (Hoffmann and Hendel-Kramer, 2011) and vulnerability (Sedelmeier, 2011). Other studies address public perceptions of the organization and its services (Häuser, 2011; Witt, 2011). Several studies (Selke, 2011b; Werth, 2011; Witt, 2011) indicate that the German Food Bank's operations are not purely nonprofit, but in fact overlap with the for-profit and public sectors. This overlap in operations can be framed as sector blending. Sector blending occurs when an organization operating in a defined sector uses various approaches, activities, and relationships that blur the distinctions between nonprofit, public and for-profit organizations. The organization operates either in a manner similar to organizations in other sectors or operates in the same realms or both (Dees and Battle Anderson, 2003; Park, 2008).

Dees and Battle Anderson (2003) emphasize the importance of sector blending as a means of organizational survival, as a way to establish legitimacy in the operating sector and to gain resources. At present, the number of food bank users is steadily increasing, of which mismatch between the quantity of food available in local food pantries and the number of users arises (Federal Association of German Food Banks, 2017; Hoffmann and Hendel-Kramer, 2011; Von Normann, 2011). Therefore receiving donations and funds is particular important for the organization, and sector blending can contribute to receiving both. However, because its operational principles strictly emphasize the non-profit nature of the organization, adopting for profit-business practices also could jeopardize the German Food Bank's reputation and existence. As the Food Bank has become an important factor in the German social welfare system, the demise of the organization could lead to serious

consequences for people in need. In this context, the present study adds an organizational perspective to the existing body of literature on food pantries in Germany, in which the German Food Bank's operations are examined for evidence of sector blending. The objectives are to explore which forms of sector blending are employed by the German Food Bank, and which potential benefits and drawbacks emerge from sector blending for the organization.

2. Literature review

Sector blending occurs due to global and cultural shifts (Wachhaus, 2013), as a consequence of organizations striving for market power and functionality (Bromley and Meyer, 2014), or due to resource dependencies and political pressure (Bromley and Meyer, 2014). The decline of governmental control in markets leads to market pressures that drive nonprofit organizations to adopt strategies similar to that of organizations operating in the for-profit and public sectors (Bromley and Meyer, 2014). Prior studies provide various examples of sector blending between the for-profit, nonprofit and the public sectors (Alcock, 2010; Billis, 1993; Brandsen *et al.*, 2005; Park, 2008; Sagwa and Segal, 2000; Tuckman, 1998). The creation of 'hybrid organizations' (Evers, 2005; Hoffmann *et al.*, 2012; Ménard, 2004; Pache and Santos, 2013), collaboration (Brandsen *et al.*, 2005) and contracting (Dees and Battle Anderson, 2003) are commonly identified practices. The housing, health and educational sectors in the U.S. serve as examples where sector blending has taken place (Dees and Battle Anderson, 2003). Dees and Battle Anderson (2003) grouped various forms of sector blending into four categories: imitation and conversion, interaction, intermingling and industry creation (Table 1). These four categories are closely interrelated and the different forms of sector blending also occur in association with one another.

Further, Dees and Battle Anderson (2003) explored benefits and drawbacks of sector blending. As benefits, they emphasized effective and appropriate resource allocation, sustainable solutions to social problems for social entrepreneurs, increased accountability for nonprofit organizations and increased financial strength. In terms of drawbacks, they enumerated threats to social performance (including mission drift), decrease in quality of service and decline in the level of advocacy against social injustice. Another critical aspect they addressed is the potential of undermining indirect social benefits. For example, Dees and Battle Anderson (2003) mentioned reduction in the creation of social capital as well as loss of the charitable character of the nonprofit sector. Another negative aspect of sector blending Dees and Battle Anderson (2003) emphasized is the creation of classes among service recipients.

Social capital has been extensively studied in various disciplines (e.g. in sociology, Coleman, 1988; in philosophy, Bourdieu and Wacquant, 1992; in political science Putnam, 1995; in economics, Portes, 1998, refined concepts described by Bourdieu and Coleman), each of which has its own definition. Dees and Battle Anderson (2003) do not explicitly state which line of theory or school they follow. Instead, they provide examples of how social capital is created through members of organizations, within the organization and externally with other stakeholders and organizations (Dees and Battle Anderson, 2003: 23). These examples cover a broad enough spectrum to encompass the main themes included in each of the different schools mentioned above. Schneider (2009: 2) defined social capital as 'relationships based in patterns of reciprocal, enforceable trust that enable people and institutions to gain access to resources like social services, volunteers, or funding.' In developing this definition, Schneider identified the key elements common to all of the various schools of social capital theory – namely, networks, trust, norms and culture – and differentiated between different forms of social capital. The examples provided by Dees and Battle Anderson (2003) seem to relate well to Schneider's definition. Accordingly, Schneider's definition (2009) is used in the context of the present study, because it also fits well with the German Food Bank's operations.

To better understand the evidence of sector blending in the activities of the German Food Bank, the organizational structures of the German Food Bank are revisited, as these structures determine its operations. The term operations is used here to refer to the day-to-day activities of the food bank that serve both to create

Table 1. Sector blending classification system (adapted from Dees and Battle Anderson, 2003).

Category	Explanation
Imitation and conversion	Adoption of strategies, concepts and practices of the business world; identifying target markets and consumer segments; application of management strategies and tools; charging fees for services provided; changing from non-profit to for-profit status. Example: Habitat for Humanity in the U.S. – organization building houses for those who otherwise could not afford them; in exchange, the new owners must repay a modest mortgage (generating fees for services).
Interaction	
Competing	Nonprofit organizations entering profit or public sectors and competing for market share, resources or consumers. Example: hospice care in the US
Contracting	For-profit organizations contracting with nonprofit organizations for both 'nonprofit-like' goods and services and goods and services traditionally provided by other for-profit businesses. Example: universities contracting with technology companies to transfer curriculum to media suitable for distance learning.
Collaboration	Nonprofit organizations and for-profit organizations entering strategic partnerships and joint ventures that provide mutual benefits. Example: an anti-hunger organization in the U.S. entering into an agreement with American Express to market and raise money via cause-related marketing campaigns.
Intermingling	Creation of 'hybrid organizations'; hybrid organizations are organizations, networks or umbrella groups with for-profit as well as nonprofit components; hybrid organizations allow nonprofit organizations to conduct activities not fitting neatly into the nonprofit structure. Example: Girl Scouts in the U.S. and the charity organization 'United Way' establishing for-profit subsidiaries to generate revenues to support their nonprofit programs by selling equipment and merchandise to local organizations and licensing the organizations' names and logos.
Industry creation	Establishment of a new market within an existing market. Example: charter schools in the US are independent public schools that are often run and managed by parent-teacher partnerships, nonprofits, universities, and for-profit companies; some charter schools are new schools, others have been converted from traditional public schools; in return for demonstrated results, these schools are allowed to operate outside of traditional rules and regulations of the public school system.

unique value and achieve core objectives. Resources, capacity and output usually influence operations. As shown by Dees and Battle Anderson (2003), these three aspects are expected to improve due to sector blending.

Based on the international literature on food bank management (González-Torre and Coque, 2016; McIntyre, 2015; Vitiello *et al.*, 2015), particularly studies describing food bank structures and operations (Baglioni *et al.*, 2016; Mohan *et al.*, 2013; Tarasuk and Eakin, 2003, 2005), German food pantries can be classified as 'front line systems'. In contrast to 'logistical systems' where food bank operations are focused on food bank donors and distribution to users is carried out by other organizations, front line system are dedicated to serve food bank users (Baglioni *et al.*, 2016). The pantries operate either as soup kitchens, where prepared food is served (Lorenz, 2012); as distribution centers, where available food items are apportioned to food bank users by food bank volunteers (Selke, 2011a); or as supermarket-like pantries, where food bank users can choose from the available options within a monetary limit that is based on their level of need (Werth, 2011).

To maintain the pantries and guarantee service to food bank users, collaborations with sponsors and donors are essential. Selke (2011b) and Witt (2011) explained the benefits of collaboration for food donors and the German Food Bank using the example of event weeks carried out by a German food retail chain that invite consumers to buy products and place them in bags for donation to food pantries. The retailer donates the purchased food items to the food bank, and adds a predetermined quantity of products to the donation. The practice creates a win-win situation for the retailer and the food pantries, as it confers a positive image to the retailer while providing a large quantity of food donations to the food pantries (Witt, 2011). The Food Bank advertises collaboration by retailers and social welfare organizations its collaboration partners to food pantry users as well as on their internet site. Usually collaborations work well, because both parties benefit; but operational conflicts can occur in case of dependency on individual donors or sponsors (Hiss, 2010; Selke, 2011b).

Selke (2011b) addressed another operational conflict related to brand protection. The Federal Association of German Food Banks protected the German name for food pantries 'Tafel' (dining table) as a brand name. Accordingly, only food pantries belonging to or associated with the organization are allowed to use the name, even though other nonprofit organizations provide the same service (Reiniger, 2011; Selke, 2011b). According to Selke (2011b), this creates conflict and hinders collaboration. Studies by Lorenz (2010b) and Witt (2011) researched the consequences of branding and the monopoly that resulted from it. They focused on the brand concept and emphasized the logo (a plate with cutlery and the slogan 'Food where it belongs'). The brand concept can be associated with wealth, while food pantries are associated with poverty. Since logo and slogan should depict the reality behind the brand, both authors considered the branding questionable.

German and international studies have highlighted equity and dignity as key operational principles for food pantry volunteers when serving food pantry users (Hoffmann and Hendel-Kramer, 2011; Lorenz, 2010a; McIntyre *et al.* 2015; Tarasuk and Eakin, 2003; Van der Horst *et al.* 2014). Volunteers are expected to distribute the available food fairly amongst the users, to treat them respectfully and avoid any form of shaming (Tarasuk and Eakin, 2003). In practice, these operational principles are not always followed. Structural asymmetry between users and volunteers can cause conflicts (McIntrye *et al.* 2015; Reiniger, 2011; Selke, 2011b, 2016; Van der Horst *et al.*, 2014). With respect to dignity, Hoffmann and Hendel-Kramer (2011) found that in German food pantries, managers decide whether the food is provided free of charge or for a symbolic payment. Such payments are usually 10-30% of the prices charged at a local retailer. Payments are adjusted to the benefits users receive according to the Social Security Code (Hoffmann and Hendel-Kramer, 2011; Lorenz, 2010a). Von Normann (2011) pointed out that having to provide an official proof of neediness from the welfare agency to receive food from a food pantry was perceived as humiliating by users. However, the German Food Bank decided that the eligibility assessment was necessary, because deception had been documented (Von Normann, 2011).

