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Food aid in four European countries: Assessing the price and content of charitable food aid packages by using food basket, household budget survey and contextual data

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Food aid in four European countries: Assessing the price and content of charitable food aid packages by using food basket, household budget survey and contextual data

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Abstract

Many European welfare states are confronted with a growing demand for charitable food aid among households that struggle to make ends meet. This issue is particularly pressing today as a consequence of the COVID-19 crisis, the Russian invasion of Ukraine and the following soaring inflation. In this exploratory case study research, we estimate the financial importance of charitable food aid packages for vulnerable recipient families by using cross-country comparable food basket data. Concretely, we collected data about the content of food packages and conducted interviews in twelve food distribution points in Antwerp, Barcelona, Budapest and Helsinki. Furthermore, we evaluate the content of food aid packages by comparing them with food basket and Household Budget Survey data. Based on the data in our twelve case study organisations, we find that the monetary value of food aid packages differs greatly between and within cities. While average food aid packages in Antwerp and Barcelona exceed 100 euros a month (adjusted for Purchasing Power Parities), this value is lower in Helsinki but especially in Budapest. This variation seems to be partially driven by differences in administrative and volunteer capacity, the (financial) support by municipalities and the position within the broader food aid network. Nevertheless, food aid packages as a top-up to inadequate minimum incomes are never able to close the at-risk-of-poverty-gap for social assistance recipients in the studied organisations in the four countries. Furthermore, our results show that the food aid packages do not fully represent a healthy and varied diet and do not correspond to people's average consumption choices. Hence, it is very likely that food aid recipients will attach a lower recipient value to the food aid packages than the estimated market values, because the packages do not entirely reflect specific household preferences and needs.

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1. Introduction

This methodological paper explores how to estimate the financial importance of charitable food packages for food aid recipients in several European welfare states. Concretely, we conduct case study research focusing on four European countries: Belgium, Finland, Hungary and Spain. Although European welfare states have some of the most elaborate and comprehensive social protection systems, a significant number of people struggles to make ends meet. Over the past decades, poverty rates have increased in many countries, especially among the working age population (Cantillon, Goedemé & Hills, 2019). Minimum income benefits are almost everywhere too low to live a life in human dignity (Marchal & Siöland, 2019) and to be able to pay all the minimum necessary expenses, such as housing and food (Penne & Goedemé, 2021). In previous research it was stated that, at least partly as a result of these welfare state shortcomings, a growing amount of families seem to find their way to third-sector food charities (Lambie-Mumford & Silvasti, 2020; Riches, 2018).

Over the past decades, many European countries have seen a remarkable return of food aid provision, most notably since the development of so-called 'food banks' in the 1980s-1990s. Additionally, the European Union (EU) plays an important historical role in the establishment of nationwide food aid distribution in a number of EU countries (Riches & Silvasti, 2014), first since the launch of the Food Distribution programme for the Most Deprived Persons (MDP) in 1987 and later through the Fund for European Aid to the most Deprived (FEAD)¹. Also during periods of crisis, food aid appears to be an important mechanism of (emergency) support, which is currently the case as a consequence of the COVID-19 pandemic (e.g. Greiss et al., 2022) and the Russian invasion of Ukraine which induced a dramatic increase of inflation rates². Nevertheless, little is known about the monetary value of food aid packages that are given to vulnerable families, and how this differs across countries with different food aid systems and ways of operating. Besides that, there is a lack of research focusing on how to take account of the content of food aid packages (e.g. the variation, healthiness) and the distribution mode

¹ This fund is currently integrated into the European Social Fund Plus (ESF+). It makes financial resources available to member states for food aid (and (non-)material aid) and aims to help people take their first steps out of poverty and social exclusion. <https://ec.europa.eu/social/main.jsp?catId=1089>

² Currently EU member states are allowed to redirect resources from FEAD to assist Ukrainian refugees <https://ec.europa.eu/social/main.jsp?langId=en&catId=86&newsId=10218&furtherNews=yes>

(e.g. the amount of freedom of choice, the adaptation to households' needs) when estimating the value of food aid.

In this paper, we explore how much food aid packages *could* be worth for vulnerable families depending on it, by calculating their monetary value. As food aid packages are not sold on the market, they do not have a ready available price, so it is necessary to apply a certain valuation method. We focus on two of the most widely used valuation methods in this context: the 'market value', which is the value we will calculate based on the private market value of food products, and the 'recipient value', which indicates recipients' own valuation of food aid products and is usually lower than the market value. Concretely, in a first step we collect data about the content of food parcels in twelve food distribution points located in four European cities: Antwerp, Barcelona, Budapest and Helsinki. In a second step, we make use of cross-country comparable food basket data to estimate a monetary market value of the food aid products and compare this value with minimum income levels. Food baskets – part of the reference budgets³ – consist of a range of food products that represent the minimal cost of a healthy and varied diet for specific family types living in a certain context (e.g. Carrillo-Alvarez, 2019a). To better understand the possible effect of food aid on the dietary intake of recipients, we also compare the monetary value and content of the food parcels with that of the food baskets for several household types in each city. Additionally, we conducted interviews with volunteers at the food distribution points to get a better insight in their size, origin and way of collecting and distributing food aid, which is important for contextualising the data on the food package values.

This is, to our knowledge, the first multi-country study that looks at the content of food aid packages to subsequently estimate how much food aid *can be* worth for the recipients by using cross-country comparable food baskets. Some previous studies have tried to calculate the monetary value of food aid packages in a single European country, and compared this for instance with total food expenses or necessary food costs (Caraher & Furey, 2018; Jessri et al., 2014; Pollastri & Maffenini, 2018). In Belgium, the food basket was used to calculate the value of food parcels and compare it with minimum income benefits (Hermans & Penne, 2019; Hermans & Delanghe, 2021). This paper introduces two meaningful novelties. First, multiple countries are involved and cross-country comparable food baskets are used to uniformly calculate food package values. Second, we devote specific attention to the difference between the

³ Reference budgets are priced baskets of goods and services that illustrate the necessary resources of specific households in order to be able to participate adequately in a particular country (Goedemé et al., 2015).

objective 'market value' of food aid packages and the monetary 'recipient value' that is usually lower, by assessing the content of the food parcels and using the interview data to give context to the calculated values.

In the next section, we briefly lay out how food aid is organised in our four country cases (Belgium, Finland, Hungary and Spain), which is vital in order to contextualise our results. In section 3, we provide an overview of previous studies that estimated the value of food aid vouchers or packages. Specifically, we focus on their valuation methods for pricing food aid. Subsequently, we discuss in detail the data collection process and methods used in this study (section 4). Section 5 extensively describes the results on the profile characteristics of the local food charities and the value and content of the food aid packages in comparative perspective. Finally, in section 6 we discuss our findings and conclude.

2. The organisation of food aid in Belgium, Finland, Hungary and Spain

In order to correctly interpret and frame the results of our local case studies, it is vital to understand the national situation of how food aid is organised in Belgium, Finland, Hungary and Spain. Therefore, we give a short overview in this section of the main actors involved in food aid, the amount of organisations and recipients distributing and receiving food aid, and the implementation of the FEAD program in each country. We include a Northern (FI), Southern (ES), Western (BE) and Eastern (HU) European country for several reasons. First, these countries represent different welfare state regimes (Arts & Gelissen, 2002) and vary greatly in GDP per capita and the size of their welfare state (Goedemé et al. 2015). Second, they all spend (part of) their FEAD budget on food aid. Third, these four countries were involved in a recent study in which cross-country comparable food baskets were updated and improved (Carrillo-Alvarez et al., forthcoming). Because of the (historically developed) urban context of food banks, the focus in this study lies on cities: Antwerp (BE), Barcelona (ES), Budapest (HU) and Helsinki (FI). Therefore, we pay specific attention to food aid actors and initiatives in these four cities.

2.1 Belgium

The Belgian Federation of Food banks (BFVB) was set up in 1988 to coordinate the regional food banks (De Mesmaeker, 2012). Today, the BFVB represents nine regional food banks (more or less situated per province) which operate as logistical partners by storing the food that is given to 654 affiliated local

organisations⁴. The goal of the BFVB is twofold: distributing food aid to the most vulnerable people while fighting food insecurity and food waste. The local organisations are the ones who directly hand out the food to the beneficiaries, often in the form of food parcels or meals. In 2021, more than 20.000 tonnes of food was collected and given to 177.238 recipients. The food comes from the FEAD, products donated by the food industry, companies in the distribution sector and to a lesser extent from auctions and food collections among the general public.

