The effect of high- and low-quality LMX relationships and inter-volunteer group conflicts on the daily operational process of a non-profit Distribution Centre – A case study at the Dutch Food Bank

Master Thesis

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Preface

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Acknowledgment

I would like to express my gratitude to several persons who have supported and guided me during the writing process of my Master Thesis. First to all the volunteers of the Dutch Food Bank in both Rotterdam and Tilburg who were tremendously willing to help me with my research. While being born and raised in the city Rotterdam, I was never aware of this large part of society that depends on the valuable work of the many unpaid volunteers who work for the Dutch Food Bank. Secondly, I would like to thank my thesis coach Dr Michael Becker-Peth for his time, effort, comments and always being open to help me. Thirdly to my co-reader Dr Lucas Meijs who provided me with interesting and challenging information related to volunteer work. The combination of comments of both Dr Michael Becker-Peth and Dr Lucas Meijs were very helpful to make a link between the operational process of the distribution centres and volunteer work. Lastly, I would like to thank my parents, as they are always a great anchor of support and stimulate me to get out the best of myself.

Executive summary

This thesis is about the unpaid volunteers that operate in the operational workplace of a food bank's distribution centre (DC), on whom the continuance of the existence of the Dutch Food Bank depends. Due to the great diversity in volunteer characteristics, relationships arise that vary in both positive and negative sense, which subsequently has beneficial and/or detrimental organizational consequences. Particularly, this thesis identifies different qualitative relationships and examines which daily operational processes are affected. Additional attention has been paid to the managerial implication in order to minimize negative consequences. With the help of *categorization*, five volunteer groups have been identified: **1) non-profit volunteers**, **2) volunteers from churches**, **3) COVID-19 volunteers via institutions (Red Cross & soldiers sent by the Department of Defense)**, **4) mandatory volunteers** and, lastly, **5) corporate volunteers.** The categorization is driven by three variables: **1) Volunteer Motivation**; volunteer groups 1, 2, 3 and 5 are generally *intrinsically* motivated, particularly these volunteers have an *altruistic, utilitarian, social* or *intrinsic obligation* (only soldiers) motivation, whereas volunteer group 4 has an *extrinsic obligation* motivation, **2) Degree of Accountability (single- or dual leadership)**; volunteer group 1 is only accountable to the DC manager while volunteer groups 2, 3, 4 and 5 face duality of command, and **3) Organizational Control System**; the DC manager adopts different managerial approaches based on volunteer group to guide them to the organizational purposes. Within these groups *permanent* and *occasional* volunteers can be differentiated and demographic differences exist. The categorization identifies two types of relationships in the operational workplace: *between the DC manager and a volunteer group* and *between volunteer groups*.

Literature Review

Concerning the first relationship type, the **Leader-Member Exchange (LMX) Theory** has been applied. This theory approaches each individual relationship between a leader and its subordinates differently and identifies an in-group and out-group. Numerous studies found that the in-group (high-quality relationship level) positively influence organizational outcomes while the out-group (low-quality relationship level) has negative effects. Previous studies indicate that the three aforementioned categorization drivers may influence the LMX relationship quality level in a certain way. Therefore, sub-research questions investigate the role of these three drivers in the LMX relationship. Concerning the second relationship type, the **Intergroup Conflict Theory** has been applied because, in a social network, individuals naturally look for other similar individuals with whom they have a comfortable relationship with and form an in-group. Consequently, the in-group may develop a neglecting and hostile attitude towards the out-group, which may result in an

intergroup conflict that has detrimental effects for an organization. Therefore, this thesis also investigates if and between which volunteer groups conflicts may happen.

Methodology

Two case studies have been thoroughly investigated: the DC of *Rotterdam* and *Tilburg*, which have different characteristics; Rotterdam is big in size, functions as a hub, and works with all five volunteer groups. Tilburg, on the other hand, is smaller in size, functions as both a hub and final destination, and only works with volunteer groups 1, 2 and 3. In particular, semi-structured interviews were conducted with DC managers and a survey was conducted among the volunteers that both assess the four LMX-MDM dimensions: *Affect, Loyalty, Contribution* and *Professional Respect* to identify an in-group and out-group in the LMX relationships. Mini interviews were conducted with volunteers in which the question: *How do you think that group X, thinks about you?* was asked in order to identify inter-volunteer group conflicts. A literature study was conducted to examine the managerial implication and participant observation functioned as an overarching method.

Results

Results indicate that, concerning LMX relationships, volunteer group 4 is the out-group and volunteer groups 1, 2 and 3 are the in-group. Especially, male volunteers who are non-native in Dutch have a significant lower relationship with the DC manager, which is even lower in case of a female DC manager. Unfortunately, due to COVID-19 it was impossible to include volunteer group 5, which is a limitation. Results show that two drivers: *Volunteer Motivations* and *Organizational Control System* drive the in-/out-group distinction. The *Degree of Accountability (single- or dual leadership)* does not. Results illustrate that *intrinsically* motivated and *permanent* volunteers have a higher relationship quality level with the DC manager than *extrinsically* motivated and o*ccasional* volunteers. Particularly *soldiers* (volunteer group 3) and volunteers with an *altruistic* and/or *social* motivation have a higher relationship quality level. Moreover, results indicate that a stricter organizational control system is used for volunteer group 4, which may result in disputes and, hence, negatively influences the LXM relationship. Two operational tasks: **order picking** and **maintaining food safety** are affected the most by different qualitative relationships; high-quality LMX relationships are beneficial and low-quality LMX relationships are detrimental. Concerning the relationships between volunteer groups, results show that potential intergroup conflicts may occur between volunteer group 2 and other volunteer groups, between permanent and occasional volunteers and that real intergroup conflicts happen between volunteer groups 1 and 4 and between 3 and 4. (Potential) inter-volunteer group conflicts decrease *knowledge transfer* which negatively affects **the**

efficiency of the whole operational process. Finally, different qualitative LMX relationships and inter-volunteer group conflicts influence the **volunteer retention rate;** low-quality LMX relationships and inter-volunteer group conflicts result in a less friendly work climate whereas high-quality LMX relationships cause a favorable work climate. A (un)favorable work climate may influence the volunteer retention rate of *intrinsically* motivated volunteers, which especially applies to *socially* motivated volunteers. Consequently, this may result in *overstaffing* or *understaffing* (Diwas and Terwiesch, 2009) which again negatively influences the volunteer retention rate (Shin and Kleiner, 2003) and threatens the existence of the Dutch Food Bank.

Managerial implication and recommendations for the Dutch Food Bank

Two conditions must be meet first in order to improve LMX relationships and resolve inter-volunteer group conflicts: **1) the DC manager must satisfy the four needs: autonomy, competence, relatedness and self-esteem per volunteer group** (Elliot et al., 2001) and **2) all volunteers groups must be treated fairly** (Masterson et al., 2000; Deutsch et al., 2006). A DC manager improves LMX relationship quality levels via multiple actions such as by providing leader delegation (Bauer & Green, 1996; Yuki et al., 2009, being ethical and showing empathy (Mahsud et al., 2010), communicating a vision (showing transformational leadership) (Wang et al., 2005) and by preventing a violation of psychological contracts (Restubog et al., 2011). Furthermore, more autonomy is required for volunteer groups 1, 2 and 3, but it is important that the same rules apply to all volunteers to create fairness and that volunteer group 4 is coached instead of monitored. It is recommended that a DC (especially a large one) focusses its recruitment on *altruistically* and *socially* motivated volunteers and must therefore increase its intrinsic rewards. Furthermore, it is critical that the daily utilization rate is balanced. Moreover, it is recommended that a highly motivated individual within the out-group is educated to become a DC manager and that LMX trainings are provided to DC managers so that LMX relationship quality levels improve (Scandura and Grean, 1984; Graen, et al., 1986). Concerning, inter-volunteer group conflicts, the physical distance between groups must be reduced by letting different volunteers groups collaborate on one task (Al Ramiah and Hewstone, 2013). When there is a real conflict, the DC manager may act as a third-party consultant (Fisher, 1983), but he/she has to possess analytical skills, personal qualities, interpersonal skills, group leadership skills, intergroup skills, consultation skills, a professional attitude and an awareness for cognitive biases (Deutsch et al., 2006), which should be taken into account when a DC manager is recruited.

Table of Contents

List of figures

List of tables

List of abbreviations

BEP	Break-even-point
CV	Corporate Volunteering
DC	Distribution Centre
FPO	For-profit organization
LMX	Leader-Member Exchange Theory
NPO	Non-profit organization
SUB-RQ	Sub-research question

Chapter 1. Introduction

This thesis is about the distribution centres (DC) of the Dutch Food Bank. In particular, the topic is about the volunteers that operate in the operational workplace of the DCs. These unpaid volunteers keep the daily operational process running and assure that numerous parties benefit of the services of the Dutch Food Bank.

1.1 The purpose of this study

Food banks have the aim to distribute food among the poorest individuals in society while minimizing both food waste and misuse at the same time by completely relying on volunteers (Starkey, Kuhnlein, and Gray-Donald, 1998, 1999). Food banks create a win-win situation for, firstly, *society* since the poorest citizens are guaranteed food access, which consequently benefits the general quality of life in the nation (Midgley, 2013). A food-secure situation does not only positively affect people's health; it also benefits nations as a whole in terms of justice, trade and positively contributes to the global sustainability challenge (McIntyre, 2003). Secondly, a win-win situation is created for *the private sector*, as costs of waste management are reduced (Midgley, 2013).

In the Netherlands, the need for food assistance has significantly grown in recent years (De Graaf, 2019). Due to an annual increase of customers, the Dutch Food Bank needed two additional regional DCs in 2018 (Voedselbanken Nederland, 2019). Presently, the Dutch Food Bank serves more than 151,000 clients. Dutch citizens with an income below a certain threshold qualify and may collect once a week a food package, which is based on the family size (Voedselbanken Nederland, 2019). Regarding food waste in the Netherlands, 34.30 kilogram of food per person was wasted in 2019, which amounts to a total waste of 9.50 per cent of all purchased food (Van Dooren, 2019). In 2019, the Dutch Food bank saved approximately €74,000,000 in food from waste (Voedselbanken Nederland, 2019). Hence, the Dutch Food Bank provides an unprecedented value to numerous parties, which the arrival of COVID-19 emphasizes even more. The corona crisis shows to nations that an increasing number of citizens lives are becoming dependent on food banks due to unemployment (Kruyswijk, 2020).

The Dutch Food Bank is run by many *unpaid* volunteers and is therefore tremendously dependent on them. Without volunteers, the Dutch Food Bank cannot operate. The diversity among the volunteers is extremely big in the operational workplace of a food bank's DC. For instance, volunteers may vary in demographic characteristics (e.g. age, educational level, origin and income), skills, personality and reason to volunteer. This great diversity among the volunteers may cause different qualitative relationships in the operational workplace, which may consequently influence the DC's daily operational process. To explain, high-quality relationships between

volunteers may positively influence a DC's daily operational process whereas low-quality relationships may have negative consequences, which may even harm the existence of the Dutch Food Bank. The DC manager is ultimately responsible for the daily operational process and must ensure that it runs as smoothly as possible. From a managerial perspective, he/she may benefit when understanding the different qualitative relationships and its consequences. This thesis therefore aims to investigate the effect of both positive and negative relationships between volunteers in the operational workplace of a food bank's DC on the daily operational process.

1.2 Types of volunteer groups in a food bank's distribution centre

Unlike for-profit organizations (FPOs), food banks rely entirely on unpaid volunteers, whose value to the Dutch Food Bank is of great importance. Volunteering is a complex and ambiguous phenomenon that differs per of type of activity, organization and sector and is therefore not clearly delineated. Hence, numerous perspectives regarding the term exist. From a more general perspective, volunteering is seen as an activity in which an individual voluntarily offers up his/her time to help without obtaining a financial or material compensation (Wilson, 2000). Handy, Cnaan, Brudney, Ascoli, Meijs, and Ranade (2000) on the other hand approach volunteering from a public perspective. The authors argue that society ranks an individual higher as a volunteer when the net costs are higher. When it is noticed that an individual personally benefits from volunteering (e.g. financially and/or socially), this individual is ranked as less of a volunteer compared to an individual who not receives personal benefits.

While management information systems generally guide the operations of a for-profit DC (Faber, De Koster and Smidts, 2013), non-profit DCs are only run by persons. As described before, the great diversity in volunteer characteristics results in different qualitative relationships. This thesis will *categorize* volunteers in groups in order to identify these relationships, which may positively contribute to warehouse operations management as the clarification of different relationships in the operational workplace may help to develop a managerial approach per volunteer group. Hence, the categorization of volunteers may facilitate the tasks of a DC manager, who is ultimately responsible for the whole operational process. There are three main variables that drive the volunteer group categorization; *Volunteer Motivation*, *Degree of Accountability (single- or dual leadership)* and *Organizational Control System*.

Driver 1: Volunteer Motivation

Motivation implies to be moved to carry out something (Ryan and Deci, 2000). Brand, Kerby, Elledge, Burton, Coles and Dunn (2008) argue that motivation is a crucial factor in volunteer work

because it contributes to the understanding of what drives volunteers to dedicate their time to non-profit organizations (NPOs). This allows organizations to make the required managerial adjustments to those different volunteer profiles and motivations, which will consequently benefit both parties. According to Latham and Pinder (2005), motivation is a complex psychological process that results from an interaction between the individual and his/her surrounding environment. In general, a basic distinction is made between *intrinsic* and *extrinsic* motivation. Intrinsic motivation means that an individual does something because he/she thinks it is amusing and/or satisfying. There is no external incentive. Extrinsic motivation on the other hand refers to carrying out something because it results in a particular outcome (Ryan and Deci, 2000). Referring to aforementioned definitions of volunteering provided by Wilson (2000) and Handy et al. (2000), volunteers can be seen as intrinsically motivated from both a general- and public perspective; a volunteer is not seen as a real volunteer when he/she gets compensated or personally benefits from the volunteer activity. A real volunteer has an internal incentive.

To be more specific, Clary, Snyder, Ridge, and Copeland (1998) propose six widely accepted volunteer motivations, namely: *values, social, understanding, career, protective and enhancement* which can be assigned to three main volunteer motivation categories: *altruistic*, *utilitarian* and *social* motivations. An altruistically motivated person has a constant focus on the well-being of others and often sacrifices or neglects self-interests and personal well-being. Examples of altruistic motivations are religious values and the ambition to help others. A utilitarian motivated person aims to enhance human capital. The volunteer sees the volunteer activity as useful and practical. Examples of utilitarian motivations include improving resumes, developing abilities and gaining work experience. Volunteers with social motivations may feel social pressure of family and friends to volunteer and/or want to extend their social network (Cnaan and Goldberg-Glen, 1991; Cappellari and Turati, 2004). In addition, a volunteer can have an *obligation* motivation, which is extrinsic motivation. In many Dutch municipalities, citizens who receive a payment must work as compensation in NPOs. The Netherlands and Australia are the only countries worldwide that use this principle of mandatory voluntariness (Kampen, 2014). Moreover, mandatory voluntariness prepares individuals to reintegrate into society.

It is possible that a volunteer has a combination of motivations. For instance, a volunteer may be altruistically motivated; he/she wants to do something good for society, but also seeks social contact. In this case, the volunteer is both altruistically and socially motivated.

Driver 2: Degree of Accountability (single- or dual leadership)

Some volunteers face duality of command; they are accountable to the food bank's DC manager and to another person, institution or FPO. If a person must report to two superiors, it may create confusion. Moreover, duality of command may undermine authority (Fayol, 1949). Hence, volunteers who deal with single leadership may need a different managerial approach than volunteers who face dual leadership, so it is important to distinguish volunteers based on this aspect.

Driver 3: Organizational Control System

An organizational control system can be defined as "a set of mechanisms (processes and techniques), which are designed to increase the probability that people will behave in ways leading to the attainment of organizational objectives" (Flamholtz, 1996, p. 598). In other words, how do you make sure as a manager that your subordinates do their tasks they have to do? As a result of the great diversity in volunteer characteristics, a DC manager may have to adopt different organizational control systems in order to align all volunteers to organizational purposes, as some approaches are likely to be more effective when dealing with certain volunteers than others. Categorization may clarify which organization control system to adopt per group. Flamholtz (1996) explains that there are five factors that contribute to control an organizational control system:

I. Setting goals for each activity related to performance
II. Setting standards of performance on each stated goal
III. Using a measurement tool for monitoring performance of members
IV. Evaluation of performance
V. Reward to motive and reinforce performance

Categorization into five volunteer groups

As mentioned before, categorizing volunteers may benefit warehouse operations management. Three main variables (Volunteer Motivation, Degree of Accountability (single- or dual leadership) and Organizational Control System) drive this categorization. In total, five volunteer groups can be distinguished in the DCs of the Dutch Food Bank based on these three drivers. Within the groups, the individuals may differ in demographic variables and can be differentiated in *permanent* and *occasional* food bank volunteers (Agostinho and Paço, 2012). Permanent volunteers attend consistently while occasional volunteers show up inconsequently.

It is important to mention that these groups already implicitly exist in the operational workplace. For instance, both volunteers and DC managers refer to these groups which has been

noticed during observational research before starting to write this thesis. Hence, this thesis does not create groups itself but clarifies and uses them to identify the different relationships in the operational workplace.

Group 1: Non-profit volunteers

The first group is defined as *non-profit volunteers* and can be characterized as an *intrinsically* motivated group of volunteers, which corresponds to the definitions of a volunteer provided by Wilson (2000) and Handy et al. (2000). Volunteers in this group can either be *permanent* or *occasional*. Examples of representatives of this group are students, pensioners and part-time workers, who all greatly vary in demographic characteristics. Each volunteer has their own motivation or a combination of motivations to volunteer (altruistic, utilitarian and/or social). This group also includes COVID-19 volunteers, which are volunteers that want to help society in times of need (altruistic motivation), have lost their job but want to do something useful in the meantime (utilitarian motivation) and/or want to stay socially connected because of the lockdown (social motivation). This group faces single leadership since it is only accountable to the DC manager.

Group 2: Volunteers from churches

The second group consists of *volunteers from churches*. The more religious people are, the more likely they are to volunteer (Cnaan, Kasternakis, and Wineburg, 1993). In general, volunteers from churches are considered as intrinsically motivated because religious values belong to altruistic intentions. However, the relationship between religion and volunteering is "not univocal- or 'default' but differentiated and ambiguous" according to Hustinx, von Essen, Haers, and Mels (2015, p. 3). The relationship may sometimes be even provocative, as the demands of the church may have an obligatory character (Hustinx, et al., 2015). Hence, this group may experience a social pressure, which is a social motivation. Volunteers from churches experience a duality of command; on one hand they are accountable to the DC manager, while on the other hand they are accountable to the church/pastor. Many churches have an international exchange volunteer program that provides the opportunity to churchgoers to live abroad and volunteer for a certain amount of time, which attracts especially young churchgoers. This group includes both permanent- (mainly Dutch churchgoers) and occasional volunteers (mainly via an international exchange volunteer program).

Group 3: COVID-19 volunteers via institutions

A recently created occasional volunteer group consists of *COVID-19 volunteers that are sent by institutions* such as the Red Cross and the Department of Defense. Volunteers sent by institutions

are very similar to the non-profit volunteers (volunteer group 1). Both groups are intrinsically motivated and vary greatly in demographic variables. The only difference is that this group experiences dual leadership; the volunteers are accountable to the Red Cross or the Department of Defense. The volunteers sent by the Red Cross have an altruistic, a utilitarian or social motivation because it is their own choice to sign up for the initiative. The soldiers sent by the Department of Defense are obliged to help society since the Department of Defense offered this, as the Dutch Food bank experiences an immense increase in clients and a shortage in volunteers due to COVID-19.

Group 4: Mandatory volunteers

The third group includes *mandatory volunteers*. As described before, the Netherlands and Australia are the only countries in the world that use this form of mandatory voluntariness (Kampen, 2014). This group may include citizens that receive a financial compensation of the government or citizens that are being helped to reintegrate into society (e.g. former prisoners and alcohol/drugs addicts). This group is often a client of the food bank itself and, hence, the majority is part of the lower social class. The intention of mandatory voluntariness is that these people volunteer for a short moment of time until they are ready to face the real society. However, the time it takes can vary per volunteer. These volunteers deal with dual leadership, as they work for the food bank's DC manager and a social institution. It is essential to mention that the nature of the obligation of this group and the obligation of the soldiers (volunteer group 3) differs. Whereas the soldiers sent by the Department of Defense are generally intrinsically motivated, the motivation of the mandatory volunteers is extrinsic. The soldiers have chosen a job which positively contributes to society (altruistic motivation) while the mandatory volunteers volunteer to prevent a negative consequence when the performance is not delivered (e.g. not receiving financial support and/or a food package)

Group 5: Corporate volunteers

The last group includes *corporate volunteers* (CV). This term is described as "employed individuals giving time, through a company initiative, during a planned activity for an external non-profit or charitable group or organization" (Rodell, Breitsohl, Schroder, and Keiting, 2015, p. 57). This group is considered as intrinsically motivated because the employees can decide for themselves whether to participate in the program. These corporate volunteers are mainly middle-aged, highly educated and volunteer occasionally. Since this group volunteers through an FPO initiative, this group faces duality of command; the group is accountable to both the DC manager and its employer (FPO). CV is considerably increasing, especially in OECD countries (Pajo and Lee,

2011). CV seems to be tremendously beneficial to both employees and organizational performance. Several examples of positive effects are; increased job satisfaction, productivity, turnover, teambuilding, well-being, self-esteem, life satisfaction and reduced absenteeism (de Gilder, Schuyt, and Breedjik, 2005; Peterson, 2004; Mojza, Sonnentag, and Bornemann 2011; Paço and Nave, 2013). Moreover, CV provides an opportunity for employees to enhance skills such as communication and interpersonal skills. Besides, CV improves morale and ultimately performance (Booth, Won Park, and Glomb, 2009; Caligiuri, Mencin, and Jiang 2013), serves as a resource to attract and retain employees, and improves both a FPO's reputation and Corporate Social Responsibility image (Jones and Willness, 2013; Plewa, Conduit, Quester, and Johnson, 2015). However, some employees are more likely to participate in volunteer opportunities provided by their employers than others due to different motivations. Paço, Agostinho, and Nave (2013) investigated if there are significant differences between motivations of a corporate- and non-profit volunteer (volunteer group 1). The results indicate that non-profit volunteers have higher scores for all six motivations proposed by Clary et al., 1998 (values, social, understanding, career, protective and enhancement). Furthermore, the results show that the motivational factor *values* is recorded as the most relevant for both groups (altruistic motivation). Additionally, Gatignon-Turnau and Mignonac (2014) imply that many employees base their decision on whether to volunteer on the company's ulterior motive behind it, which can be characterized as altruistically motivated as well. Peterson (2004) states that employees view volunteerism as an effective method of improving job-related skills (utilitarian motivation). Hu, Jiang, Mo, Chen, and Shi, (2016) discovered that prosocial motivation correlates positively with voluntarily participation and that social support strengthens the positive effect of prosocial motivation (social motivation).

To summarize the categorization based on the three drivers, volunteer groups 1, 2, 3 and 5 are considered as intrinsically motivated volunteers because they have an internal incentive. Only volunteer group 4 is characterized as extrinsically motivated because not volunteering results in a negative futures consequence. Within these groups, the volunteers may have different (multiple) motivations (altruistic, utilitarian, social, intrinsic- or extrinsic obligation). Regarding the degree of accountability, volunteer groups 2, 3, 4, and 5 experience dual leadership while volunteer group 1 faces single leadership. The DC manager may adopt different organizational control systems based on volunteer group so that the volunteers execute the tasks they must do. In table I below, a generalizable summary is provided of the main characteristics of the five volunteer groups.

	Group 1: Non-profit volunteers	Group 2: Volunteers from churches	Group 3: COVID-19 volunteers via institutions	Group 4: Mandatory volunteers	Group 5: Corporate volunteers
Driver 1: Volunteer Motivation	Intrinsic (altruistic, utilitarian, social)	Intrinsic (altruistic, social)	Intrinsic (altruistic, utilitarian, social, obligation)	Extrinsic (obligation)	Intrinsic (altruistic, utilitarian, social)
Driver 2: Degree of Accountability (single- or dual leadership)	Single leadership	Dual leadership	Dual leadership	Dual leadership	Dual leadership
Demographic characteristics	Diversified	The majority is foreign and young (<25 years). However, this group also includes Dutch volunteers	Diversified	The majority is foreign and part of the lower social class	Middle-aged and highly educated
Permanent or occasional volunteers	Permanent or occasional	Permanent (Dutch) or occasional (via international exchange volunteer programs)	Occasional	Depends	Occasional
Members of the group	Students, pensioners, part-time workers, COVID-19 volunteers	Churchgoers both Dutch and foreign	Volunteers sent by the Red Cross and soldiers sent by the Department of Defense to help due to COVID-19	Citizens that receive a financial compensation, former prisoners and alcohol/drugs addicts.	Volunteers who signed up for their FPO initiative

Table I: Generalizable summary of volunteer characteristics per volunteer group

One important aspect to mention in this thesis is the fact that a food bank's DC Manager is also characterized as an unpaid volunteer. Some voluntarily leaders volunteer even though this may come at personal costs, which can be defined as altruistic behavior. Others use voluntarily leadership strategically to extract personal gains with the expectation that others will be at least as helpful (utilitarian motivation). Thirdly, a fraction desires to maintain a positive social image (social motivation) (Arbak and Villeval, 2013).

1.3 Relationships in the workplace

Since a food bank's DC is run by people, many diversified relationships exist in the workplace. In order to optimize warehouse operations management, it is important that the diversified relationships are understood. Categorization clarifies these different relationships. Two main relationships exist in the operational workplace of a food bank's DC. The first relationship in the workplace is *between the DC manager and a volunteer group*. The DC manager must guide each volunteer, which is characterized as a leader – subordinate relationship. The second relationship is *between volunteer groups*. The five identified volunteer groups must collaborate which results in differing relationships between the groups.