Lorenz (2010b) and Hoffmann and Hendel-Kramer (2011) criticized the German Food Bank on three main points. First, they posited that the German Food Bank has strayed from its foundational idea by bringing regular food items into the food pantry system, referring to the acquisition of non-surplus food items (e.g. through event weeks) in response to insufficient supply. Second, they confirmed prior work by Becker (2010) showing that the German Food Bank had also started addressing other aspects of poverty, such as education and youth unemployment. They postulated that food bank volunteers charged with these tasks are not necessarily qualified and suggested that these tasks were more appropriately carried out by what they see as better qualified personnel in other recognized German welfare organizations. Finally, they suggested that the German food bank aims to reach too many different target groups by opening food pantries for pets and children, and portrayed such operations as self-sustaining measures and attempts to create a social market within an existing social market (see also Selke, 2016).

Judging from the studies discussed above, the operations of the German Food Bank include various forms of sector blending (Dees and Battle Anderson, 2003). The establishment of different food pantry types (Lorenz, 2012; Selke, 2011a; Werth, 2011), such as soup kitchens (Lorenz, 2012) and pantries with a supermarket

character (Werth, 2011), can be summarized as imitation, as these structures mimic German food retail or food service venues on a smaller scale. Another example of imitation (in this case of the public sector, namely social security provision) is the eligibility assessment required of food bank users (Hoffmann and Hendel-Kramer, 2011; Von Normann, 2011). Collaborations with donors and sponsors (Witt, 2011) as well as with food pantry users (Lorenz, 2012) are forms of interaction. Similarly, brand creation can be interpreted as a form of interaction, more precisely, avoiding competition (Reiniger, 2011; Selke, 2011b). By the same token, brand creation and monopoly building represent a form of imitation of the for-profit sector. Whether sector blending is strictly beneficial to the German Food Bank or whether drawbacks also occur has not yet been studied.

3. Methods

The study uses a qualitative research approach, because a qualitative approach is appropriate when a theory is to be developed, an unknown research topic to be explored, or a new perspective to be added to a previously well-investigated topic (Bitsch, 2005). The exploration of operations of the German Food Bank in relation to sector blending and its potential benefits and drawbacks takes a new perspective on researching food pantry operations. According to Bitsch (2005), a qualitative research approach is necessary when a study focuses on the perspectives and experiences of actors in their everyday lives. Further, it allows the identification of cultural framings and social realities (Bitsch and Yakura, 2007; Perera *et al.,* 2016). Exploring food bank operations and forms of sector blending requires examination of the perspectives of multiple actors involved in these operations (Darbyshire *et al.*, 2005). Also, food pantry users are considered a vulnerable population, which are more effectively reached using qualitative in-depth interviews (Hsieh and Shannon, 2005); thus, this approach was used here. Qualitative in-depth interviews allow the researcher to obtain answers to questions of a sensitive nature. This was particularly important in this study, as sector blending is not necessarily perceived as entirely positive. Potential negative effects on other parties might lead food pantry managers to avoid revealing operations that might be construed as sector blending (Hoffmann and Hendel-Kramer, 2011; Von Normann, 2011).

Twenty in-depth interviews were conducted in August and September 2015 and from January to March 2016. Following Suri (2011) and Noy (2008), emphasizing purposeful sampling as particularly suitable for qualitative research, the interviewees' roles at the German Food Bank, respectively their relationship with it, as well as their potential knowledge of forms of sector blending and their potential control over or benefits from sector blending activities were considered (Table 2). Interviewees included five food pantry managers, four food pantry users, five volunteers, one spokesperson from the head office of the Federal Association of the German Food Banks and five retail food donors, and represented both free and associated food pantries.

Each interview lasted 60 to 90 minutes. Interviews were carried out either face-to-face or by phone, according to the interviewees' preferences. A semi-structured interview guide outlined the main topics of the interviews. Topics were addressed through open-ended questions that were asked according to the interview flow. The topics discussed included food waste, food redistribution as well as other food pantry operations. The initial interview guide focused on food redistribution and volunteering at the food pantries. During the research process, modifications to the research guide were necessary in order to better reflect each interviewee's duties as well as the terminology they used (see also Perera *et al.*, 2016).

Eighteen of the twenty interviews were audio recorded and transcribed verbatim before data analysis. On two occasions, the interviewees did not agree to audio recording and, therefore, field notes were taken. In addition to the interviews, information from webpages of the German Food Bank and food retailers were analyzed. The internet site of the Federal Association of German Food Banks served as the starting point. Press releases and other materials from the German Food Bank published between 2015 and 2016 were collected and analyzed. As the site also identified partnerships with food donors and sponsors, information from collaboration partners' webpages were also included in the analysis. Field notes, press releases and interview transcripts were analyzed using qualitative content analysis. During the analysis process, raw text

Table 2. Purposeful sampling approach.

Group of interviewees	Role in/for the organization	Information sought from interviewee[1]	Assumed level of control over or benefits from sector blending activities[1]
Managers of local food pantry	Manage food pantry operations	Managers are knowledgeable about all types of food bank operations within their food pantry, within the umbrella organization and about external collaboration partners. They are knowledgeable about all forms of sector blending practiced by the German Food Bank.	Managers have control over sector blending activities. If the organization would not benefit from sector blending, these efforts would not be undertaken.
Food pantry users	Receive food	Food bank users are knowledgeable about the forms of sector blending they perceive when coming to the food bank to receive food and interact with personnel and other users. They are likely knowledgeable about forms of imitation and possibly interaction, if collaboration partners are advertised by the food pantries personnel.	Users benefit from sector blending activities but have no control over it.
Volunteers at a food pantry	Serve food bank users, sort and pack food, collect food from retail chains	Due to volunteers' diverse tasks, they are likely to be knowledgeable about imitation and interaction. Since they are not involved in strategic decisions of the umbrella organization, they are not likely knowledgeable about industry creation.	Volunteers mostly follow the instructions of mangers. They do not have direct control over sector blending activities, and also do not benefit.
Spokesperson of the German Food Banks	Official communications	The spokesperson communicates on behalf of the umbrella organization. Therefore, she is expected to know all forms of sector blending practiced by the German Food Bank.	The spokesperson has no control over sector blending activities, and also does not benefit.
Managers in food retail chains	Cooperation with local food bank, food donations	Managers in ford retail chains are expected to be knowledgeable about forms of interaction, due to the collaborations between food retail chains and the German Food Bank.	Retail chains are likely to benefit from sector blending activities; otherwise, the collaboration would not exist. Extent and frequency of collaborations provide indirect control to retail chains.

[1] Adapted from Dees and Battle Anderson, 2000; Dart, 2004; Hoffmann and Hendel-Kramer, 2011; Lorenz, 2012; Selke, 2011b; Witt, 2011.

was systematically broken down and common themes were extracted. This was achieved through constant comparison and contrasting of the material. Ultimately, various forms of sector blending carried out by the German Food Bank were identified.

The analysis process consisted of two main steps: open coding and the establishment of categories. During open coding, labels were assigned to text fragments. These labels reflected the key thought behind each text fragment. During the coding process, field notes, transcripts and other materials were carefully read several

times. Throughout the analysis process, codes were conceptualized and relabeled. The coding process linked all relevant interview excerpts with codes and their corresponding definitions (Table 3).

In the second step, categories were established by grouping codes according to their meanings and associations. Each category was named using content-characteristic words and defined. Category definitions were created by combining all related codes and their definitions. This process of qualitative content analysis was carried out using the software package Atlas.ti (ATLAS.ti Scientific Software Development GmbH, Berlin, Germany), which allows for systematic analysis of documents. Atlas.ti includes tools for annotating and coding the data. Prior to the analysis of the empirical data, the categorization of Dees and Battle Anderson was used to identify forms of sector blending in the existing body of literature on operations of the German Food Bank (Table 4).

Table 3. Codes for the category 'Industry creation' with excerpts from interviews and web pages.

Code	Excerpt
Receiving regular food items Operations of the food bank reflecting industry creation; the German Food Bank uses different strategies to receive regular food items from German food retailers directly or indirectly through collaborations.	'From Monday (7 November 2016) on: [German food retailer] and [German food retailer] are asking you to buy a bag with seven products! These products will be donated to our local food banks. The bags are filled with products that are rarely donated due to their long shelf life. Spaghetti, ravioli, ketchup, milk rice, jam, tea and biscuits. The actual cost is currently 5.09 €, but the products are made available for 5.00 € in our markets. [Name of German food retail] will add 40,000 extra bags to the customer donations' (Announcement on the webpage of a German food retailer).
Focus on other aspects of poverty Operations of the food bank reflecting industry creation; the German Food Bank offers services and products dedicated to other aspects of poverty that are not related to food; services can overlap with those of other welfare organizations.	'The Food Bank Academy is a 100%-owned subsidiary of the Federal Association of German Food Banks and a nonprofit limited liability company. The purpose of the Food Bank Academy is to promote education. We would like to educate people that come actively to the food bank. We want to ensure the professional work of our boards and support volunteers in their commitment' (Description on the webpage of the Food Bank Academy). 'The food bank is helping greatly and is the solution for so many of us. I know that the food bank is supporting four schools in Munich' (User of an associated food pantry, female, 50-60 years old).
Supply and demand Demand for food is higher than the amount of food that can be supplied in the food pantries; impetus for the German food bank to focus on industry creation.	'What I am also doing is speaking with the big supermarket chains and the big donors. For example, I really go to the logistics center of [Name of a supermarket in German food retail] or [Name of a discounter in German food retail] to make sure that we have enough supply for the next year. The level of supply has dropped over the last year, but the number of people who want to receive food from the food bank has increased. So now you have an imbalance' (Manager of an associated food pantry and country representative, male, 60-70 years old).

Table 4. Forms of sector blending activities carried out by the German food bank.