Belgium has been taking part in the EU food aid program since the launch of the Food Distribution programme for the Most Deprived Persons (MDP) in 1987. During 2014-2020, the FEAD program in Belgium was managed by the Federal public planning service for social integration (PPS SI). As managing authority, they decided that people living below the at-risk-of-poverty threshold⁵ are able to receive FEAD help in Belgium (POD MI, 2017). The Belgian FEAD basket consists of around 20 basic, long-lasting products that are supposed to contribute to the nutritional balance and needs of the beneficiaries. They agree on the list on products in collaboration with experts, people on the field and stakeholders (e.g. the BFVB, the Red Cross, the Federation of Public Centres for Social Welfare (PCSW)). Eventually, these products are transported to the local organisations who distribute them to the beneficiaries. These local organisations consist of local welfare centres and recognized partner organisations (which are mainly local food distribution points, sometimes social groceries or social restaurants). They are obligated to distribute the FEAD products for free to those who meet the criteria for 'most deprived persons'. According to the yearly progress report, in 2020, 381.951 people or 3,3% of the Belgian population received at least once FEAD aid⁶.

Specifically, in Antwerp, since 1997 around 20 food aid organisations have been coming together and have become member of the 'Platform Noodhulp onder Protest' (Platform emergency aid under protest), to discuss their experiences and challenges on the terrain, strengthen their network and to exercise their protest function for structural poverty alleviation⁷. Furthermore, since June 2021, the city council of Antwerp has put a new subsidy regulation in place for organisations handing out food products or running a social grocery⁸. The subsidy is intended to strengthen the clients, improve the offered food and basic products, promote exchange of information and collaboration between

⁴ <https://www.foodbanks.be/nl>

⁵ 60% of the national median equivalent disposable household income (Eurostat definition).

⁶ <https://www.mi-is.be/nl/fead-algemeen>

⁷ <https://www.deloodsen.be/platform-noodhulp-onder-protest/>

⁸ <https://www.antwerpen.be/info/607007dab23ffb605311d68b/subsidie-voor-voedselhulp-reglement>

organisations and better divide the food aid activities across the city. In order to be able to receive this subsidy, organisations must meet several conditions. They have to use the designed management tool, which is a digital application that intends to make organisations' operation processes uniform, for instance by digitally registering all clients. Importantly, it includes equal eligibility criteria for people who want to receive food aid, which is put into practice through a form with questions about the financial situation (income and expenses), the household composition and address. Furthermore, the subsidy can only be used for specific types of costs, such as entry costs when implementing the regulation, logistical costs (for the building where the food aid is distributed) and a variable financial amount based on the number of weekly helped clients. Lastly, organisations are required to report on their financial and substantive situation.

2.2 Finland

Contrary to many other European countries, Finland has no national food bank federation. Therefore, for a long time, food aid distribution has been taking place in an uncoordinated way (Ohisalo et al., 2013; Silvasti, 2015). Nevertheless, several initiatives have been taken in the direction of more cooperation. At the national level, the 2019-2021 'participating community' project, financed by the National funding centre for social welfare and health organisations (STEA) and coordinated by the Church Resources Agency, led to the launch of the website 'foodaid.fi' (Nick & Salmela, 2021). On this website, food aid distributors provide information about their activities, so people in need are able to find them and coordination can be improved among food charities. Also at the local level new networks have been set up. Vantaa was the first city to introduce a 'Shared Table' model in 2017, in which the city and the Vantaa Parish Association set up a central terminal to gather food from the retail and food industry and distribute that to affiliated food charities.

After that, other (bigger) cities have followed this example, including the capital city Helsinki. In 2018, the city of Helsinki and the Helsinki Parish Association launched 'Stadin Safka' (meaning 'Helsinki food'), a logistical terminal in which food is picked up from around 60 food donators and brought to 60 food distribution points. The city finances the majority of this project, such as storage space, freezers, vans and around 15 employees (of which many are temporary subsidized workers who were unemployed before) (personal communication with a Finnish food aid actor, 2022). Additionally, two social workers

occasionally go to the affiliated food aid providers to give information about social services and benefits to people who are queuing⁹.

Although Finland does not have a national food bank federation, through participation in the MDP since 1996 and later the FEAD program, food aid has been distributed on a nationwide level for quite some time. The Ministry of Economic Affairs and Employment (MEAE) is responsible for FEAD (MEAE, 2014). Twice a year, long shelf life FEAD products are delivered through some 25 partner organisations to 500-700 sub-organisations who distribute the food mainly in the form of food parcels and bags (MEAE, 2014). Although there are no up to date official statistics of regular food aid use in Finland (Silvasti & Tikka, 2020), according to the Finnish managing authority, 317.490 people received FEAD food aid at least once in 2020, or 5,7% of the population. According to the Church Resources Agency, Finland's biggest FEAD food aid distributor, remote areas are most dependent on EU food aid, due to a lack of private donations and low physical access to food as large retailers closed some grocery shops in those areas to maximize their profits (Silvasti, 2015). Overall, the share of FEAD products in the total food aid delivery has shrunk from around 40% in 2015 to only 10% nowadays¹⁰ (Nick & Salmela, 2021), presumably due to a stronger focus on food waste reduction (Tikka, 2019).

2.3 Hungary

The Hungarian Food Bank Association (HFBA), founded in 2005 by private individuals, is a non-profit organisation with the double aim to i) reduce food waste by collecting surpluses and ii) fight poverty and hunger by delivering surpluses to those in need (HFBA, 2020). The set-up of this initiative in 2005 was influenced by the existing examples of coordinated national food bank associations in other European countries, and the realization that it could be useful in Hungary as well (personal communication with a Hungarian food aid actor, 2022). The HFBA receives leftover food from various players in the food chain, stores it and transports it to almost 550 local partner organisations for free, who then hand it out to the needy. The partner organisations are both non-governmental organisations and municipalities. In 2021, almost 8000 tons of food was donated to more than 250.000 recipients¹¹.

In Budapest, the HFBA has a central warehouse where 10 to 20% of the total food supply is stored (personal communication with a Hungarian food aid actor, 2022). This food mostly comes from food processors and manufacturers who

⁹ <https://www.hel.fi/sote/stadin-safka/ruoka-avun-sosiaalityo>

¹⁰ The exact shares per year can be found in the annual FEAD reports provided by the MEAE.

¹¹ https://www.elelmiszerbank.hu/en/about_us/who_we_are.html

supply large quantities of food products. The other 80-90% of the food supply of local organisations is more decentralised, as they directly take surpluses from retail stores in the neighbourhood, with whom the HFBA has contracts. The HFBA website involves a list of food aid organisations located in the country¹², from which it becomes visible that Budapest has many third-sector food aid organisations, as well as that a lot of them hand out food aid in the form of (hot) meals rather than food aid packages. One possible explanation for this might be that organisations also have homeless persons as clientele, for whom food aid packages are not useful if they have no facilities to properly cook and store food products.

Hungary has been implementing the MDP food aid program since 2006, after they joined the EU. From 2014 onwards, with the launch of FEAD, Hungary decided to still focus on distributing food aid (85,6% of the budget) and to a lower extent also on material aid for children (e.g. baby and school kits). However, some substantial changes took place. First of all, the FEAD program now focuses on three specific target groups: 1) poor families with young children or pregnant mothers, 2) homeless people and 3) socially deprived people with reduced working capacity and elderly with a very low income. Something specific about the Hungarian FEAD program is that, depending on the regional poverty rates, some municipalities get more and others less FEAD support to distribute. Therefore, the Budapest region receives only little FEAD support (only cooked meals for homeless people and a small amount of food products for the elderly). Second, the type of products differs by target group depending on their needs. For instance, the package for the first target group includes baby foods, which are basic, healthy, non-perishable and non-refrigerated. Due to the change from surpluses to produced products, it is possible to not only give pre-prepared food parcels, but also hot meals, which has been done consciously for the target group of the homeless. Third, the newly bought FEAD products are distributed through partner organisations which can react on an open call for tenders if they meet the selection criteria. However, they are not distributed anymore through the HFBA (Ministry of Human Capacities, 2014). In 2020, FEAD support was handed out to 345.632 beneficiaries in Hungary, representing 3,5% of the population¹³.