1.4 The daily operational process of a foodbank's DC

A DC has a critical intermediate role in the supply chain influencing both service and supply chain costs (Kiefer and Novack, 1999). A food bank's DC is non-profit and aims to help as many people as possible. However, income is needed for activities (e.g. rent, electricity, water, office supplies and destruction costs), which is retrieved from municipality- and state support and gifts. Hence, a food bank's DC must achieve its break-even-point (BEP). Anno 2020, the Dutch Food Bank has in total ten regional DCs which all work independently and vary in size, layout, capacity and equipment. A DC has four functions: *receiving, storage, order picking* and *distribution* (Gue, 2001). In addition, *maintaining food safety* is an essential task as well for a food bank's DC (Voedselbanken Nederland, n.d.). Each DC has one or more voluntarily DC managers, who are ultimately responsible for the whole operational process.

The five tasks of a foodbank's DC

Receiving

A food bank's DC is totally dependent on donations. All products are donated by major retailers (e.g. Albert Heijn, Jumbo and Sligro), wholesalers (e.g. Unilever) and local farmers. Furthermore, local shops may provide occasional gifts, which particularly occurs during Christmas and Easter.

Each DC has one or more volunteers who communicate with the donors and arrange the acquisition. These volunteers have specifically applied for this purchasing function and work behind the scenes of the DC. The donors themselves ensure that their products are transported to the DCs. It is essential to distribute all the donated products, as the continuation of donations must be ensured to serve as many clients as possible and to prevent the loss of donors.

Storing

Each food bank's DC has two storage spaces. Firstly, there is an area for dry products (e.g. canned products, pasta and rice), for which standard pallets racks are used. Secondly, there is a cooling area for refrigerated and frozen items with a limited expiration date (e.g. vegetables, fruit, bread, meat and dairy). A forklift is often used to move pallets around the facility. A small group of volunteers is allowed to drive in a forklift, which are most of the time permanent volunteers.

Order picking & Distribution

The Dutch Food Bank distributes its products via a combination of four different types of distribution channels, which may differ per DC. A food bank's DC may function as a *final destination*, a *hub* or as a combination of both.

I. Final destination; Smaller DCs may function as a final destination for direct clients. On a fixed day of the week, direct clients can collect food packages at the DC itself.
II. Hub; Food packages are sent to local distribution points, which mainly includes churches.
III. Hub; Food packages are shipped to smaller food banks in the region, which are affiliated with the Dutch Food Bank. In this way, the scope of citizens being helped is expanded.
IV. Hub; Food packages are distributed via small supermarkets, which is a relatively new concept since it was launched in 2018. Customers can shop their food package together in a store, which seems to have several advantages; Firstly, it reduces the embarrassment of being a customer of the food bank. A Dutch study found that receiving food assistance might harm people's self-esteem (Van Der Horst, Pascucci and Bol, 2014). Shopping your groceries at a supermarket may give a feeling of not being dependent on the food bank. Additionally, clients can choose products which they prefer, which reduces food waste. However, the downside of this new concept is that it is often hard to find a suitable store in overpopulated areas, which satisfies certain requirements such

as cooling storages and a good accessibility. Currently, 38 percent of the food banks in the Netherlands utilize the new supermarket formula.

The used order picking method(s) may vary per DC and is generally based on the type of distribution channel. During the order picking procedure one of the considerations include a diverse food package. Moreover, there are some basic products that are required for each food package. The general rule is; what is received, must be distributed. So, it is important that attention is paid to expiration dates. Some products (e.g. fruit and vegetables) need to be repacked in smaller quantities. The order picking procedure can be distinguished into *discrete order picking* and/or *zone order picking*. Discrete order picking means that one volunteer is responsible for one order (e.g. for a direct client, affiliated food bank or supermarket) at a time. In this case, volunteers are given an order picking list and must pick the right quantity of products manually, which is basic and simple to understand. Zone order picking on the other hand means that each volunteer is responsible for their item(s) in their zone and when he/she is done, passes the order to the next volunteer (De Koster, 2019).

When a DC functions as a final destination (distribution channel I), volunteers directly distribute a diversity of products to the customers, which is consistently replenished at distribution day until the products run out. In contrast, distribution channels III and IV require fewer handling operations since large pallets are distributed to both smaller food banks and supermarkets considering the demand and the diversity of the assortment. As for distribution channel II, a DC may prepare food packages in advance, which results in high handling costs, or may distribute pallets, which resembles the order picking procedure of distribution channels III and IV.

Maintaining food safety

Each DC has one or more volunteers responsible for monitoring the food safety. This includes tasks such as monitoring hygiene, expiration dates, temperatures of cooling storage spaces, interior of the building and whether a DC works according to the First-In-First-Out (FIFO) principle. The Dutch Food Bank provides a manual for its DCs to maintain food safety (Handboek Voedselveiligheid van de Vereniging van Nederlandse Voedselbanken, 2016). In the operational workplace, each volunteer must always check the quality of the product.

Overarching: the daily utilization rate

On a working day, there are a fixed number of spots available in the workplace. Hence, the daily utilization rate must be balanced as too many volunteers result in *overstaffing,* which may lead to

inefficiency (e.g. volunteers waiting on tasks to do). Consequently, volunteers may feel useless and may therefore think it better not to show up the next time. On the other hand, too few volunteers result in *understaffing*, which first may lead to an increase in workload which is positive. However, Diwas and Terwiesch (2009) state that an increase in workload will not sustain over time in service settings due to fatigue. Even though the authors use a different setting, namely a hospital, the results may be generalized to a non-profit DC, as a hospital and a food bank have both the intention to help as many people as possible. Both over- and understaffing may consequently influence the *volunteer's retention rate* (Shin and Kleiner, 2003). Eventually, a surplus or shortage of volunteers may negatively influence the overall daily operational process and may even threaten the existence of the Dutch Food Bank. Hence, creating a balance of the utilization rate is critical.

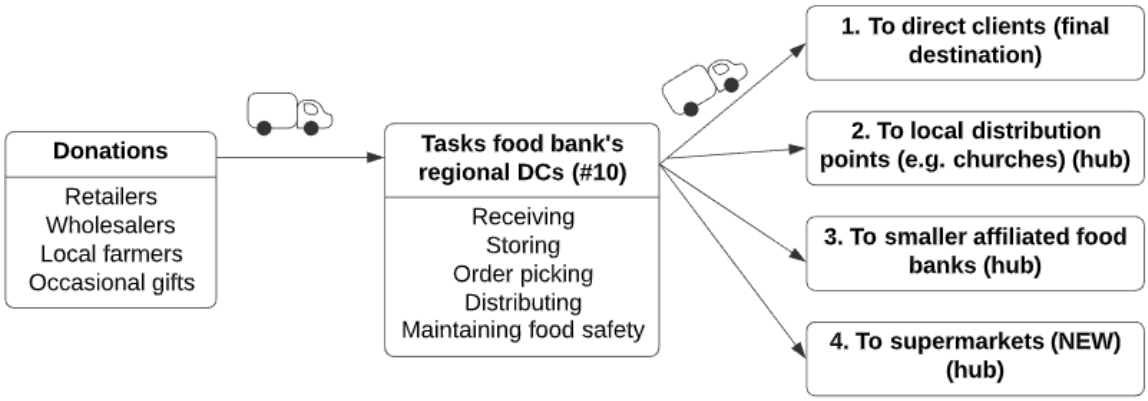

Figure I: The supple chain of the Dutch Food Bank

1.5 Problem description

As mentioned before, the Dutch Food Bank is extremely dependent on unpaid volunteers. The five identified volunteer groups and the fact that the DC manager is a volunteer as well, creates a situation with various motivations, differences in the extent of accountability (single or dual leadership), and different organization control systems adopted by a DC manager based on volunteer group. Furthermore, there are demographic differences and differences in how long someone has been volunteering. Hence, the relationships in the operational workplace may positively or negatively vary. Regarding the relationship between a DC manager and a volunteer group, a high-quality relationship may positively affect the daily operational process of a DC. Conversely, negative organizational consequences may occur when leader-subordinate' relationships are of low quality. Moreover, with regards to the relationships between volunteer groups, individuals naturally look for other similar individuals with whom they have a comfortable

relationship within a social network and identify them as members of their own in-group. Other individuals that are not part of the own in-group belong to the out-group. An in-group may create a neglecting and hostile attitude towards the out-group, which may result in an intergroup conflict and may negatively affect the DC's daily operational process. From a managerial perspective, it is essential for a food bank's DC to understand the different relationships in the operational workplace and its effect on the daily operational process. Since it is the task of a DC manager to align the great diversity in volunteers to the organizational purposes, he/she may benefit by understanding the different qualitative relationships he/she has with each volunteer group separately. Furthermore, it may be beneficial to know between which volunteer groups conflicts may happen so that an appropriate leadership style can be applied, which may favor the DC's daily operational process and eventually the continuance of the services of the Dutch Food Bank.

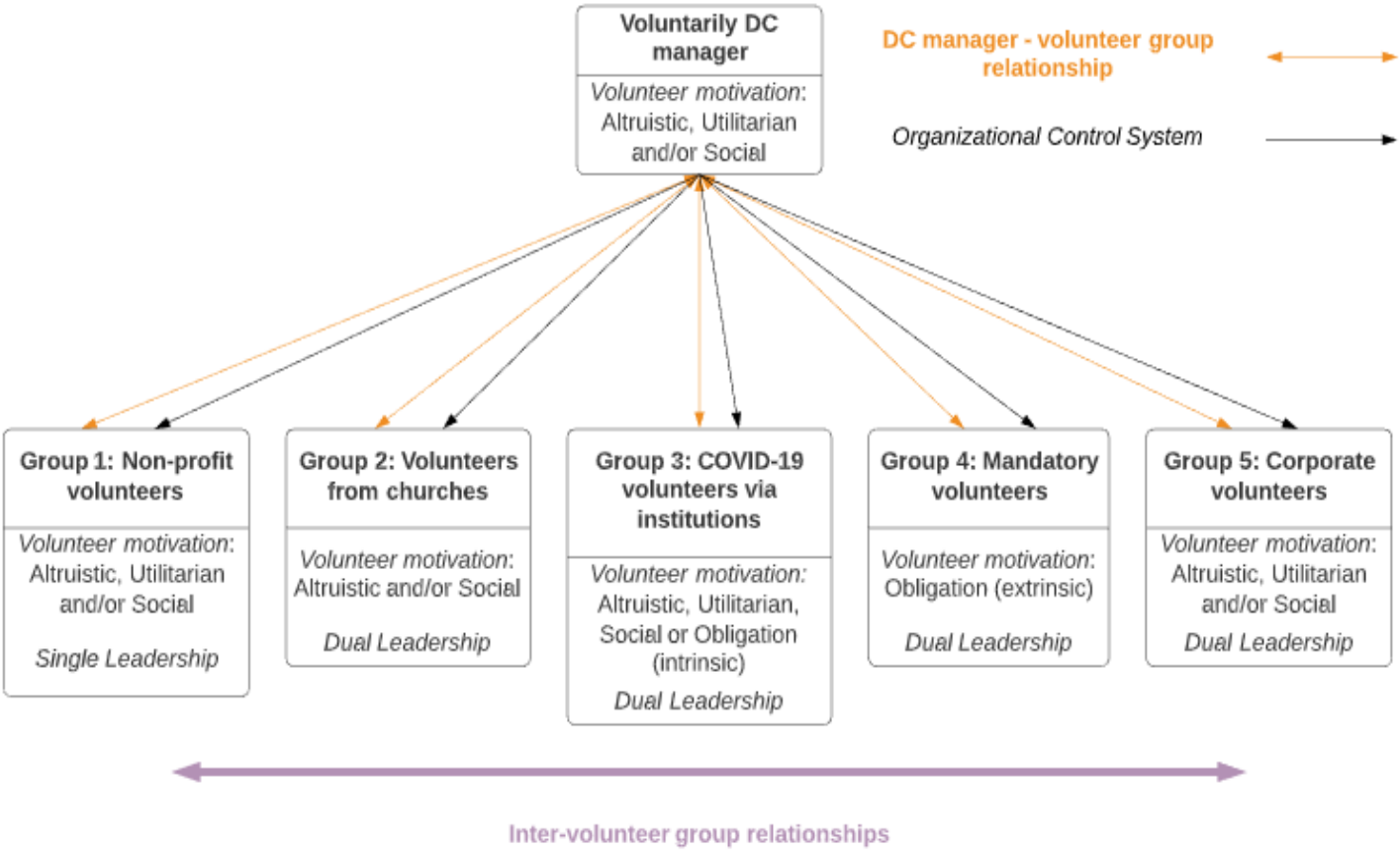

Figure II: Visual problem description

1.6 Research questions, research objective and conceptual model

The main research question of this thesis is:

What are the consequences of both different relationship quality levels between a DC manager and the five volunteer groups and potential inter-volunteer group conflicts for the daily operational process of a food bank's DC?

The sub-research questions (SUB-RQs) can be divided into two sections. The first aspect is between DC manager and volunteer group. The second aspect is between volunteer groups. Sub-research question one, two, three, and four investigate the different relationship quality levels between a DC manager and a volunteer group. Sub-research question five examines the relationships between the different groups. The last sub-research question relates to the managerial implication.

SUB-RQs DC manager ⇔ volunteer group relationships:

I. How do relationship quality levels differ between a food bank's DC manager and the five volunteer groups?
II. How do the various volunteer motivations drive the differences in relationship quality levels?
III. How does the degree of accountability (single- or dual leadership) affect the relationship quality levels?
IV. Does a foodbank's DC manager adopt different organizational control systems based on volunteer group? If so, how does this affect the relationship quality levels?

SUB-RQ inter-volunteer group relationships:

V. Do conflicts happen between the volunteer groups? If so, between which volunteer groups?

SUB-RQ managerial implication:

VI. What can be learned from academic literature to manage different relationship quality levels and conflicts between volunteer groups in order to optimize warehouse operations management?

Conceptual model:

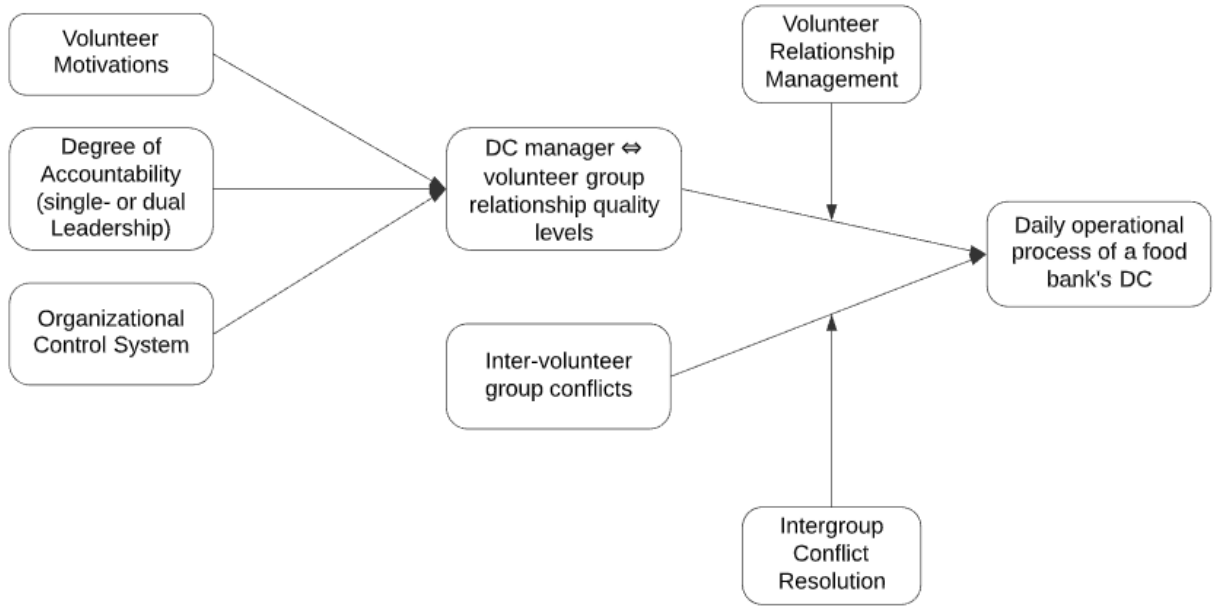

Figure III: Conceptual model

The main objective of this thesis is to understand how both positive and negative relationship quality levels between a food bank's DC manager and volunteer group, and possible inter-volunteer group conflicts affect the daily operational process of a food bank's DC. As mentioned before, it may be beneficial for a DC manager to understand the different natures of relationships and its effects on the daily operational process since he/she could adapt its leadership style so that the operational process still runs smoothly despite possible negative consequences of low-quality leader-subordinate' relationships and inter-volunteer group conflicts. Therefore, additional attention will be paid to the question how a DC manager should manage these different relationship quality levels and inter-volunteer group conflicts in the operational workplace so that the DC's daily operational process is optimized.

1.7 Academic and managerial contributions

Despite the unprecedented value of a food bank to entire nations, society and the private sector (McIntyre, 2003; Midgley, 2013), the availability of academic literature concerning the management of a foodbank and its warehouse operational processes is scarce. Most of the food bank literature focuses on the USA and Canada and most of the warehouse operations management literature examines FPOs. This study will therefore contribute to academic literature that focuses on the management of food banks and non-profit warehouse operations management. Secondly, this will be the first study that examines different relationship quality levels between a DC manager and

volunteer groups and inter-volunteer group conflicts in a food bank's DC with the help of categorization based on three drivers (Volunteer Motivations, Degree of Accountability (single- or dual leadership), and Organizational Control System). Thirdly, this thesis pioneers in investigating inter-volunteer group conflicts in detail. To explain, this thesis investigates between which volunteer groups conflicts may happen and its organizational consequences. Regarding the organizational consequences of intergroup conflicts, there is also a lack of academic literature, as most of the managerial studies focus on the causes and possible solutions to solve an intergroup conflict.

This study contributes to practice, as it helps voluntarily food bank's DC managers to understand how to execute the daily operational leading task in distribution centres when dealing with a vast diversity in volunteer's characteristics which may cause negative consequences so that the daily operational process is still optimized.

Chapter 2. Literature Review

In this chapter, two theories are applied to two types of relationships that exist in a food bank's DC (see paragraph 1.4). Paragraph 2.1 applies the Leader-Member Exchange Theory (LMX) to the relationship between DC manager and volunteer group. Paragraph 2.2 applies the intergroup conflict theory to the relationships between the different volunteer groups

2.1 Leader-Member Exchange Theory

In general, existing leadership literature considers all relationships between a leader and its members identical, whereas the LMX theory approaches each individual relationship between a leader and its subordinates differently. The theory, developed by Dansereau, Graen and Haga (1975), analyses the nature of dyadic relationships between a leader and follower. The *role theory* served as the foundation for the LMX and describes the development of leader- member relationships as a result of various role-making episodes (Graen, 1976). Supervisors communicate role expectations to their subordinates and base the amount of work and given autonomy to the extent that subordinates comply with these expectations (Graen and Scandura, 1987). Moreover, LMX can also be approached from the *social exchange theory* perspective. In an organizational environment, both material and non-material (e.g. advice, knowledge, and support) goods are exchanged in social interactions. Hence, leader-member exchanges can be differentiated based on social exchanges (Dienesch and Liden, 1986; Liden and Maslyn, 1998)

The LMX is a process that explores how leaders and members develop relationships that differ in quality. This theory involves a three-step process. In the first step - *Role Taking* - the new member joins an organization and his/her abilities are initially assessed by the leader. During the second step - *Role Making* - a role is created for the member. Leaders will not seek to develop mature LMX relationships without first assessing the three criteria: *reciprocal trust, respect and obligation*. Consequently, the member is classified in either the in-group or out-group. Some members have a high-quality relationship with the leader (high mutual trust, respect and obligation), which is called the in-group, while others are of low quality (low mutual trust, respect and obligation), which is also referred to as the out-group. In the third step – *Routinization* - routines, norms and expectations are established and both parties get an insight how the other works (Graen and Scandura, 1987; Bauer and Green, 1996; Northouse, 2016). Numerous studies found that a high level of LMX is associated with several positive outcomes for organizations, leaders, subordinates, and work units (Graen and Uhl-Bien, 1995). It is found that a high LMX positively correlates with task

performance, citizenship performance, attention, participation, supervision satisfaction, overall satisfaction, organizational commitment, role conflict, attitude and role clarity. (Gerstner and Day, 1997; Northouse 2016; Mardanov, Heischmidt, and Henson 2008; Schyns, 2006; Martin, Guillaume, Thomas, Lee, Epitropaki, 2016). On the other hand, followers who have a low-quality relationship with their supervisor are more likely to evaluate their jobs negatively, receive less supervisory support, desire a better relationship, feel aggrieved, have fewer advancement opportunities and quit earlier. (Grean and Uhl-Bien, 1995; Vecchio, 1995; Gerstner and Day, 1997; Maslyn and Uhl-Bien, 2001; Bolino and Turnley, 2009). So, the exchange quality of the relationship considerably affects individual outcome variables, which subsequently influence organizational results. This thesis has a focus on the organizational outcomes.

The three variables that drive the categorization (Volunteer Motivations, Degree of Accountability (single- or dual leadership), and Organizational Control System) may clarify the difference in the relationship quality level between a DC manager and volunteer group based on LMX differentiation. SUB-RQs II, III and IV will examine if and how these three drivers influence the relationship quality level. According to the fundamental definition of a volunteer provided by Wilson (2000) and Handy et al. (2000), volunteers are intrinsically motivated. This implies that many volunteers value rewards such as establishing social networks, increasing personal development and achieving a sense of fulfillment (Wilson, 2000). Hence, this may imply that high-quality relationships may be of greater personal importance for some volunteer groups However, this may differ per identified group based on motivation. Aforementioned, volunteer group 4 is extrinsically motivated because not volunteering may result in a negative consequence for them. Therefore, group 4 may differ in the given importance to the relationship quality level with the DC manager, which negatively influences the overall exchange relationship. Regarding the second driver, many LMX studies investigated the relationship between one member and one leader. Vidyarthi, Erdogan, Anand, Liden and Chaudry (2014), however, studied the situation of one member and two leaders (dual leadership). They found that employees develop two different LMX relationships, which jointly influence employee outcomes (e.g. turnover, job and supervision satisfaction). As a result, there may be a difference in relationship quality levels between volunteer groups that face non-duality (single leadership) or duality of command (dual leadership). Concerning the last driver, Crosno and Brown (2015) insinuate that an organizational control system may improve a relationship quality level because the system acts as a medium for communication (e.g. providing expectations and feedback), which favors the general exchange relationship in terms of trust, commitment and satisfaction. However, when an organizational control system is very strict, it may imply mistrust which reduces the relationship quality level (Frey,

1993). Hence, the adopted organizational control system(s) influence(s) the relationship quality level between a leader and its subordinates in a certain way. Finally, Dienesch and Liden (1986) argue that individual characteristics (e.g. gender, race and educational background) may be correlated with the quality of LMX relationship. Follow up research on this subject executed by Wayne, Liden and Sparrowe (1994) suggests that members and leaders with the same gender will develop higher relationship quality levels compared to members and leaders with opposite genders.

It is important to mention that leaders and followers may have different perceptions of their dyadic relationships. Schyns and Wolfram (2008) found that follower-rated LMX is related to subordinates' attitudes and well-being, whereas leader-rated LMX refers to overall group performance. Therefore, both perceptions will be considered in this thesis in order to get a proper understanding of the leader-subordinate relationships' nature.

To conclude, the relationship quality levels between a foodbank's DC manager (leader) and the five identified volunteer groups (members) may vary. Whereas high-quality relationships may positively affect the daily operational process of a food bank's DC, low quality relationships may have negative consequences. Hence, it is critical to identify the quality of the relationship levels, which will be examined through LMX differentiation based on both the perception of the DC manager and the perceptions of the volunteer groups in this thesis.

2.2 Intergroup Conflict Theory

Groups are connected through social relationships, similar purposes and the same social hierarchy (Böhm, Rusch and Baron 2018). Individuals naturally look for other similar individuals with whom they have a comfortable relationship with and identify them as members of their own in-group (us). Consequently, the in-group feels threatened by the out-group and a neglecting and hostile attitude towards the out-group may exist (them), which may result in an intergroup conflict. Fisher (2000) defines an intergroup conflict as "a social situation in which there are perceived incompatibilities in goals or values between two or more parties, attempts by the parties to control one and another, and antagonistic feelings toward each other" (p. 168). Intergroup conflicts influence the *perceptions* (e.g. stereotyping and prejudice), *emotions* (e.g. dislike), and *behaviors* (e.g. discrimination and hostility) of all involved individuals (Böhm et al., 2018). Continuous conflict in the workplace detrimentally affects the work climate and both the physical and psychological well-being of employees (Danna and Griffin, 1999). Only a few studies relate to the organizational consequences of intergroup conflict. More managerial studies exist that focus on the causes and how to solve an intergroup conflict. One study found that intergroup conflict can be associated with depressive symptoms and job dissatisfaction among Japanese male fire fighters (Saijo, Ueno

and Hashimoto, 2008). Another study, however, found no significant evidence concerning the effect of intergroup conflict on the job satisfaction and team performance effectiveness among nurses (Cox, 2003). Despite a great lack of research regarding this topic, it is important to clarify possible negative consequences since it may harm the organization as a whole. Especially since food bank's rely on unpaid volunteers, it is important to support an agreeable work climate and well-being that stimulates 'job' satisfaction, because it may influence the volunteer retention rate.