Form of sector blending	In the literature	In this study	Excerpt
Imitation of the for-profit sector			
Retail structures, food service structures	Selke (2011a); Werth (2011); Lorenz (2012)	Yes	'Every station gets basic food, number one, potatoes, carrots, onions. In addition, bread is given out. Yes, yogurt, cheese, sausages. Rarely meat. Meat is not often available. We emphasize a healthy diet for these people [food bank users]. Fruit and vegetables' (Manager and founder of a free pantry, female, 50-60 years old).
Choice provided to food bank users	Selke (2011a); Werth (2011); Lorenz (2012)	Yes	'They give me a small choice. However, in fact, I am not the only one. There more than 100 people and if I would say, I want 10 or 20 bananas, and then they would say, are you crazy? I mean I cannot'. (User of an associated food pantry, female, 20-30 years old).
Home delivery service for users	No	Yes	'Some guests get the food delivered to their home. We also pack for new families, a box, which is packed beforehand at the distribution center, which we pick up and deliver to them. We do this for the ones that cannot come here, because they are disabled.' (Volunteer at an associated food pantry, female, 60-70 years old).
Payment for food	Hoffmann and Hendel-Kramer (2011)	Yes	'So they have the feeling of buying something with very little money. Nevertheless, they have the feeling of buying something. And for us it's about 300 € income per week' (Manager of an associated food pantry, male, 50-60 years old).
Branding	Witt (2011)	No	Not applicable
Motto	Witt (2011)	No	Not applicable
Imitation of public sector			
Proving eligibility	Lorenz (2010a); Hoffmann and Hendel-Kramer (2011); Von Normann (2011); Lorenz (2012)	Yes	'What helps us, is that, at the entrance of the food bank, the customers have to show their certificate'. (Volunteer at an associated food pantry, female, 20-30 years old).
Rating standards	Normann (2011)	Yes	'And so we separate them [food bank users]...the ones on Wednesday have green passes, and for Thursday they have white passes' (Manager of an associated food pantry, male, 50-60 years old).
Interaction			
Resource competition	No	Yes	'Lunch table! Our food bank in [Name of a North German town] recently got competition from the neighboring town. Another organization in [Name of the neighboring town] is collecting surplus food items for their purposes' (Announcement on the webpage of an associated food pantry in North Germany).

Table 4. Continued.

Form of sector blending	In the literature	In this study	Excerpt
Interaction (continued)			
Competition with other organizations providing same service related to food	Selke (2011b); Reiniger (2011)	No	Not applicable
Competition with other welfare organizations	Selke (2011b)	No	Not applicable
Collaboration with sponsors and donors	Selke (2011b); Witt (2011); Lorenz (2012); Von Normann (2011)	Yes	'So companies donate their stuff, big companies like [name of an online retailer], they put their stuff in these containers to help' (Manager and founder of a free pantry, female, 50-60 years old).
Collaboration with other welfare organization	Selke (2011b)	Yes	'For many people it is quite normal to have a warm meal every day. Moreover, to eat something healthy. For many people this is not normal. For example, they do not have enough money. That is why there is the food bank' (Announcement on the webpage of a welfare organization dedicated to helping people with disabilities).
Contracting	No	No	Not applicable
Intermingling	No	No	Not applicable
Industry creation			
Supply and demand	Lorenz (2010b); Hoffmann and Hendel-Kramer (2011)	Yes	'Yes 200 people on Wednesday and 120 people on Thursday. On Thursday there are almost only refugees...90% of the refugees are Muslims. They do not eat pork and mostly we get pork' (Manager of an associated food pantry, male, 50-60 years old).
Focus on other aspects of poverty	Becker (2010); Lorenz (2010b); Hoffmann and Hendel-Kramer (2011); Selke 2016	Yes	'After our lunch, at around 2 p.m., we support the children doing their homework. The ones that would like to can sit down in our food bank café and do their homework. If needed, we are there to help' (Offer on the webpage of a food pantry for children in Eastern Germany).
Bring regular food items into the food bank system in addition to surplus items	Lorenz (2010b); Hoffmann and Hendel-Kramer (2011)	Yes	'Since 2009, [Name of a German food retailer] has been involving its customers in the engagement with the food bank. Every year, for the period of a few weeks, our customers and we are 'filling plates together.' In 2014, a total of 318,000 food bags were given to the local food banks' (Announcement on the webpage of a German food retailer).

4. Results and discussion

Forms of sector blending identified in the recent body of literature reviewed above focus predominantly on operations taking place within food pantries, partnerships with sponsors and donors, and the process of serving food pantry users. Therefore, the following sections are structured accordingly. The final section describes the benefits and drawbacks of sector blending for the German Food Bank. The discussion includes both, findings from this study as well as forms of sector blending identified in prior studies.

4.1 Forms of sector blending related to operations within German food pantries

Given that different forms of food pantries exist in Germany (see also Lorenz, 2012; Werth, 2011), operations and duties described by the food bank volunteers interviewed are specific to the pantry in which they serve. Volunteers emphasized driving and reloading food trucks, inspecting, sorting and preparing food as their main duties in food pantries. Even though the operations volunteers are involved in seem diverse, they are related to food pantry users and how they receive food in the pantries. While some volunteers reported serving users coming to the pantry, others emphasized operations such as home delivery.

> Yeah. You can choose, but not everything. We give them prepared options they can choose. It is broccoli or cabbage, what do you like? (Volunteer at an associated food pantry, female, 20-30 years old).

> Some guests get the food delivered to their home. We also pack for new families, a box, which is packed beforehand at the distribution center, which we pick up and deliver to them. We do this for the ones that cannot come here, because they are disabled. The ones that cannot carry the food by themselves get it delivered to their home. (Volunteer at an associated food pantry, female, 60-70 years old).

As shown in the statements on the food pantry operations in which volunteers are involved, forms of sector blending are present. The volunteers' statements are focused on the imitation of practices found in food retail, for instance, providing a variety of products or home delivery service. These findings correspond to the findings of Hoffmann and Hendel-Kramer (2011), Von Norman (2011) and Werth (2011). Von Normann (2011) discussed the existence of various types of food pantries which operate differently. Adding to this information, Werth (2011) more explicitly outlined the existence of supermarket-like food pantries where users are able to choose relatively freely from the available food items. As these prior studies were not dedicated to sector blending, these activities were not identified as forms of imitation. The sociological background of the prior studies likely led the authors to interpret their observations as forms of dignity and respect towards food pantry users (Hoffman and Hendel Kramer, 2011).

When discussing their duties, managers focused on challenges, for instance, how to prevent cheating by food pantry users. They reported further challenges, such as the acquisition of funds and food donations. Managers emphasized food distribution schemes, quantities of food and partnerships with sponsors and donors. They mentioned their personal efforts as well as the importance of the Federal Association of German Food Banks as an umbrella organization with regard to the generation of funds and donations.

> We have different colors, yellow, pink and green. Then you know immediately. A person can come only once to each station. Through the color system they cannot try again through the back door. (Manager of an associated food pantry and country representative, male, 60-70 years old).

> We [the Federal Association of German Food Banks] have an agreement with them [a German wholesaler for food and tobacco] to keep 40 pallets. Therefore, we receive a pizza delivery from [a company producing frozen pizza]. And biannually, we receive a delivery of pizza on pallets. So, we can keep for example 30 pallets in our pantry in [a city in Bavaria]. The rest is distributed in other

pantries following the plans of the Federal Association. (Manager of an associated food pantry, male, 60-70 years old).

Eleven million euros – We thank all [a discounter in German food retail] customers. Eleven million euros this incredible amount of money has been donated by [a discounter in German food retail] customers at the bottle deposit machine. (Headline on the webpage of a discounter in German food retail).

The first manager statement above emphasizes the use of colors as a measure to ensure fair food distribution. This also reflects a form of imitation. In this case, the food pantry has borrowed measures from the public sector. The colors reflect the extent of neediness, evidence of which is required before becoming a food bank user. Similarly, before receiving any basic benefits, users must prove to the social security office the extent of their neediness. Standard rates of basic security benefits are payed accordingly. The managers interviewed and the webpages of German food retail discounters and supermarkets all reported on the amounts of food and funds being donated. In addition, webpages in particular, emphasized the partnerships between various food retail chains and the Federal Association of German Food Banks. According to Dees and Battle Anderson (2003), partnership presents a form of interaction, more precisely, collaboration between a non-profit organization and a for-profit organization.

4.2 Forms of sector blending within operations with respect to sponsors and donors

German food retailers are important collaboration partners of the German Food Bank and are deeply involved in food bank operations. Within the partnership, both partners need to be able to trust each other. Accordingly, it is important to understand whether retailers evaluate the collaboration in the same positive light as it is presented by the Federal Association of German Food Banks. Some of the retailers interviewed confirmed the positive nature of the collaboration, while others expressed concern and shared examples of conflicts between themselves and the food bank. Other retailers addressed the issue of resource competition amongst various organizations involved with collecting surplus food items.

We cannot stand them anymore; this is not correctly put. Well, those people came again and again. They always came back and said: 'this is not alright. We will take this with us, but not that.' But it depends on the person [the food bank volunteer who is collecting the food items]. Now we just donate it all to the...youth center. This does not hurt me, because I think, now the food is with someone who is very active in youth work, and the kids are very happy, even though the chocolate is expired. (Manager of a German food retail chain, female, previously donated to the German Food Bank once a week).

Because after all it is the acceptance. It is not easy to explain to someone, clearly the food bank, they already do it, and now how should I best explain that? They are giving it to the needy...But again, on the other side, the Food Sharers, what they do is simple, they distribute it among themselves. There are certainly many who are not needy. And there it would, I think, diverge a bit. (Manager of a German food retail chain, male, donates once a week to Food Sharing).

Some of the retail managers interviewed stated that they preferred to collaborate with organizations other than the German Food Bank, some stated that they wanted to end their current collaborations with the food bank, and some stated they had never wanted to collaborate with the German Food Bank to begin with. As these interviewees are giving their surplus items to other nonprofit organizations, competition was identified as another form of interaction. In contrast to Witt (2011) who highlighted the German Food Bank's efforts to avoid competition with other organizations providing the same service through branding and monopoly creation, the present study found that resource competition could not be fully avoided. The contrasting findings can be explained by retailers' evaluation of the partnership. Witt (2011) stated that both parties – food pantries and retailers – benefited from the collaboration, and that retailers are positively perceived by

society due to the collaboration. However, in the present study, some retailers interviewed feared reputational damage caused by publicity surrounding donations of surplus food items.

4.3 Forms of sector blending within operations related to food pantry users

When focusing on the food pantry user as one of the central actors in the operations of the German Food Bank, managers, volunteers, donating retailers and the users themselves enumerated problems related to the current user situation and users' demand for food as well as supply problems. Interviewees highlighted an increase in the number of food pantry users and a decline in the amount of available food. The interviewees mentioned increasing poverty among the elderly, provision of food to refugees and efforts to increase the amount of food available for users.

> The reason for the decrease in goods is that retailers have changed the way they do their logistics. Before they calculated more days and then received the goods from their logistics centers for the days they calculated. And if not enough was distributed then they had to give them out...This acquisition is now done daily, yeah. So now, they do not work with such a huge amount of goods but with fewer. (Volunteer at an associated food pantry, male, 60-70 years old).