2.4 Spain

Since 1995, the Spanish Federation of Food Banks (FESBAL) has been in place with the objective to fight hunger, poverty and food waste. Nowadays they coordinate 54 food banks covering the entire national territory. These regional

¹² https://www.elelmiszerbank.hu/hu/tevekenyseguink/hova_kerulnek_a_megmentett_elelmiszerek.html

¹³ <https://www.palyazat.gov.hu/rszorul-szemlyeket-tmogat-operativ-program-rsztop-2>

food banks in turn distribute the collected food to more than 8.000 charities who eventually hand out food to more than 1.560.000 beneficiaries. Around half of the distributed food are recovered surpluses from, for instance, the food industry. Besides that, campaigns such as 'La Gran Recogida' where food products donated by individuals are collected in supermarkets, make up an important part of their supply, as well as food donated by companies as an act of 'corporate philanthropy' (FESBAL, 2019).

FEAD also plays an important role for the total food supply. Similar to Belgium, Spain already joined the previous EU MDP program since its launch in 1987. Currently, the Spanish FEAD managing authority, the Ministry of Employment and Social Economy¹⁴, appointed the FESBAL together with the Red Cross to distribute FEAD products to around 6000 local food aid organisations. The basket of +- 15 FEAD products is determined based on criteria such as nutrition, quality and variation. The local entities distribute these food products to the most deprived people, which are "*those individuals, families, households or groups in a situation of economic poverty, as well as the homeless and other people in a special situation of vulnerability*" (MESS, 2014, p.8). In order to verify whether people meet these criteria, individuals need a report from the public social services or from the entities participating in the program if they have social workers or professionals carrying out similar functions. According to the progress report, almost 1,5 million people received at least once FEAD support in 2020, which is 3,2% of the Spanish population¹⁵. Unlike many other countries (including Belgium, Finland and Hungary), Spain uses 5% of its FEAD budget for accompanying measures. All local partner organisations have to offer at least information about the nearest social services, and can supplement this for instance with referring to social services or direct provision of services (e.g. activities aimed at socio-labour integration (MESS, 2014).

In Barcelona, there have been several local food aid initiatives over the past years. In 2018, the Barcelona city council together with several NGO's and other (public) organisations launched the 'Network for the right to adequate nutrition'. The city council grants subsidies to finance this project. The main goal of the Network is to deploy the Collaborative Model to guarantee the right to adequate food in the city of Barcelona enhancing the autonomy and empowerment of people, by promoting a socialized approach to the right to adequate food that is integrated into the regular food chain and addressing food waste by advancing

¹⁴ Specifically, the Deputy Sub-Directorate General for Management of the Deputy Directorate General of the European Social Fund Administration Unit (UAFSE), attached to the State Secretary for Employment of the Ministry of Employment and Social Economy.

¹⁵ <https://www.mites.gob.es/uafse/es/destacados/fead/index.htm>

in the reorientation of food use policies¹⁶. During the COVID-19 pandemic (2021) Barcelona also launched the ‘Alimenta project’ to ‘promote the right to a dignified, sustainable and healthy diet among people in a vulnerable situation’. Concretely, the City Council opened three Food Spaces, run by social organisations, which are serving a hundred users from a pioneering project that includes community kitchens and training workshops that will work on food as a right¹⁷.

3. What is food aid worth? Insights from previous studies

Food aid packages are not sold on the market and do not have a defined value or price, so ‘shadow prices’ have to be computed. In order to estimate the value of food aid, previous studies have made use of various pricing methods for this form of in-kind support. The most used valuation methods for (public) in-kind transfers are the market value and the cash-equivalent or recipient value¹⁸ (Smeeding, 1982). The market value equals the private market cost of the goods received by the recipient. The recipient value reflects the recipient’s own valuation of the in-kind benefit. The recipient value can never exceed the market value and is usually lower. These methods have been applied to for instance housing and medical care but also to food (particularly food stamps), to evaluate how these transfers affect recipients’ consumption, expenditure and more broadly the income distribution and poverty (Moffit, 1989; Smeeding, 1982; Whitmore, 2002).

In the US, the Supplemental Nutrition Assistance Program (SNAP), better known as the ‘food stamp program’¹⁹, is the largest federal nutrition assistance program²⁰. It provides benefits for low-income families via an electronic benefits card with which they can buy eligible food items. In the case of food stamps, the market value is the face value of the food stamps. The recipient value is more difficult to estimate (Smeeding, 1982) and varies a lot between studies (between 39 and 100 percent of the face value) (Moffit, 1989). By comparing the food expenditures of food stamp recipients to those of non-participants in the program with the same income, Smeeding (1982) estimated the recipient value

¹⁶ <https://www.bcn.cat/barcelonainclusiva/es/xarxa15.html>

¹⁷ <https://ajuntament.barcelona.cat/premsa/2021/07/27/barcelona-engega-el-projecte-alimenta-per-promoure-el-dret-a-una-alimentacio-digna-sostenible-i-saludable-entre-persones-en-situacio-de-vulnerabilitat/> and <https://www.alimentaciosostenible.barcelona/en/what-we-do/alimenta-project>

¹⁸ Other methods include the poverty budget share value, government cost value and social benefit value

¹⁹ This program was the forerunner of the SNAP program from the 1964 ‘Food Stamp Act’ to 2008 (Caswell & Yaktine, 2013).

²⁰ <https://www.benefits.gov/benefit/361>

at 97 percent of the face value. Whitmore (2002) on the contrary, found the recipient value to be around 80 percent of the market value. He used a different methodology based on the price elasticity of food and the magnitude of food-stamps-induced distorted consumption, whereafter he applied the method to experimental data in which some recipients got the benefit in cash instead of stamps. Another study focusing on the Puerto Rican food stamp program which was paid out in cash instead of stamps in 1982, found that the recipient value did not differ from the market value, possibly because the benefit level was so low compared to income (Moffit, 1989).

The methods in these studies are not directly transferrable to the European context, first and foremost because unlike food stamps, which have a face value and provide recipients considerable freedom of choice, food parcels are typically fixed, contain a limited range of products and have no pre-determined value. Furthermore, in Europe food aid is not (yet) an in-kind benefit but a form of charity, making it more difficult to repeat these experiments. Nevertheless, the underlying principles of these two valuation methods are particularly crucial in the case of food aid packages, which usually provide no or only a limited amount of choice. Because previous research has shown that food products often do not meet recipients' needs and are of poor quality and variation (e.g. Middleton et al., 2018; Booth, 2018), recipients may rate the received food products lower than the 'objective' market value of the products. According to Slesnick (1996), *"the ability of in-kind transfers to alleviate poverty depends on accurate targeting as well as recipients' valuations of the benefits."* Hence, the way recipients experience and value the received food aid products is indispensable for assessing the role and impact food aid may possibly have for them.

A few research papers have, similar to our study, focused on estimating the monetary value of charitable food aid packages. A large Canadian study in a university campus food bank assessed the content of distributed food hampers and the cost savings to students receiving these packages (Jessri, Abedi, Wong & Eslamian, 2014). Although the energy levels of the parcels were adequate, their amount of fat and animal protein were low. The food packages of non-perishable food items were worth between 14,88 and 64,3 Canadian dollars, depending on the household size. The authors priced the food items by using household brands and non-sale prices of three supermarkets nearby the campus. Some other studies focused on the European situation. Pollastri and Maffenini (2018) tried to determine the percentage of the value of food aid in relation to households' total food expenditures in a local food aid organisation in Milan, Italy. According to their estimates, this amounted to almost 70 euros per month, compared to total food expenditures of 290 euros. A drawback of this

study, however, is that the authors did not indicate which method they used to compute the total value of the food parcels. In Northern Ireland, Caraher and Furey (2018) estimated the value of food parcels and compared it with the cost of a healthy diet, inspired by reference budgets research. Concretely, they priced the food products by taking the lowest price of each product in four supermarkets with retail presence across the UK. Depending on the supermarket, the parcels were worth between 76 and 105 pounds a month. Lastly, in Belgium the reference budget method was used to estimate the value of food aid packages in three food aid organisations in Antwerp, meaning that low but acceptable prices of an affordable supermarket were used to price the products in the packages. This resulted in packages with a monthly value between 69,7 and 166,3 euros depending on the organisation and household size (Hermans & Penne, 2019; Hermans & Delanghe, 2021). Our study also starts from the reference budget method for pricing the food aid packages, which we elaborate on in Section 4.

The studies mentioned above have in common that they all focus on the market value when estimating a value of food aid packages, by making use of supermarket product prices and assuming that persons can and want to eat all products. Although some studies also discuss the healthiness, variation and freedom of choice in the food aid packages (e.g. Jessri et al., 2014; Hermans & Delanghe, 2021), so far this was not reflected in the monetary value of food aid packages. In this study we aim to give specific attention to the fact that the recipient value of food aid packages may be lower for some or most recipients than the 'objective' value calculated with supermarket prices. Hence, depending on the assumptions made and people's preferences, this results in a wide range of recipient values of the food parcels. In other words, the recipient value will differ per food aid recipient, because it depends on individual food preferences, cooking and storage capacities and possible food restrictions.