Intergroup conflicts may occur due to different reasons. Katz (1965) states the following three intergroup conflict sources: *economic* (e.g. attaining resources), *power* and *value* (e.g. disagreement in principles). More recent studies investigated the influence of both situational and personal characteristics on intergroup relationships and the behavioral effects of group categorizing as a source for intergroup conflicts.

In-group/out-group differentiation is an important characteristic in social networks. Hewstone and Greenland (2000) provide an overview of three group perspectives on intergroup conflict, which explain the psychology of intergroup conflict. In the first place, *ethnocentrism* describes a tendency between the we/in-group and others/out-groups. The own group values and standards are considered as superior while the other group is judged. Secondly, the *realistic group conflict theory* argues that intergroup conflicts are rational, as groups have incompatible goals and are rivals of each other due to limited resources. Lastly, the *social identity theory* states that individuals define themselves to a great extent in terms of their social group memberships and aim to search a positive social status. Discrimination and prejudice happen to the out-group naturally. This categorization of individuals into groups is enough to create differentiation and biases in favor of the own in-group and discrimination against out-groups (Deutsch, Coleman and Marcus, 2006). The social identity theory is the most dominant perspective in intergroup relations studies (Brewer and Brown, 1998). A more recent perspective is the *integrated threat theory*, proposed by Stephan and Stephan (2000). This theory focuses on the aspects that lead to various individual perceptions of threat, which influences attitude and behavior.

Brewer (1997) introduces three principles that are likely to operate in every social situation. Firstly, the *social competition principle* addresses that intergroup social comparison with the out-group is identified as competitive rather than cooperative. Secondly, the *in-group favoritism principle* refers to the selective generalization of positive affect to a fellow in-group member and not to out-group members. Lastly, the *intergroup accentuation principle* states that individuals assimilate within the category boundaries, which result in major differences between the two categories.

To conclude, in-group/out-group differentiation among the five volunteer groups may drive discrimination and prejudice to other volunteer groups, which may result in inter-volunteer

group conflicts. These conflicts may negatively affect the daily operations of a foodbank's DC, which makes it essential to identify between which volunteer groups conflicts happen so that the DC manager can resolve these.

Chapter 3. Methodology

This thesis uses a case study methodology. Particularly, two cases have been thoroughly investigated. This chapter describes the characteristics of these two cases and explains which research methods are conducted per SUB-RQ.

3.1 Two case studies: Rotterdam and Tilburg

In this thesis, a case study methodology has been used. McCutcheon and Meredith (1993) argue that case study research is a valid strategy in operations management because it allows to investigate a real-life situation. Dul and Hak (2008) explain that a case study is an appropriate research strategy in business research when the subject is broad and complex, when there is a lack of theory available and when the context is highly meaningful. All these three conditions hold for this thesis; (a) the great diversity in volunteer characteristics makes the topic broad and complex, (b) the availability of literature concerning the management of a foodbank and its warehouse operational processes is scarce, and (c) the Dutch Food Bank has in total ten regional DCs which all have their own way of working and vary in size, layout, capacity and equipment. Hence, the context per DC is important because it may influence results.

Two cases: the DC of *Rotterdam* and *Tilburg*, have been analyzed in their real-life contexts in order to increase the generalizability of this study.

The DC of Rotterdam

Rotterdam serves more than 7,000 families via 30 distribution points and 27 affiliated regional food banks with the help of more than 400 volunteers, who can be categorized into one of the five identified volunteer groups. Volunteer group 1 (non-profit volunteers) is the largest, followed by volunteer group 4 (mandatory volunteers). The estimated size ratio between these groups is 3:1. The other three groups are significantly smaller. Two voluntarily DC managers one male and one female, manage the operational process both two days a week.

The DC of Tilburg

Tilburg serves approximately 600 families in the Dutch provinces Brabant and Zeeland via 5 distribution points and 32 food banks located in the south of the Netherlands. Tilburg has around 100 active volunteers, who all belong to either volunteer group 1, 2 or 3. Tilburg does not work with mandatory (volunteer group 4) - nor corporate volunteers (volunteer group 5). Concerning Tilburg, volunteer group 1 is by far the largest, followed by volunteers from churches (volunteer

group 2). The estimated size ratio between these two groups amounts 4:1. Volunteer group 3 has a small size. One voluntarily DC manager (male) manages the weekly operational process full-time.

Operational differences across the cases

As mentioned before, each food bank's DC works independently and, hence, has their own way of working. Therefore, the operational differences between the two case studies will be described through the DC's functions (receiving, storage, order picking, distribution, and maintaining food safety) because this may influence the results and the managerial implication of this thesis. The functions receiving, storage and maintaining food safety are similar in both DCs. However, Rotterdam and Tilburg highly differ in the two functions: order picking and distribution, which can be understood due to the difference in DC sizes.

Rotterdam uses distribution channels II, III and IV, while Tilburg combines distribution channels I, II and III (see paragraph 1.2 for a detailed explanation of the four possible distribution channels). Both DCs distribute to local distribution points and affiliated food banks in their region (II and III). In addition, Tilburg distributes food packages directly to its clients at Fridays. The customers can collect the products at the DC itself. Each volunteer is responsible for giving away one product until it runs out. In this way, food packages do not need to be made in advance, which results in less handling costs (I). A recent development in Rotterdam in contrast to Tilburg is the conduction of pilot studies with supermarkets in the region (IV). Hence, Rotterdam only functions as a hub while Tilburg functions as both a final destination and hub.

Regarding the order picking procedures, Rotterdam uses discrete order picking for distribution channels III and IV and uses zone order picking concerning distribution channel II. Especially, Rotterdam uses a conveyor belt to fill crates (one crate represents one food package). Each volunteer is responsible for putting one product in the crate. A pallet is built when the crate has passed all volunteers and is brought to the storage cooling area where it awaits distribution the same day. After the crates are unpacked at the distribution points, they are distributed back to the DC. Tilburg on the other hand only utilizes discrete order picking because one volunteer is responsible for one order at a time.

Regarding the volunteer retention rate, whereas Rotterdam experiences a shortage of intrinsically motivated volunteers and a surplus of volunteers with an extrinsic motivation, Tilburg experiences a surplus of volunteers with an intrinsic motivation.

In order to clarify the operational processes, the maps of both DCs are shown in figure IV (Rotterdam) and V (Tilburg).

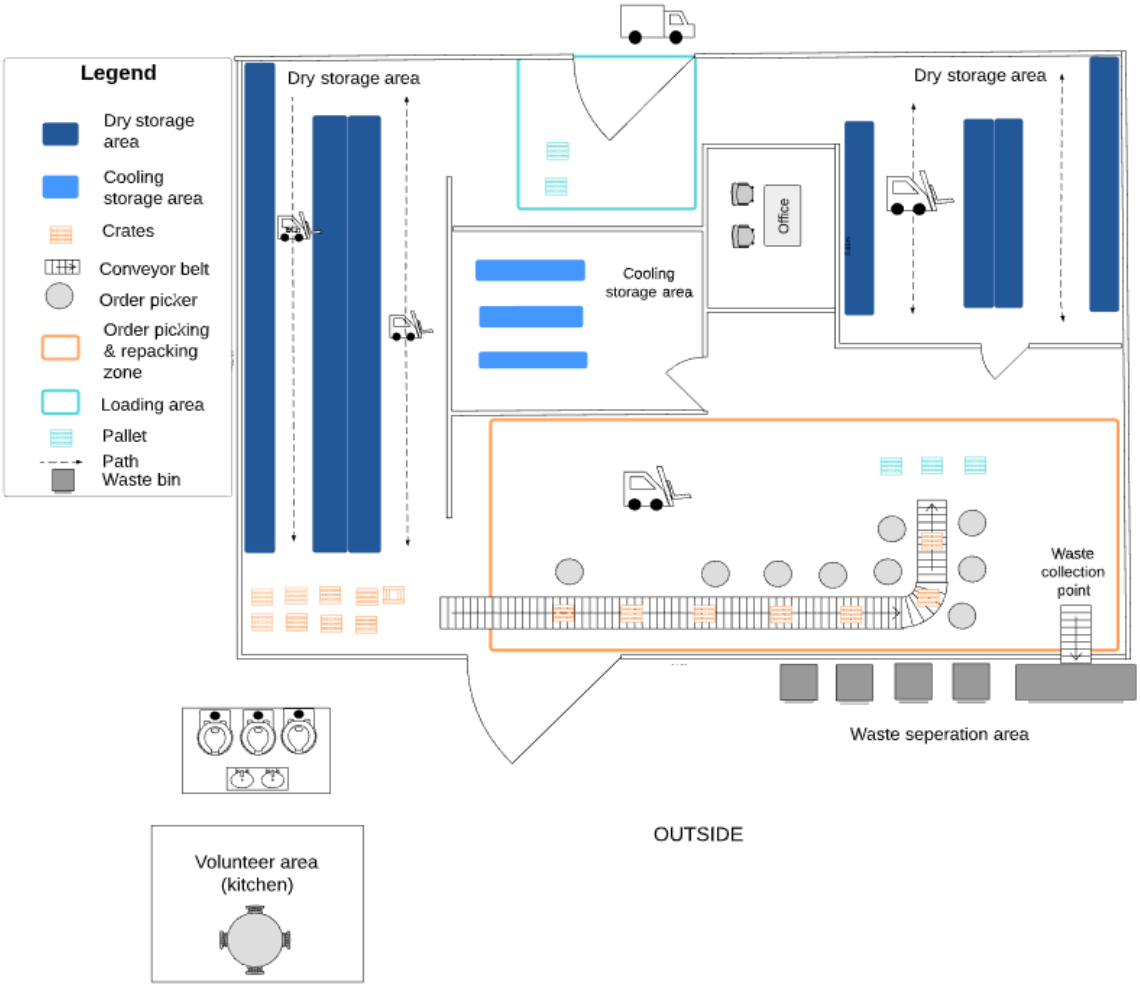

Figure IV: Map of the DC in Rotterdam

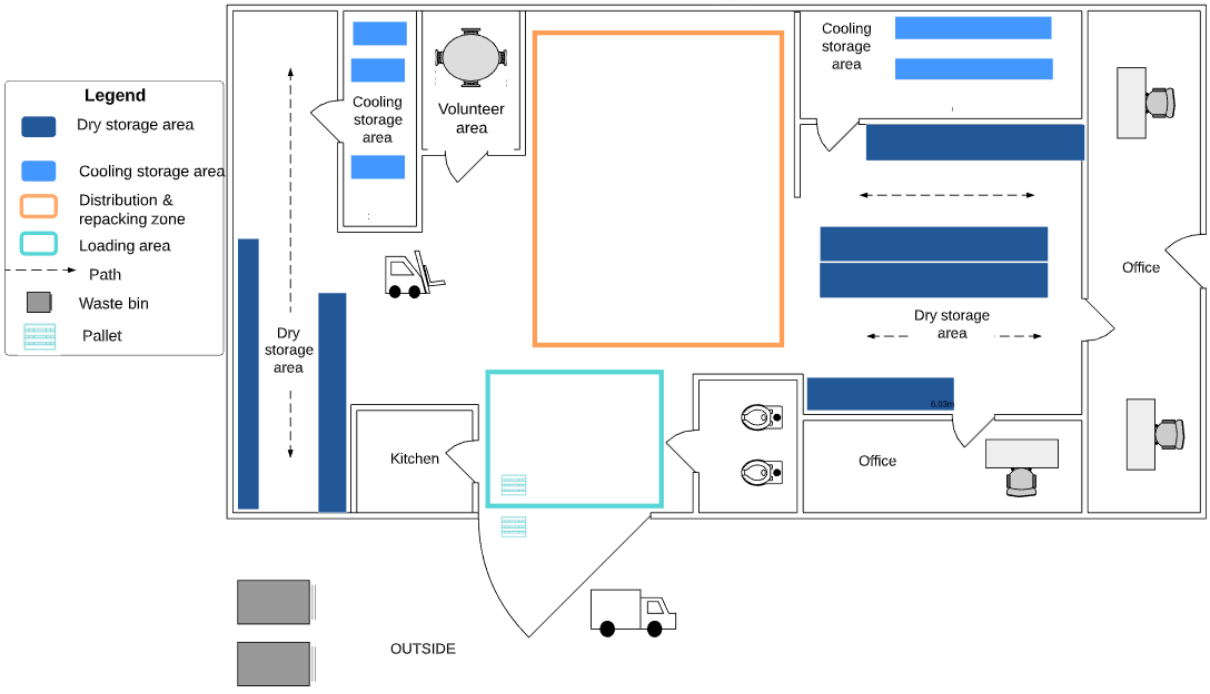

Figure V: Map of the DC in Tilburg

The maps indicate that Rotterdam has a large area for both repacking and zone order picking and Tilburg uses a large zone for repacking and direct distribution to clients. Characteristics of both DCs are summarized in table II below.

	DC Rotterdam	**DC Tilburg**
#Served families	Serves 7,000 families	Serves 600 families
#DC managers	2 DC managers part-time (male and female)	1 DC manager full-time (male)
#Volunteers and active volunteer groups	> 400 volunteers, who belong to group 1, 2, 3, 4 or 5	> 100 volunteers who belong to group 1, 2 or 3 (**So, neither mandatory volunteers nor corporate volunteers**)
Volunteer group sizes	Group 1 is the largest, followed by group 4 (estimated ratio 3:1). The other groups (2, 3 and 5) are relatively small.	Group 1 is by far the largest, followed by group 2 (estimated ratio 4:1). Group 3 is relatively small.
Order picking method	Both discrete order picking and zone order picking (conveyor belt with crates)	Only discrete order picking
Types of distribution channels	DC only functions as a **hub**: II. Via 30 distribution points III. Serves 27 affiliated food banks IV. Supermarket formula: pilot studies in the region	DC functions as both a **final destination** and a **hub**: I. Direct distribution at Fridays II. Via 5 distribution points III. Serves 32 affiliated food banks
Volunteer retention rate	Shortage of intrinsically - and surplus of extrinsically motivated volunteers	Surplus of intrinsically motivated volunteers

Table II: DC characteristics of Rotterdam and Tilburg

3.2 Data collection methods per sub-research question

This thesis uses the technique of triangulation, which increases the internal validity. Both qualitative and quantitative data has been collected via four different methods, namely: a survey, interviews, a literature study and, lastly, participant observation, which serves as an overarching method. Figure VI below demonstrates the different research methods that have been conducted per SUB-RQ.

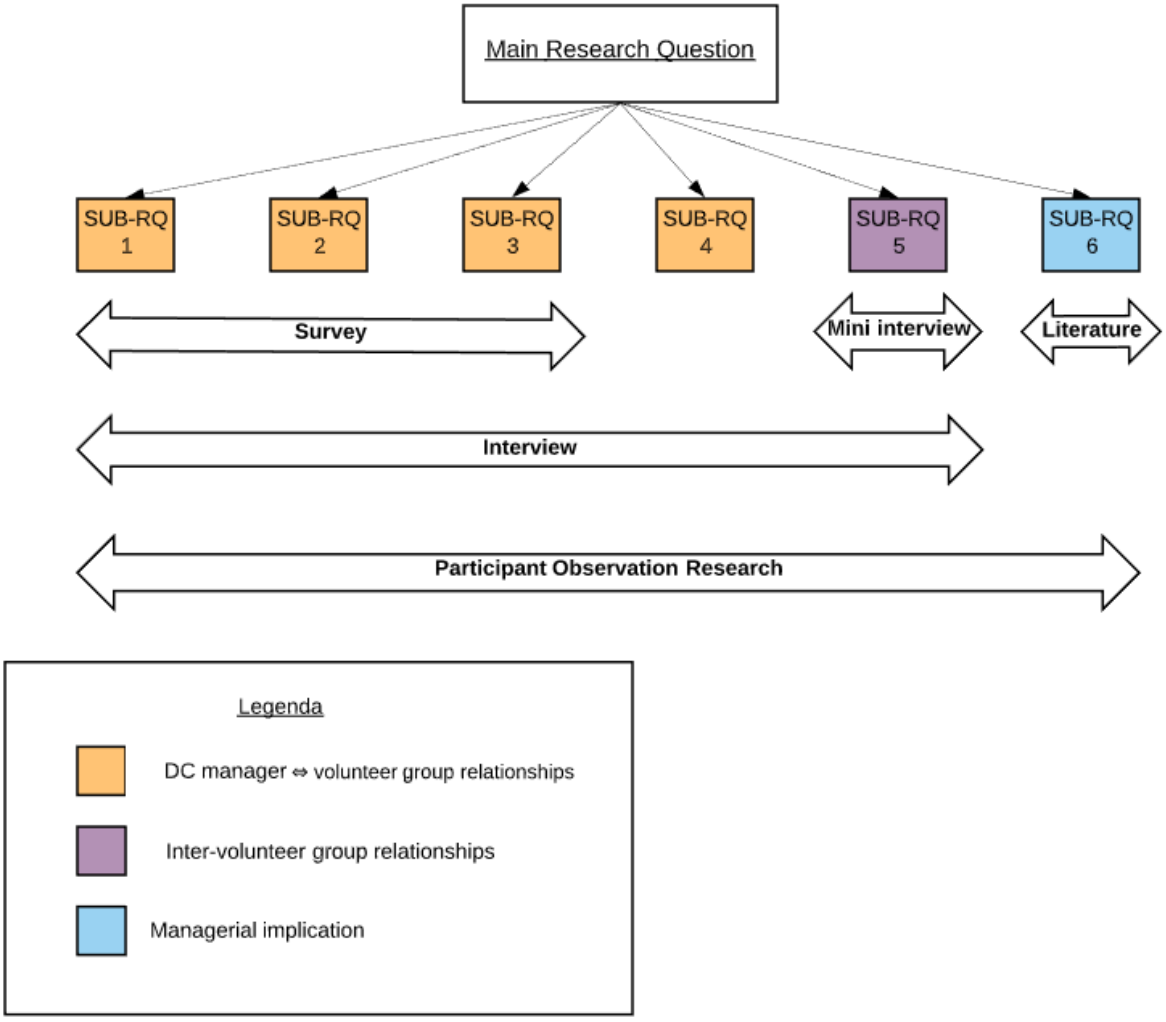

Figure VI: Overview conducted research methods per sub-research question

3.2.1 LMX-MDM survey

As mentioned before, it is crucial to evaluate the relationship quality level from both the leader's and member's perception because only then a proper understanding of the nature of the relationship can be obtained. In order to measure the quality of the relationships between the DC manager and the volunteer groups from the volunteers' (members) perception, several assessment methods can be adopted regarding LMX. The two most dominant instruments are the one-

dimensional LMX-7 scale and the multidimensional LMX-MDM scale. Both appear to overlap very strongly (Joseph, Newman and Sin, 2011). However, the LMX-MDM, which was developed by Liden and Maslyn (1998), has theoretical and empirical advantages compared to LMX-7. Firstly, the LMX-MDM was developed through an integrated scale development process. Hence, ad hoc alterations of scale items do not change psychometric properties (Keller and Dansereau, 2001). Secondly, the LMX-MDM captures the domain of the LMX construct better (Liden and Maslyn, 1998). This thesis therefore implements the multidimensional LMX-MDM scale.

The four dimensions of LMX-MDM consist of *Affect* ("the mutual affection members of the dyad have for each other based primarily on interpersonal attraction rather than work or professional values"), *Loyalty* ("the extent to which both leader and member publicly support each other's actions and character"), *Contribution* ("the perception of the amount, direction and quality of work-oriented activity each member puts forth toward the mutual goals") and, lastly, *Professional Respect* ("the perception of the degree to which each member of the dyad had built a reputation, within and/or outside the organization, of excelling at his/her line of work") (Liden and Maslyn, 1998, p. 50).

Table III illustrates the questions related to the LMX-MDM scale, which is measured on a five-point Likert scale and interpreted as interval measurement level. Options are 'completely disagree' (1), 'disagree' (2), 'neutral' (3), 'agree' (4), and 'completely agree' (5). Three questions per dimensions were asked.

Affect	
I.	*I like my supervisor very much as a person*
II.	*My supervisor is the kind of person I would like to have as a friend*
III.	*My supervisor is a lot of fun to work with*
Loyalty	
IV.	*My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question*
V.	*My supervisor would come to my defense if I were attacked by others*
VI.	*My supervisor would defend me to others in the organization if I made an honest mistake*
Contribution	
VII.	*I do work for my supervisor that goes beyond what is specified in my job descriptions*
VIII.	*I am willing to apply extra efforts, beyond those normally required, to meet my supervisor's work goals*
IX.	*I do not mind working my hardest for my supervisor*

Professional Respect	
X.	*I am impressed with my supervisor's knowledge of his/her job*
XI.	*I respect my supervisor's knowledge of and competence on the job*
XII.	*I admire my supervisor's professional skills*

Table III: Question form LMX-MDM

The LMX-MDM questionnaire was presented to volunteer groups 1, 2, 3 and 4. Due to COVID-19, volunteer group 5 (corporate volunteers), were not active in the DCs and were, therefore, not included. The survey which has been presented can be found in appendix A. The Volunteer Motivation was asked in order to categorize the respondents into the correct volunteer group and to get an understanding of the interaction of the various motivations which relates to SUB-RQ II. Included control variables were *Age*, a ratio variable, *Gender,* a dichotomous variable (0 = male, 1 = female), *Native Language*, a dichotomous variable (0 = Dutch, 1 = other), finally, *How long the volunteer is already active at the DC*, which has been converted to weeks and is a ratio variable. In this way, volunteers could be assigned to permanent or occasional volunteers. A few volunteers that were non-native in Dutch were helped with filling out the survey.

Regarding the analysis of SUB-RQ I and II, the means of the average scores on the four LMX-MDM dimensions have been visually compared in order to examine interesting differences. Furthermore, a Kruskal- Wallis H test was executed in order to evaluate statistical differences between the volunteer groups, as the data is not normally distributed and there is no homogeneity between the variances. In addition, an ad hoc analysis has been conducted in order to examine which volunteer groups particularly differ (pairwise comparison). With regards to SUB-RQ III, regressions have been executed to explain the effect of the Degree of Accountability (single- or dual leadership), where 0 = Single leadership, 1 = dual Leadership, on the four LMX-MDM dimensions. Moreover, regressions have been executed that control for the Volunteer Motivation. The standardized β has been mentioned, which describes the strength of the effect of the individual variable to the dependent variable. The higher / lower the β, the stronger / weaker the effect.

Descriptive statistics of the LMX-MDM survey respondents

In total, 65 volunteers from volunteer groups 1, 2, 3 and 4 filled out the LMX-MDM survey. A total of three surveys has been removed from the analysis due to incompleteness. In total, 41 respondents volunteered in Rotterdam (26 volunteers were under the guidance of the male DC manager (40.00%) and 15 volunteers were under the guidance of the female DC manager (23.10%)) and 15 respondents volunteered in Tilburg (36.90%). To be more specific, the LMX-MDM survey

has been filled out by 33 volunteers from group 1 (50.80%), 10 volunteers from group 2 (15.40%), 10 volunteers from group 3 (15.40%) and 12 volunteers from group 4 (18.50%). Concerning the descriptive results of the control variables of the Rotterdam respondents, the average age amounts to 31.68 years (minimum 18 and maximum 58), the male/female ratio is equal, the average volunteer time is 14.95 weeks (minimum 1 and maximum 104 weeks), and the mean of the binary variable Native Language equals to .39 (where 0 = Dutch, 1 = non-native Dutch). Tilburg, on the other hand, differs in population noticeably. The average age is higher, which amounts to 47.29 years (minimum 22 and maximum 78). There are slightly more male volunteers (mean .42 where 0 = male, 1 = female), and the average volunteer time is considerably higher, which equals 154.58 weeks (minimum 2 and maximum 780 weeks). Lastly, there are slightly more native Dutch speakers in Tilburg with a mean of .25. Table IV below provides an overview of the control variables results per case.

Control variables	**DC of Rotterdam**	**DC of Tilburg**
Age	31.68 years (min 18 and max 58 years)	47.29 years (min 22 and max 78 years)
Gender (0 = male, 1 = female)	Male/female ratio = .50	Male/female ratio = .42
Native Language (0 = Dutch, 1 = non-native Dutch)	Dutch/foreign ratio = .39.	Dutch/foreign ratio = .25.
How long the volunteer is already active at the DC	14.95 weeks (min 1 and max 104 weeks)	154.58 weeks (min 2 and max 780 weeks)

Table IV: Overview of the control variables results per DC

Regarding the driver Volunteer Motivation, most of the respondents had an altruistic or social motivation to volunteer (respectively, 43.10% and 27.70%). Subsequently, 23.10% of the volunteers were obliged to volunteer. As mentioned before, the obligation motivation applies to both volunteer group 3 (soldiers sent by Defense) and 4 (mandatory volunteers) from which the nature differs. Whereas the soldiers are intrinsically motivated, the mandatory volunteers are extrinsically motivated (respectively, 4.60% and 18.50%). Therefore, the obligation motivation will be displayed separately. The minority had a utilitarian motivation (6.20%). Zooming in on the volunteer motivations per DC, it can be observed that Rotterdam is characterized by volunteers with all motivations (altruistic = 41.15%, N = 17; extrinsic obligation (mandatory volunteers; volunteer group 4) = 29.27%, N = 12; intrinsic obligation (soldiers sent by Defense; volunteer

group 3) = 2.44%, N = 1; social = 17.07%, N = 7 and utilitarian = 9.76%, N = 4). Tilburg is only characterized with altruistic (45.83%, N = 11), obligation (soldiers sent by Defense) (8.34%, N = 2) and social motivations (45.83%, N = 11).

Concerning the second driver Degree of Accountability (single- or dual leadership), the N of volunteers in Rotterdam that face single leadership amounts to 16 (only volunteer group 1) and the N of dual leadership is 25 (volunteer groups 2, 3 and 4). In Tilburg, 17 volunteers belong to volunteer group 1 and, hence, experience single leadership. A total of 7 volunteers (volunteer groups 2 and 3) face duality of command. Table V below provides an overview of the number of respondents with regards to these two drivers.