> Well, the first reason is that we have many more asylum seekers. That is the first reason. The second reason is that the income of the women whose husbands have died is 400 €. That means that is the problem. And it is just getting worse. Yeah. Unfortunately, that is how it is. The women or retirees who come to the food bank have never worked before or do not work anymore because the husband worked and they looked after the children. Therefore, they have no income anymore. That is the problem today. (Manager of an associated food pantry and country representative, male, 60-70 years old).

> I did not know about it. It was a little bit a gift for me. There were some presents for my children on Christmas. It was a big event at the food bank...I feel thankful for it. It is very nice. Every child whose parents get standard social benefits gets a present. Lovingly done by people. Gifts, yeah! Socks or hats...and books, gloves. Very nice. (User of an associated food pantry, female, 20-30 years old).

> If you are a customer and see, uh, I can help the food bank, you buy the bags. And then the bag gets a sticker and goes to the food bank. And with this we also bring this idea to the public. (Manager of a German food retail chain, male, donates to the German Food Bank once a week).

The statements presented indicate industry creation as another form of sector blending. Interviewees described features of a market system, alluded to the concepts of supply and demand and the inclusion of food items in the German Food Bank system which are not surplus items. They also elaborated on aspects of poverty that are not related to food but are being addressed by food banks. These findings corroborate findings by Hoffmann and Hendel-Kramer (2011). The criticism that the German Food Bank is not adhering to its foundational idea by carrying out activities not related to food and food insecurity may be appropriate from Hoffmann and Hendel Kramers' point of view. However, from an economic point of view, the food bank is simply adapting to market conditions, which have changed between 1993 and 2017. The concern over not only supplying surplus food items is also questionable. Since 1993, the number of food pantries in Germany has increased to 900. The number of food pantry users has increased as well during this period (Federal Association of German Food Banks, 2017; Von Norman, 2011). In order for the services provided by the German Food Bank to be more than purely symbolic (i.e. to actually come close to meeting demand), it has become necessary to find ways to bring regular food items into the system. The inclusion of other market segments such as children, pets, and refugees is a consequence of cultural changes (Bromley and Meyer, 2014) and represents the German Food Bank's adjustment to these changing conditions.

The various operations of the German Food Bank identified in the present study correspond with the sector blending categorization system described by Dees and Battle Anderson (2003). Aside from contracting (which is a form of interaction) and intermingling, all forms of sector blending described by Dees and Battle Anderson were identified in the present study (Table 3). Whether contracting and intermingling are not used by the German Food Bank or whether they could be identified in other materials than the ones analyzed remains to be determined in future research. Because the German Food Bank is advertising its nonprofit and charitable character, these forms are most likely not used, as they could harm the organization's image. Donors and sponsors might not want to support any form of for-profit business. The forms of imitation identified here were mainly related to concepts and practices common in German retail operations and furthermore in the German public sector, most notably the requirement for provision of proof of neediness in order to receive social security benefits. In contrast to findings from prior studies, aspects of industry creation identified at the German Food Bank were not found to be negative, but rather present necessary adaptations to cultural and market developments.

4.4 Benefits and drawbacks of sector blending

The sector blending activities identified here with regard to the German Food Bank have both benefits and drawbacks for the organization. All forms of sector blending found in the present study as well as operations described in prior studies and identified as forms of sector blending here (Table 3) are evaluated below, following the classification of Dees and Battle Anderson (2003) (Figure 1).
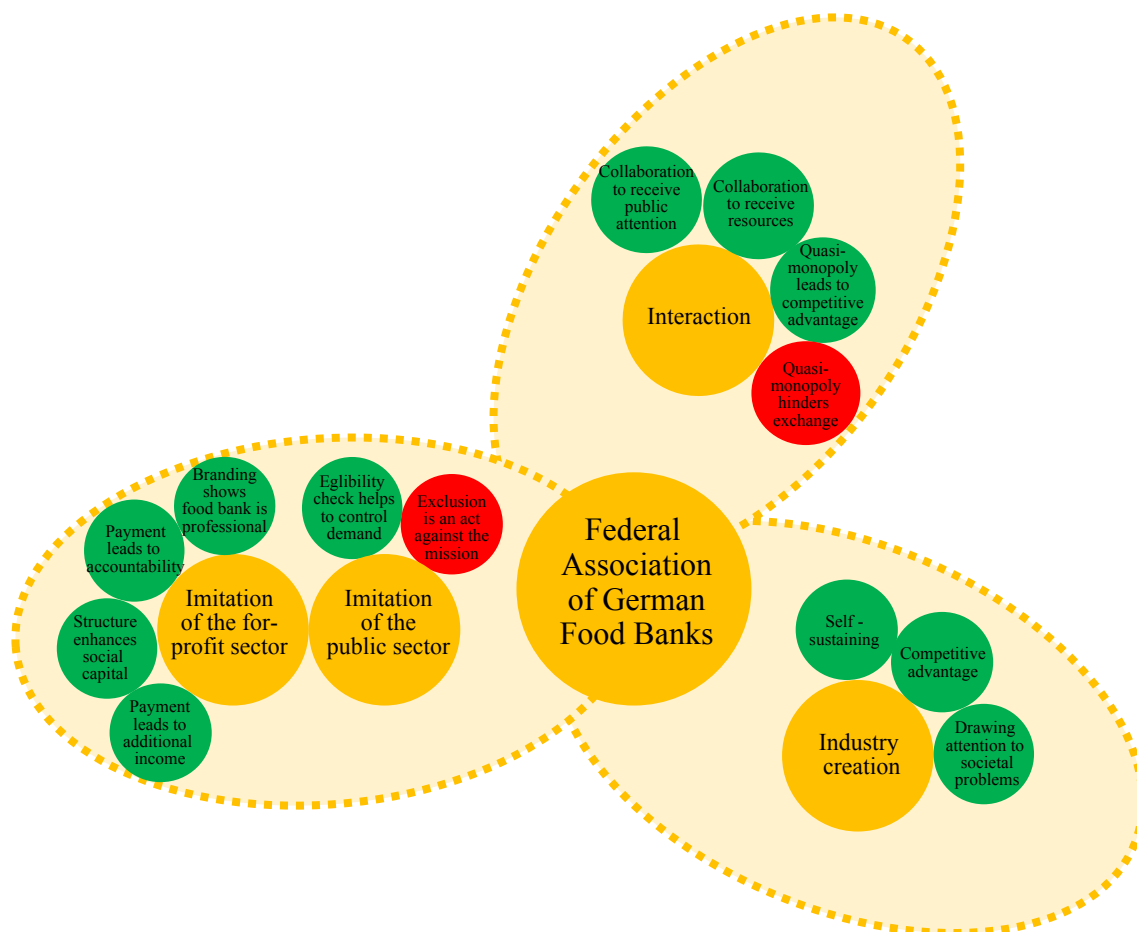
Figure 1. Overview of the benefits and drawbacks of sector blending. Benefits are depicted in green and drawbacks in red.

Imitation of food retail and food service structures in German food pantries can be evaluated as beneficial, as these structures allow the creation of social capital. According to Dees and Battle Anderson (2003), social capital can develop at sites where many volunteers are involved. Soup kitchens and supermarket-like food pantries (Lorenz, 2012; Selke, 2011a; Werth, 2011) allow food pantry users to receive food and interact with one another as well as with volunteers. Following Schneider (2009), volunteers can be seen as the connection between the organization, the users and society, because the frequent interaction between volunteers and the users leads to reciprocal trust-based relationships that also benefit the German Food Bank as an organization. Another form of imitation – the establishment of an organizational logo and slogan (Witt, 2011) – is beneficial for the German Food Bank, as branding signals professionalism to current and potential users.

In addition to imitation of retail practices and elements of branding, symbolic payments by users (Lorenz, 2010; Hoffmann and Hendel-Kramer, 2011) also have beneficial consequences for the German Food Bank. As explained by Dees and Battle Anderson (2011), shifting from a completely charitable relationship (where food is provided free of charge) to a customer relationship (where users are asked to provide a symbolic payment) improves accountability of the organization. The payment requirement increases the likelihood that food pantry users will hold the organization accountable if the food or services received are not of acceptable quality. Dees and Battle Anderson (2003) posited that paying customers usually provide feedback to the organization, make their complaints public, or seek other options for receiving goods or services in cases where the quality of the product or service is insufficient. Furthermore, charging users a symbolic payment results in a small amount of income for the food pantry, which can be used for other purposes, for instance, to buy equipment. Dees and Battle Anderson (2003) pointed out that earned income can lead to greater financial strength of nonprofit organizations.

The German Food Bank's imitation of the public sector (Hoffmann and Hendel-Kramer, 2011; Lorenz, 2012; Von Normann, 2011) also has both benefits and drawbacks. The eligibility assessment and distribution according to the extent of users' neediness allows German food pantries to control supply and demand. Moreover, the eligibility assessment avoids cheating and free rider effects. However, the eligibility assessment also causes the exclusion of some people suffering from food scarcity, e.g. homeless people. Since people outside the social security system are excluded, this can be seen as a threat to the social performance of the German Food Bank, reflecting mission drift. According to Dees and Battle Anderson (2003), business structures or operations can steer nonprofit organizations away from their original mission. In the case of the German Food Bank, the original mission was to reduce food waste and provide food to socially and economically disadvantaged people. This mission would include homeless people. Dees and Battle Anderson (2003) further explained that many social services originally intended to serve the extremely poor focus instead on less disadvantaged people, rather than finding ways to serve both populations.

Competing with other organizations that provide food to the needy as well as other welfare organizations with different foci also has both benefits and drawbacks for the German Food Bank. Providing education and other services, e.g. the Food Bank Academy (Federal Association of German Food Banks, 2017) can lead to improved service quality and distinction in the market. In addition, the legal protection of the organization's name and the branding concept create a quasi-monopoly, which provides advantages over other organizations with similar objectives. Consequently, some of these organizations might be unwilling to collaborate and exchange knowledge.

The relationships with sponsors, donors and other welfare organizations that consider the German Food Bank as a favorable collaboration partner are beneficial. Sponsors provide resources in the form of food items and funds that are needed by the food pantries (Lorenz, 2012; Selke, 2011b; Witt, 2011). In particular, event weeks dedicated to the German Food Bank have positive effects, because the food bank and its collaboration partners receive positive public attention. During event weeks, the food bank also receives food items rarely donated due to their long shelf life, e.g. canned food and cookies. These extra items received through collaborations are beneficial, since they help adjust the food supply to demand. Further, cooperation with

other welfare organizations not deterred by the German Food Bank's quasi-monopoly are beneficial, as resources and knowledge can be exchanged.