4. Data and methods

4.1 Study design

The aim of this research is to gain a better understanding of the importance of food aid for those receiving it, and the extent to which food aid packages reflect varied and healthy diets that correspond to people's average consumption habits. To address this question, we conduct an exploratory case study research in which we collected data about the content of food parcels and conducted interviews in local food distribution points in Antwerp, Barcelona, Budapest and Helsinki. Since this is, to our knowledge, the first study to assess in-depth the monetary value and content of food aid packages in real-life operating food aid

organisations located in different cities and countries, we consider this an exploratory case study (Yin, 1992; Baxter & Jack, 2008). A collaboration of researchers from the involved countries was set up and together three food aid organisations per city were selected. Findings from previous research have showed that Belgian food distribution points can be very heterogenous, in terms of the content and value of food parcels and their operation mode (Hermans & Delanghe, 2021). In order to verify and account for the possibility that this is also the case in other countries, we collected data in multiple organisations per city. Nevertheless, it is important to realise that many more organisations are active in each city²¹, so we cannot generalise the results. Therefore, we see the twelve selected organisations in this study as case studies.

Participating organisations had to fulfil several inclusion criteria. First, the organisations provide food aid on a regular basis, at least once a month (whether or not to the same persons). Second, we chose to include only organisations who distribute food aid in the form of food products in more or less fixed food parcels, more commonly known as ‘food distribution points’²². Hence, organisations where meals are provided (e.g. social restaurants), or ‘social supermarkets’ allowing people to choose every product were not included. This criterium was mainly included for feasibility reasons, as it is less easy to estimate the monetary value of food aid in case of meals where only parts of food products are used, or in case of organisations where each individual receives different products. However, this turned out to be somewhat difficult in especially Budapest. In this city, food aid is often provided in the form of meals, and in the case that food products are distributed, this often happens on an irregular basis. Third, food aid must be an important activity of the organisation, but does not have to be the only form of aid/activity provided. Fourth, we decided to include organisations who distribute food aid for free to vulnerable people because if we would include organisations that charge a fee, this would indirectly influence the monetary value of food aid for recipients (leading to lower values) and a more difficult comparison if organisations charge different fees. Besides that, FEAD products are not allowed to be sold, which leads us to the last criterium: it was the aim to include organisations where part of the products in the food parcels were FEAD-financed. Nevertheless, this also turned out not to be easy because the 2014-2020 FEAD program is coming to an end in 2022 in many countries, so some organisations received fewer FEAD products than the previous years. Some countries will not renew the current system of FEAD products, as the new

²¹ From the lists we could use/compile: 25 in Antwerp, 24 in Helsinki, 75 in Budapest and 78 in Barcelona.

²² In the remainder of this study we will use the term food distribution points and food aid organisations (a more general term for organisations providing food aid, e.g. also in the form of meals) interchangeably.

2021-2027 program (where FEAD is included in ESF+) allows countries for the first time to also use the budget for (electronic) food vouchers (Ecorys, 2021; European Commission, 2021). Besides that, as countries may decide themselves how to use their FEAD budget (which form of support, which target groups), it turned out that in Budapest FEAD products are mainly delivered to organisations who serve (cooked) meals, in particular to homeless persons. Although the Hungarian FEAD program has two additional schemes and target groups, these means largely go to poorer Hungarian regions. Hence, the distribution of FEAD products in the shape of products (not meals) is very limited in Budapest.

In order to be able to select three food aid organisations in Antwerp, Barcelona, Budapest and Helsinki, we first examined how many and which organisations are active in these cities. Thus, the studied population in each city is the number of food aid organisations. For Belgium, Hungary and Spain, we could make use of a list of organisations²³ that was recently compiled to conduct an online survey in food aid organisations in eight European countries (Greiss et al., 2022). As these lists include information about the location of the organisations, we could isolate those in Antwerp, Barcelona and Budapest. For Finland, a country not included in that survey, we used the website “foodaid.fi” and made a selection of all organisations located in Helsinki²⁴. Next, we evaluated which organisations fulfilled the inclusion criteria so three of them could be randomly selected in each city through e-mail or telephone. The restrictions due to the COVID-19 pandemic prevented one of the contacted organisations to participate, after which another organisation was contacted as replacement. The organisations were offered a compensation of 100 euros for participating in the study. 7 out of the 12 organisations accepted this offer. For privacy reasons, the twelve organisations are anonymised in this study.

4.2 Data collection

4.2.1 Registration of the content of food parcels

We collected data in the food distribution points between February and May 2022, which included two aspects. The largest part of the time was spent on the registration of the content of the distributed food parcels. This information is crucial in order to be able to i) evaluate whether the food parcels include healthy, varied food products that correspond to the eating habits and needs of the

²³ For Belgium, this list includes all organisations that are affiliated with the BFVB. For Spain, a complete list of FEAD distributing local organisations could be obtained. For Hungary, the list includes all HFBA local partner organisations plus the FEAD partner organisations not on the HFBA list.

²⁴ Not necessarily all food aid organisations in Helsinki are present on this website. Food aid organisations decide themselves whether they want to provide information of their activities on this website.

recipients and ii) calculate a monetary value of the food parcels. Since food distribution points largely depend on unpredictable food surpluses of supermarkets and the agro-food industry, we decided to pay four visits to each organisation in order to take into account fluctuations in the size and composition of the food parcels. During the visits to each organisation, mostly with one week between each visit²⁵, the researchers made notes and pictures of the products that were included in the food parcels. Concretely, the following information about the products was collected:

- Product name
- Brand of the product
- Volume (in kg, or l)²⁶
- Package type (if useful): is the product fresh, frozen or canned (e.g. for fruits or vegetables)
- FEAD product yes or no
- Is the product (almost) expired yes or no²⁷
- Extra comments if useful to mention

Furthermore, we wrote down if the product was given to everyone or whether it served as an alternative/replacement for another product. The latter may be the case for various reasons, for instance because there are only limited quantities of certain products, or because the organisations take into account recipients' allergies, food-related diseases or religious or cultural preferences (e.g. no meat). The researchers collected this information in a harmonised way by making use of a uniformly constructed Microsoft Excel template.

Importantly, we looked at the composition of the food parcel for several household sizes, from a single household up to a four person household. For the three and four person household we considered there were two children in the household. Although some food distribution points do not or only limitedly adapt the content of food parcels depending on the household size and type, it is essential to study this aspect because the nutritional needs of a family depends on their household composition. Here we limited ourselves however to small- and medium-sized households, whereas larger households consisting of more than four household members have distinct and more nutritional needs. A

²⁵ Except for one Spanish organisation that provides only food aid once a month.

²⁶ In some cases the weight/volume of a product was unknown, for instance for fresh vegetables and fruit. Then it was estimated based on the average weight of these products and the sources were documented in the methodological notes.

²⁷ We looked at the expiration date of each product and considered it (almost) expired if the product was given on the expiration date or past the expiration date. For some products (e.g. fresh fruit or vegetables), no expiration date was visible, meaning that for these products we could not register if they were expired or not.

few organisations do offer some extra products or larger packages for families up to six persons, partly because in some organisations large families (with many children) are common among the food aid recipients. Hence, it is important to bear in mind that we only show the content and value of food aid packages for a limited amount of specific household sizes and types, which cannot be generalised to all family compositions.

4.2.2 Interviews

Additionally, during the first visit to the organisations we conducted structured interviews with the head or with a well-informed volunteer at the food distribution points. The goal of these interviews was to gather basic information about the history, operations and the clientele of the food distribution points. Besides that, the questions in the interviews allowed us to provide context on the data of the content and value of the food aid packages. In correspondence with ethical procedure rules, the interviewees signed a consent form to confirm their participation and their knowledge of the aim and procedure of the interview. The interviews were saved by recording or taking notes and lasted between 16 and 52 minutes with an average of 33 minutes. The interviews were conducted at the location of the organisations and a few organisations also provided some of the information via e-mail or telephone before or after the interview.