Driver	DC of Rotterdam	DC of Tilburg
Altruistic	N = 17	N = 11
Utilitarian	N = 4	-
Social	N = 7	N = 11
Intrinsic obligation (group 3)	N = 1	N = 2
Extrinsic obligation (group 4)	N = 12	-
Single leadership (group 1)	N = 16	N = 25
Dual leadership (group 2, 3 and/or 4)	N = 17	N = 7

Table V: Overview N per Volunteer Motivation and Degree of Accountability (single- or dual leadership) per DC

3.2.2 Interview

Semi-structured in-depth interviews with DC Managers

To examine the leader's perception regarding the relationship quality levels, semi-structured in-depth interviews were conducted with DC managers, in which the four LMX dimensions (Affect, Loyalty, Contribution and Professional Respect) were questioned. These interviews were conducted in Dutch but have been translated to English in order to code the data for this thesis. Other research questions related to the three drivers of categorization (Volunteer Motivation, Degree of Accountability (single- or dual leadership) and Organizational Control System) were also addressed in the interviews (SUB-RQ II, III and IV). Furthermore, semi-structured interviews were used to examine SUB-RQ VI related to inter-volunteer group conflicts. In total, three phone interviews have been conducted:

- The Rotterdam male DC manager (R1)
- The Rotterdam female DC manager (R2)

- The Tilburg male DC manager (R3)

The interview protocol can be found in appendix B. To code the interviews, the direct quotations of the three DC managers have been recorded and compared. Opinions and experiences can be easily explored via an in-depth interview, which gives a better understanding of the leader's perspective. Moreover, the interviews were flexibly designed, which resulted in situations where participants shared more personal experiences (Rubin and Rubin, 2011). Telephone interviews were conducted due to the corona crisis. Although the interviewee cannot be seen and body language cannot be analyzed, enough social cues remain such as voice and intonation for conducting a hassle- free telephone interview (Opdenakker, 2006).

Mini interviews with volunteers

In order to investigate how the different volunteer groups think of each other and the question if conflicts may arise and where (SUB-RQ VI), short interviews with volunteer groups 1, 2, 3 and 4 were conducted. Due to COVID-19, volunteer group 5 (corporate volunteers), was unfortunately not active in the DCs and is, therefore, not included, which also applied to the LMX-MDM survey. In order to get a representative sample, the volunteer group sizes have been considered. First, the reason of presence was asked in order to categorize the specific respondent into a volunteer group (sometimes the reason of presence was already known because of personally knowing the volunteers due to participant observation research and was therefore not asked). Moreover, the volunteers were asked how long they are active in the DC. Subsequently, the descriptive question: *How do you think that group **X**, thinks about you?* was presented. The ***X*** was randomly picked in order to get a broad picture. These short interviews were conducted in Dutch but have been translated to English in order to code the data for this thesis.

The respondents can be considered as proxy respondents, as they were questioned about the behavior of another volunteer group, which was the target group to be questioned. This was done in order to minimize social desirability bias (Nederhof, 1985). The responses were immediately briefly noted after interrogation.

To code the mini interviews, an inductive approach has been used. The thematic/grounded theory coding analysis of Gioia, Corley and Hamilton (2012) was used to code the interviews in order to not jeopardize the authenticity. Moreover, since this thesis investigates a relatively new field and tries to develop a new theory, the Gioia Method provides an excellent way of coding because the method allows a qualitative rigorous data analysis in its entirety. The aim of this systematic open coding approach is to uncover communalities in the data. The first step was coding

in vivo, which enables staying close to the original data by using direct quotations of the interviewees' word choices. These direct quotations are called the first order concepts. Subsequently, second order concepts were created in which the first order concepts were categorized. According to Kenny and Fourie (2015) creativity and interpretations are allowed during this process. The last step was to categorize the second order concepts into abstract aggregate dimensions.

Descriptive statistics of the mini interviews with volunteers

In total, 35 volunteers have been questioned in Rotterdam and 10 volunteers have been questioned in Tilburg. Three mandatory male volunteers (volunteer group 4) were excluded from the analysis since they were not willing to answer the question (42 in total). More volunteers belonging to volunteer group 1 have been questioned since this group is the largest in size in both DCs followed by group 4 regarding Rotterdam and by group 2 concerning Tilburg. In Rotterdam, 15 volunteers from group 1, 11 volunteers from group 4, 5 volunteers from group 3, and 4 volunteers from group 2 have been questioned. In Tilburg, 5 volunteers from group 1, 3 volunteers from group 2 and 2 volunteers from group 3 have been interviewed. Table VI below provides an overview of the number of respondents per volunteer group with whom a mini interview has been conducted.

	DC of Rotterdam	**DC of Tilburg**
Volunteer group 1	N = 15	N = 5
Volunteer group 2	N = 4	N = 3
Volunteer group 3	N = 5	N = 2
Volunteer group 4	N = 11	N = 0
Volunteer group 5	N = 0	N = 0

Table VI: N per volunteer group per DC concerning mini interviews

3.2.3 Literature study

In order to understand how to manage LMX relationship quality level differences and inter-volunteer group conflicts in a good way to benefit the operations in the DC (managerial implication), existing papers were critically reviewed. Studies related to volunteer relationship management and intergroup conflict resolution were reviewed. A literature review can be a very powerful research method, as different findings and perspectives are integrated and an overview is provided (Snyder, 2019).

3.2.4 Participant observation

Participating observation was carried out to understand the social context and how individual behaviors influence this as an overarching method. By conducting this method using other research methods as well, the validity increases (De Walt and De Walt, 2002). Participant observation makes it possible to learn about the activities of the studied volunteers in their natural setting, as participants do not know that they are observed. In this way, events that normally would not appear in, for instance, interviews due to unwillingness or incapableness of sharing, are possible to observe (Marshall and Rossman, 1995). Furthermore, the developed relationships with several volunteers provide an in-depth understanding of them (Baker, 2006; Ary, Jacobs, and Sorenson, 2010).

Regarding the conduction of observations, attention was paid to the work climate, (non)verbal communication, the way of working, interactions and disputes between the DC manager and volunteer groups and conflicts between volunteer groups. Moreover, attention was paid to the physical distance in the workplace between the different volunteer groups. Goff, Steele and Davies (2008) found that the physical distance between an individual and the out-group is larger compared to the in-group, which measures prejudice.

The primary manner of capturing data is field notes. In the field notes, records of what was observed while paying attention to the attention points and informal conversations with participants were noted the same day after the event, as this helps to remember details easier, which stimulates describing, analyzing and reflecting (Laurier, 2010).

A limitation may be a lack of objectivity, as aspects are seen what one wants to see (Gold, 1958). This was minimized by participating as volunteer at least two times in both DCs. Moreover, participation has been used as an underlying method to understand the social network as a whole. Thus, participant observation method was not the main research method technique but functioned as a supportive tool.

Chapter 4. Results

In this chapter, the results of the several research methods techniques are described per SUB-RQ. SUB-RQs I, II, III and VI have been approached via both the perception of the DC manager and via the perception of the five identified volunteer groups in order to get a proper indication of the mutual relationship. SUB-RQ IV is only examined via the perception of the DC manager because it's the DC manager who adopts a certain organizational control system. Since Rotterdam and Tilburg characterize a salient different population, the DCs have been analyzed separately, as this may impact results in later analyses. At the end of each SUB-RQ, a conclusion will be provided to describe overall themes, similarities and/or differences across the two cases.

4.1 SUB-RQ I: How do relationship quality levels differ between a food bank's DC manager and the five volunteer groups?

Perception of the DC manager

The subsequent results are extracted from the semi-structured in-depth interviews with three DC managers. Regarding the first dimension *Affect*, the DC managers of Rotterdam explain that they experience a relationship of poor quality with the mandatory volunteers (volunteer group 4), particularly with male mandatory volunteers originated from the Antilles. The mandatory volunteers are difficult to manage because the majority lacks motivation, has a certain background (e.g. have been in prison, alcohol addiction and no education) and/or was raised in another culture. The DC manager of Tilburg explained that he quit the collaboration with mandatory volunteers and only works with intrinsically motivated volunteers (volunteer groups 1, 2 and 3) because it costs the DC more than the collaboration yields. Rotterdam wants to create a better balance between the intrinsically motivated volunteers and the mandatory volunteers, as the DC currently experiences a surplus of mandatory volunteers. Moreover, Rotterdam aims to create qualitative better interpersonal relationships with all volunteers since the current volunteer retention rate is high. Additionally, the DC managers seem to have higher relationship quality levels with permanent volunteers compared to occasional volunteers: "*we have a lot of mandatory volunteers, and most of them have a difficult story. Do not get me wrong, some have a great motivation, but many are very difficult to manage. Maybe you have seen it, there are some men who think that if they work ten minutes, they have done a lot and therefore want to quit for the rest of the day"* (R1), *"The mandatory volunteers are quite difficult to work with. They do not respect me as a female manager, and they are difficult to manage because they do not listen. They shout a lot and won't stop when I ask them to stop"* (R2), *"I do not want to generalize but many foreign male mandatory*

volunteers do think: a woman has to tell me what I need to do? Especially, male volunteers from the Antilles" (R2), *"Some volunteers have been volunteering for a long time here and we became sort of friends"* (R2), *"we had more trouble with mandatory volunteers than we gained from them"* (R3), "*I have with each volunteer a good relationship, with some better than with others of course but some volunteers are volunteering for such a long time here already that I can really rely on them"* (R3).

Related to the second dimension *Loyalty,* both DCs have a few permanent intrinsically motivated volunteers belonging to volunteer group 1, who are close to the DC manager. This small group sometimes even takes on management tasks and therefore is more likely to support the DC manager's actions and character: *"we have some intrinsically motivated people, who volunteer have been volunteering here for a very long time. With some of them, I have a good relationship and they help me a lot with managing as well. Hence, I think these persons are more likely to defend me"* (R1), *"I only experience problems with the mandatory volunteers, with other volunteers I do not. If a conflict with me and a mandatory volunteer explodes, another real volunteer, let's call it like that, will come in between I guess, but that hardly happens, as I often ignore the situation then"* (R2), *"sometimes I have a disturbance with a client who comes to pick up food here. For instance, they behave inappropriately or take more food than they are allowed. In this case, the volunteers that are close to the organization and already volunteer for a long time, will help me"* (R3), "*volunteer Y*[1] *volunteers here longer than I am. He is valuable for us and we cannot function without him. He manages the whole distribution process on Fridays"* (R3).

Concerning the third dimension *Contribution*, all three DC managers mention that they not only manage the volunteers, but that they also do additional tasks such as helping with packing and cleaning: "*while managing, I help most of the time at the conveyor belt as well"* (R1), *"I always help with cleaning to be done faster"* (R2), *"I help with the daily operations of course but more on Fridays, as our clients will come collect their food packages at the DC which is chaos then"* (R3).

In regard to the last dimension *Professional Respect,* it seems that there is a dichotomy; The DC managers of Rotterdam explicitly value volunteers with a high education, whereas the DC manager of Tilburg admires volunteers that are committing each week: *"volunteers with a good education are more useful for the organization"* (R1), *"I think it really depends on the level of education. The mandatory volunteers are in general less educated than the real volunteers. They speak hardly Dutch, which makes it even more difficult to approach them. People of your age that are highly educated, are easier and more fun to work with; they work faster, listen to you and may sometimes come with their own ideas for improvement"*" (R2), *"I am impressed by volunteers who are dedicated to volunteer each week, not necessarily by knowledge or skills"* (R3).

1 The name of this specific volunteer has been covered due to privacy reasons

Perception of the volunteer groups

Analysis: Comparing means and a Kruskal-Wallis H test

As mentioned before in paragraph 3.2.1, the average scores on the four LMX-MDM dimensions have been visually compared and a Kruskal-Wallis H test (non-parametric) has been conducted regarding the data of Rotterdam and Tilburg in order to determine if there are statistically significant differences between the volunteer groups on the four LMX-MDM dimensions, as the data is not normally distributed and there is no homogeneity between the variances.

DC of Rotterdam results

Since two part-time DC managers are active in Rotterdam who differ in gender which may influence results (Wayne et al., 1994), the results are presented separately. Overall, it is noticed that volunteer group 2 consistently has the highest average score on all four LMX-MDM dimensions and volunteer group 4 consistently has the lowest means. This means that volunteer from churches score the quality of their relationship with the DC manager higher and mandatory volunteers, on the other hand, lower. Volunteer group 1 and 3 have similar scores, which can be defined as qualitative good relationships since the value of the means are between 3.5 and 4.5. Notable to observe is that the female DC manager scores significantly lower on all the four dimensions from the perception of volunteer group 4.

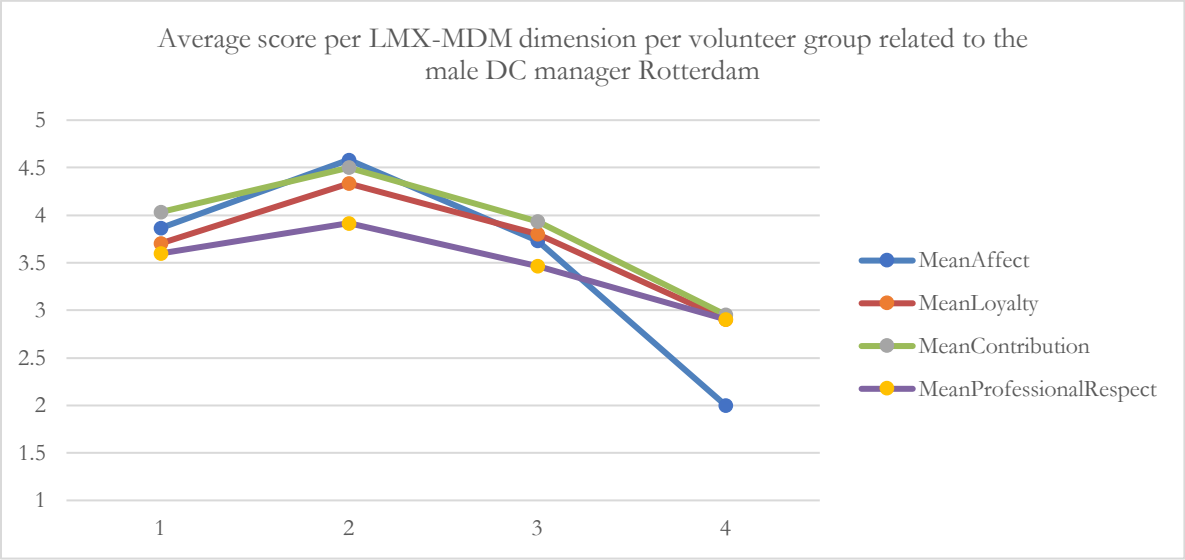

Figure VII: Average score per LMX-MDM dimension per volunteer group regarding the ***male*** *DC manager Rotterdam*

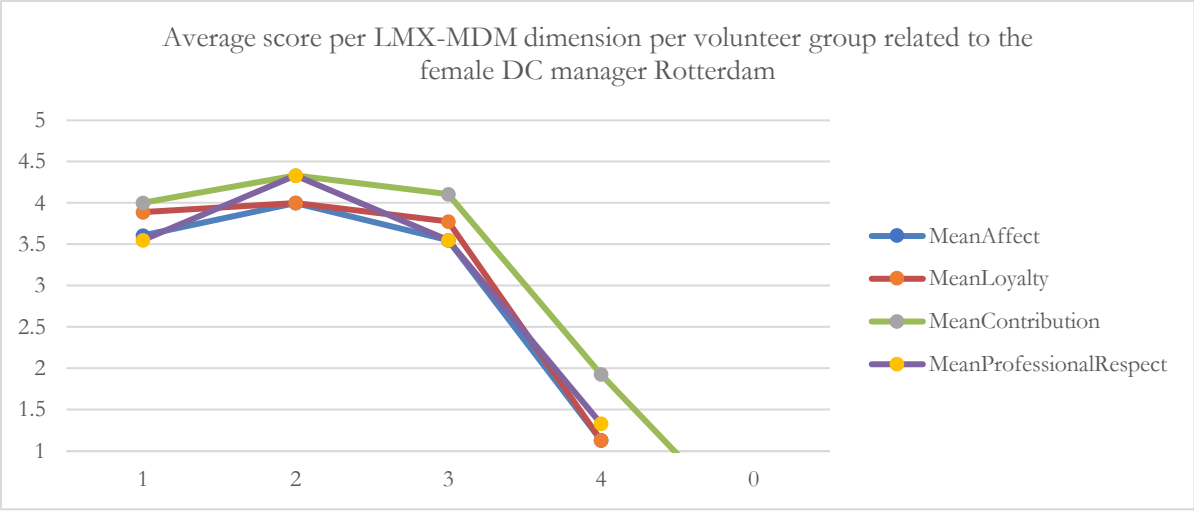

Figure VIII: Average score per LMX-MDM dimension per volunteer group regarding the ***female*** *DC manager Rotterdam*

Regarding the male DC manager, the Kruskal-Wallis H test shows that there is a significant difference between the four volunteer groups in two LMX-MDM dimensions: *Affect* and *Contribution*, since the p-value is below .05 (*Affect*: $\chi^2(3) = 17.379$, p = .001 and *Contribution*: $\chi^2(3)$ = 9.947, p = .01). However, there is no significant difference found between the four volunteer groups related to the LMX-MDM dimensions *Loyalty* and *Professional Respect*, as the p-value is above .05 (*Loyalty*; $\chi^2(3)$ = 6.992, p = .072 and *Professional Respect*; $\chi^2(3)$ = 3.580, p = .311). Concerning the female DC manager, the Kruskal-Wallis H test shows that there is a significant difference between the four volunteer groups in all four LMX-MDM dimensions because all p-values are below .05 (*Affect*: $\chi^2(3)$= 11.991, p = .007; *Loyalty*: $\chi^2(3)$ = 10.354, p = .016; *Contribution*: $\chi^2(3)$ = 10.007, p = .019; *Professional Respect*: $\chi^2(3)$ = 11.018, p = .012).

In addition, an ad hoc analysis has been conducted in order to examine which volunteer groups significantly differ in their LMX-MDM scores (pairwise comparison). If the p-value between two groups related a certain LMX-MDM dimensions is below the value .05, it means that the two groups significantly differ on this dimension. If the p-value is above the value .05, the two groups do not significantly differ in their score on an LMX-MDM dimension. Regarding the male DC manager, the ad hoc analysis shows that only volunteer group 1 and 4 and 2 and 4 significantly differ on the LMX-dimension *Affect* (respectively, p-value = .021 and p-value = .000). Furthermore, the ad hoc analysis displays that volunteer group 2 and 4 significantly differ on the LMX-dimension *Contribution* (p-value = .014).

	Volunteer groups					
Dimension adj.sig	**1 - 2**	**1 - 3**	**1 - 4**	**2 - 3**	**2 - 4**	**3 - 4**
Affect	.451	1.000	.021	.464	.000	.154
Contribution	.935	1.000	.186	.852	.014	.702

Table III: P-values between volunteer groups in Rotterdam regarding the ***male*** *DC manager Rotterdam*

Concerning the female DC manager, the ad hoc analysis shows that volunteer group 1 and 4 significantly differ on the LMX dimensions *Affect* (p-value = .026), *Loyalty* (p-value = .017) and *Professional Respect* (p-value = .044).

	Volunteer groups					
Dimension adj.sig	**1 - 2**	**1 - 3**	**1 - 4**	**2 - 3**	**2 - 4**	**3 - 4**
Affect	1.000	1.000	.026	1.000	.054	.203
Loyalty	1.000	1.000	.017	1.000	.348	.272
Contribution	1.000	1.000	.064	1.000	.299	.068
Professional Respect	1.000	1.000	.044	1.000	.073	.193

Table IV: P-values between volunteer groups in Rotterdam regarding the ***female*** *DC manager Rotterdam*

The significance levels are adjusted in table III and IV by the Bonferroni correction in order to decrease type 1 errors.

DC of Tilburg results

Tilburg displays an equal course for the average scores on all the four LMX-dimensions for volunteer group 1, 2 and 3 with a consistent average around the value 4.0. This implies that all three volunteer groups assess their relationship with the DC manager of high quality.

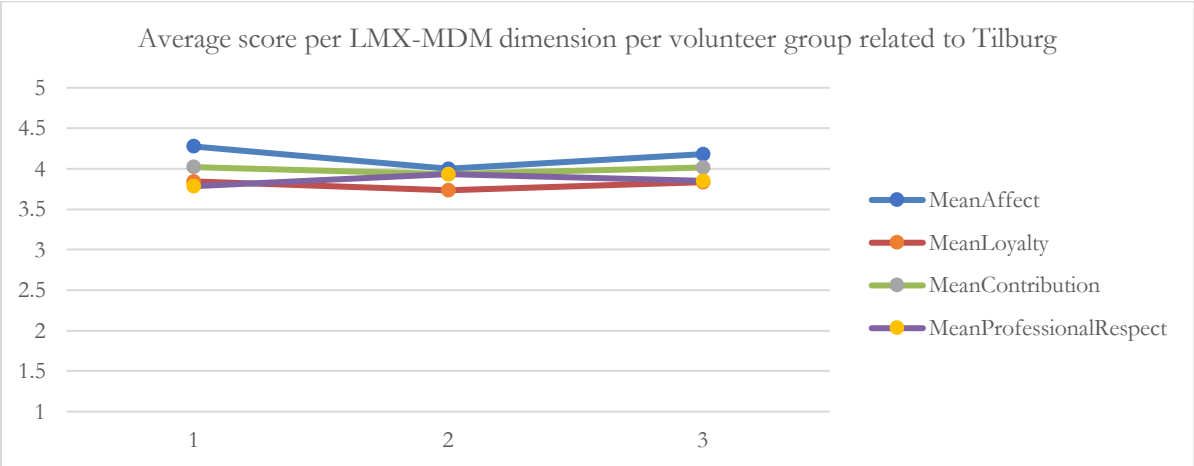

Figure IX: Average score per LMX-MDM dimension per volunteer group regarding Tilburg

The Kruskal-Wallis H test shows that there are no significant differences in the four LMX-MDM dimensions between the three volunteer groups in Tilburg because all p-values are above the significance level of .05, *Affect*: $\chi^2(2) = 3.452$, p = .178; *Loyalty*: $\chi^2(2) = 0.888$, p = .642, *Contribution*: $\chi^2(2) = 0.943$, p = .624, and *Professional Respect*: $\chi^2(2) = 3.915$, p = .141.

Control variables

It may be interesting to analyze results considering the control variables, as significant differences between means on the four LMX-MDM dimensions may be noticed. Regarding the first control variable *Age* no conclusions can be made based on Spearman's Rank-Order correlation, as all the four p-values are higher than the significance value of .05 (p-value *Age* & *Affect* = .643, p-value *Age* & *Loyalty* = .249, p-value *Age* & *Contribution* =.483, p-value *Age* & *Professional Respect* = .587). The second control variable *Gender* shows that, regarding Rotterdam, the mean scores on the LMX-MDM dimensions of both men and women of volunteer groups 1, 2, and 3 are between the values 3.5 and 4.5. However, notable is that the female volunteers within volunteer group 4 have significantly higher average scores on all four dimensions compared to the male volunteers (Means **male** volunteers; *Affect* = 1.1852, *Loyalty* = 1.5926, *Contribution* = 2.0741, *Professional Respect* = 1.6667 and means female volunteers; *Affect* = 3.000, *Loyalty* = 3.8889, *Contribution* = 3.8889, *Professional Respect* = 4.0000). This result is in line with the results obtained from the semi-structured interviews with the DC managers. Concerning Tilburg, all men and women belonging to the three volunteer groups score between the values 3.5 and 4.5. So, no conclusions can be made related to Tilburg. Regarding the third control variable *Native Language* only volunteer group 2 and 4 are characterized by non-native Dutch volunteers. In Rotterdam, the native Dutch speaking volunteers score significantly higher compared to non-native Dutch speaking volunteers (Mean *Affect* = 3.6267 > 2,5625), Mean *Loyalty* = 3.6933 > 2.85, Mean *Contribution* = 3.9467 > 3.1458, Mean *Professional Respect* = 3.5067 > 2.7917). In Tilburg, on the other hand, this difference in scores between native Dutch and non-native Dutch speakers does not apply because the averages are all around the value 4.0. Finally, no conclusions can be made related to the last control variable *How long the volunteer is already active at the DC*, as all the four p-values calculated with Pearman's Rank-Order correlation are higher than the significance value of .05 (p-value *How long the volunteer is already active at the DC* & *Affect* = .057, p-value *How long the volunteer is already active at the DC* & *Loyalty* = .818, p-*value How long the volunteer is already active at the DC* & *Contribution* =.918 and p-value *How long the volunteer is already active at the DC* & *Professional Respect* = .408).

Participant observation

In Rotterdam, four disputes between the DC manager and volunteer group 4 were experienced. Two times, the DC manager tried to address the 1.5-meter rule to two mandatory male volunteers, who did not take this into account. The other two times, the DC manager tried to allocate a task to a group of mandatory volunteers, who refused to execute it. No difficulties between the DC manager and a certain volunteer group were noticed in Tilburg.

Summary results SUB-RQ I

Rotterdam is characterized by both high- and low-quality LMX relationship quality levels. From the interviews conducted with the DC managers, it became clear that all three experience(d) a complicated relationship with volunteer group 4, which is in line with the volunteer's perceptions obtained from the LMX-MDM survey and participant observation research. Particularly, male and non-native Dutch volunteers belonging to volunteer group 4 have a significant lower relationship quality level with the DC managers, which is especially lower with regards to the female DC manager. Therefore, volunteer group 4 is considered as the out-group and volunteer groups 1, 2 and 3 as the in-group in Rotterdam. In Tilburg, there is no in-group/out-group distinction because there are no different LMX relationship quality levels. To both DCs applies that the DC managers have a higher relationship quality level with permanent volunteers compared to occasional volunteers.