The present study as well as prior literature (Hoffmann and Hendel-Kramer, 2011; Lorenz, 2010) show aspects of industry creation. Industry creation can be evaluated as beneficial for the German Food Bank, as this form of sector blending has a self-sustaining effect that, from an economic point of view, is considered desirable even for a nonprofit organization. Including other aspects of poverty and different target groups is particularly beneficial, because these forms of diversification can lead to a competitive advantage. Also from a social point of view, such diversification is beneficial, because it helps both to draw attention to societal problems, such as poverty among children and the elderly, and to identify gaps in the German social security system.

When evaluating the German Food Bank's operations on the background of sector blending as a whole, social capital is enhanced through the adjustment of structures. But sector blending also leads to the exclusion of potential users from the system through eligibility control. With respect to economic benefits, the German Food Bank's efforts of sector blending are aimed at addressing user demands and adjusting to cultural changes. A resulting drawback is interference with potential collaborations. Since the German Food Bank has remained focused on its mission and kept its charitable character, sector blending can be evaluated as positive overall.

5. Conclusions

The study presented identified sector-blending activities in the German Food Bank, and showed that these are largely beneficial in both economic and social terms. Sector blending increases the generation of funds and resources, supports adjustment to increased demand by users, contributes to the professional appearance of the organization and enhances social capital. Drawbacks are mostly of a social nature, because the German Food Bank is not serving people outside the social security system. However, since the organization has neither lost its charitable character nor significantly jeopardized its mission, its activities benefit the German society overall.

Sector blending efforts of the German Food Bank are of interest to marketing managers of food retail chains as well as agricultural producers considering collaborations. On the one hand, sector blending efforts emphasize the focus and professionalism of the German Food Bank as a potential collaboration partner. On the other hand, there are drawbacks, e.g. the exclusion of certain groups from the system, which are of importance for potential collaborators wanting to support the extreme poor. Since the present study emphasizes both benefits and drawbacks, it contributes to informed decision making as to whether the German Food Bank is a suitable collaboration partner for sponsors and donors.

Furthermore, the study is valuable to organizations providing services similar to those provided by the German Food Bank. Other organizations could fill the niche that it is not serving. This strategy would lead to more effective and appropriate resource allocation in the market dedicated to supporting the poor, by allowing those not participating in the German social security system to be served. This includes not only the homeless, but also others who choose not to use the system due to embarrassment. In addition, the study serves to bring further attention to the fact that food insecurity is not only an issue in developing countries. In many developed countries such as Germany, food insecurity is a societal problem. In Germany, stigmatization of people, e.g. children and retirees, suffering from food insecurity still occurs (Selke, 2011a). Accordingly, governmental campaigns, social media as well as other forms of media reaching a large share of the German population could contribute to increased awareness. The German Food Bank may be willing to support these efforts with accumulated experience and knowledge.

A limitation of the present study results from it being carried out in Bavaria, one of the wealthier German states. Inclusion of less wealthy states with higher unemployment, for instance in eastern Germany, may lead to somewhat different results, including other forms of imitation and interaction. However, conversion

and intermingling are not likely to exist, because their for-profit nature contradicts the German Food Bank's mission. Furthermore, an important actor was not included in the sampling for the present study, state and local government. Government representatives were not included, because their viewpoints were intensively discussed in prior sociological studies (Selke, 2011a,b; Von Norman, 2011). Still, these actors might have provided insights into forms of interaction between the German Food Bank and the official welfare system, e.g. collaboration and competition.

With respect to sector blending, food bank structures and operations in countries with a similar economic situation should be investigated to identify solutions for current problems and further potential to improve food banks' services and functioning. For example, the U.S. Department of Agriculture (USDA) can be seen as a collaboration partner supporting food pantries with food for emergency programs (USDA, 2017), while in the German context there is no such support from the government directly to the German Food Bank. Instead, there is an underlying tension, because the German Food Bank assumes duties of the German welfare system, and cutbacks in support to the poor have resulted in increased user dependence on the German Food Bank (Selke, 2016).

Future research could also investigate the German Food Bank from a management perspective, since prior studies were mainly focused on users and on sociological issues. Accordingly, an investigation from a managerial perspective could benefit the German Food Bank's operations and effectiveness and may allow comparison with prior U.S. (Vitiello *et al.*, 2015) and European studies (González-Torre and Coque, 2016). For example, it would be beneficial to investigate human resource management in food pantries. As shown in Canadian studies (McIntrye *et al.*, 2015; Tarasuk and Eakin, 2003), European studies (Van der Horst *et al.*, 2014; Von Normann, 2011) and the present study, some of the operations and the sector blending efforts of the German and other food banks resulted in problems for food pantry users. Examples of eligibility assessments leading to exclusion or user shaming by volunteers do not necessarily imply mission drift, but might result from lack of management skills.

Acknowledgements

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Food waste reduction practices in German food retail

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Abstract

Purpose – The purpose of this paper is to investigate food retailers food waste reduction practices in Germany. The focus is on selling and redistributing agricultural produce with visual impairments and other surplus food items. In addition, drivers and barriers regarding the implementation of both waste reduction practices are explored.

Design/methodology/approach – In total, 12 in-depth interviews with managerial actors in the food retail sector and a food bank spokesperson were recorded, transcribed and analyzed through a qualitative content analysis.

Findings – In contrast to organic retailers, conventional retailers were reluctant to include agricultural produce with visual impairments in their product assortments, due to fears of negative consumer reactions. Another obstacle was EU marketing standards for specific produce. All retailers interviewed engaged in redistribution of surplus food. Logistics and the regulatory framework were the main barriers to food redistribution.

Originality/value – The present study adds to the existing body of literature on food waste reduction practices as it explores selling produce with visual impairments and elaborates on the legal background of food redistribution in German retail. The results are the foundation for providing recommendations to policy makers and charitable food organizations.

Keywords Motivation theory, Food bank, Food donation, Legal background of food redistribution, Lowering quality standards

Paper type Research paper

Introduction

In Germany, 11 million tons of food waste per year (Kranert *et al.*, 2012) occur throughout the supply chain from farm gate to consumer (Gadde and Amani, 2016). Although prior research emphasized that food waste is generated mostly on the consumption level (Principato *et al.*, 2015), food retailers play a pivotal role as brokers between producers and consumers (Midgley, 2014; Cicatiello *et al.*, 2016). Promotions entice consumers to buy more food than intended (Peattie, 1998), which may turn into waste (Gruber *et al.*, 2016; Priefer *et al.*, 2013). Food waste also results from quality standards prescribed by retailers. Waste resulting from produce not meeting standards is attributed to earlier supply chain stages (Göbel *et al.*, 2015). Excluding the household level, Gustavsson *et al.* (2011) estimated produce losses of up to 20 percent of production in Europe, mostly due to quality requirements. The problem of food waste was targeted by German and other European governments. Government agencies developed media campaigns and initiated projects to increase awareness and educate consumers.

According to Gruber *et al.* (2016), retailers are concerned about food waste due to economic and moral reasons. A common waste reduction practice on the retail level is the redistribution of non-marketable food items (Lebersorger and Schneider, 2014; Göbel *et al.*, 2015; Priefer *et al.*, 2016). Retailers tend towards donating these items to charitable organizations such as food

banks (Lebersorger and Schneider, 2014; Papargyropoulou *et al.*, 2014; Richter and Bokelmann, 2016) and social supermarkets (Holweg *et al.*, 2010, 2016; Holweg and Lienbacher, 2011).

Another practice to reduce food waste applied by some European retailers is lowering quality standards for fresh produce. In this context, the term lowering quality standards refers to selling fruits and vegetables with visual impairments that have no effect on food safety or taste. In 2013, different retail chains in Austria, Switzerland, and France started to include such produce in their assortment. The produce was marketed emphasizing its unique appearance. In Switzerland and France, the initiative was extended beyond the trial period (Blanke, 2015; Intermarché, 2017). Lowering quality standards of agricultural produce contributes to waste prevention; food redistribution for human consumption through charitable organizations is a form of reuse. As both practices ultimately serve to prevent food from being discarded, they are desirable from society's point of view. The present study explores the situation in German food retail, focusing on both practices. Since prior studies in Europe, specifically Austria, mainly focused on the redistribution of produce with visual impairments to external parties (Holweg *et al.*, 2010; Holweg and Lienbacher, 2011), the aspect of selling such produce is a research gap. Also, when exploring the aspect of redistribution in Germany, these studies are likely relevant for comparison, because German and Austrian retail are similarly structured and operating, but the regulatory framework is not identical. In addition, the present study investigates drivers and barriers regarding the implementation of both waste reduction practices.

Literature review

In order to evaluate food waste reduction practices in German food retail it is necessary to understand the food waste hierarchy (Figure 1), including suggestions how to handle surplus food and food waste. Furthermore, food quality standards and consumer preferences affect the occurrence of surplus food. Similarly, the redistribution of non-marketable food is impacted by laws and regulations as well as the personal motivation of the retail managers in charge.

Food waste hierarchy

The food waste hierarchy follows the European waste hierarchy and consists of five levels (Bates and Phillips, 1999). It prioritizes actions to prevent food waste and handle surplus food items on the background of sustainability (Papargyropoulou *et al.*, 2014). The first level of the hierarchy, prevention, constitutes the most desirable option and the last level, disposal, constitutes the least desirable option. The authors suggested avoiding surplus food generation from production to consumption. On the reuse level, surplus food can be used for human consumption, for instance, redistribution to people in need. For food unsuitable for human consumption, recycling is an option. Recycling includes using food as animal feed or compost. On the recovery level, food waste is used for energy generation. On the last level, items which cannot be used for any other purpose must be disposed. Accordingly, desirable strategies include lowering quality standards, as prevention, and redistribution for human consumption, as reuse.

Note: Arrows in dark blue indicate the focus of the present study
Source: Builds on Papargyropoulou *et al.* (2014)

Figure 1.
Food waste hierarchy

Lowering quality standards

Quality standards for marketing produce build on standards of the European Union's (EU) Common Agricultural Policy, designed to prevent produce of inferior quality from entering European markets, provide a reference framework for market transparency, and improve the profitability of production (Council of the European Union, 1996, Paras 3-5). To reduce bureaucracy and create the possibility of marketing produce independently of size and shape, marketing standards for 26 types of produce have been replaced by general standards in 2009 (European Commission, 2008). The general standards require produce to be sound, clean, sufficiently developed, and correctly labeled (Priefer *et al.*, 2013). Classification into grades (Class Extra, Class I, Class II) is still possible. Specific marketing standards remain in place for ten types of produce, representing approximately 75 percent of the intra-EU trade. In addition to the EU standards, retailers can set quality standards for produce, such as maximum residue levels for pesticides or requirements regarding physical properties.