For the execution and translation, we followed a frequently used strategy in cross-cultural qualitative research (e.g. Choi et al., 2012). The interview questions were set up in English, the study language, and discussed with the involved researchers who provided feedback so we obtained a relevant and complete list of questions which takes into account the national contexts. The final questionnaire list can be found in Appendix 1. Then, the questionnaire was translated by the research partners to Dutch, Hungarian, Finnish and Spanish, because the interviews were conducted in the participants' native language. Finally, by making use of the notes and recordings, we translated the interview answers back to English to be able to simultaneously analyse and compare all the answers. After a first analysis of the answers, some extra questions were posed in each organisation for clarification or to obtain more details about a certain answer.

4.3 Valuation method for the food aid packages: the food basket

In section 3 we made clear that, because food packages are not sold on the market, we have to calculate 'shadow prices' of food aid products by making use of a certain pricing method. Although some of the products are sold in for instance supermarkets, this is not the case for every product, especially for the FEAD products which are produced with the purpose to give it as food aid. In

this study, the reference budget method and in particular the food basket is the starting point for pricing the food parcels. Reference budgets, which are priced baskets of goods and services that illustrate the necessary resources of specific households in order to be able to participate adequately in a particular country, have been constructed for many EU countries (Goedemé et al., 2015).

One of the baskets included in the reference budgets is the food basket, which represents the minimal cost of a healthy and varied diet. The food basket starts from national food-based dietary guidelines (FBDG) and in collaboration with a nutritionist and the organisation of focus groups, these guidelines are translated into a varied, tasteful, feasible and acceptable basket of food products. The pricing of the food basket is based on minimal but acceptable prices in accessible and affordable shops (e.g. Carrillo-Alvarez et al., 2019b). The food basket does not only cover the nutritional function of food, but also other functions such as the social and psychological function, kitchen equipment and physical activity. In this study, however, the focus is on the minimum amount of resources for a healthy and varied diet. Important to mention is that food baskets are developed for specific hypothetical household types and based on several assumptions: all household members are in good health, they are well-informed and have the capacity to buy their food products economically and cook healthy (Goedemé et al., 2015). Especially for people in a vulnerable position, these assumptions may not always be fulfilled. Furthermore, the food basket likely represents the dominant cultural eating patterns. In previous studies, it was assumed that adapting the food basket to other cultural preferences (for instance of ethnic minorities) is possible without increasing the total cost of the basket (e.g. Carrillo-Alvarez et al., 2019b; Penne & Goedemé, 2021).

Nevertheless, choosing the food basket method in this study has several advantages over other methods that estimate the cost of food (Hermans & Penne, 2019). First, they map out the minimum necessary and acceptable cost of a healthy diet by construction of a concrete list of food items and prices, which can be used for pricing food aid packages. Second, in prior projects the food basket has been conducted in a comparable manner across European countries. Nevertheless, due to variation in the quality of dietary guidelines across countries, the comparability is affected (e.g. Carrillo-Alvarez et al., 2019a). Recently, attempts were made to improve comparability between the food baskets in Belgium, Finland, Hungary and Spain (Carrillo-Alvarez et al., forthcoming) by using the European Food Safety Authority (EFSA) dietary references values (DRV). DRV indicate the amount of a nutrient which must be consumed on a regular basis to maintain health in healthy individuals, and serve as a further criteria of homogenization for cross-national reference budgets.

Third, the food basket is updated regularly which is important so it can reflect current food habits, dietary guidelines and food prices. The importance of the latter aspect is particularly visible today, given the very high inflation rate in European countries and beyond, which are largely driven by high energy prices and soaring food prices²⁸.

By using the food basket to calculate the value of food aid packages, we are able to estimate how much it would cost for households to buy the same food products of the food parcels in affordable supermarkets at minimal prices but with some space for choosing and autonomy of the consumers. Two steps can be distinguished in pricing the food aid packages with the food basket method. First, for food aid products that are also present in the food basket, the prices from the food basket were adopted. Second, when food aid products were not included in the food basket, a similar supermarket product was searched for and the same pricing procedure (i.e. minimal but acceptable price in the same supermarkets) was used to price these products in the food aid packages. Each country team wrote a methodological note on the pricing of the food aid packages and the choices for certain products. It turned out that in every country a small amount of products was not sold (at that moment) in the supermarket chain used in the food basket, after which the price of an alternative but similar product was applied in the same or a similar supermarket chain.

Additionally, next to calculating the absolute monetary value of food aid packages, we can also assess the relative importance of food aid. On the one hand, we compare the value of the food parcels with the total food basket amount, i.e. the minimal cost of a healthy and varied diet, to get an idea about the extent to which food aid can theoretically cover minimum necessary food expenses. Second, we take a broader perspective and compare the food parcel values with the level of total net disposable social assistance benefits and the at-risk-of-poverty line. We do this in order to estimate the financial importance of food aid as a complement to inadequate social assistance benefits, and to get insight to what extent the value of food aid can substantially close the at-risk-of-poverty gap for social assistance recipients. To do this, we build on the MIPI-HHot²⁹ database, which contains hypothetical household simulations, i.e. calculations of the legally guaranteed income of a hypothetical household in line with the applicable tax-benefit rules, allowing to gauge a minimal situation while including the full range of rights-based benefits in a given country (see Marchal et al., 2018 for a full discussion). Similarly to the food baskets which are

²⁸ E.g. <https://www.imf.org/en/Blogs/Articles/2022/09/09/cotw-how-food-and-energy-are-driving-the-global-inflation-surge>

²⁹ We are very grateful to Elise Aerts for delivering the 2021 MIPI-HHOT data.

designed for specific household types, the MIPI-HHoT indicators are calculated for precise households. Concretely, we evaluate the relative importance of food aid for four household types:

- a single man (30-60y),
- a couple (30-60y) without children,
- a single mother (30-60y) with two children (boy 10y & girl 14y)
- a couple (30-60y) with two children (boy 10y & girl 14y)

In the MIPI-HHoT database, the youngest child is aged 7 instead of 10 and the adults are 35 years old. For all these household types, the simulations assume that the households rent on the private market³⁰ and live in a large city or urban region in each country. Furthermore, the couples are assumed to be married and the single mother divorced, but the other parent is known. The households have no assets and income other than explicitly assumed or the income that is guaranteed by the tax-benefit system. Lastly, out-of-work adults are looking for work, and the children regularly attend school. An advantage of hypothetical household simulations is that they allow to assess actual policy rules in a comparable way over time and across countries. However, they refer to the situation of very specific households, that may be more or less representative for individual country experiences. Still, they are a commonly accepted way to assess and compare the generosity of benefit systems (see e.g. Bahle et al., 2011).

The currency used in this study is the euro. For Hungary, we applied the exchange rate of Hungarian Forint (HUF) to euro on the days the food aid packages were priced³¹. Unlike the food basket, which does not take account of discounts or promotions (Carrillo-Alvarez et al. 2019b), we adopt a discount of 30% for products that are handed out on or behind the expiration date³² for several reasons. First, many supermarket chains also apply a certain discount percentage for clients when they sell it on or just before the expiration date. These percentages may differ depending on the supermarket chain³³, product type (e.g. dairy, meat, vegetables) or the date on which it is sold (more discount closer to the expiration date). However, we chose to apply a uniform discount percentage of 30%, which is a quite common discount rate used in all four

³⁰ Housing costs are assumed to be equal to the median housing costs for the respective household type according to the 2015 EU SILC numbers (uprated in line with inflation).

³¹ 1 EUR = 397 HUF on average on 9, 12 and 13 June 2022 and 1 EUR = 399 HUF on 23 June 2022.

³² We only apply a 30% discount rate if we were certain that the product was handed out on or behind the expiration date. For products where no expiration date was visible, we did not apply the discount rate although sometimes the appearance of a product suggested that it should have best been consumed earlier already.

³³ Most supermarkets seem to give certain discount rates for almost expired products, but the Spanish supermarket used for the food basket prices does not apply discount rates for almost expired products.

countries, making the data more comparable. Second, as many food aid organisations heavily depend on leftovers which they distribute to families in need, this discount rate takes into account that some distributed products have to be consumed immediately when they are still edible.

This pricing method calculates the market value of food aid packages and thus gives a maximum value of how much food aid could be worth for families, under many assumptions. First, it implies that recipients would choose to buy exactly the same products in the supermarket as those in the food parcels. However, recipients may have stronger preferences for other products. For example, they may want to buy different products because of cultural or religious reasons, such as not eating meat. Second, some recipients may not be allowed to consume all products due to health reasons. Third, some products require specific equipment (e.g. an oven) to prepare the food, which people might not always possess, meaning that some food products may be useless for them. Lastly, this method includes the assumption that the products in the food aid packages are of the same quality as those in the supermarket, which might for instance not be the case for leftovers that are handed out after the expiration date. So, this method gives an upper limit of the value of food aid packages, but many families will rate it at a lower value if some assumptions do not hold.