4.2 SUB-RQ II: How do the various volunteer motivations drive the differences in relationship quality levels?

Intrinsically motivated volunteers can have an altruistic, utilitarian, social or ***intrinsic*** *obligation motivation (or combination of) and belong to either volunteer group 1, 2, 3 or 5. Volunteer group 4 is extrinsically motivated and is characterized by an* ***extrinsic*** *obligation motivation (see table I).*

Perception of the DC manager

From the semi-structured interviews, it became clear that all three DC managers have both an altruistic and social motivation: *"I quit my job a few years ago. So, my wife said to me: are you going to stay at home the whole week? That's why I thought why not helping the food bank?"* (R1), *"I had some time left and I wanted to do something for less wealthy people, as we have a lot of them even in the Netherlands"* (R2), *"I wanted to do something useful for society and I wanted to stay in contact with people"* (R3). The three DC managers agree that working with intrinsically motivated volunteers functions better: *"due to the Corona virus, we have many new volunteers. We have a lot of students and people of the Red Cross who come to help. They prefer*

to help society instead of watching Netflix all day. Besides, many permanent volunteers are sick or must stay at home for their children. So, I am lucky to have these people otherwise we could not make it" (R1), *"the real volunteers are more intrinsically motivated compared to the mandatory volunteers, who have another attitude in general, which is more difficult to work with"* (R1), *"we want to reduce the mandatory volunteers by replacing them with corporate volunteers"* (R1), "*The mandatory volunteers are not motivated so that often causes problems*" (R2), "*I believe working with mandatory volunteers is more common in Rotterdam and The Hague. We work only with motivated volunteers"* (R3).

Perception of the volunteer groups

Analysis: Comparing means and a Kruskal-Wallis H test

The same analysis with regards to SUB-RQ I has been executed for the same reasons as mentioned before in paragraph 3.2.1.

DC of Rotterdam results

The soldiers who are sent by the Department of Defense and have an ***intrinsic*** *obligation* motivation, score the highest on all four LMX-MDM dimensions (Mean *Affect*: 4,0000; Mean *Loyalty*: 4,3333; Mean *Contribution*: 4,3333 and Mean *Professional Respect*: 3,6667) followed by both *altruistic* (Mean *Affect*: 3,9412; Mean *Loyalty*: 3,8431; Mean *Contribution*: 4,1765 and Mean *Professional Respect*: 3,6667) and *social* motivations (Mean *Affect*: 3,8095; Mean *Loyalty*: 4,0000; Mean *Contribution*: 4,0000 and Mean *Professional Respect*: 3,6190). Volunteers who have a *utilitarian* motivation slightly score lower and, thus, are at place number four (Mean *Affect*: 3,5833; Mean *Loyalty*: 3,5833; Mean *Contribution*: 3,8333 and Mean *Professional Respect*: 3,5000). Volunteer who have an ***extrinsic*** *obligation* motivation (volunteer group 4), significantly have the lowest results (Mean *Affect*: 1,6389; Mean *Loyalty*: 2,1667; Mean *Contribution*: 2,5278 and Mean *Professional Respect*: 2,2500), which is in line with the results obtained related to SUB-RQ I. Figures X, XI, XII and XIII below display the average scores on the four LMX-MDM dimensions per motivation.

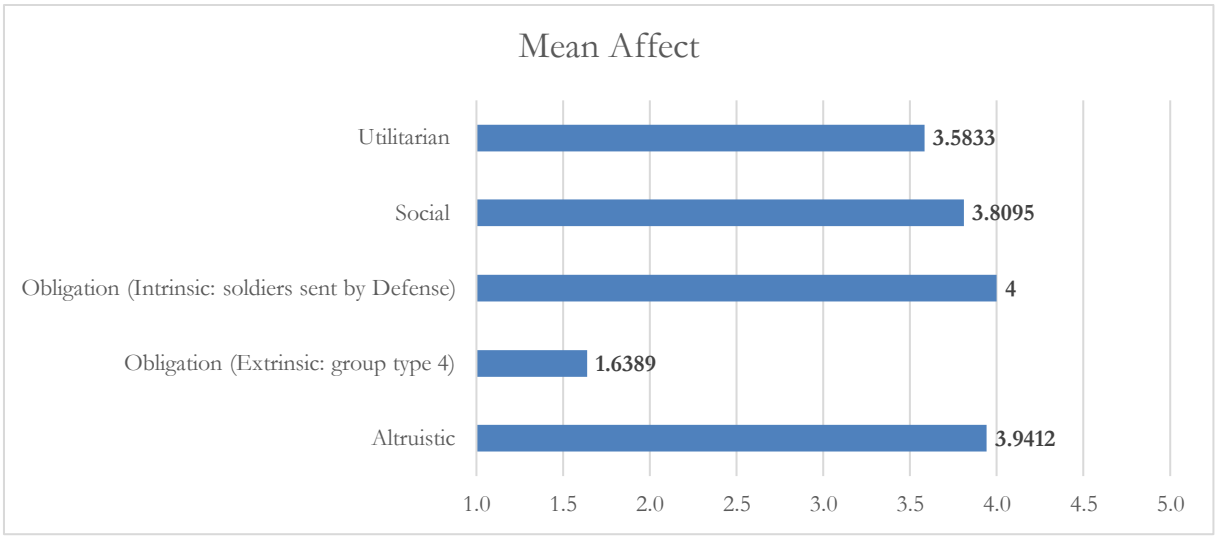

Figure X: Average score per Volunteer Motivation on Mean Affect Rotterdam

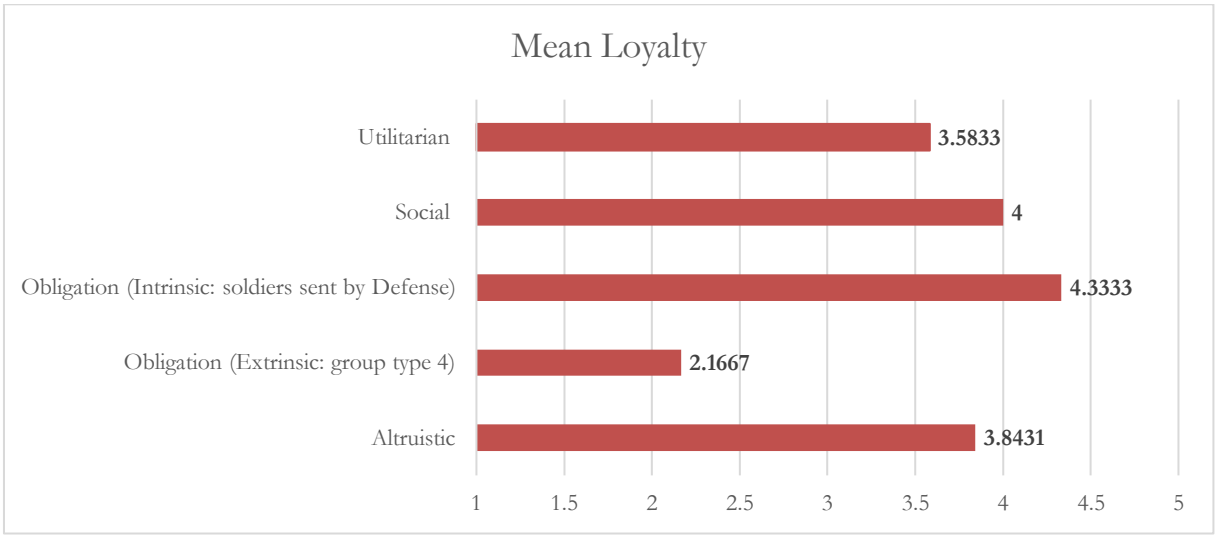

Figure XI: Average score per Volunteer Motivation on Mean Loyalty Rotterdam

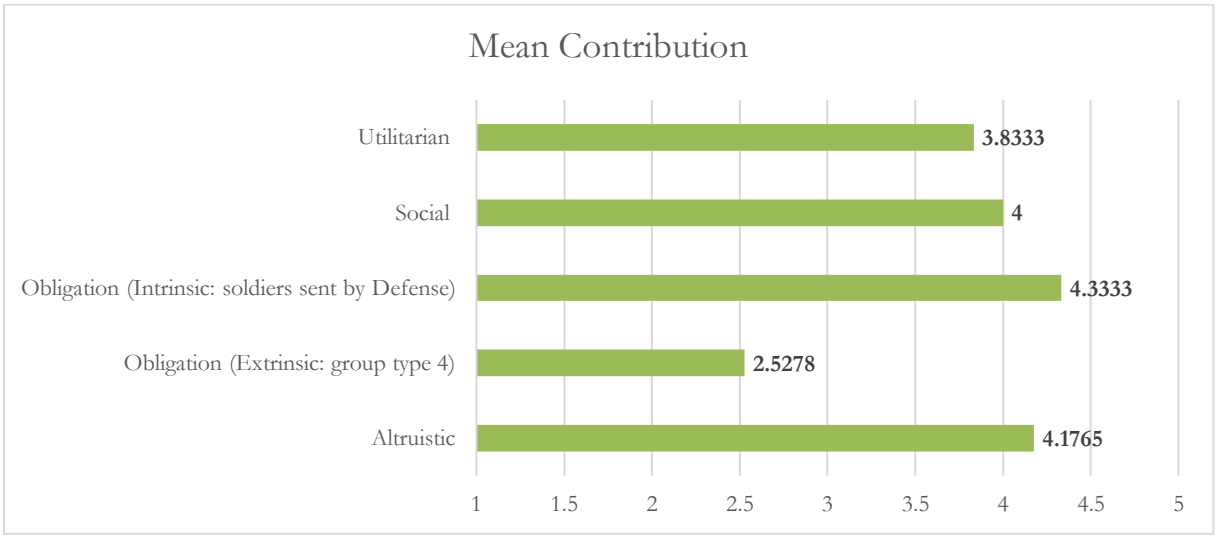

Figure XII: Average score per Volunteer Motivation on Mean Contribution Rotterdam

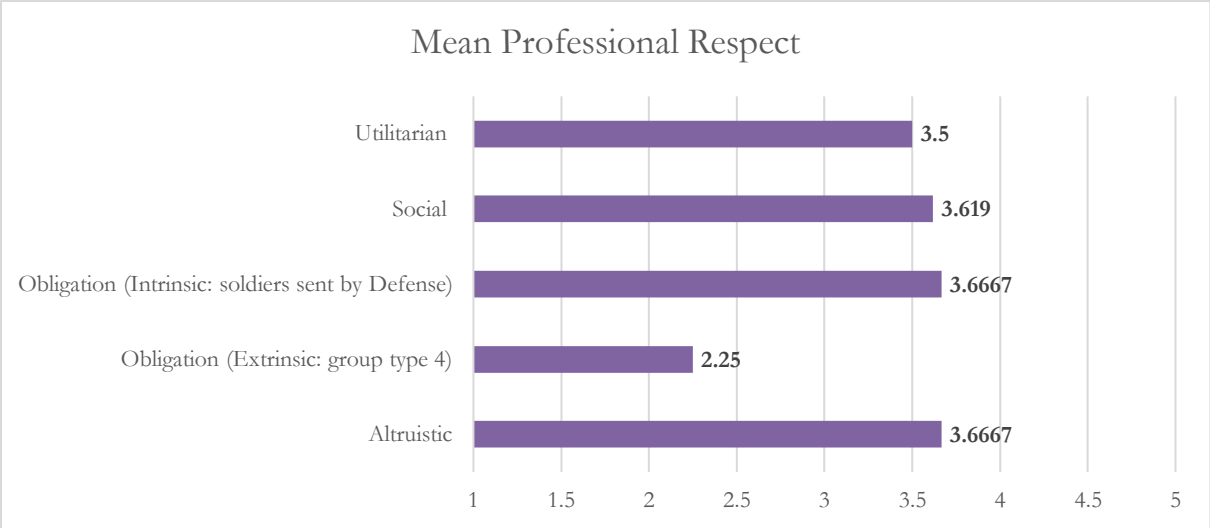

Figure XIII: Average score per Volunteer Motivation on Mean Professional Respect Rotterdam

The Kruskal-Wallis H test shows that there is a significant difference between the several motivations in three LMX-MDM dimensions: *Affect, Loyalty* and *Contribution*, since the p-value is below .05 (*Affect*; $\chi^2(4) = 25.595$, p = .000, *Loyalty;* $\chi^2(4) = 15.717$, p = .003 and *Contribution*; $\chi^2(4) = 18.960$, p = .001). No significant differences are found between the motivations related to the LMX-MDM dimension *Professional Respect* ($\chi^2(4) = 8.658$, p = .070).

An ad hoc analysis (pairwise comparison) shows that *altruistically* motivated volunteers and volunteers with an ***extrinsic*** *obligation* motivation significantly differ on the three dimensions *Affect* (p-value = .000)*, Loyalty* (p-value = .008) and *Contribution* (p-value = .000). Furthermore, the ad hoc analysis indicates that *socially* motivated volunteers and volunteers with an ***extrinsic*** *obligation* motivation significantly differ on the two dimensions *Affect* (p-value = .005) and *Loyalty* (p-value = .023). The other motivations do not significantly differ on the LMX-MDM dimensions. See appendix D for the p-values related to the pairwise comparison results of the various volunteer motivations.

DC of Tilburg results

The soldiers who are sent by Defense and have an ***intrinsic*** *obligation motivation* score the highest on the LMX-MDM dimensions *Loyalty, Contribution* and *Professional Respect* ((Mean *Loyalty*: 4,0000; Mean *Contribution:* 4,1667; Mean *Professional Respect:* 4,1667) but not on *Affect*. The average scores of volunteers who have both an *altruistic* and *social* motivation are analogous since the results vary per dimension (one time one motivation scores higher/lower and the other time the other motivation scores higher/lower). Figures XIV, XV, XVI and XVII below display the average scores on the four LMX-MDM dimensions per motivation.

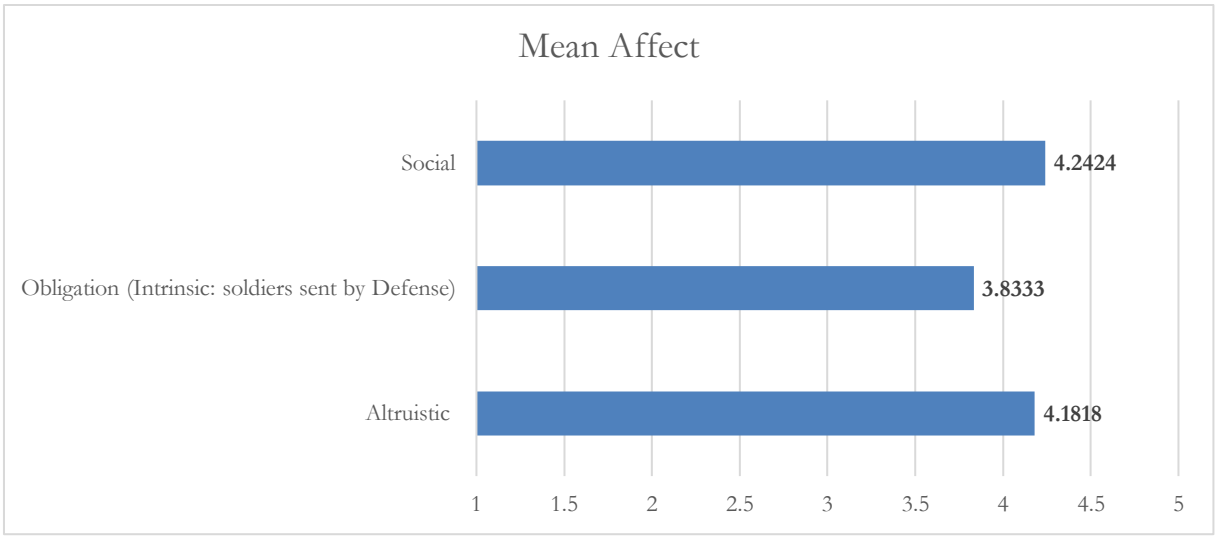

Figure XIV: Average score per Volunteer Motivation on Mean Affect Tilburg

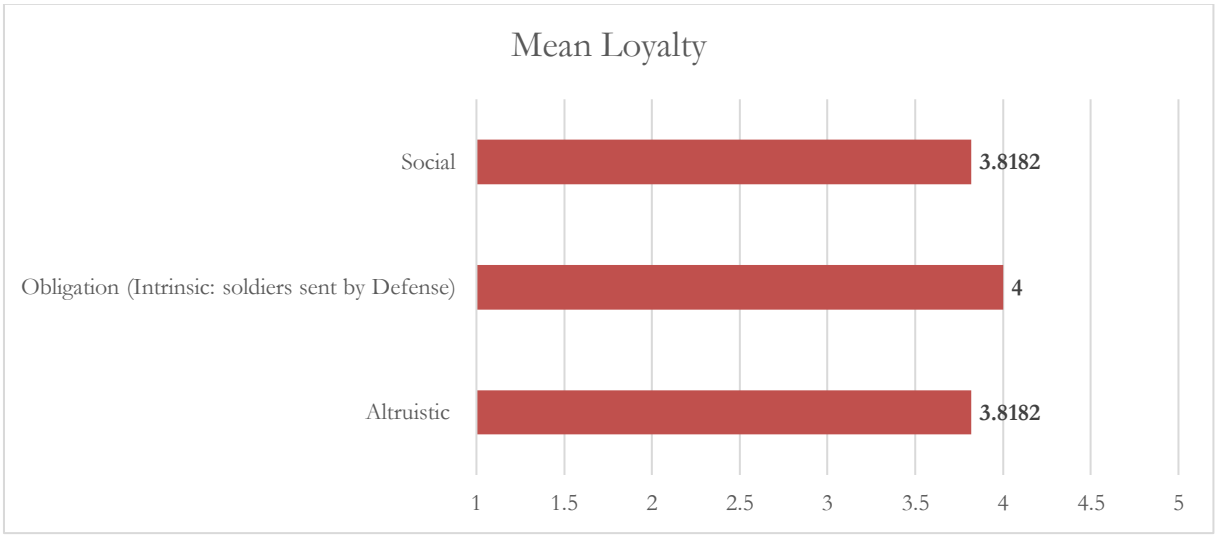

Figure XV: Average score per Volunteer Motivation on Mean Loyalty Tilburg

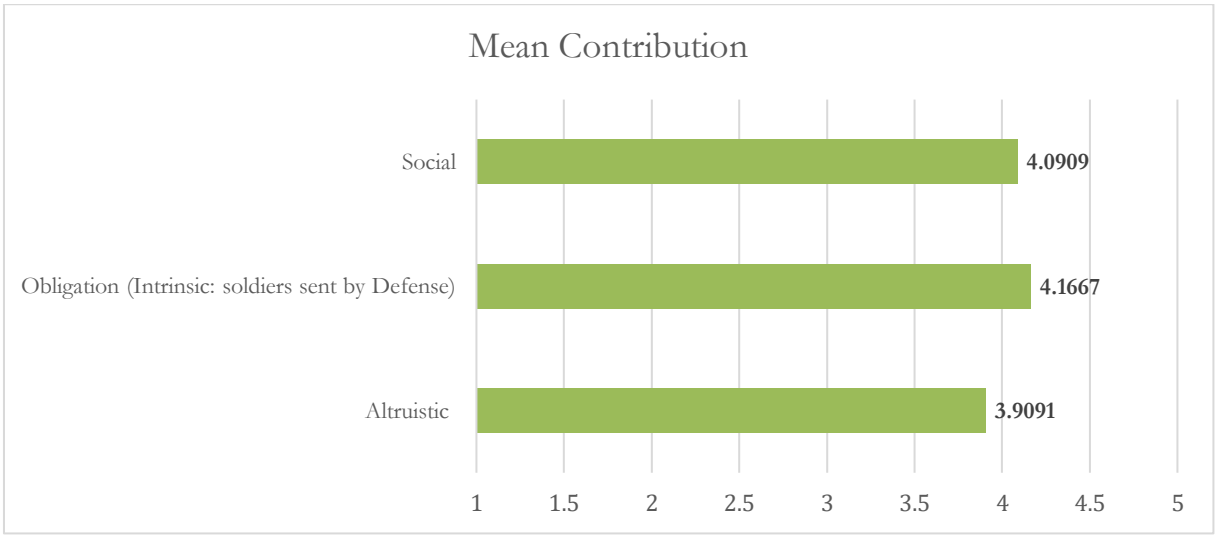

Figure XVI: Average score per Volunteer Motivation on Mean Contribution Tilburg

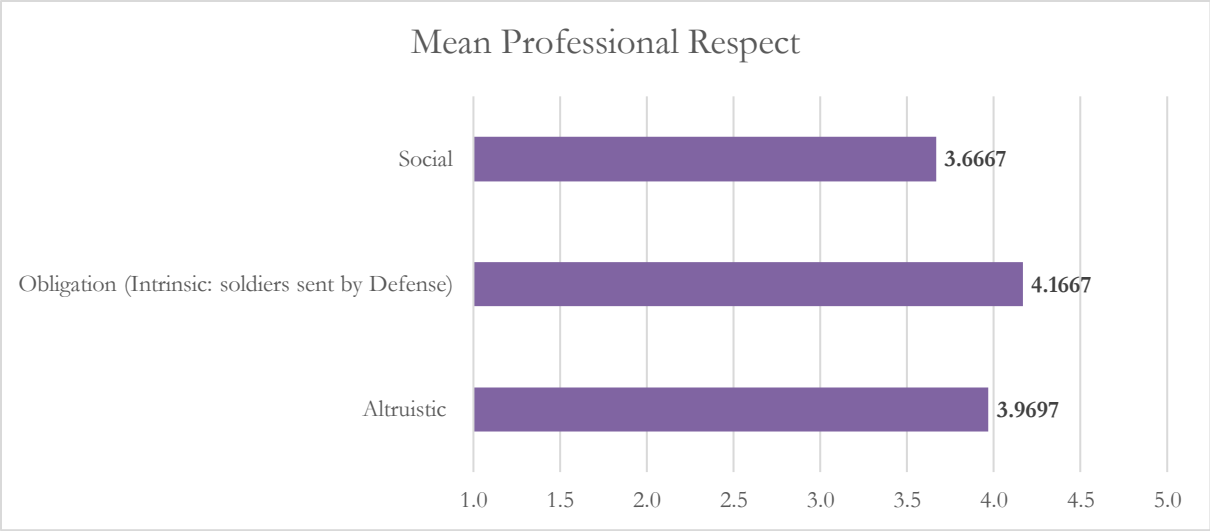

Figure XVII: Average score per Volunteer Motivation on Mean Professional Respect Tilburg

The Kruskal-Wallis H test shows that there is a significant difference between the several motivations in only one LMX-MDM dimension: *Professional Respect;* $\chi^2(3) = 15.717$, p = .003, which contrasts with the results of the DC of Rotterdam. Regarding the other three dimensions, no significant differences between volunteer motivations have been found, as all p-values are above .05 (*Affect;* $\chi^2(3) = 2.509$, p = .474, *Loyalty;* $\chi^2(3) = .604$, p = .895 and *Contribution*; $\chi^2(3) = 2.430$, p-value = .488). However, the ad hoc analysis regarding the dimension *Professional Respect* shows that after the Bonferroni correction there are no significant differences between volunteer motivations anymore. See appendix D for the pairwise comparison results regarding the LMX-MDM dimension *Professional Respect.*

Control variables

The first control variable *Age* has a moderate association with the driver *Volunteer Motivation* since the Eta correlation coefficient is .433. Zooming in on Tilburg, it is noticeable that the age of volunteers who have a *social* motivation is significantly higher in comparison with socially motivated volunteers in Rotterdam (Average *Age* Rotterdam volunteers with a *social* motivation = 22 years & average *Age* Tilburg volunteers with a *social* motivation = 49.50 years). Regarding the other volunteer motivations, no conclusions can be made related to *Age* since the means do not significantly differ per DC. The second control variable *Gender* (0 = male, 1 = female), shows that women are more likely to have an *altruistic* motivation than man in general (*Gender* mean *altruistic* motivation Rotterdam = .59 and *Gender* mean *altruistic* motivation Tilburg = .73). Concerning a social motivation, women in Rotterdam are more like to have a social motivation compared to men (*Gender* mean *social* motivation Rotterdam = .86, but in Tilburg men are significantly more likely to

have a *social* motivation (*Gender* mean *social* motivation Tilburg = .09). The male/female ratio related to *utilitarian* motivation is equal (.50) and for *obligation (*both *intrinsic* and *extrinsic)* motivations men predominate (*Gender* mean *extrinsic obligation: volunteer group 4* = .25, *Gender* mean *intrinsic obligation: soldiers sent by Defense* = .33). The third variable *Native Language* (0 = Dutch, 1 = other) shows that volunteers with an *obligation* motivation are most of the time non-native in Dutch (.92). In Tilburg, the mean of volunteers with an *altruistic* motivation is .45, which means that the ratio between native Dutch and non-native Dutch is almost equal. In general, volunteers with other motivations speak native Dutch both in Rotterdam and Tilburg. Regarding the last control variable *how long the volunteer is already active at the DC*, the Eta correlation coefficient illustrates that there is a moderate association with *Volunteer Motivation* (.501). Remarkable to see in Tilburg is that the average week of *how long a volunteer is already active at the DC* is extremely higher for volunteers with a *social* motivation compared to Rotterdam (276.55 weeks; Tilburg > 12 weeks; Rotterdam). The same observation can be made related to *altruistic motivations* (60.36 weeks; Tilburg > 8.71 weeks; Rotterdam)

Participant observation

Due to COVID-19, Rotterdam and Tilburg tried to attract more intrinsically motivated and young volunteers, as the workload increased considerably. According to direct informal quotations of DC managers, intrinsically motivated and young volunteers work faster and better: *"I prefer to work with real volunteers due to the current circumstances"* (R1), and *"it is a relief to work with young people, as they work faster and better"* (R3). Another notable observation in Rotterdam was that the day after Easter more volunteers from volunteer group 1 and 3 were deliberately scheduled, as the workload was doubled because the DC was closed during Easter. The DC of Rotterdam requested additional help from the Red Cross that day.