In addition to standards, factors such as weather events impact the marketability of produce. Heavy rain or droughts determine yield levels and physical properties. Since standards are mainly based on visual appearance, produce with optical defects receives lower prices (Göbel *et al.*, 2012). If prices fall below harvesting costs, produce is left in the fields. In addition, farmers contracted to supply crops of specified quality and quantity may produce larger quantities to hedge against losses caused by weather events or pest infestation. If these surpluses are marketed, they lead to reduced prices (Göbel *et al.*, 2012; Priefer *et al.*, 2013). Food waste caused by retailers' quality standards also occurs during distribution. Returns of rejected produce are at risk of spoilage due to short shelf life (Göbel *et al.*, 2012).

Several barriers impede retailers' lowering of quality standards. Quality standards specifying low maximum residue levels reduce the risk of exceeding required levels, preventing the involvement in food contamination scandals, which could affect retailers' reputation (Priefer *et al.*, 2013). Also, standardized produce can increase logistic efficiency (Göbel *et al.*, 2015). Aside from logistics, retailers also impose requirements referring to physical properties due to consumer demands (Newman and Cullen, 2001; Mena *et al.*, 2014). Retailers assume that consumers are not willing to buy produce deviating from the standard appearance (Loebnitz *et al.*, 2015; Di Muro *et al.*, 2016).

For example, Danish consumers have been shown to be less likely to purchase produce deviating from the norm, confirming retailers' assumptions of visual appearance as an indicator for assessing produce quality by consumers (Loebnitz *et al.*, 2015). Since the standardized produce typically offered serves as reference for quality assessment, consumers may assume that produce with visual impairments is of lower quality (Göbel *et al.*, 2015). Di Muro *et al.* (2016) found decreased willingness to buy for Italian consumers confronted with unusual appearance. For fresh market consumers, produce with visual impairments was more acceptable than for supermarkets consumers. Loebnitz *et al.* (2015) suggested that consumers might accept produce with visual impairments, if they became accustomed to these products, as in France and Switzerland (Blanke, 2015; Intermarché, 2017).

Redistribution of surplus food and legal background

Redistribution of surplus food for charitable purposes is an established practice in European retail. For instance, in France, retail stores with 400 square meters and above are required to provide surplus food to educational or charitable institutions (Rombach and Bitsch, 2015). However, in the UK, regulations impede redistribution since retailers fear litigation (Midgley, 2014; Gruber *et al.*, 2016).

In Germany, the redistribution of surplus food is not required, but encouraged by the Federal Ministry of Food and Agriculture (FMFA). The Federal Ministry of Food and Agriculture (2014, pp. 14-15) has provided advice on liability in this context. Producers and retailers are liable for damages. If the producer or retailer cannot be identified, the

redistributor is liable (Art. 3, Section 1, and Art. 14, German product liability law). Accordingly, when redistributing food to third parties retailers are advised to emphasize that the products are, e.g., close to the best-before-date. EU Regulation 178/2002 (Sections 17 and 19) requires retailers to act responsibly, and take unsafe products off the market. Retailer as well as redistributors must be able to show from where they received their products. Documentation is mandatory for traceability throughout the supply chain (EU Regulation 178/2002, Sections 3 and 18) (Federal Ministry of Food and Agriculture, 2014, pp. 14-15).

However, when surplus food is donated, and accordingly free of charge for redistributors, the law of gifting applies (Articles 516-534, German civil code). As some redistributors such as the German food bank also hand out the food items donated by German retailers to food bank users free of charge, liability becomes more complex. Voit (2014) discusses a case when a food bank user is injured through canned food with the best-before-date expired. The producer, the retailer and the food bank can be held liable, if the injured party is not an affiliate but a third party as in this case. The producer must present proof of exoneration (Art 1, German product liability law), of not providing a spoiled product to the retailer. The retailer can be liable for willful negligence (Art. 521, German civil code), if the retailer did not emphasize the information to the food bank that best-before-date was expired. If the retailer willfully omitted information, the retailer is liable for the material defect and must compensate the injured party (Art. 524, German civil code). Voit (2014) further states that the German food bank is in an equivalent situation with regard to its users. In terms of liability, also Articles 521 and 524, German civil code apply in this case. To guard against these legal challenges, food pantries under the umbrella of the German food bank carefully inspect and document donated food items upon arrival at the pantries (Von Normann, 2011).

Retailers' motivation to reduce food waste

Prior studies on donations showed that the awareness of need was a prerequisite for charitable giving (Vlaholias *et al.*, 2015). In the context of food redistribution, food recipients are not directly involved in the donation process. Consequently, the needs of the recipients remain unknown to the donor. Accordingly, Vlaholias *et al.* (2015) suggested that food redistributors communicate the recipients' needs to food retailers.

Food retailers are explicitly asked by food banks and other organizations, and implicitly by society to donate surplus food (Evans, 2011; Vlaholias *et al.*, 2015). Solicitation is a major factor in food assistance and at the same time a critical aspect. Since food waste is perceived negatively by society, some retailers do not want to donate to avoid drawing attention to the amount of surplus (Holweg *et al.*, 2010). Another reason to avoid redistribution is the fear of additional cost for administration, as well as logistical challenges (Holweg *et al.*, 2010). However, since donations are cheaper than disposal, economic benefits add another motivation to donate (Holweg *et al.*, 2010; Lorenz, 2012; Vlaholias *et al.*, 2015). Also, depending on the regulatory framework in different countries, food redistribution may be tax deductible (Booth *et al.*, 2014; Vlaholias *et al.*, 2015). Lorenz (2012) also found similar motivations for food donations, including reputation gains, tax savings, and avoiding the costs of disposal.

Although some studies showed altruism as motivation of charitable activities, Vlaholias *et al.* (2015) questioned altruism's applicability to food donations. They proposed that support of charitable organizations requires direct benefits for donors. Furthermore, they emphasized increased self-esteem, feeling superior, joy of giving, and the desire for a world with enough to eat for everyone as reasons to support food banks. Only striving for an ideal world reflects personal values and a philanthropic mindset.

Few studies did explicitly discuss retailers' motivation to sell produce with visual impairments. Prior studies showed that consumers can get used to such produce, as they become accustomed to it (Loebnitz *et al.*, 2015; Blanke, 2015). Because marketing is necessary to accomplish this, it can be assumed that these efforts aim to attract another target group

of costumers. Also, retailers want to present themselves as socially responsible and concerned about food waste (Holweg and Lienbacher, 2011; Holweg *et al.*, 2016). Selling produce with visual impairments could lead to a positive reputation similar to redistribution (Vlaholias *et al.*, 2015).

Motivations to donate food and sell produce with visual impairments can be classified applying the well-known scheme of economic, psychological and social aspects following Anik *et al*'s (2010) research of donor behavior in charitable giving. Independent of the underlying motivation, donors ultimately receive a form of satisfaction (Strahilevitz, 2010). Economic motivations include avoiding costs and receiving tax benefits (Lorenz, 2012; Vlaholias *et al.*, 2015). Improving reputation, feeling superior and the joy of giving are examples of psychological motivations (Lorenz, 2012; Vlaholias *et al.*, 2015). Altruism and solicitation are often influenced by society, and, therefore, can be classified as social motivations. The three forms of motivation are not mutually exclusive and can reinforce each other.

Material and methods

Due to its exploratory character the present study employed a qualitative research approach (Bitsch, 2005). A qualitative approach is particularly suitable, since the present study focused on the perspectives and experiences of actors in their lifeworld (Bitsch and Yakura, 2007). The experiences and perceptions of actors involved in German food retail and their strategies to reduce food waste are yet unexplored. In addition, food waste is a sensitive topic, since food waste is considered socially undesirable.

In 2015, 12 in-depth interviews were conducted in Germany, 11 with actors in the food retail sector, and one with a spokesperson for a food bank (Table I). Three of the 11 retail actors were owners of conventional supermarkets, one store manager for a produce specialty store, one produce buyer of a conventional supermarket chain, and two managers of a produce wholesale market. Furthermore, two interviewees owned organic supermarkets, and one was a spokesperson of an organic supermarket chain. The store sizes of interviewees' retail outlets ranged from less than 200-2,000 m². Another interviewee was the co-founder of a start-up specializing in marketing produce not fulfilling regular retail's quality standards. Organic retailers were included to explore potential differences

Interviewee	Venture	Size of the sales area in m²	Authority for decision making (Redistribution or inclusion of new products in the assortment)
Owner	Conventional supermarket	1,800	Yes
Owner	Conventional supermarket	600	Yes
Owner	Conventional supermarket	1,000	Yes
Owner	Organic supermarkets	200	Yes
Owner	Organic supermarkets	220	Yes
Store manager	Specialty store for fruit and vegetables	1,200	Yes
Spokesperson	Organic supermarket	1,000	Not applicable
Spokesperson	Federal Association of German Food Banks Non-profit organization	Not applicable	Not applicable
Buyer (employed) for fruits and vegetables	Conventional supermarket	2,000	No
Founder and manager	Social start up marketing fruits and vegetables with visual impairments not affecting food safety or taste	Information not shared	Yes
Manager (employed)	Wholesaler market for fruit and vegetables	310.000	Yes
Manager (employed)	Wholesaler market for fruit and vegetables	250.000	Yes

Table I.
Interviewees and their background

between conventional and organic retailers (compare Hamzaoui-Essoussi *et al.*, 2013). Interviewee selection also strove to include retailers in a large city, suburbs and a smaller city to account for location as well as infrastructure of relevant food banks.

Interviewees were contacted through personal contacts of the researchers, and via subsequent snowball sampling. Due to the limited accessibility of actors with management positions in food retail, other sampling strategies would not have been likely to succeed. The snowball sampling procedure followed Noy (2008) and Heckathorn (2011) who suggested a multiple referral approach. This approach has the advantage that the sampling process is not easily interrupted or stopped, and reduces potential sampling bias. Each interview lasted 45-70 minutes. Depending on interviewees' preferences, nine interviews were held face-to-face and three by phone.

A semi-structured interview guide outlined the topics for the interviews. The interview guide focused on food waste reduction strategies relating to the interviewees' particular work environments and their specific tasks. In this context interviewees were asked to comment on recent policy changes in other European countries, especially France. Further topics were quality standards for produce, and the retailers' endeavors to handle produce with visual impairments. Furthermore, interviewees were asked about their working environment, their positions and duties. Topics were addressed through open-ended questions, and asked according to the interview flow.