4.4 Assessing the content of food parcels: The food basket and Household Budget Survey

Because the made assumptions are often not met, we give context to this pricing data through two additional evaluations. First, the interviews conducted in the local food charities provide information on how the food aid packages are delivered to the recipients and how much freedom of choice is offered so people can eat what they want and need. Second, in order to make a basic evaluation of the variation, healthiness and extent to which the content of the registered food parcels meet the average eating habits of food aid recipients, we use two secondary data sets: the Household Budget Survey (HBS) and the Food basket.

The food basket, illustrating the minimal cost of a healthy and varied diet, is useful to compare with the composition of the food parcels to verify how healthy and varied the food parcels are. The eight food categories in the food basket are: liquids (tap water, coffee, tea, light soft drinks); bread, grains, legumes and potatoes; vegetables; fruit; dairy; meat, fish and eggs; fats; and residual. The residual category includes products that are part of a balanced diet, but for which there are no recommendations, such as cocoa powder, chocolate, jam, sugar, spices, flour, sauces and vinegar (Carrillo Álvarez, Cussó-Parcerisas and Riera-Romaní, 2016). The HBS is a national sample survey which mainly focuses on

private households' expenditure on goods and services. It is carried out by all member states and collected by Eurostat (the EU statistical office) every five years since 1988. Since then, important steps were taken towards greater harmonization of the national Household Budget Surveys (HBSs) regarding the classifications and coding system of variables (Eurostat, 2022). Nevertheless, Member States still have considerable freedom regarding the objectives, methodology and frequency, so the data of the HBSs are not directly comparable³⁴. The latest survey dates from 2020, but the most recent available data is that of 2015, which we used in this research. Specifically, the Eurostat website provides data on the expenditure of households following the Classification of individual consumption by purpose (COICOP) structure. Importantly, the HBS uses slightly different food categories than the food basket. In appendix 2, a description of the eleven sub-categories of the 'food and non-alcoholic beverages' consumption category is included: bread and cereals; meat; fish and seafood; milk, cheese and eggs; oils and fats; fruit; vegetables; sugar, jam, honey, chocolate and confectionary; food products not elsewhere classified (n.e.c.); coffee, tea and cocoa; and mineral waters, soft drinks, fruit and vegetable juices. Although it would be interesting to compare the content of the food aid packages with people's *individual* eating habits and preferences, we could only compare this with *average* consumption patterns because of data availability reasons.

5. Results

In the results section we first discuss the interview data to get insight into the profile characteristics of the twelve food aid organisations and how they differ from each other. Similar to Greiss et al. (2022), we map the profiles of the organisations based on various features. After that, we present the results on the monetary value of the food aid packages in each organisation, including the importance of FEAD. Lastly, we shed light on the content of food aid packages and compare it with the content of the food basket and the HBS, to get an idea about their variation, healthiness and correspondence to real food consumption patterns.

5.1 Characteristics of the local food charities: across- and within-country variation

In this section, we analyse in detail the organisations' profile characteristics based on the interview data in each organisation. The results of the interviews are useful, first, to give context to the values of food aid packages in the different

³⁴ <https://ec.europa.eu/eurostat/web/household-budget-surveys/overview>

organisations. Second, it allows us to get a better insight in the operation of food aid in each city and whether we find little or large variation across and within these cities which are all located in different countries. Lastly, the interviews provide a more broader opportunity to frame our results within existing data and literature about food aid in the four countries. During the interviews, we put special focus on a number of themes, which we divided in the following sections:

1. Origin, type and size of the organisations
2. Eligibility criteria for food aid and recipients' profiles
3. Duration of food aid use and link with social inclusion
4. Influence of financial support and ties with other associations
5. Food sources: Importance of FEAD, surpluses and purchases
6. Distribution mode: frequency, location, freedom of choice and adaptation to households' needs

In Table 1 we show the main results for the twelve organisations on the mentioned topics. The columns show the characteristics per organisation; the organisations are grouped per country (Belgium, Finland, Hungary and Spain) and ranked from lowest to highest food package values (which we discuss in section 5.2). In each row, a separate aspect is presented, which we describe in more detail in the subsequent sections:

- the year the organisation started with distributing food aid;
- the type of organisation (governmental or non-governmental);
- whether the organisation is faith-based;
- how many volunteers and/or employees are involved in the activity of food aid;
- how many clients receive food aid at the moment or during the last year (2021);
- the eligibility criteria for receiving food aid, if any;
- the duration limit of how long people can receive food aid, if any;
- the extent to which there is a link with social inclusion;
- whether the organisation is associated with other (larger) organisations;
- whether the organisation receives subsidies or financial donations;
- the sources of the food products in the packages
- the frequency by which the organisation distributes food aid
- the way food aid is handed out: whether people stand in line or come by appointment
- the amount of freedom of choice when receiving food aid products, if any

	BE1	BE2	BE3	F11	F12	F13	ES1	ES2	ES3	HU1	HU2	HU3
Start date	±1998	1992	1968	2020	±2014	±2012	1973	2014	2010	1989	2010	2009
Type	NGO	NGO	NGO	NGO	NGO	NGO	NGO	NGO	NGO	NGO	NGO	NGO
Faith-based			X		X	X	X	X		X		
# Volunteers # Employees	25 0	±50 0	12 0	8-9 0	15-20 0	17 0	15 0	53 0	8-10 1	35 3	±10 2	±3 3
# Clients now/2021	333	420-500	±250	90	±500	150-180	±95	600-700	27-30	700 /year	±20	180 + 40 ad hoc
Eligibility criteria	financial+ residence	financial+ residence	financial+ residence	/	/	/	mostly referral + residence	referral	referral / activities	private hh	referral	live on-site
Duration limit	no limit	no limit	no limit	no limit	no limit	no limit	2-3 years	3 months or longer	3 months or longer	no limit	no limit	1,5-2 years
Link social inclusion	medium-high	medium	medium	low-medium	low-medium	low-medium	medium	medium	medium-high	medium-high	medium	medium-high
Association w organisation	X	X	X	(X)	X	X	(X)	X	(X)	X	X	(X)
Subsidies/ donations (€)	public & private	public	public & private	no	private	no	public & private	public (& private)	public & private	public & private	private	public & private
Food sources	surpluses FEAD purchases	surpluses FEAD purchases	surpluses FEAD purchases	surpluses FEAD	surpluses FEAD donations	surpluses FEAD	surpluses FEAD	surpluses FEAD	surpluses FEAD	purchases donations	purchases donations	surpluses (FEAD)
Frequency distribution	once in 3 weeks	weekly	weekly	weekly	weekly	weekly	once per month	once per month	once in 2 weeks	3 times per year	once per month	weekly
Line vs. appointment	appointment	appointment	Line	line	line	line	appointment	appointment	appointment	appointment	(line)	NA
Freedom of choice?	limited choice	limited choice	limited choice	± fixed package	± fixed package	± fixed package	± fixed package	limited choice	limited choice	limited choice	± fixed package	± fixed package

Table 1: Overview of general profile characteristics of the twelve food charity case studies. Source: own elaboration based on the interview data. Note: NGO = non-governmental organisation. Number of clients is the amount per distribution moment.

5.1.1 Origin, type and size of the organisations

We first compare the type and size of our twelve food distribution points and we describe when and why they started with food aid distribution. Our case study organisations started distributing food aid between 1968 and 2020. Hence, there is great variation in the number of years these organisations have already been operating in food aid, from 2 to 54 years with on average 21 years. We also observe remarkable differences between countries, which is shown in Figure 1. All three organisations in Belgium started food aid distribution before 2000, whereas the three Finnish organisations started doing this in the past ten years. Hungary and Spain show a more mixed picture between older and younger food aid organisations.

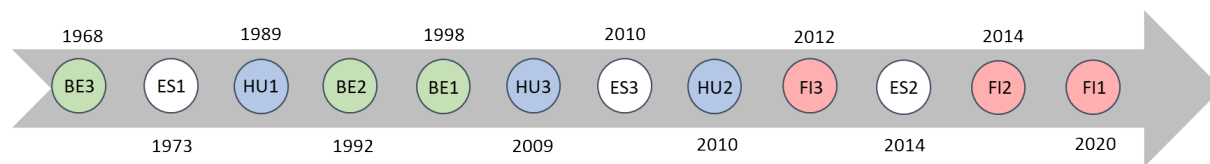


Figure 1: Starting year food aid distribution of twelve food aid distribution points. Source: own elaboration.