Summary results SUB-RQ II

From the perception of both the DC manager and the volunteer groups, it can be concluded that *intrinsically* motivated volunteer groups (volunteer groups 1, 2 and 3) have a higher relationship quality level with the DC manager in comparison with *extrinsically* motivated volunteers (volunteer group 4. To be more specific, soldiers who are sent by Defense and have an ***intrinsic*** *obligation motivation* have the highest relationship quality level with the DC manager in both Rotterdam and Tilburg followed by *altruistically* and *socially* motivated volunteers. Volunteers with a *utilitarian* motivation (only active in Rotterdam) score slightly lower and volunteers with an ***extrinsic*** *obligation motivation* (volunteer group 4; only active in Rotterdam) have a significant lower relationship quality level, which is in line with the results from SUB-RQ I. Concerning Rotterdam,

an ad hoc analysis (pairwise comparison) shows that *altruistically* motivated volunteers and volunteers with an ***extrinsic*** *obligation* motivation significantly differ on three LMX-MDM dimensions: *Affect*, *Loyalty* and *Contribution*. Additionally, *socially* motivated volunteers and volunteers with an ***extrinsic*** *obligation* motivation significantly differ on two LMX-MDM dimensions *Affect* and *Loyalty*. In Tilburg, no significant differences between volunteer motivations have been found.

4.3 SUB-RQ III: How does the degree of accountability (single- or dual leadership) affect the relationship quality levels?

As mentioned before, volunteer groups 2, 3, 4 and 5 experience a duality of command (dual leadership). Volunteer group 1 is only accountable to the food bank's DC manager (single leadership).

Perception of the DC manager

All three DC managers agree that they do not experience difficulties in managing volunteers who face a duality of command. *"I do not experience difficulties because someone has a second manager or institution to whom they are accountable to"* (R1), *"no, the municipality let us do our work with the mandatory volunteers and corporate managers often volunteer as well"* (R2), *"no, I do not experience problems related to that aspect"* (R3).

Perception of the volunteer groups

Analysis: Regression

As described before in paragraph 3.2.1, a single regression has been executed in order to explain the effect of the driver: *Degree in Accountability (Single- or Dual leadership)* on the four LMX-MDM dimensions. In addition, a second regression was executed which controlled for the first driver: *Volunteer Motivation*. The higher / lower the β, the stronger / weaker the effect.

DC of Rotterdam results

Four single regressions indicate that volunteer groups that face Single Leadership / Dual Leadership score significantly higher / lower on the two LMX-MDM dimensions: *Affect* (standardized β = -.379, p-value = .014) and *Contribution* (standardized β = -.325, p-value = .038). On the other two dimensions *Loyalty* (standardized β = -.300, p-value = .056) and *Professional Respect* (standardized β = -.297, p-value = .059), the effect was not significant because the p-values are above the value .05. When the regressions are controlled for the five different volunteer motivations (altruistic, utilitarian, social, intrinsic- and extrinsic obligation motivation), the results

show that the effect of the degree of accountability is not significant anymore on the two dimensions *Affect* and *Contribution* due to the *extrinsic obligation* motivation of volunteer group 4 (all p-values are significant in this case). So, it can be concluded the degree of accountability does not drive differences in LMX relationship quality levels.

DC of Tilburg results

Four single regressions show that the degree of accountability has no influence on the four LMX-MDM dimensions since all p-values are above the value .05 (*Affect*; standardized β = -.349, p-value = .094, *Loyalty*; standardized β = -.041, p-value = .849, *Contribution;* standardized β = -.128, p-value = .899, *Professional Respect*; standardized β = .307, p-value = .144). Hence, it is not necessary to control for the *Volunteer Motivation* in this case.

See appendix E for the detailed results of all regressions.

Summary results SUB-RQ III

All three DC managers do not experience problems with volunteer groups that have a second leader, which the data from the LMX-MDM survey supports. However, at first sight, it seems that volunteer groups that face single leadership / dual leadership in Rotterdam score significantly higher / lower on the LMX-MDM dimensions *Affect* and *Contribution*. But after controlling the regression for the driver *Volunteer Motivation*, the new findings illustrate that these results are due to the *extrinsic obligation* motivation of volunteer group 4. So, the degree of accountability does not affect the relationship quality levels.

4.4 SUB-RQ IV: Does a foodbank's DC manager adopt different organizational control systems based on volunteer group? If so, how does this affect the relationship quality levels?

Perception of the DC manager

From the semi-structured interviews, a dichotomy between the two DCs can be clarified. Whereas the Rotterdam DC managers both explicitly mention that they try to additionally motivate volunteer group 4, the DC manager from Tilburg claims that he manages each volunteer in the same way: *"I am consistently trying to motivate some mandatory volunteers. I do not like this, as I sometimes must threaten with consequences, and this does not contribute to a friendly working environment. But with others, I do not*

have a problem at all" (R1), *"the mandatory volunteers need to have some extra motivation, so I try to motivate them separately in addition"* (R2), *"I try to manage in general, I make no distinction"* (R3).

Participant observation

Considering aforementioned five factors that contribute to control an organizational control system proposed by Flamholtz (1996) (Setting goals for each activity related to performance; Setting standards of performance on each stated goal; Using a measurement tool for monitoring performance of members; Evaluation of performance; Reward to motive and reinforce performance), it was observed that Rotterdam set goals at the beginning of the working day (e.g. the number of pallets and cool boxes that need to be packed that specific day, the number of volunteers that are present and how quickly they are finished). So, no specific performance standards are being set. During the working day, the DC manager walks around and monitors if everything is going well. Moreover, the DC manager allocates volunteers to tasks. Since the majority of volunteer group 4 was consistently cutting corners (e.g. sitting still, walking around aimlessly, and talking to other mandatory volunteers), the Rotterdam DC managers tried to additionally motivate volunteer group 4. For instance, both DC managers asked how the volunteers were doing, what they did in the weekend or were going to, called the volunteers by their names and both made jokes about their low working speed. Furthermore, it was noticed that the overall management approach to volunteer group 4 was stricter. For instance, the group was not allowed to leave until they were told to whereas the other groups could leave whenever they wanted. Moreover, the Rotterdam DC managers actively monitored the performance of volunteer group 4 and addressed when the performance was not good enough, which sometimes resulted in a dispute. However, the situation was sometimes ignored in order to prevent a scene. Regarding rewards, volunteer groups 1, 2 and 3 received at the end of a working day a present in the form of several food products and volunteer group 4 received a whole food package at the end of each week, which can be characterized as an extrinsic reward (Flamholtz, 1996). Moreover, the majority of volunteer group 1, 2 and 3 mentioned in informal conversations that they volunteer in order to help society and to make good use of their time, which belongs to intrinsic rewards (Flamholtz, 1996). In contrast to Rotterdam, Tilburg neither sets performance goals nor provides rewards. It was noticed that the DC manager did always not actively monitor (e.g. he sometimes went to his office) and other volunteers took the lead. The volunteers in Tilburg declared in informal conversations that the actual reward is to see the clients happy, which can be defined as an intrinsic reward (Flamholtz, 1996). Since Tilburg is a final destination for direct clients, the volunteers are able to see, speak and provide aid to the direct clients of the food bank.

Summary results SUB-RQ IV

The DC managers of Rotterdam and Tilburg adopt different organizational control systems for the whole organization, which can be clarified due to the difference in DC size. Whereas Rotterdam sets goals and provide both intrinsic and extrinsic rewards, Tilburg only provides intrinsic rewards. Moreover, the DC managers in Rotterdam actively monitor the performance of the volunteers while the DC manager of Tilburg does this less actively. Zooming in on organization control systems adopted per volunteer group, the Rotterdam DC managers try to additionally motivate volunteer group 4, as most of the volunteers of this group has a poor work performance. Moreover, the Rotterdam DC managers are stricter regarding the performance of volunteer group 4, which may lead to a dispute between DC manager and volunteer. Sometimes situations are ignored by the Rotterdam DC managers in order to prevent a dispute.

4.5 SUB-RQ V: Do conflicts happen between the volunteer groups? If so, between which volunteer groups?

Perception of the DC manager

From the perception of the DC managers, it becomes clear that there are conflicts between volunteer group 4 and intrinsically motivated volunteer groups. Rotterdam works with volunteer group 4 and, therefore, experiences intergroup conflicts, Tilburg does not: ***"****last week Friday for instance, we have terminated a contract with a mandatory volunteer, as he called other volunteers racists. Sometimes the personal backgrounds stories of mandatory volunteers intervene too much with our interaction with them now. When this has negative consequences for the Food Bank, I must take measures"* (R1), *"sometimes there are some disputes between mandatory volunteers and real volunteers initiated by the mandatory volunteers. Therefore, many real volunteers avoid them"* (R2), "*I have never experienced conflicts between volunteers"* (R3).

Perception of the volunteer groups

Analysis: Gioia Method

Aforementioned in paragraph 3.2.2, the thematic/grounded theory coding analysis of Gioia, Corley and Hamilton (2012) was used to code the interviews. The first step was coding in vivo, which means using direct quotations which are called the first order concepts. Subsequently, second order concepts were created in which the first order concepts were categorized. The last step was to categorize the second order concepts into abstract aggregate dimensions. In total, four aggregate dimensions have been identified. Appendix C displays the detailed coding procedure.

4.5.1 Aggregate dimension 1: Inferiority vs. self-confidence of volunteer group 2

A division arises related to volunteer group 2. A great proportion of this group is non-native in Dutch. On one hand, the group expresses that it is not taken seriously by other volunteer groups because they are non-native Dutch speakers. Hence, the group understands less and feels that is of less value for the organization. On the other hand, some volunteers belonging to volunteer group 2 are self-confident and think that other volunteers see them in a positive way.

4.5.2 Aggregate dimension 2: Permanent vs. occasional volunteers

A distinction needs to be made between permanent and occasional volunteers. Occasional volunteers often do not know how other volunteer groups think of them. Moreover, it seems that permanent volunteers belonging to volunteer group 1 may take the lead and command occasional volunteers. Therefore, intergroup conflicts may happen more frequently when permanent volunteers are involved.

4.5.3 Aggregate dimension 3: Self-glorification of volunteer group 1 and 3

Both volunteer group 1 and 3 explicitly mention that they think that other volunteer groups think positively about them. Both groups believe that other volunteers are pleased that they sacrifice their time to aid society.

4.5.4 Aggregate dimension 4: Conflicts between volunteer group 1 and 4 (only applies to the DC of Rotterdam)

In Rotterdam, conflicts between volunteer group 1 and 4 may occur. Volunteer group 4 mentions that volunteer group 1 looks at them in a negative way. The group feels that it is not taken seriously. Furthermore, it seems that volunteer group 4 negatively comments on volunteer group 1. Volunteer group 1 indicates that volunteer group 4 explicitly expresses that their group does not perform well. Furthermore, two forms of discrimination seem to exist in the workplace of Rotterdam between volunteer group 1 and 4. In the first place, volunteer group 4 feels that it is being judged based on origin. Secondly, while volunteer group 4 feels being discriminated, it seems that the group explicitly discriminate Dutch volunteers.

Participant observation

During the participant observation several aspects were noticed that strengthen both perspectives. In the first place, special attention was paid to the physical distance between different volunteer groups. During the repacking process, it was observed that volunteers belonging to the same volunteer group worked on the same product (e.g. volunteer group 1 repacks the tomatoes,

volunteer group 2 repacks the asparagus etc.). Moreover, it was noticed that within a volunteer group are smaller groups. For instance, mandatory volunteers (volunteer group 4) originated from the same country and students (volunteer group 1) distanced itself from other volunteers during lunch break. Secondly, I experienced two times a potential conflict between certain volunteer groups. In Rotterdam, I experienced once a potential conflict between a mandatory volunteer (volunteer group 4) and a volunteer from the Red Cross (volunteer group 3) due to a negative comment about mandatory volunteers from the Red Cross volunteer to other Red Cross volunteers. The mandatory volunteer happened to hear this. However, the mandatory did not respond. In Tilburg, I experienced once tension between a volunteer belonging to volunteer group 2 and a volunteer belonging to volunteer group 1. The volunteer belonging to volunteer group 1 mentioned that she thinks that *"the volunteers from the church are weird"* and that she does not like them, which a volunteer from the church, who spoke average Dutch, happened to hear but did not respond. Thirdly, I experienced two times an inter-volunteer group conflict in Rotterdam between volunteer groups 1 and 4, which were both times initiated by the same mandatory (male) volunteer (volunteer group 4). Fourthly, it was noticed that each week a few permanent volunteers of volunteer group 1 took the lead and were commanding other volunteers, which aspect was quoted by RR27-3 as well. This did not result in direct inter-volunteer group conflicts but functioned as a driver of potential future inter-volunteer group conflicts.

Summary results SUB-RQ V

To summarize, in both DCs potential conflicts between the subsequent volunteer groups may appear:

I. Volunteer group 2 ⇔ other volunteer groups
II. Permanent volunteers ⇔ Occasional volunteers

In addition, only in Rotterdam potential conflicts may occur between the following volunteer groups:

III. Volunteer group 1 & 3 ⇔ Volunteer group 4

4.6 SUB-RQ VI: What can be learned from academic literature to manage different relationship quality levels and conflicts between volunteer groups in order to optimize warehouse operations management?

The foodbank's DC manager is the key actor in leading all volunteers towards the organizational purposes and ultimately responsible for the daily operational process. The great diversity in volunteer characteristics resulting in an in-group and out-group makes volunteer relationship management of great importance. Furthermore, intergroup conflict resolution may be important in order to let the operational process run smoothly. This SUB-RQ examines the managerial implication via a literature study.

Volunteer relationship management

Results show that volunteer group 4 is the out-group since this group has the lowest relationship quality level with the DC manager. The other volunteer groups (1, 2 and 3) have a higher relationship quality level with the DC manager and, hence, are considered as the in-group. The perfect LMX relationship starts at recruitment since a realistic preview of the responsibilities of an in-group can be given, which improves the likelihood that a new member infiltrates an in-group relationship or decreases the likelihood that a new member who not fits the in-ingroup, joins the organization (Premack and Wanous, 1985; Robbins, 1995). However, the Dutch Food Bank is run by unpaid volunteers and therefore has not the luxury to choose between many candidates like an FPO. Due to a lack of volunteers, Rotterdam must keep recruiting mandatory volunteers (volunteer group 4). Hence, the out-group cannot be completely reduced, which makes improving the LMX relationships of even more importance for Rotterdam. Regarding Tilburg, it is important to maintain the current situation in order to continue as they are.

Since a food bank's DC is run by unpaid volunteers, the task of a DC manager is to understand the needs, wants and motivations of all volunteers, as these aspects drive the desire to act in a certain way. This understanding will not only improve management, but also volunteer recruitment and retention (Shin and Kleiner, 2003). For an FPO manager this understanding is of less importance since their employees are mainly driven by salaries (extrinsic reward). Elliot, Kasset, Kim and Sheldon (2001) state that *autonomy*, *competence*, *relatedness* and *self-esteem* are four essential needs that individuals seek to be satisfied. Autonomy refers to the quality of being self-governing, competence means achieving/exceeding a certain standard in someone's performance, self-esteem refers to a global evaluation of yourself and relatedness addresses feelings of interpersonal connections. Hence, a DC manager must try to behave in a certain way which enhances these four needs in order to improve LMX relationship quality levels.

Several studies have investigated the actions a leader can take to improve the relationship exchange quality with its followers, which can be linked to enhancing these four needs. Firstly,

research shows that *leader delegation* is correlated with a higher LMX quality (Bauer & Green, 1996; Yuki, O'Donnell and Taber, 2009), which refers to the first need autonomy. Hence, a DC manager must provide a certain level of autonomy to its members. Schwalbe (1985) explains in its model that when autonomy functions as freedom to act and take responsibility for success in the workplace, an individual's self-perception improves, which consequently enhances competence and eventually increases someone's self-esteem. In addition, *being ethical and showing empathy* as a leader is essential. An ethical leader has concern for the well-being of its subordinates and tries to help, protect and empower them. Empathy is the capacity to identify and comprehend other people's feelings and emotions. By showing both aspects as a manager, a cooperative relationship with mutual trust is created (Mahsud, Yuki and Prussia, 2010). So, the interpersonal connection between leader and member improves, which refers to the need relatedness. Thirdly, leaders that *communicate a vision* and can make their subordinates excited about that vision (transformational leadership behaviors) may increase the LMX quality development (Wang, Law, Hackett, Wang and Chen, 2005). Showing transformational behavior may provide a feeling of connection for the member, which refers to the need relatedness as well. Fourthly, research shows that leaders must *prevent a violation of psychological contracts* because this negatively affects the LMX relationship and the need relatedness. A psychological contract breach means that a leader fails to fulfill the promises he/she made to a member (Restubog, Bordia and Bordia, 2011). Furthermore, Masterson, Lewis, Goldman and Taylor (2000) argue that a leader must behave in a way that *fairness* is perceived by all members, which relates to the need relatedness again. Another action a DC manager can take is *LMX training*. Research shows that all LMX relationships improve when leaders are trained in the LMX three-step process (Role Taking; Role Making; Routinization) (see paragraph 2.1) (Scandura and Grean, 1984; Graen, Scandura and Graen, 1986). Their results imply that a significant number of members may move from the out-group to the in-group (so the training affects the Role Making process). The two main components of this LMX training program are a description of the LMX three-step process and outcomes, and LMX communication training. The first component in the training includes informing leaders about the value of the LMX relationships and how their behaviors can facilitate high quality relationship levels. The second component: LMX communication training, includes the improvement of a leader's feedback, assignment clarification skills and to reopen the communication lines between themselves and the out-group. This can be done via role-plays (Scandura and Grean, 1984; Graen, et al., 1986).

To conclude, a DC manager must try to behave in a certain way and take actions which enhances the four needs: autonomy, competence, relatedness and self-esteem in order to improve the LMX relationships with both in-group and out-group. This can be done via multiple actions.

Intergroup conflict resolution

A great diversity in volunteer characteristics in the workplace may result in potential inter-volunteer group conflicts, in which the other group is considered as the 'enemy', which may have detrimental consequences for an organization. For instance, intergroup conflicts may negatively affect work climate and well-being of volunteers, which consequently affects the 'job' satisfaction and eventually the volunteer retention rate. Hence, it is important that companies prevent and try to solve these intergroup conflicts for the long term. Resolving an intergroup conflict implies a diversity of social groups collaborating in an interdependent way for mutual benefits.

In line with the previous paragraph regarding volunteer relationship management, Deutsch et al. (2006) suggest that the four needs each volunteer group has, must be satisfied first. These needs may refer to the four needs (autonomy, competence, relatedness and self-esteem) proposed by Elliot et al. (2001). When each volunteer group has a satisfactory degree of these four needs, it is easier to develop mutual beneficial relationships. Moreover, Deutsch et al. (2006) explains that organizations must make sure that humanistic and democratic values are implemented (e.g. each group is equally involved and justice), as this provides a working climate that is characterized by trust and respect. Thus, satisfying the four needs an individual seeks and implementing humanistic and democratic values are two underlying conditions to solve a conflict between different parties in an organization.

Fisher (1983) proposes that *third party consultation* may be helpful in resolving an intergroup conflict. The argument is that a reliable and experienced intermediary is better able to implement problem-solving skills in order to improve communication and evaluate the relationship between the parties. Consequently, the question arises regarding this approach; which basic skills are needed to operationalize conflict resolution methods? Deutsch et al. (2006) provides an overview which skills are required for a third-party consultant: *analytical skills*; the consultant must have the capacity to apply knowledge related to social conflict (e.g. causes, processes of escalation, management, methods for de-escalation and resolution, and understanding of different cultures that are active in the conflict), *personal qualities* (e.g. integrity, self-confidence, assuredness, self-awareness, respect, genuineness), *interpersonal skills* (e.g. ability to communicate in a genuine and respectful way that does not escalate dissimilarities, emotional empathy), *group leadership skills;* facilitative leadership (e.g. discussion moderator, human relations trainer, conversation facilitator), *intergroup skills;* stimulating mutuality and reciprocity and controlling disruptive interactions, and , lastly, *consultation skills*. The second question that arises is; is a foodbank's DC manager suitable for this position since he/she may not be an independent party due to personally knowing volunteers (in particular, permanent volunteers)? Hence, it is important that a DC manager has a professional attitude. Moreover,

differences in background (e.g. culture, education, language and gender) may lead to misperceptions and misunderstandings resulting in cognitive biases. Hence, it is essential that a DC manager rises above his/her potential cognitive biases. Unfortunately, many dispute resolvers are unaware of their cognitive biases and their detrimental effects. A common bias in conflict situations, is the tendency to simplify conflict situations. *Stereotyping* is an example of this (Deutsch et al., 2006). Regarding the Dutch Food Bank, it may occur that a DC manager groups all the mandatory volunteers together since this group has the lowest relationship quality level (the out-group) with the DC manager. The DC manager may therefore develop a prejudice against volunteer group 4 when attempting to solve an intergroup conflict between volunteer groups 1 and 4. Another cognitive bias that is likely to occur, is the *attribution bias,* which is the tendency to see out-group members as personally responsible for negative behavior rather caused by situational factors. On the other hand, undesirable behaviors by in-group members are attributed to external conditions for which the member is not responsible (Deutsch et al., 2006). These cognitive biases are more likely to occur in the DC of Rotterdam since volunteer group 4 (the out-group) is only active in Rotterdam.

Another approach to resolve intergroup conflicts is *intergroup contact* (Al Ramiah and Hewstone, 2013). During participant observation, special attention was paid to the physical distance between groups in the workplace. It was noted that volunteer groups perform their duties separately. Research shows that intergroup contact seems to reduce prejudice and to increase trust and forgiveness. Therefore, it may be favorable to stimulate the execution of tasks of volunteer groups together. However, Gordon Allport (1954) was early aware of the fact that intergroup contact could strengthen negative perceptions as well (e.g. prejudice). This will not be the case when the two underlying conditions are met (satisfying the four needs and implementing humanistic and democratic values).

To conclude, in order to be able to solve an inter-volunteer group conflict as a DC manager, it is essential that two conditions are met first. In the first place, the four needs (autonomy, competence, relatedness and self-esteem) must be satisfied for each volunteer group. Secondly, a working climate that characterizes trust and respect must be created through the implementation of humanistic and democratic values. Subsequently, two possible approaches may be adopted to resolve an inter-volunteer group conflict. Firstly, the DC manager may act as a third-party consultant. Hereby, it is important that the DC manager possesses certain skills, he/she has a professional attitude and that he/she is aware of potential cognitive biases (e.g. stereotyping and attribution bias). The second approach is to stimulate intergroup contact. When the physical

distance between volunteer groups is reduced in the workplace and tasks are being executed together, negative perceptions to the other parties may be reduced.

Chapter 5. Discussion and Conclusion

In the last chapter, the results will be discussed and a link with the consequences for the daily operational process will be made. In addition, a conclusion with regards to the managerial implication and recommendations for the Dutch Food Bank will be provided. Finally, the external validity of this thesis, potential limitations and recommendations for future research will be discussed.

5.1 Discussing the findings

Firstly, the findings concerning the relationships between the DC manager and volunteer groups will be discussed (SUB-RQ I, II, III and IV). Subsequently, the findings concerning the relationships between the volunteer groups will be interpreted (SUB-RQ V).

Relationships between the DC manager and volunteer groups

Results indicate that volunteer group 4 is the out-group and volunteer groups 1, 2, and 3 are the in-group in the LMX relationship. This means that volunteer group 4 has a low relationship quality level and volunteer groups 1, 2 and 3 have a high relationship quality level with the DC manager. Furthermore, the data suggests that the relationship quality level is even lower between volunteer group 4 and a female DC manager compared to a male DC manager, which corresponds with the results obtained by Wayne, et al. (1994). To be more specific, a pairwise comparison shows that the biggest significant differences between the scores on the four LMX-MDM dimensions (Affect, Loyalty, Contribution and Professional Respect) are between volunteer group 1 and 4, and between group 2 and 4. The pairwise comparison was not significant between volunteer group 3 and 4 on all four LMX-MDM dimensions (see table III and IV). This can be clarified since volunteer group 3 is more heterogenous compared to volunteer group 1 and 2 because two sub-groups; volunteers sent by the Red Cross and soldiers, are part of this group, which may influence results. Moreover, results show that permanent volunteers have a higher relationship quality level with the DC manager compared to occasional volunteers. A clarification of this higher LMX relationship quality level may be that permanent volunteers have a higher organizational commitment which benefits the relationship exchange (Schyns and Wolfram, 2008).