All interviews were conducted by the first author. In total, 11 of the 12 interviews were audio recorded and transcribed verbatim. On one occasion, the interviewee did not agree to recording, and therefore field notes were taken. Field notes and all interview transcripts were analyzed through a qualitative content analysis. The first and the second author carried out the analysis using f4 software for transcription and Atlas.ti for coding, establishment of the categories, and memo writing. Computer-assisted qualitative data analysis softwares such as Atlas.ti allow to manage a large amount of qualitative data and structure the analysis process because they provide tools for annotating and coding the data.

Building on a constructivist paradigm, the analysis followed a consensus coding process. According to Sandelowski and Barroso (2003), in qualitative research, consensus is a common approach where at least two coder independently code the data, compare their coding, and discuss and resolve discrepancies when they arise. The inductive qualitative content analysis was carried out in an iterative and recursive process. The analysis process built on constant comparing and contrasting of the data material. Comparing and contrasting is an essential part of a qualitative analysis because it supports a structured analysis process and increases the audibility of the analysis (Boeije, 2002; Corbin and Strauss, 2014). The procedure served to identify food waste reduction strategies in use and interviewees' specific motivations. Steps within the qualitative content analysis were open and axial coding and the establishment categories (Table II). As an example, a category with three codes, corresponding definitions and exemplary interview excerpts illustrate the analysis process (Table III).

Results and discussion

According to the food waste hierarchy, retailers' practice of lowering quality standards is preferred to other strategies to reduce waste, because it prevents food from becoming waste at prior stages of the supply chain. Food redistribution measures are still more desirable than other options. Interviewees did not provide direct insights into their motivation for experimenting with lower quality standards; these can only be inferred indirectly. However, they did discuss their motivation to participate in redistribution.

Lowering quality standards

German retailers reported on their experience selling produce with lower external quality standards. Results showed that produce with visual impairments is rarely part of the

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Progression of analysis	Analysis activity	Aim	Form of results
Within a single interview	Open coding Summarize basic content Discussion to find consensus among coders	Researchers become acquainted with the text material and develop an understanding for the data	Summary of the interviews Preliminary coding scheme Initial memos
Within the same group	Axial coding Compare and contrast Merging codes Add new aspects to summaries Discussion to find consensus among coders	Identifying differences and relationships that arise from the initial coding scheme	Further developed coding schemes Preliminary categories Elaborated memos
Between different groups (organic vs conventional)	Axial coding Compare and contrast Merging codes and categories Add new aspects to summaries Discussion to find consensus among coders	Developing definitions for categories and their respective codes	Emerging patterns Elaborated memos
Comparison between transcribed interviews and field notes	Triangulation of data material	Validity Understand a different dimensions of the topic	Showing authenticity of knowledge

Table II.
Analytic steps

Notes: The analytic steps merge into each other because the analysis process is iterative and recursive
Source: Authors own elaboration Builds on Boeije (2002) and Corbin and Strauss (2014)

Code	Interview excerpt
Storage and logistics Interviewees' experiences with and opinion on dealing with non-standardized food items in storage and logistics	"Yes, logistics will be probably more expensive. With the curvy cucumbers, the biggest problem is the transportation, because they do not fit straight into the crate. And I think that would simply be an additional expense. […]" (Owner of a small organic supermarket in Freising)
Dimension and quantities of produce with visual defects Dimensions or amount of non-standardized food items in the product assortment	"That is difficult to say. For the carrots, […] almost 50% that you could not sell in a supermarket. But as I said, we are an organic grocery store" (Owner of a small organic supermarket near Munich)
Characteristics of produce with visual defects Characteristics of non-standardized food items in the product assortment	"I also have carrots here, which are unwashed. Well, they come with sand. Let us say with dirt. They get sold as well here. Also, the two-legged" (Owner of a small organic supermarket near Munich)

Table III.
Codes for the category "produce with visual defects as part of the product assortment" with examples of interview excerpts

assortment of conventional retailers, while in organic assortments it is quite common. Both types of retailers referred to customers' expectations with respect food quality, and shared that customers use their prior shopping and food experiences as indicators to evaluate the quality of produce. Retailers stated that they want to offer food items and qualities meeting their customers' expectations:

Because since decades, […] one is used to everything having a norm. […] One will rather grab something that one is used to, meaning a cucumber that is the same as it was the last ten years, instead of a cucumber that is curvy (Owner of a conventional supermarket in a suburb).

Well, for us the shape is not so important. Who cares if a carrot has two legs? […] In an organic store, small defects in appearance are not so bad (Owner of an organic supermarket in a small city).

And the second reason is, relates to marketing. People that value organic are basically more willing accept the appearance as they are aware the appearance has nothing to do with taste. It is simply the external appearance (Founder and manager of a startup specialized in marketing produce with visual impairments in a large city).

Conventional retailers doubted that their customers would buy produce with visual impairments, affirming prior findings of consumers avoiding products with even small optical defects (Buder *et al.*, 2014; Göbel *et al.*, 2015; Loebnitz *et al.*, 2015). They believed that the practice of showcasing perfectly shaped produce according to former EU standards (trade classes extra and I) led to consumers only being familiar that type of produce. These results confirm findings that consumers' quality perception is influenced by the produce available on the market (Creusen and Schoormans, 2005). Further, retailers believed that customers took irregularities in size, deformations or change in color as signs of low quality resulting from long storage periods or simply as inconvenient for consumption. These findings parallel prior studies, emphasizing appearance as a cue of perceived quality (Brunsø *et al.*, 2002).

Similarly, acceptance of such irregular produce by consumers of organic produce is related to the perception of naturalness and organic production practices. Since by nature produce does not have a perfect shape and size, these consumers are not concerned about marketing standards and trade classes. These results raise a question discussed in the literature, whether the visual requirements of consumers affect the requirements of retailers or vice versa (Göbel *et al.*, 2015; Priefer *et al.* 2016).

Some conventional retailers interviewed believed consumers' acceptance to be so low that they feared losing their customers in case of introducing produce with visual impairments into their assortment. Others were concerned about extra costs of selling produce with visual impairments. Conventional retailers enumerated extra storage, transportation, disposal and marketing costs. In contrast, organic retailers did not mention extra costs. Conventional retailers' concerns correspond with prior studies emphasizing logistics (Frieling *et al.*, 2013; Priefer *et al.*, 2013) and consumer acceptance (Loebnitz *et al.*, 2015; Di Muro *et al.*, 2016). The absence of these concerns among organic retailers is due to produce with visual impairments being well established among their customers, and logistics and marketing of these products being normal to them.

Food redistribution
All retailers interviewed reported to engage in food redistribution measures. Non-marketable food items and surplus are given to farmers, retailers' employees, and food banks. Although several retailers collaborate with farmers on a regular basis, they emphasized that donations to farmers, e.g., as animal feed or compost (recycling), are regarded as an inferior option compared to redistribution for human consumption. The interviewees' prioritization corresponded to the food waste hierarchy (Figure 1). In addition, the decision whether to donate to agriculture or charitable organizations involves an ethical decision. In Germany, 7 percent of the population, approximately 5,740,000 people, suffer from food insecurity (Pfeiffer *et al.*, 2011). Retailers seem more likely to aim at counteracting food insecurity than providing feed to farm animals or composting materials.

Three of the retailers interviewed allowed their employees to take home surplus food. Others mentioned that this practice was not advisable since it might cause employee deviance, undesired behaviors and actions by employees, such as deliberate damage to

packaging or over-ordering. Earlier studies showed these behaviors to be common in food retail (Boye and Slora, 1993; Dunlop and Lee, 2004):

> Unfortunately we had the experience. In the past we have just given damaged items to employees. But then things start to happen. There are 'clever' employees from time to time or they think they are clever and also deliberately damage items. And then this gets out of hand. And therefore, there has to be a clear line (Owner of a conventional supermarket in a large city).

> Especially in the outlets of retail chains it is strictly prohibited for employees to take home or buy food waste. Because it has happened that employees deliberately over-ordered and basically thought, "Yes, well, we take it with us" (Owner of a large conventional supermarket in a large city).

Contrary to the present analysis, prior studies found that the retailers themselves practiced over-ordering, and it was considered a common business practice to return unsold products to wholesalers, even if products were not in perfect condition anymore (Midgley, 2014; Gruber *et al.*, 2016). Gruber *et al.* (2016) emphasized that retailers became aware through low-income employees that this practice could be perceived as morally questionable or unethical. This difference in findings may be explained by retailers' size as well as through employer-employee relationships.

Instead of distributing the surplus items to their employees, most retail interviewees preferred to collaborate with food banks. Conventional as well as organic retailers reported on extra efforts to sort food to meet food banks' requirements. Further they reported that their operational schedules do not match well with food banks' collection schedules:

> That will take me two hours, if I do that [sorting] for our food bank. […] First, I have to scan everything. I would have to do that anyway, but since the food bank always comes on Fridays, I have a fixed plan. And for this reason I have to think about it. Well, what do I have to take out earlier that I can then give to them? […] Well, in the past, before we gave that to the food bank, I used to look that was expiring and took it out while I did the restocking (Owner of a conventional supermarket in a large city).

> The problem with the food bank was always that the food bank did not have that many people, and they couldn't collect daily. Because some things must be collected daily. And they were always laying around here for a week. And especially in the summer the goods do not get better then. Because they also cannot always be refrigerated. […] (Owner of an organic supermarket store in a suburb).

Food banks require donated items to not have exceeded the best-before-date as part of food safety provisions (Federal Ministry of Food and Agriculture, 2014; Priefer *et al.*, 2016). However, sorting food that needs to be taken off the shelves by best-before-dates requires additional time and, in the case of perishables, additional refrigerated storage space. Further the operational differences between both parties can affect their collaboration, because retailers shun the extra efforts. The concerns regarding products that require cooling have also been found by Holweg *et al.* (2016). Austrian retailers appear less concerned regarding logistics (Holweg *et al.*, 2016). Given equivalent shop sizes, differences between Austrian and German retailers are likely to due to differences in planning and ordering and other internal logistic operations.

In addition to the logistical challenges involved in donating to food banks, another barrier identified is the legal framework. Some retailers were concerned that donating items with possible food safety problems due to faulty handling or storage might cause liability. Other retailers believed they would not be liable, because only the third party, i.e., the food bank, was responsible for redistributed food:

> We are liable. […] That is why meat is an absolute no-go. Especially in summer. […] And they do two, three markets in a trip and […] it is 35 degrees Celsius outside. Then everything might have been okay here, but until it arrives there, and we vouched for the good quality, respectively edibility (Owner of a conventional supermarket in a large city).