Despite these differences in the starting year, we observe more similarity in organisations' motives for beginning with food aid distribution. The main reason for all organisations was 'the large need' for it, as they noticed the difficulties of vulnerable and poor persons to make ends meet. In some cases, an individual took the initiative of providing food to vulnerable groups. This resulted either in a new organisation specifically founded for food aid, or the individual transferred this task to an existing charity organisation. In other cases the organisation already existed for other purposes (e.g. church congregations, organisations active in other social activities such as homelessness or helping refugees) and only later food aid was added to their activities. Religious organisations also saw food aid as part of the church's social work, i.e. it is their mission to help the poor.

All twelve organisations where we collected data turned out to be non-governmental and not for profit. Nevertheless, as mentioned in section 2, in Belgium, Hungary and to a lesser extent in Spain also governmental organisations distribute food aid. Per city, one or two faith-based organisations were included in the study. This is not a coincidence, as religious organisations played an important historical role in food aid provision and development (e.g. Salonen, 2016) and we see that today religious organisations are still quite active in this field.

From Table 1, it is clear that a mix of smaller and larger organisations is included per city. We measure the variation in the size of organisations by a) number of volunteers and/or paid employees and b) number of recipients. Most organisations rely entirely on volunteers, ranging between around 3 to 50 volunteers per organisation. Only one Spanish organisation and the three Hungarian organisations have between one and three paid employees. This may be explained by the other activities and help they are offering. Two of the three Hungarian organisations are a local division of a large charity organisation which is active in a large range of social and humanitarian actions. The other two organisations with paid staff also have a broader social function (providing shelter and improving digital inclusion). Evidently, in general, organisations with more volunteers and/or employees also have a larger clientele. The number of households that receive food aid varies from around 20 up to 700 per distribution moment (e.g. per week or per month, depending on the frequency of food distribution).

5.1.2 Eligibility criteria for food aid and recipients' profiles

We are not only interested in how many people receive food aid in the organisations, but also which people are allowed to and what their socio-demographic and -economic profiles look like. In most organisations, some eligibility criteria are in place to define which persons are allowed to receive food aid. An exception are the organisations in Helsinki (and Finland more generally) where everyone who needs it can stand in line for a food aid package. Also in Budapest it is not very means-tested. One of the organisations does not have any restrictions, except for living in a private household (not a social institution). Another organisation in Budapest, which shelters single homeless people and families living in temporary homes, requires people to live in the facilities of the NGO. The third Budapest organisation asks for a recommendation/referral from the social and family support services of the municipality or from Red Cross volunteers. Additionally, since the interviews were held during the beginning of the Ukraine invasion of Russia, all organisations in Budapest also started to offer their help to Ukrainian refugees.

In Antwerp and Barcelona, receiving food aid is more means-tested. In Barcelona, organisations mostly demand a certificate from the city social services where a social worker assesses their needs and specifies how long someone can receive food aid. However, in some cases (certainly during the COVID-19 pandemic) the first food aid is given without any requirements or it is sufficient to participate in the activities of the organisation to receive the aid. One organisation additionally

requires that families live in the same neighbourhood so as not to overload other organisations. In Antwerp, place of residence (postal code) is also a criteria that is used by the food charities. Furthermore, people wanting to receive food aid in these Antwerp organisations have to fill in a document which asks for detailed information and proof about income, expenses and family composition. Organisations can opt to check this information themselves, or choose that people have to be referred by the social welfare centre where a social worker checks the eligibility.

According to most of the responsible volunteers/employees of the organisations, the profiles of food aid recipients are diverse, although it is remarkable that the majority of organisations did not know the exact profile characteristics³⁵. Regarding the income source, there seems to be a mix of people that have no income and people receiving social assistance, while a smaller share of persons receives disability or sickness benefits, unemployment benefits, a pension and to a lesser extent wages from work. Often, a mix of household types is common, including single persons, single parents and couples with children. Only in two Budapest organisations specific target groups are prioritised: one organisation focuses on large families with children and another targets single adults and families with children without a residence. Often, these families are from ethnic minorities (mainly Roma). Unlike in Budapest, in Antwerp and Barcelona persons with a migrant background (often Muslim) seem to make up a quite large share of the recipients (around 40-60%). Furthermore, a smaller share of the recipients are elderly, persons with a disability, homeless persons or people with debts or an addiction. Due to the fact that in Helsinki no information is asked to the recipients, they do not have data about the profiles of the recipients. However, the estimation is that many people rely on benefits or have a low wage. Besides that, elderly people, students, migrants and people with a disability or who need long-term care were also mentioned.

5.1.3 Duration of food aid use and link with social inclusion

Given the vulnerable profiles and the difficult situation many recipients live in, it is to some extent not very surprising that in most organisations there are people who have been receiving food aid for several years or even decades. For them it seems to have become a survival strategy to cope with their situation. Some persons even visit multiple food aid organisations, although this is not allowed by most

³⁵ This is certainly the case for income source and age, whereas most organisations did have a better idea of the household composition of the recipient and their nationality (except in Helsinki).

organisations. Only in Barcelona, two organisations mention that the social worker referring people to food aid organisations, defines how long people may receive food aid, which is mostly three months. Hence, here we can speak more or less of short-time emergency use, but in most organisations where people can receive food aid for a year or longer (sometimes indefinitely), it is risky to be caught in a 'dependency trap' and become long-term food aid users.

Because charitable food aid only relieves an immediate need but does not tackle the causes of people's situation of poverty and financial difficulties, it is important that this aid is complemented by social inclusion activities, referrals to social services or other support measures. The EU also requires that organisations handing out FEAD-financed products provide accompanying measures. Unfortunately, this does not always seem to happen. Certainly in Helsinki, the link with social inclusion is quite low. The organisations do not provide any extra support measures (except for some material aid), which may have to do with the fact that they do not know anything about the recipients' situation. Through the Stadin Safka network, a social worker sometimes visits the organisations to hand out flyers with information about social services and to ask the people waiting in line if they need help. However, this seems to happen only a few times a year in smaller organisations and once a month in larger organisations, and according to the organisations most recipients are already known by the social service centres. Also in the other countries it looks like some organisations do not offer accompanying social inclusion measures or refer people to social services. However, some organisations do provide this. For instance in Antwerp, organisations sometimes refer to social services and have a coffee place to meet and ask questions. One organisation even provides budget management and personal counselling. In Barcelona, one organisation offers extra activities to improve people's literacy, as well as training and advice related to social inclusion. In Budapest, two organisations provide, with subsidies from the government, social services as well as shelter.

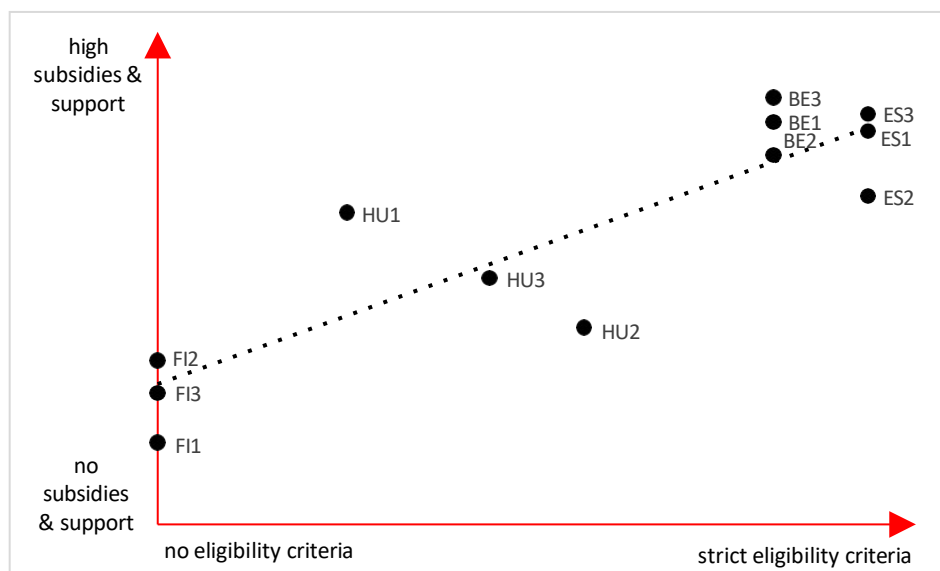


Figure 2: Link between strictness of eligibility criteria for food aid and the amount of subsidies and support organisations receive. Source: own elaboration.