It seems that two of the three investigated drivers drive this distinction in LMX relationship quality levels, namely: **Volunteer Motivation** and **Organization Control System**. Results show that concerning the first driver Volunteer Motivation, intrinsically motivated volunteers have a higher relationship quality level with the DC manager compared to extrinsically motivated volunteers. As described in advance, intrinsically motivated volunteers belong to volunteer groups

1, 2, 3 and 5 because they have an internal incentive. Extrinsically motivated volunteers include volunteer group 4, as this group volunteers to prevent a negative consequence. However, an interesting and debatable aspect to mention in this thesis is that volunteers from churches (volunteer group 2), soldiers sent by the Department of Defense (volunteer group 3) and corporate volunteers (volunteer group 5) may be extrinsically motivated to a certain extent. The reason is that all three volunteer groups may experience a negative consequence when they decide not to volunteer; churchgoers that decide not to volunteer may be left out the church community, soldiers that reject to volunteer may experience negative consequences during their future career in the army and corporate volunteers that choose not to participate in their FPO volunteer program may be socially disadvantaged within their department or it may negatively affect their career in the company. Specific results point out that soldiers who are sent by the Department of Defense (intrinsic obligation motivation) have the highest relationship quality level with the DC manager followed by altruistically and socially motivated volunteers. In one way, soldiers are altruistically motivated to a certain extent, as they have chosen a job that helps society. Both altruistic and social motivations significantly differ the most with an extrinsic obligation motivation on the LMX-MDM dimensions (see appendix D). Agostinho and Paço (2012) found that food bank volunteers who are more involved in the organization, have an altruistic or social motivation. This may be a clarification for the higher LMX relationship quality levels of these motivations (Schyns and Wolfram, 2008). Regarding the driver Organizational Control System, results show that DC managers adopt a stricter organizational control system concerning volunteer group 4 because the work performance of most of this group is of poor quality due to an extrinsic motivation. This stricter approach may result in disputes, which negatively influences the LMX relationship. This aspect especially applies to both male and non-native Dutch mandatory volunteers because their LMX relationship is of the poorest quality It can be concluded that the driver: Degree of Accountability (Single or Dual Leadership) does not influence the LMX relationship quality level.

With regards to the organizational consequences, it can be interpreted that volunteer groups 1, 2 and 3 (the in-group) positively affect the operational process of a foodbank's DC and volunteer group 4 (the out-group) negatively influences the operational process because previous research shows that high-quality LMX relationships may affect the organization in a positive way and low-quality LMX relationships may have negative organizational consequences (Gerstner and Day, 1997; Northouse 2016; Mardanov et al., 2008; Schyns, 2006; Martin, et al., 2016; Grean and Uhl-Bien, 1995; Vecchio, 1995; Maslyn and Uhl-Bien, 2001; Bolino and Turnley, 2009). To be more specific, it can be interpreted that the different LMX relationships influence two out of the five operational tasks, namely: **order picking** and **maintaining food safety** because these two tasks

are affected the most by the volunteers that work in the operational workplace. The other tasks (receiving, storing and distribution) are centrally managed by permanent volunteers who work in the office, which is more behind the scenes. The tasks order picking and maintaining food safety have a lot to do with each other; a task of all volunteers is to actively check the quality of the products during the repacking and order picking process. This is especially essential for products with a short expiration date (e.g. fruit and vegetables). The out-group may cause potential problems to these tasks. The observational research in Rotterdam supports this claim. It was noticed that most mandatory volunteers (volunteer group 4), who were working on the conveyor belt (zone order picking), did not thoroughly checked the quality of the products. For instance, volunteer group 4 did not take out the rotten oranges while the other volunteer groups (1, 2 and 3) did. Due to the zone order picking system, the crates had to be passed quickly to the next volunteer. Hence, it was strenuous to pick out rotten oranges and volunteer group 4 simply did not have the motivation. Another effect of different relationship quality levels may be on the **volunteer retention rate** because poor-quality LMX relationships may result in a less friendly work climate and high-quality LMX relationships may result in a more friendly work climate. The work climate may influence the volunteer retention rate of intrinsically motivated volunteer groups, which may especially apply to socially motivated volunteers since they value relationships in the workplace more. Consequently, this may result in both overstaffing, which may cause inefficiency, and understaffing, which reduce the workload over time due to fatigue (Diwas and Terwiesch, 2009). Moreover, overstaffing and understaffing may influence the volunteer retention rate again (Shin and Kleiner, 2003); intrinsically motivated volunteers may think that they are useless in case of overstaffing and may decide not to show up the next time. With regards to understaffing, intrinsically motivated volunteers may feel that it is too exhausting to volunteer and decide not to show up the next time. Both overstaffing and understaffing consequently negatively affects the whole operational process and is a threat to the existence of the Dutch Food bank because the organization extremely depends on unpaid volunteers. Hence, a balance of the utilization rate is critical. Aforementioned, Tilburg has a higher volunteer retention rate with regards to intrinsically motivated volunteers compared to Rotterdam. Thus, the higher volunteer retention rate of Tilburg may be clarified since volunteer group 4 is not active in the DC of Tilburg and low-quality LMX relationships do not exist in the operational workplace. However, not only the quality of the LMX relationship levels affects the management of the daily utilization rate, it also depends on the characteristics of an organization (e.g. size, whether volunteers are paid and fundamental membership (Paull, 2002)), which refers to a *contingency approach* that is supported by many academic scholars (Rochester, 1999; Rehnborg, 2005; Meijs and Ten Hoorn, 2008; Studer and von

Schnurbein, 2013). The two investigated cases: Rotterdam and Tilburg, saliently differ in characteristics (see paragraph 3.1). The higher volunteer retention rate of volunteer with an intrinsic motivation in Tilburg may also be clarified due to the DC size and characteristics of the volunteers. Rotterdam is significantly bigger in size, which makes it more difficult to recruit enough volunteers. Furthermore, the intrinsic reward provided by Tilburg is more valuable compared to the intrinsic reward provided by Rotterdam because the DC of Tilburg functions as a final destination. In this way, the volunteers see the actual results of their volunteer work, which may clarify the higher volunteer retention rate of volunteers with both a social and altruistic motivation in Tilburg. The descriptive statistics of the volunteers indicate that Tilburg has a higher average age and more socially motivated volunteers. Okun and Schultz (2003) found that the higher the age of a volunteer, the less likely he/she has altruistic intentions and the more important social motivations become. The higher number of socially motivated volunteers in Tilburg may be a clarification of the higher volunteer retention rate because the DC is more a meeting- than a 'work' place.

Relationships between volunteer groups

Results indicate that inter-volunteer group conflicts may happen between volunteer group 2 and other volunteer groups, between permanent and occasional volunteers and between both volunteer groups 1 and 3 with 4.

Concerning the relationship between volunteer group 2 and other volunteer groups, a clarification for a potential conflict may be that most of volunteer group 2 is non-native in Dutch, which prevents a stimulation of communication. In this case, volunteer group 2 is the out-group in the social network and the native Dutch speakers belonging to other volunteer groups are the in-group. This development can be explained by the social identity theory. Individuals define themselves in terms of their social group memberships; discrimination and prejudice happen naturally to the out-group, especially if they do not communicate (Hewstone and Greenland, 2000). With regards to the relationship between permanent and occasional volunteers, permanent volunteers may feel superior above occasional volunteers since they have more experience with the procedures of the DC. Hence, some permanent volunteers may take the lead and may command occasional volunteers which results in power inequality, which is a source for intergroup conflicts (Katz, 1965). Whereas only potential conflicts were observed in the operational workplace between above mentioned groups, real conflicts happened between volunteer group 1 and 4 and 3 and 4. As mentioned before, volunteer group 1 and 3 are very similar. The only difference is the degree in accountability (volunteer group 1 faces single leadership whereas volunteer group 3 faces dual leadership). Results indicate that both groups feel self-glorified because both are convinced that

they help the poorer society (aggregate dimension 3). This feeling of self-glorification of these two groups may be a source of potential intergroup conflicts with volunteer group 4 that is extrinsically motivated because there is a disagreement in principles (value) (Katz, 1965). Furthermore, since volunteer group 4 thinks that other volunteer groups look negatively at them, they might think that it is useless to change their behavior because it will not change a thing. Moreover, discrimination seems to occur between volunteer group 1 and 4 (not between group 3 and 4), which can be clarified by the social identity theory again. The majority of volunteer group 4 is foreign, which indicates that culture differences may also be a driver for these inter-volunteer group conflicts.

Regarding the organizational consequences, (potential) inter-volunteer group conflicts may have a negative effect on *knowledge transfer*; volunteer groups that face (potential) intergroup conflicts may not collaborate/help each other and, thus, do not share information. Consequently, this negatively affects **the efficiency of the whole operational process** and even strengthen (potential) inter-volunteer group conflicts since a negative spiral maintains in this way. For instance, with regards to the zone order picking system, a volunteer may require help when he/she is order picking and must pick out rotten oranges simultaneously because it is strenuous. Furthermore, (potential) inter-volunteer group conflicts may result in a less friendly work climate. As described in advance with regards to the effects of poor-quality LMX relationship quality levels, this may negatively influence **the volunteer retention rate** because it may result in understaffing, which results in a decrease in workload due to fatigue (Diwas and Terwiesch, 2009) and influences the volunteer retention rate again (Shin and Kleiner, 2003) because intrinsically motivated volunteer groups may decide not to show up the next time due to this less friendly work climate. This negatively influences the whole operational process and may even be a threat to the existence of the Dutch Food Bank since the NPO cannot operate without enough volunteers. Hence, it is critical that inter-volunteer group conflicts are prevented and solved.

5.2 Conclusion managerial implication and recommendations for the Dutch Food Bank

This paragraph builds on the problems outlined in the previous section. The question: how these problems must be treated will be examined (SUB-RQ VI).

Managerial implication

In order to improve low-quality LMX relationships and to resolve inter-volunteer group conflicts, it is critical that a DC manager meets two conditions first; **1) the DC manager must satisfy the**

four needs: autonomy, competence, relatedness and self-esteem per volunteer group (Elliot et al., 2001) and **2) all volunteers groups must be treated fairly** (Deutsch et al., 2006)

With regards to LMX relationships, a DC manager can improve relationship quality levels via multiple actions according to the executed literature study with regards to SUB-RQ VI; by providing leader delegation (Bauer & Green, 1996; Yuki et al., 2009, being ethical and showing empathy (Mahsud et al., 2010), communicating a vision (showing transformational leadership) (Wang et al., 2005) and by preventing a violation of psychological contracts (Restubog et al., 2011). However, the stricter organization control system for volunteer group 4 means that the need autonomy is not completely satisfied for group 4. Consequently, volunteer group 4 may end up in a negative spiral; the provision of less autonomy may result in a decrease in the two needs competence and self-esteem as these needs are correlated (Schwalbe, 1985). This consequently may negatively affect the need relatedness as well because the connection with the organization deteriorates when these three needs are not satisfied. Hence, the failure to meet the four needs with regards to volunteer group 4 may result in disputes with the DC manager, which influences the work climate and eventually the volunteer retention rate as described in the previous section. This implies that it is important that a DC manager creates a balance in providing the amount of autonomy to the mandatory volunteers (volunteer group 4) so that the four needs are met to a certain extent, which may consequently benefit the LMX relationship. On the other hand, the other volunteer groups (1, 2, and 3) require a feeling of freedom because these groups are generally intrinsically motivated (Davis Smith, 1996). When their autonomy is mitigated, it may result in a decrease in intrinsic motivation and, consequently, in the needs competence, self-esteem (Schwalbe, 1985) and relatedness as well, which may result in a lower volunteer retention rate. Hence, the DC manager must give more autonomy to the intrinsically motivated volunteer groups. However, with regards to the second condition, it is essential that all organizational control systems adopted by the DC manager are seen as fair by all volunteer groups (Masterson et al., 2000). Providing more autonomy to volunteer groups 1, 2 and 3 and less to volunteer group 4 may create unfairness among the volunteers, which may deteriorate the LMX relationship quality levels and may even result in inter-volunteer group conflicts. Therefore, in order to minimize unfairness, the same rules should apply to everyone such as the same beginning- and end time of the working day for each volunteer. Furthermore, volunteer group 4 must be coached instead of monitored by the DC manager so that the group feels more useful and the four needs are consequently more satisfied. Right now, volunteer group 4 must perform and when they do not, a dispute may occur with the DC manager and their contract with the food bank can even be terminated. Hence, it is better for the whole work climate that more genuine attention is being provided to volunteer group 4. Lastly,

Shin and Kleiner (2003) explicitly emphasize that it is essential that a leader must utilize volunteer time efficiently, as this influence the volunteer retention rate due to over- or understaffing. When an unpaid volunteer does not usefully spend his/her time, the satisfaction of both needs competence and self-esteem is in danger.

With regards to the inter-volunteer group conflicts, the physical distance in the operational workplace between volunteer groups aggravate (potential) conflicts. Therefore, it is important to reduce physical distances between groups by letting different volunteers groups collaborate on one task (Al Ramiah and Hewstone, 2013). When there is a real conflict, the DC manager may act as a third-party consultant (Fisher, 1983). However, not every person is suitable for this position. It is important that a DC manager possesses the following skills and qualities: analytical skills; personal qualities; interpersonal skills; group leadership skills; intergroup skills and consultation skills, he/she has a professional attitude and that he/she is aware of potential cognitive biases such as stereotyping and the attribution bias (Deutsch et al., 2006). Hence, this should be taken into account when a DC manager is recruited.

Recommendations for the Dutch Food Bank

Since forecasts describe a significant growth of citizens who are going to be dependent on the Dutch Food bank, which is mainly due to COVID-19, volunteer recruitment and high-quality LMX relationships become even more important. Volunteers with an altruistic and/or social motivation are part of the in-group and have a higher relationship quality level with a DC manager, which consequently positively affects the daily operational process. Therefore, it may be valuable for the Dutch Food Bank to focus on volunteer that are altruistically and/or socially motivated during the volunteer recruitment. While Rotterdam faces a consistent shortage of intrinsically motivated volunteers and therefore must rely a lot on mandatory volunteers, Tilburg does not. This can be clarified by the reasons which are described in paragraph 5.1; Tilburg is a final destination and, hence, the intrinsic reward is greater and due to organizational characteristics (contingency approach). Hence, it is recommended for larger DCs (e.g. Rotterdam and Amsterdam) to increase intrinsic rewards in order to recruit more altruistically and socially motivated volunteers. This can be done via, for instance, a social media platform and organizing fun activities for all volunteers, which increases the establishment of social networks. Moreover, it may be valuable to assign volunteers one week to the distribution points (churches) and one week to the DC. In this way, the sense of fulfilment will be increased since each volunteer will see the happy faces of the clients at the distribution points. Currently, scheduling volunteers for the DC and the distribution points is organized separately. In line with this, a recommendation is that a central App is launched in

which volunteers can schedule themselves. In this way, the DCs can manage the daily utilization rate more effectively due to a more accurate overview of the present volunteers and, subsequently, can anticipate and take actions in case of overstaffing or understaffing. Furthermore, it is recommended to recruit actively via schools and universities. In this way, realization of the societal importance of the Dutch Food Bank penetrates young society. Another recommendation to the Dutch Food Bank may be that an individual within the out-group is educated to become a DC manager. Presently, results show that most of the DC managers have an altruistically and socially motivation, are Dutch, highly educated and have/had a good job. This does not fit with the characteristics of volunteer group 4 since most of these volunteers are part of the lower social class and foreign. When someone from the out-group is educated to become a manager, a good example for the out-group is set and the LMX relationship quality levels may improve which consequently positively affects the DC's operational process. However, a requirement is that this person is highly motivated. Furthermore, it is recommended that the Dutch Food Bank provides LMX trainings to DC manager so that LMX relationship quality levels improve (Scandura and Grean, 1984; Graen, et al., 1986).

5.3 External validity, limitations and future research

External validity

In total two out of ten DCs of the Dutch Food Bank have been analyzed in detail. Each DC of the Dutch Food Bank works independently and therefore differs in size, operational process and active volunteer groups. The two case studies (Rotterdam and Tilburg) are contrasting in any aspect. Hence, the results of this thesis can be generalized to all ten DCs of the Dutch Food Bank. However, these results cannot be generalized to other non-profit DCs operating in other industries and countries (e.g. the Red Cross, Stichting Jarige Job and Leger des Heils), as the goals of the DCs differ due to a provision of other products/services and the fact that not each organization/country works with volunteer group 4. Hence, the results of this thesis can only be generalized to the ten non-profit DCs of the Dutch Food Bank.

Limitations

This thesis has potential limitations. Firstly, it was impossible to include corporate volunteers (volunteer group 5) as respondents for the LMX-MDM survey, mini interviews and to observe them while volunteering due to COVID-19 because all the participating FPOs decided to put the volunteer programs on hold. It was only possible to examine volunteer group 5 via the semi-structured interviews with the DC managers. Hence, their perception has not been included in this

thesis. In addition, a methodological issue of this thesis may be the fact that some non-native Dutch volunteers were being helped with filling out the LMX-MDM survey. It is possible that non-native Dutch respondents may have answered thoughtless due to a lack of understanding of the Dutch language. Moreover, these non-native Dutch volunteers were helped in groups while filling out the survey, which may imply that the volunteers answered the questions under group pressure. Finally, a possible issue may be that not all volunteers consider themselves as a member/subordinate, which may especially apply to permanent volunteers. Results show that permanent volunteers have a higher relationship quality level with the DC manager and may sometimes take the lead and, thus, they replace the DC manager. In this case, the LMX theory does not hold.

Future research

Based on the results found in this thesis, it may be interesting for future research to look into the subsequent three aspects; Firstly, future studies may investigate which *personality traits* a food bank's DC manager must have in order to effectively manage the great diversity in volunteers characteristics. In managerial literature, required actions and skills that a DC manager needs to take and have, have already been examined but required personality traits not yet. In general, actions and skills can be trained but personality not so clarification regarding required personality traits may positively contribute to the recruitment of a DC manager. Secondly, results indicate that *culture* may be a driver for discrimination which may be a source for potential inter-volunteer group conflicts between groups 1 and 4. However, which specific cultures may conflict and why, is still a unresearched area. Therefore, clarification regarding this topic, may be interesting for volunteer recruitment and may positively contribute to a DCs operational process. Thirdly, in line with the previous recommendation, future research may look at *intragroup conflicts* (so between two members of the same group) because results show that volunteers from the same culture tend more towards each other. Lastly, future research may examine the question if the volunteer retention rate may increase if volunteer groups are *resembled*. The DC of Tilburg has a higher volunteer retention rate and less active volunteer groups (only volunteer groups 1, 2 and 3 are active) compared to Rotterdam. It may be interesting to investigate if this higher volunteer retention rate may also be caused by the fact that the volunteer groups are resembled more (in addition to the provided clarifications in paragraph 5.1). With regards to Rotterdam, it may be interesting to investigate if it is more likely that volunteer groups 1 and 3 will not show up when the majority in the workplace includes volunteer group 4.

References

Agostinho, D. and Paço, A. (2012). Analysis of the motivations, generativity and demographics of the food bank volunteer. International Journal of Nonprofit and Voluntary Sector Marketing 17, pp. 249–261.

Agostinho, D. and Paço, A. (2012). Does the kind of bond matter? The case of food bank volunteer. International Review on Public and Nonprofit Marketing, 9(2), pp. 105-118.

Agostinho, D., Paço, A. and Nave, A. (2013). Corporate versus non-profit volunteering- do the volunteer's motivations significantly differ? International Review on Public and Nonprofit Marketing volume 10, pp. 221–233.

Allport, G. W. (1954). The nature of prejudice. Cambridge, MA: Addison-Wesley.

Al Ramiah, A., and Hewstone, M. (2013). Intergroup Contact as a Tool for Reducing, Resolving, and Preventing Intergroup Conflict. American Psychologist, 68(7), pp. 527–542.

Arbak, E., and Villeval, MC. (2013). Voluntary leadership: motivation and influence. Social Choice and Welfare 40:635-662.

Ary, D., Jacobs, L. C., and Sorenson, C. (2010). Introduction to research in education (8th ed.). Belmont, CA: Wadsworth

Baker, L. (2006). Observation: a complex research method. Library trends, 55(1), pp. 171-189.

Bauer, T. N., and Green, S. G. (1996). Development of leader-member exchange: a longitudinal test. Academy of Management Journal, 39, pp. 1538-1567.

Böhm, R, Rusch, H, and Baron, J. (2018). The psychology of intergroup conflict: a review of theories and measures. Journal of Economic Behavior and Organization.

Bolino, M. C., and Turnley, W. H. (2009). Relative deprivation among employees in lower-quality leader-member exchange relationships. The leadership Quarterly, 20(3), pp. 276-286

Booth, J. E., Won Park, K., and Glomb, T. M. (2009). Employer-supported volunteering benefits: Gift exchange among employers, employees, and volunteer organizations. Human Resource Management, 48, pp. 227-249.

Brand M, Kerby D, Elledge B, Burton T, Coles D, Dunn A. (2008) Public health's response: citizens' thoughts on volunteering. Disast Prev Manag 17, pp. 54–61

Brewer, M. B. (1997). The social psychology of intergroup relations: Can research inform practice? Journal of Social Issues, 53, pp. 197-211

Brewer, M.B., and Brown, R.J. (1998). Intergroup relations. The handbook of social psychology, 4th edition, pp. 554- 594. New York: McGraw-Hill.

Caligiuri, P., Mencin, A., and Jiang, K. (2013). Win-win-win: The influence of company-sponsored volunteerism programs on employees, NGOs, and business units. Personnel Psychology, 66, pp. 825-860.

Cappellari, L., and Turati, G. (2004). Volunteer labour supply: The role of workers' motivations. Annals of Public Cooperative Economics, 75, pp. 619-643.

Clary E, Snyder M, Ridge R, Copeland J. 1998. Under-standing and assessing the motivations of volunteersof volunteers: a function approach. Journal of Personality and Social Psychology 74, pp. 1516-1530.

Cnaan, R. A., and Goldberg-Glen, R. S. (1991). Measuring motivation to volunteer in human services. Journal of Applied Behavioral Science, 27, pp. 269-284

Cnaan, R. A., Kasternakis, A., and Wineburg, R. J. (1993). Religious people, religious congregations, and volunteerism in human services: Is there a link? Nonprofit and Voluntary Sector Quarterly, 22(1), 33–51.

Cox, K. (2003) The Effects of Intrapersonal, Intragroup, and Intergroup Conflict on Team Performance Effectiveness and Work Satisfaction. Nursing Administration Quarterly, 27(2), pp. 153-163.

Crosno, J. L. and Brown, J. R. (2015). A meta-analytic review of the effects of organizational control in marketing exchange relationships. Journal of the Academic Marketing Science, 43, pp. 297–314. DOI 10.1007/s11747-014-0386-5

Danna K, Griffin RW (1999) Health and well-being in the workplace: a review and synthesis of the literarure. J Manage 25, 357–84.

Dansereau Jr, F. G., Graen, G., and Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations: A longitudinal investigation of the role making process. Organizational Behavior and Human Performance, 13(1), 46-78.

Davis Smith, J. (1996). Should Volunteers be managed? in Billis, D. and M. Harris (Eds) voluntary agencies: Challenges of organisation and management, Macmillan: Basingstoke.

De Graaf, P. (2019). Steeds meer klanten kloppen aan bij de voedselbank, stijging van 8 procent [online]. Available at: https://www.volkskrant.nl/nieuws-achtergrond/steeds-meer-klanten-kloppen-aan-bij-de-voedselbank-stijging-van-8-procent~b0c47394/ [Accessed 15 July 2020].

De Koster, R. (2019, November). Facility Logistics Management: Order picking. Lecture conducted from the MSc program Supply Chain Management, Rotterdam School of Management.

Deutsch, M., Coleman, P. T., Marcus, E. C. (2006). The handbook of conflict resolution. Jossey-Bass. 2nd edition.

DeWalt, K. M. and DeWalt, B. R. (2002). Participant observation: a guide for fieldworkers. Walnut Creek, CA: AltaMira Press.

Dienesch, R. M., and Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. Academy of Management Review. 11: 618-634

Diwas S. Kc, Christian Terwiesch, (2009) Impact of Workload on Service Time and Patient Safety: An Econometric Analysis of Hospital Operations. Management Science 55(9):1486-1498

Dul, J. and Hak, T. (2008). Case study methodology in business research. (First edition). Published by Elsevier Ltd.

Elliot, A., Kasset, T., Kim, Y., Sheldon, K. "What is Satisfying About Satisfying Events? Testing 10 Candidate Psychological Needs", Journal of Personality and Social Psychology, Vol. 80 No. 2, Feb 2001, pp. 325-39.

Faber, N., De Koster, M.B.M., Smidts, A. (2013). Organizing Warehouse Management. International Journal of Operations and Production Management, 33(9), pp. 1230-1256.

Fayol, H. (1949), General and Industrial Management, Pitman, New York, NY.

Fisher, R. J. (1983). Third Party Consultation as a Method of Intergroup Conflict Resolution. Journal of conflict resolution, 27(2), pp. 301-334.

Fisher, R. J. (2000). Intergroup conflict. In the Handbook of Conflict Resolution (M. Deutsch and P.T. Coleman, eds), pp. 166-185. Jossey-Bass Publishers, San-Francisco, CA.

Flamholtz, E. (1996). Effective Organizational Control: A Framework, Applications, and Implications. European Management Journal, 14(6).

Frey, B. S. (1993). Does monitoring increase work effort? The rivalry with trust and loyalty. Economic Inquiry, 31, pp. 663–670

Gatignon-Turnau, A.-L., and Mignonac, K. (2015). (Mis)Using employee volunteering for public relations: Implications for corporate volunteers' organizational commitment. Journal of Business Research, 68(1), pp. 7-18.

Gerstner, C. R., and Day, D. V. (1997). Meta-analytic review of leader–member exchange theory: Correlates and construct issues. Journal of Applied Psychology, 82(6), 827-844.

Gilder, de, D., Schuyt, T. N., and Breedjik, M. (2005). Effects of an employee volunteering program on the work force: The ABN AMRO case. Journal of Business Ethics, 61(2), 143

Goff, P.A., Steele, C.M., Davies, P.G. (2008). The space between us: Stereotype threat and

distance in interracial contexts. Journal of Personality and Social Psychology, 94(1), pp. 91–107

Gioia, D. A., Corley, K. G., and Hamilton, A. L. (2012). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. Organizational Research Methods, 16(1), pp. 15-31.

Gold, R. L. (1958). Roles in sociological field observations. Social Forces, 36(3), pp. 217–223.

Graen, G.B. (1976). Role making processes within complex organizations. In: M.D. Dunnette (Ed.), Handbook of Industrial and Organizational Psychology (pp. 1201-1245). Chicago: Rand-McNally.