> Honestly, I do not know what the guidelines of the [city] food bank are. But I know that we are not liable for the products after giving them away. And the food bank, they are liable for the products (Owner of a conventional supermarket in a large city).

Even the interviewed spokesperson of a food bank was unsure about the legal situation. Facing this uncertainty, many interviewees only donated items with minor safety concerns. The findings concerning liability and storage corroborate earlier work (Midgley, 2014). The lack of knowledge regarding the legal situation by both retailers and food banks is an unexpected finding, because the legal situation is not as uncertain as claimed by interviewees. Food items given to food banks need to be safe, both parties need to inspect and document redistributed items. In Germany, product liability law and the law of gifting frame the legal situation (Federal Ministry of Food and Agriculture, 2014; Voit, 2014). In contrast to other German speaking countries, such as Austria where waiver agreement between retailer and charities is a common practice (Holweg *et al.*, 2016), responsibility cannot be transferred through waivers in Germany (Federal Ministry of Food and Agriculture, 2014, p. 15).

Retailers' motivations for lowering quality standards and redistribution

When analyzing motivations to sell produce with visual impairments, none of the retailers interviewed explicitly stated economic motivations. Particularly, statements by organic retailers, emphasizing customers' demand for natural products, allow drawing inferences regarding motivations. Unusual appearance is attractive to these consumers, which implies that organic retailers found a niche for produce with visual impairments. Accordingly, for organic retailers lowering quality standards is less due to the desire to reduce food waste, and rather an income opportunity, because their customers understand the visual impairment as a signifier of naturalness. Implicitly, this would reflect an economic motivation. However, interest in increasing reputation as responsible retailers could not be found in this context.

Although sorting storage of food items and the legal framework appear to be considerable barriers to the redistribution of surplus food items, retailers interviewed still used this practice for various reasons. All interviewees expressed positive attitudes towards redistribution, but were not interested in communicating their donations to the public:

> That [donation to food banks] must not be seen by them [customers]. Because I think what I give away, I need not make a big fuzz about. That is my attitude. If I do it, then I do it and then I must not shout it from the rooftop (Owner of a conventional supermarket in a large city).

> At the [city] food bank, honestly speaking, they take their stuff from everywhere. Why should I make a big deal of that? To me that is nothing special, not at all. There are stickers everywhere "We are supporting the Munich food bank". We could have posted that too, but we did not want to (Owner of a conventional supermarket in a large city).

The findings presented differ from Holweg *et al.* (2010) and Lorenz (2012), emphasizing psychological and economic motivations to donate food. Interviewees showed little interest in enhancing their reputation. They also did not state any economic motivations. The absence of stated economic motivation could be due to social desirability bias. Overall, motivations seemed altruistic, since retailers did not show interest in gaining benefits for themselves. Analyzing interview statements in-depth, reputation management still played a role, but in a different way than found in prior studies. Since food waste is an undesired problem of affluent societies (Lorenz, 2012; Vlaholias *et al.*, 2015), interviewees seemed to want to hide the amount of waste generated. Also, they did not want any weaknesses in logistical management to become public (Holweg *et al.*, 2010, 2016). In addition, they might not want to emphasize interactions with food banks, due to potential negative perceptions by specific groups among the regular customers.

Conclusions

Results underlined the importance of increasing consumer acceptance which is critical for produce with visual impairments. Since prior research indicated that awareness of food waste could increase purchasing intentions for produce deviating from the standard appearance (Loebnitz *et al.*, 2015), awareness campaigns could contribute to reaching this goal. For instance, the appearance of food and quality could be addressed in governmental campaigns by the FMFA, which already aim to reduce food waste. Another focus could be educating children, e.g., in the context of EU school fruit programs, which could include a share of produce with visual impairments. The program provides a venue to familiarize children with produce and foster acceptance. Simultaneously, addressing fruit production in lessons would enhance children's knowledge of fruit quality, independent of appearance.

Furthermore, retailers could also contribute to awareness regarding food waste. Introducing produce with visual impairments could be marketed as a corporate social responsibility strategy. Retailers wishing to include produce with visual impairments in their product assortment in the long term could try to market the naturalness of the product in order to attract consumers. Based on the results, these products are be particular appealing to organic consumers and potentially others with a different understanding of product quality. In retail settings, where consumers appear skeptical, retailers could emulate practices employed in Austrian retail. For example, produce with visual impairments can be processed and sold if retailers feature fresh counters or in-store restaurants (Holweg *et al.*, 2016). Further consumers could be provided with small pieces of produce with visual impairments to convince them of the taste, given the irregular appearance. Handing out free samples is a common practice when anchoring a new product in the market (Bawa and Shoemaker, 2004).

Corresponding with Di Muro *et al.* (2016), future research should focus on consumers' willingness to pay for produce with visual impairments. Conventional supermarkets appear to be a promising location for such an investigation to understand whether it makes economic sense to offer standard produce and produce with visual impairments in parallel. When studying organic consumers, future studies could follow a willingness to accept approach, because produce with visual impairments seems appreciated by organic consumers. However, it remains unclear if produce with visual impairments is preferred over regular produce.

Results suggested that food redistribution is a common practice among German retailers. However, costs for donations resulting from logistical challenges and labor for sorting food by best-before-date may discourage retailers from collaborating with food banks. Increased frequency of food collection by food banks would contribute to reducing the strain on retailers' storage capacity. Since the frequency of collection depends on food banks' infrastructure, e.g., transportation and storage facilities, investments in the infrastructure of food banks are recommended. Financial resources for these investments could come from payments for redistributed food items by food recipients, even if the food items are only sold for a symbolic price. In addition to finding more sponsors, state subsidies would currently be justified since the need for services provided by food banks has increased due to the number of refugees hosted by Germany (Lang, 2015).

Considering the motivation of German retailers for participating in food redistribution, psychological and social motivations appeared more prevalent than economic motivation. Awareness of solicitation and reputation as motivations should be carefully considered by managers of charitable organizations. Based on this knowledge, different strategies to convince potential contributors can be developed. A sensitive, not too persistent approach could be helpful to convince future contributors and avoid donor fatigue. To unburden retailers from uncertainties regarding the legal liability, policy makers could establish a framework encouraging retailers to donate unmarketable food. Policy makers might consider a law similar to the "Good Samaritan Act" in the USA to limit donors' liability (Priefer *et al.*, 2013).

In addition to the German food bank, retailers can cooperate with special outlets focusing on produce with visual impairments. In Germany there is a recent trend of establishing supermarkets selling only redistributed products. These endeavors originated from social movements and aim to reduce food waste. In contrast to the Austrian case (Holweg *et al.*, 2010; Holweg and Lienbacher, 2011), these new markets do not emphasize a social background. Therefore it is advisable for retailers, considering cooperation with these new ventures, to investigate the target groups the cooperating partner to avoid potential direct competition.

As the study followed a qualitative research approach, results of this study are not generalizable, because of the non-random sampling method. However, qualitative results can be transferable to other situations or populations than explored, if sending and receiving contexts have important characteristics in common (Bitsch, 2005). For example, the situation for hypermarkets, which have not been part of the present sample, could be similar, and settings in other European or extra-European countries could be comparable as well, depending on the legal framework.

The present study draws attention to the discrepancy of quality as defined through EU-norms and consumers' quality perception. Produce with a standardized appearance may ease trade, but seem to negatively impact the acceptance of produce with visual impairments both in the regular market and in redistribution. To address both aspects, the specific marketing standards could be abolished and minimum quality requirements as stipulated in the general marketing standards could be enacted for all fruits and vegetables.

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Appendix 5: Parallel positivistic evaluation criteria

Positivistic criteria of rigor	Parallel positivistic criteria*	Achieved through
Internal validity	Credibility	• Prolonged engagement • Persistent observation • Peer debriefing, • Negative case analysis • Progressive subjectivity • Member checks.
External validity and generalizability	Transferability	• Thick description • Purposeful sampling
Reliability	Dependability	• Keeping track of any changes • Detailed and comprehensive documentation of the research process and every methodological decision • Acknowledgement of academic training and number of researchers
Objectivity	Confirmability	• Practicing reflexivity • Discussing the researcher's epistemological assumptions • Discussing the researcher's personal involvement with the research • Quality assurance: Careful documentation of the entire research process

Adapted from Bitsch (2005) building on Schroeder et al. (1986)

Note: *Further information about the necessity to establish quality criteria fitting to qualitative research are addressed in Bitsch (2005, p81-82). The specific logic behind each parallel positivistic criterion is presented in Bitsch (2005, p.82-87)

Appendix 6: List of informants (Paper1)

Number	Organization	Gender	Residence	Profession	Age group
1	Food Sharing + Dumpster diver	Male	Southern Germany	Student	20-30
2	Dumpster diver	Male	Southern Germany	Peace activist	20-30
3	Dumpster diver	Male	Southern Germany	Student	20-30
4	Dumpster diver	Female	Southern Germany	Student	20-30
5	Dumpster diver	Male	Southern Germany	Student	20-30
6	Dumpster diver	Male	Southern Germany	Student	20-30
7	Dumpster diver	Male	Southern Germany	Student	20-30
8	Food Sharing + Dumpster diver	Male	Southern Germany	Programmer	20-30
9	Dumpster diver	Female	Southern Germany	Student	20-30
10	Dumpster diver	Male	Southern Germany	Forester	20-30
11	Slow Food	Male	Southern Germany	Manager and programmer	41-50
12	Slow Food	Male	Southern Germany	Actor	No information
13	Slow Food	Female	Southern Germany	Employee at Slow Food	No information
14	Slow Food	Female	Southern Germany	Child care worker	20-30
15	Slow Food	Female	Western Germany	Student	20-30
16	Slow Food	Female	Southern Germany	Student	20-30
17	Slow Food	Female	Western Germany	Student	20-30
18	Slow Food	Female	Southern Germany	Teacher	31-40
19	Slow Food	Male	Eastern Germany	Chef	20-30
20	Food Sharing + Dumpster diver	Female	Northern Germany	Elderly care	20-30
21	Dumpster diver	Female	Western Germany	Student	20-30
22	Food Sharing + Dumpster diver	Male	Southern Germany	Unemployed actor	20-30
23	Food Sharing + Dumpster diver	Female	Southern Germany	Unemployed baker	20-30
24	Dumpster diver	Male	Southern Germany	Stage director	20-30
25	Food Sharing + Dumpster diver	Male	Western Germany	Student	20-30