Graen, G.B., and Scandura, T. (1987). Toward a psychology of dyadic organizing. In: B. Staw and L.L. Cumming (Eds.), Research in Organizational Behaviour (Vol. 9, pp. 175-208). Greenwich, CT: JAI Press.

Graen, G., Scandura, T. A., & Graen, M. R. (1986). A field experimental test of the moderating effects of growth need strength on productivity. Journal of Applied Psychology, 71, 484-491.

Graen, George B. and Uhl-Bien, M. (1995). Relationship-Based Approach to Leadership: Development of Leader-Member Exchange (LMX) Theory of Leadership over 25 Years: Applying a Multi-Level MultiDomain Perspective. Management Department Faculty

Gue, K. R. (2001). Crossdocking: Just-In-Time for Distribution.

Handboek Voedselveiligheid van de Vereniging van Nederlandse Voedselbanken (2016). [online]. Available at https://voedselbankennederland.nl/wp-content/uploads/2016/12/handboek-voedselveiligheid-voedselbanken-nederland.pdf [Accessed on 16 July 2020].

Handy, F., Cnaan, R. A., Brudney, J. L., Ascoli, U., Meijs, L. C., and Ranade, S. (2000). Public Perception of "Who is a Volunteer": An Examination of the Net-cost Approach from a Cross-Cultural Perspective. Retrieved from http://repository.upenn.edu/spp_papers/2

Hewstone, M., and Greenland, K. (2000). Intergroup conflict. International Journal of Psychology, 35(2), pp. 136 – 144.

Hu, J., Jiang, K., Mo, S., Chen, H., Shi, J. (2016). The motivational antecedents and performance consequences of corporate volunteering: When do employees volunteer and when does volunteering help versus harm work performance? Organizational Behaviour and Human Decision Processes. 137, pp. 99-111.

Hustinx, L., Essen, von, J., Haers, J., and Mels, S. (2015). Religion and volunteering: Complex, contested and ambiguous relationships. First edition. Springer.

Jones, D. A., and Willness, C. R. (2013). Corporate social performance, organizational reputation, and recruitment. In K. Y. T. Yu and D. Cable (Eds.), The Oxford handbook of recruitment: 298-313. New York: Oxford University Press.

Joseph, D., Newman, D. A., Sin, H.-P. (2011). Leader-Member Exchange (LMX) Measurement: Evidence for Consensus, Construct Breadth, and Discriminant Validity. Research Methodology in Strategy and Management, 6, pp. 89-135.

Kampen, T, (2014). Verplicht Vrijwilligerswerk. First edition. Amsterdam: Van Gennep.

Katz, D. (1965). Nationalism and strategies of international conflict resolution. In H.C. Kelman (ed.), International behavior: A social psychological analysis. New York: Holt, Rinehart, Winston, pp 356-390.

Keller, T., and Dansereau, F. (2001) The effect of adding items to scales: An illustrative case of LMX. Organizational Research Methods.

Kenny, M., and Fourie, R. (2015). Contrasting classic, Straussian, and constructivist grounded theory: methodological and philosophical conflicts, The Qualitative Report,20(8), pp. 1270-1289.

Kiefer, A.W. and Novack, R.A. (1999). An empirical analysis of warehouse measurement systems in the context of supply chain implementation. Transportation Journal, Vol. 38 No. 3, pp. 18-27.

Kruyswijk, M. (2020). Drukte bij de voedselbank: 'De crisis is al luid en duidelijk begonnen' [online]. Available at: https://www.parool.nl/amsterdam/drukte-bij-de-voedselbank-de-crisis-is-al-luid-en-duidelijk-begonnen~b416f6c5/?referer=https%3A%2F%2Fwww.google.com%2F

Latham, G. P., and Pinder, C. C. (2005). Work motivational theory and research at the dawn of the twenty-first century. Annual Review of Psychology, 5, pp. 485–516.

Laurier, E. (2010). Participant Observation. in N Clifford, S French & G Valentine (eds), Key Methods in Geography. 2nd edn, SAGE Publications Ltd, London, pp. 116-130.

Liden, R. C., and Maslyn, J. M. (1998). "Multidimensionality of Leader– Member Exchange: An Empirical Assessment Through Scale Development." Journal of Management, 24(1), pp. 43–72.

Mahsud, R., Yuki, G., and Prussia, G. (2010). Leader empathy, ethical leadership, and relations-oriented behaviors as antecedents of leader-member exchange quality.

Mardanov, I. T., Heischmidt, K., and Henson, A. (2008). Leader–MemberExchange and Job Satisfaction Bond and Predicted Employee Turnover. Journal of Leadership and Organizational Studies, 15(2), pp. 159–175.

Marshall, C., and Rossman, G, B. (1995). Designing qualitative research. Newbury Park, CA: Sage.

Martin, R., Guillaume, Y., Thomas, G., Lee, A., Epitropaki, O. (2016). Leader-Member Exchange (LMX) and Performance: A meta-analytic review. Personnel Psychology, 69, pp. 67-121.

Maslyn, J.M., Uhl-Bien, M. (2001). Leader-member exchange and its dimensions: effects of self-effort and other's effort on relationship quality. Journal of Applied Psychology, 86, pp. 697-708

Masterson, S. S., Lewis, K., Goldman, B. M., and Taylor, M. S. (2000). Integrating Justice and Social Exchange: The Differing Effects of Fair Procedures and Treatment on Work Relationships. The Academy of Management Journal, 43(4), pp. 738-748

McCutcheon, D.M. and Meredith, J.R. (1993). Conducting case study research in operations management. Journal of Operations Management, 11, pp. 239-256.

McIntyre, L. (2003). Food security: more than a determinant of health. Options Politiques. pp. 46–51.

Meijs, L.C.P. M., and E. Ten Hoorn. (2008). No 'One-Best' Volunteer Management and Organizing: Two Fundamentally Different Approaches. In Challenges in Volunteer Management, edited by M. Liao-Troth, 29– 50. Charlotte, NC: Information Age

Midgley, J. L. (2013). The logics of surplus food redistribution, Journal of Environmental Planning and Management, pp. 1-21

Mojza, E. J., Sonnentag, S., and Bornemann, C. (2011). Volunteer work as a valuable leisure-time activity: A daylevel study on volunteer work, non-work experiences, and well-being at work. Journal of Occupational and Organizational Psychology, 84: 123-152.

Nederhof, A. J. (1985). Methods of coping with social desirability bias: a review. European Journal of Social Psychology, 15, pp. 263-280.

Northouse P.G. (2016). Leadership: Theory and Practice. Thousand Oaks, CA: Sage.

Okun, M. A., and Schultz, A. (2003). Age and Motives for Volunteering: Testing Hypotheses Derived from Socioemotional Selectivity Theory. Psychology and Aging, 18(2), pp. 231–239.

Opdenakker, R. (2006). Advantages and Disadvantages of Four Interview Techniques in Qualitative Research. Forum: Qualitative Social Research, 7(4).

Paço, A. D., and Nave, A. C. (2013). Corporate volunteering: A case study centred on motivations, satisfaction and happiness of company employees. Employee Relations, 35: 547-559.

Pajo, K., and Lee, L. (2011). Corporate-sponsored volunteering: A work design perspective. Journal of Business Ethics, 99, 467–482.

Paull, M. (2002). Reframing volunteer management: A view from the West. Australian Journal on Volunteering, 7, 21–2

Peterson, D. K. (2004). Benefits of participation in corporate volunteer programs: Employees' perceptions. Personnel Review, 33(6), pp. 615-627

Plewa, C., Conduit, J., Quester, P. G and Johnson, C. (2015). The Impact of Corporate Volunteering on CSR Image: A Consumer Perspective. Journal of Business Ethics, Vol. 127(3), pp. 643-659

Premack, S. L., and Wanous, J. P. (1985). A meta-analysis of realistic job preview experiments. Journal of Applied Psychology, pp. 7-6-720.

Rehnborg, S. J. 2005. Maximizing Volunteer Engagement: A Snapshot for Executive Directors. Austin, TX: RGK Center for Philanthropy and Community Service.

Restubog, S. L., Bordia, P., Bordia, S. (2011). Investigating the role of psychological contract breach on career success: Convergent evidence from two longitudinal studies. Journal of Vocational Behavior, 79(2), pp. 428-437.

Robbins, S. P. (1995). Organizational Behaviour. Seventh edition. Englewood Cliffs. New Jersey: Precentice Hall.

Rochester, C. (1999). One Size Does Not Fit All: Four Models of Involving Volunteers in Voluntary Organizations. Voluntary Action 1 (2), pp. 7– 20.

Rodell, J. B., Breitsohl, H., Schroder, M., and Keiting, D. J. (2015). Employee volunteering. A review and framework for future research. Journal of Management, pp. 1–38.

Rubin, H. J., and Rubin, I. S. (2011). Qualitative interviewing: The art of hearing data. Los Angeles, CA: Sage.

Ryan, R. M., and Deci, E. L. (2000). Intrinsic and extrinsic motivations: classic definitions and new directions. Contemporary Educational Psychology 25, pp. 54-67.

Saijo, Y., Ueno, T., and Hashimoto, Y. (2008). Twenty-Four-Hour Shift Work, Depressive Symptoms, and Job Dissatisfaction Among Japanese Firefighters. American Journal of Industrial Medicine, 51, pp. 380-391.

Scandura, T., & Graen, G. (1984). Moderating effects of initial leader-member exchange status on the effects of a leadership intervention. Journal of Applied Psychology, 69, 428-436.

Schwalbe, M. L. (1985). Autonomy in Work and Self-Esteem. The Sociological Quarterly, 26(4), pp. 519-535.

Schyns, B. (2006). Are Group Consensus in Leader–Member Exchange (LMX) and Shared Work Values Related to Organizational Outcomes? Small Group Research, 2006, 37(1), pp. 20–35.

Schyns, B., and Wolfram, H.-J. (2008). The Relationship Between Leader–Member Exchange and Outcomes as Rated by Leaders and Followers. Leadership and Organization Development Journal, 29(7), pp. 631–646

Shin, S., and Kleiner, B. H. (2003). How to manage unpaid volunteers in organisations. Management Research News, 26(2/3/4), pp. 63-71

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. Journal of Business Research, 104, pp. 333-339.

Starkey, L.J., Kuhnlein, H.V and Gray-Donald, K. (1998). Food bank users: sociodemographic and nutritional characteristics. Canadian Medical Association Journal 158(9): 1143–1149.

Starkey, L.J., Kuhnlein, H.V and Gray-Donald, K. (1999). Nutrient intake of food bank users is related to frequency of food bank use, household size, smoking, education, and country of birth. The Journal of Nutrition 129(4), pp. 883–889.

Stephan, W.G., Stephan, C.W. (2000). An integrated threat theory of prejudice, in: Oskamp, S. (Ed.), Reducing prejudice and discrimination. Erlbaum Associates, Mahwah, NJ US, pp. 23–45

Studer, S., and G. von Schnurbein. 2013. Organizational Factors Affecting Volunteers: A Literature Review on Volunteer Coordination. Voluntas 24, pp. 403– 40.

Van Dooren, C. (2019). Voedselverspilling bij huishoudens in Nederland in 2019. [online]. Available at file:///C:/Users/425126aj/Downloads/bijlage-2-samenvatting-syntheserapport-voedselverspilling-in-nederlandse-huishoudens-2019.pdf. [Accessed on 11 February 2020].

Vecchio R.P. (1995). It's not easy being green: jealous and envy in the workplace. Research in personnel and human resources management, Vol 13, pp. 201-244, Stamford CT: JAI Press.

Vidyarthi, P. R, Erdogan, B, Anand, S, Liden, R. C, and Chaudry, A. (2014). One Member, Two Leaders: Extending Leader–Member Exchange Theory to a Dual Leadership Context. Journal of Applied Psychology, 99(3), pp. 468–483

Voedselbanken Nederland. (2019). Feiten en cijfers Voedselbanken Nederland. [online]. Available at: https://voedselbankennederland.nl/wp-content/uploads/2019/05/Feiten-en-Cijfersper31-12-2018-DEF.pdf. [Accessed on 11 February 2020].

Voedselbanken Nederland (n.d.). Voedselveiligheid. [online]. Available at: https://voedselbankennederland.nl/wat-we-doen/voedselveiligheid-is-van-het-grootste-belang/ [Accessed on 16 July 2020].

Wang, H., Law, K.S., Hackett, R. D., Wang, D., and Chen, Z. X. (2005). Leader-Member Exchange as a Mediator of the Relationship between Transformational Leadership and Followers' Performance and Organizational Citizenship Behavior. The Academy of Management Journal, 48(3), pp. 420-432

Wayne, S. J., Liden, R. C., and Sparrowe, R. T. (1994). Developing leader-member exchanges: The influence of gender and ingratiation. American Behavioral Scientist, 37(5), pp. 697-714.

Wilson, J. (2000). Volunteering. Annual Review of Sociology, 26, pp. 215–240.

Yuki, G., O'Donnell, M., and Taber, T. (2009). Influence of leader behaviors on the leader member exchange relationship. Journal of Managerial Psychology, 24, pp. 289-299

Appendix A. LMX-MDM Survey

1. Gender: Male / Female

2. Age: …….

3. Native language: ……

4. My reason to volunteer at the Dutch Food Bank is:

……
……
……
……

5. How long are you already active at the Dutch Food Bank?

……..

The subsequent questions are about **your supervisor when you volunteer at the distribution centre of the Dutch Food Bank**. Encircle a number to what extent you agree with the following statements:

	Completely disagree	Disagree	Neutral	Agree	Completely agree
1. I like my supervisor very much as a person.	1	2	3	4	5
2. My supervisor is the kind of person one would like to have as a friend.	1	2	3	4	5
3. My supervisor is a lot of fun to work with.	1	2	3	4	5
4. My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question.	1	2	3	4	5
5. My supervisor would come to my defense if I were attacked by others.	1	2	3	4	5
6. My supervisor would defend me to others in the organization if I made an honest mistake.	1	2	3	4	5
7. I do more work for my supervisor that goes beyond what is specified in my job description.	1	2	3	4	5
8. I am willing to apply extra efforts, beyond those normally required, to meet my supervisor's work goals.	1	2	3	4	5
9. I do not mind working my hardest for my supervisor.	1	2	3	4	5
10. I am impressed with my supervisor's knowledge of his/her job.	1	2	3	4	5
11. I respect my supervisor's knowledge of and competence on the job.	1	2	3	4	5
12. I admire my supervisor's professional skills.	1	2	3	4	5

Appendix B. Protocol Semi-structured In-depth Interviews with DC managers

Interview protocol:

LMX-MDM dimension: Affect

- Do you like each volunteer group equally? Or do you have a preference to work with a certain group?

LMX-MDM dimension: Loyalty

- Do you think that certain volunteer groups are more likely to defend you? So, by defending I mean, if you were attacked, so to speak, by others or if you made a mistake?

LMX-MDM dimension: Contribution

- Do you do work for your volunteers that goes beyond what you actually have to do? So, do you do more for them than only managing them?

LMX-MDM dimension: Professional Respect

- Do you admire and are you impressed by the knowledge and skills of some volunteers?

Driver 1: Volunteer Motivation

- What is your own reason to volunteer?
- How is your relationship with volunteers that have a different motivation?

Driver 2: Degree of Accountability (Single or Dual Leadership)

- Do you experience difficulties in manageability among volunteers who have a second person to whom they are accountable? So, with this I mean, volunteers from churches who are accountable to their church community, mandatory volunteers who are authorized by the municipality/social institution, volunteers from the Red Cross, soldiers, and corporate volunteers who have an own manager at their office.

Driver 3: Organizational Control System

- Do you have different approaches per volunteer group to make sure that everybody does the work which they have to do?

Intergroup conflict

- Do you or did you experience conflicts at the work floor between different volunteer groups? Have you ever had to intervene?

Appendix C. Gioia method; mini interviews with volunteers

Volunteers from Rotterdam are numbered as RR (Respondent Rotterdam numbered from 1 to 35 and volunteers from Tilburg are numbered as RT (Respondent Tilburg) numbered from 1 to 10. Moreover, the volunteer group has been noted behind the respondent. Example: RR1-1 can be identified as volunteer number 1 who has been questioned in Rotterdam who belongs to volunteer group 1.

Aggregate dimensions	Second order concepts	First order concepts
Inferiority vs. self-confidence of volunteer group 2	**Volunteer group 2 has self-doubt since not being native in Dutch**	*"We do not speak Dutch, so it is difficult to build a relationship with them"* (RR32-2), "w*e try to speak Dutch with other volunteers, but it is hard"* (RR33-2), "t*hey think I am useless"* (RT8-2).
	Self-confidence volunteer group 2	*"They appreciate that we help" (RR34-2), "I guess they think that we really help society and that they are thankful for that" (RR35-2).*
Permanent vs. occasional volunteers	**Occasional volunteers do not know how other volunteer groups think of them**	*"Volunteers that work for a longer time here can better answer this question"* (RR1-1) In addition, 11 occasional volunteers (RR2-1, RR4-1, RR8-1, RR9-1, RR11-1, RR14-1, RR29-3, RR30-3, RT4-1, RT6-2, RT7-2) did not know what to answer on the question.
	Permanent volunteers of group 1 taking the lead	*"It depends, I have the feeling that volunteers that are already active here for a long time, are kind of judging me. They think that persons such as me, who do not have a lot of experience, work slow. So, they tell me what to do"* (RR27-3).
Self-confidence volunteer group 1 and 3	**Volunteer group 1 and 3 thinks that other volunteer groups think positively about them**	*"I am doing well*" (RT9-3), *They think I am doing something meaningful for society"* (RR6-1, RR10-1, RR13-1, RR28-3, RT5-1), "t*hey think that I am a good human"* (RT1-1, RT2-1, RT3-1)

	Volunteer group 3 thinks it is of real additional value	*"I think they are happy that we help them in these difficult times"* (RR31-3, RT10-3).
Conflicts between volunteer groups 1 and 4	**Group 4 feels that volunteer group 1 looks at it negatively**	*"They do not take me seriously"* (RR17-4, RR18-4, RR25-4), "*They think I am stupid"* (RR19-4), "t*hey tell us that we do not work hard enough but they are the ones that leave early"* (RR22-4).
	Volunteer group 4 comments on volunteer group 1	*"Mandatory volunteers think I do not execute my tasks correctly" (*RR3-1), "t*hey think I do too little. They often say that to me"* (RR7-1), "t*hey think that I am lazy"* (RR12-1)
	Volunteer group 4 feels that it is being discriminated based on their origin.	*"They think stealing is my profession because I am black"* (RR16-4), "t*hey want that I leave the country"* (RR21-4), "t*hey think I am discriminating them, one mandatory volunteer said that to me'* (RR15-1), "*they all vote for Geert Wilders"*[2] (RR23-4).
	Dutch volunteers are being discriminated by non-native Dutch volunteers	*"They call me a 'kaaskop"* [3](RR5-1)

Note: A few mandatory male volunteers (RR20-4, RR24-4 and RR26-4) did not want to answer my question.

2 Dutch politician
3 Negative stereotyping Dutch name for a Dutchman

Appendix D. Pairwise comparison results of volunteer motivations

The tables below show the significance levels (the p-values) of the pairwise comparisons between the different volunteer motivations. All p-values have been adjusted by the Bonferroni correction in order to decrease type 1 errors. A p-value below .05 is significant.

DC of Rotterdam

Affect

Pairwise Comparisons of Reason to volunteer

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Extrinsic obligation–Utilitarian	-14.250	6.816	-2.091	.037	.366
Extrinsic obligation–Social	-19.625	5.614	-3.495	.000	.005
Extrinsic obligation–Altruistic	21.154	4.451	4.753	.000	.000
Extrinsic obligation–Intrinsic obligation	-25.125	12.287	-2.045	.041	.409
Utilitarian–Social	5.375	7.399	.726	.468	1.000
Utilitarian–Altruistic	6.904	6.560	1.052	.293	1.000
Utilitarian–Intrinsic obligation	10.875	13.199	.824	.410	1.000
Social–Altruistic	1.529	5.302	.288	.773	1.000
Social–Intrinsic obligation	5.500	12.620	.436	.663	1.000
Altruistic–Intrinsic obligation	-3.971	12.147	-.327	.744	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Loyalty

Pairwise Comparisons of Reason to volunteer

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Extrinsic obligation–Utilitarian	-9.167	6.769	-1.354	.176	1.000
Extrinsic obligation–Altruistic	14.777	4.420	3.343	.001	.008
Extrinsic obligation–Social	-16.970	5.576	-3.044	.002	.023
Extrinsic obligation–Intrinsic obligation	-25.542	12.203	-2.093	.036	.363
Utilitarian–Altruistic	5.610	6.515	.861	.389	1.000
Utilitarian–Social	7.804	7.348	1.062	.288	1.000
Utilitarian–Intrinsic obligation	16.375	13.108	1.249	.212	1.000
Altruistic–Social	-2.193	5.265	-.417	.677	1.000
Altruistic–Intrinsic obligation	-10.765	12.064	-.892	.372	1.000
Social–Intrinsic obligation	8.571	12.533	.684	.494	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Contribution

Pairwise Comparisons of Reason to volunteer

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Extrinsic obligation-Utilitarian	-11.250	6.843	-1.644	.100	1.000
Extrinsic obligation-Social	-15.429	5.637	-2.737	.006	.062
Extrinsic obligation-Altruistic	18.647	4.469	4.173	.000	.000
Extrinsic obligation-Intrinsic obligation	-22.000	12.337	-1.783	.075	.745
Utilitarian-Social	4.179	7.429	.562	.574	1.000
Utilitarian-Altruistic	7.397	6.587	1.123	.261	1.000
Utilitarian-Intrinsic obligation	10.750	13.252	.811	.417	1.000
Social-Altruistic	3.218	5.323	.605	.545	1.000
Social-Intrinsic obligation	6.571	12.671	.519	.604	1.000
Altruistic-Intrinsic obligation	-3.353	12.196	-.275	.783	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

DC of Tilburg

Professional Respect

Pairwise Comparisons of Reason to volunteer

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Social-Altruistic	6.500	2.790	2.330	.020	.119
Social-Intrinsic Obligation	7.909	6.833	1.157	.247	1.000
Social-Intrinsic obligation	14.409	6.833	2.109	.035	.210
Altruistic-Intrinsic Obligation	-1.409	6.833	-.206	.837	1.000
Altruistic-Intrinsic obligation	-7.909	6.833	-1.157	.247	1.000
Intrinsic Obligation-Intrinsic obligation	-6.500	9.252	-.703	.482	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Appendix E. Regression results

The first regressions investigate the effect of the second driver; Degree of Accountability (single- or dual leadership) on the four LMX-MDM dimensions (Affect, Loyalty, Contribution and Professional Respect). The second regressions controls for the driver: Volunteer Motivation.

DC of Rotterdam

NOT controlled for Volunteer Motivation

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.771	.280		13.478	.000
	DegreeofAccountability	-.918	.358	-.379	-2.561	.014

a. Dependent Variable: MeanAffect

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.771	.264		14.293	.000
	DegreeofAccountability	-.664	.338	-.300	-1.966	.056

a. Dependent Variable: MeanLoyalty

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.021	.230		17.446	.000
	DegreeofAccountability	-.634	.295	-.325	-2.149	.038

a. Dependent Variable: MeanContribution

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.583	.235		15.276	.000
	DegreeofAccountability	-.583	.300	-.297	-1.942	.059

a. Dependent Variable: MeanProfessionalRespect

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.853	.222		17.320	.000
	DegreeofAccountability	.151	.269	.062	.559	.579
	Utilitarian	-.307	.369	-.077	-.831	.412
	Social	-.065	.313	-.021	-.206	.838
	IntrinsicObligation	-.003	.672	.000	-.005	.996
	ExtrinsicObligation	-2.364	.267	-.912	-8.857	.000

a. Dependent Variable: MeanAffect

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.708	.276		13.432	.000
	DegreeofAccountability	.230	.334	.104	.689	.495
	Utilitarian	-.182	.458	-.050	-.397	.694
	Social	.259	.389	.090	.668	.509
	IntrinsicObligation	.395	.834	.057	.474	.638
	ExtrinsicObligation	-1.771	.331	-.747	-5.347	.000

a. Dependent Variable: MeanLoyalty

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.135	.232		17.840	.000
	DegreeofAccountability	.070	.281	.036	.250	.804
	Utilitarian	-.319	.385	-.100	-.830	.412
	Social	-.145	.326	-.057	-.445	.659
	IntrinsicObligation	.128	.700	.021	.183	.856
	ExtrinsicObligation	-1.678	.278	-.803	-6.031	.000

a. Dependent Variable: MeanContribution

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.610	.269		13.403	.000
	DegreeofAccountability	.096	.326	.049	.293	.771
	Utilitarian	-.134	.447	-.042	-.300	.766
	Social	-.005	.379	-.002	-.013	.990
	IntrinsicObligation	-.039	.814	-.006	-.048	.962
	ExtrinsicObligation	-1.456	.323	-.691	-4.504	.000

a. Dependent Variable: MeanProfessionalRespect

DC of Tilburg

NOT controlled for Volunteer Motivation (not necessary as it is not significant)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.275	.100		42.958	.000
	DegreeofAccountability	-.322	.184	-.349	-1.748	.094

a. Dependent Variable: MeanAffect

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.843	.094		40.742	.000
	DegreeofAccountability	-.034	.175	-.041	-.192	.849

a. Dependent Variable: MeanLoyalty

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4.020	.083		48.689	.000
	DegreeofAccountability	-.020	.153	-.027	-.128	.899

a. Dependent Variable: MeanContribution

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3.784	.077		49.239	.000
	DegreeofAccountability	.216	.142	.307	1.516	.144

a. Dependent Variable: MeanProfessionalRespect