5.1.4 Food sources: Importance of FEAD, surpluses and purchases

Typically, the products handed out via food aid packages come from various supply sources. An important source of food for most organisations is the national food bank federation of the respective country, except for the three organisations in Finland where such an organisation is absent. Regional food banks collect and store mainly food surpluses, originating from companies in the food industry and supermarkets as well as from auctions. In Helsinki, the Stadin Safka network (mainly financed by the city) functions like a food bank in the sense that it operates as a logistical centre where food surpluses from companies, supermarkets etc. are collected and then distributed among the local food aid organisations. Around half of the organisations (at least one in each city) also has extra (exclusive) agreements with nearby supermarkets, restaurants or bakeries to receive their leftovers which they cannot sell anymore. Furthermore, the food banks or the local organisations sometimes receive food donations from private individuals (which are not surpluses). This can happen spontaneously or occasionally through organised campaigns (e.g. a collection campaign in supermarkets where people can buy extra products to donate) or during specific moments of the year (e.g. Christmas).

Another important source of food in some countries are the FEAD-financed products. For the organisations in Antwerp and Barcelona, FEAD is a regular source of long-lasting, basic food products and seems to be relatively important, although some organisations had the impression that FEAD supplies had been

declining recently. In Helsinki, FEAD products seem to be less important. They are delivered through Stadin Safka, but this happens in an irregular way (it is only used to complement the food supply when there are little surpluses), except for one organisation who directly receives FEAD products and distributes these once a month. Finally, in Budapest no FEAD products are handed out because they go to poorer regions of the country. Only one organisation receives cooked meals from FEAD because they also operate as a shelter for homeless persons. Most organisations indicated that people (should) recognize the FEAD products as they are marked with the EU logo. However, some organisations mentioned that they probably don't recognize them, because they don't know the EU that well and because they do not pay attention to this. When we asked in the interviews what people think of the FEAD products, the answers were mixed. From the organisations that received some feedback on this, some declared that people seem to like most products and that they are basic and useful products. Others, however, pointed out that some products were not useful for everyone (e.g. flour for people who do not bake) and that there was too much of some products and too little of others. Besides that, two organisations in Antwerp mentioned that some products are not popular among people with a migrant background because they do not know them or because they contain meat (e.g. couscous, or typical Belgian products like 'stoofvlees').

Lastly, for some organisations own purchases are also an important source of food to distribute. All three organisations in Antwerp and two organisations in Budapest purchase food products with the financial donations they receive. In the two Budapest organisations mainly long-lasting food is bought with the money and this is the main source of food in the food aid packages. In Antwerp, on the contrary, own purchases are more a supplementary source because volunteers consider that some products are missing in the packages or there is too little from some products. Besides that, some of the other organisations also occasionally buy products, for instance when it's Christmas.

In Figure 3 we assess the relationship between on the one hand the amount of food which organisations can distribute coming from their various food sources, and on the other hand the amount of subsidies and support organisations receive. Generally, it seems that the organisations who receive less subsidies and have less connections and capacity, have also less food to distribute from the various food sources (purchases, surpluses, FEAD). This mainly concerns Budapest and Helsinki.

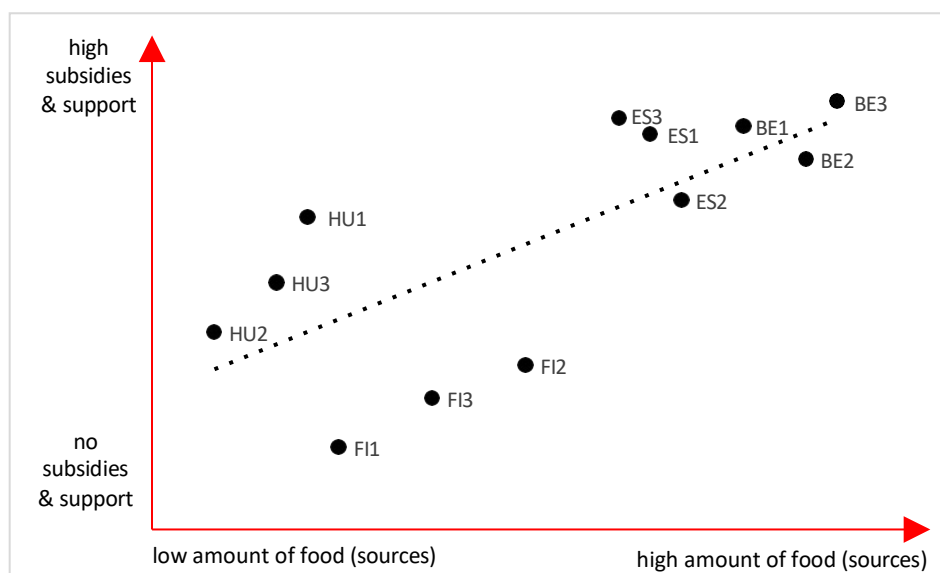


Figure 3: Link between the amount of subsidies and support organisations receive and the amount of food (sources) organisations receive/can purchase. Source: own elaboration.

5.1.5 Distribution mode: frequency, location, freedom of choice and adaptation to households' needs

A last important aspect to discuss, which also influences the value of food aid, is the way organisations distribute food aid to recipients. How often do they distribute food aid? Do people have to stand in a line or do they come by appointment? Do they receive food aid outside or inside the organisations' facilities? Do people receive a ready-made package or bag or is there some freedom of choice in the food products? Are organisations able to adapt packages to specific family needs (adaptation to household size and health, religious or cultural reasons)? Below we discuss these points, explaining how the situation looked like at the moment of the interview and data collection. However, it is crucial to mention that many organisations changed their distribution mode since the COVID-19 pandemic hit, so we also indicate if the situation was different in the past or if it might change again in the future.

The frequency with which the twelve organisations distribute food aid varies strongly from once a week to once per month or even only three times a year. In Helsinki, all organisations distribute food aid weekly, in Antwerp this is the case for two organisations (one organisation distributes once in three weeks). Two out of the three Barcelona organisations hand out food once per month, while one organisation distributes twice per month. In Budapest, the picture is more mixed: one organisation distributes weekly, another monthly and the last one only three

times a year. It is evident that the lower the organisations' frequency to distribute food aid, the less fresh food they can give to families because it has to be consumed quickly. We also expect in general that on a monthly basis the value of food aid will be lower in organisations that distribute food less often, because people can only carry a certain amount of food home because of its weight.

Second, there is variation in where the distribution takes place. In Helsinki, one Antwerp organisation and one Budapest organisation, people are not given a specific time to pick up the food aid and have to queue (often outside) to receive a food aid package. In some organisations, there was already a very long waiting line before the opening hours (they sometimes stand in line one hour or more). Nevertheless, it is important to mention that before COVID-19, the organisations let the recipients come inside so they did not have to wait outside. In the Barcelona organisations, one organisation in Antwerp and one in Budapest, people come to the organisation at a pre-booked time to receive the food aid. The intention of this measure is to spread the clientele across the opening hours, so that it is more feasible for volunteers to assist the recipients and to avoid long waiting lines. However, in some organisations where people came by appointment, there was still a line of people queuing, because of the high volume of clients at peak hours and the shortage of staff/volunteers.

Lastly, there is variation in the way the food aid is distributed, including the amount of freedom of choice and the extent to which packages are adapted to households' needs and preferences. Some organisations give 'fixed packages' in the sense that they do not allow some freedom of choice or adaptation to households' preferences/needs, while others take account of this to a limited extent. Regardless on the way food aid is distributed, however, all organisations offer the possibility for recipients to return or leave certain products they do not want (this can be for various reasons, e.g. they do not like these products or cannot consume them because of health, religious or other reasons). It was not uncommon that one or more products were returned or left out of the package (e.g. bread, meat, products people do not know, use or like).

In Helsinki, the organisations give ready-made bags with products to the recipients who were waiting outside. Nevertheless, one organisation mentioned that for a vegetarian client they made a vegetarian food package, while the two other organisations indicated they do not give certain pork products to Muslim people but exchange this for another product. Packages do not differ by household size or type in Helsinki, at least partly because the organisations have no information

about the recipients' household composition. Also in Budapest, packages are more or less fixed in two organisations. In one of these organisations, however, they do consider the household composition and whether they have the ability to cook. In Budapest, religious preferences are not taken into account but all organisations mention that this is also not necessary since migrants or Muslims are rare among their clientele. In Antwerp and Barcelona, Muslims make up a large share of their recipients, so the organisations try to take this into consideration. One Spanish organisation has fixed food aid packages, regardless of household size, but they do make a separate fixed package for Muslims and another for non-Muslims. Other organisations do not systematically take this into account, but they try to keep fish, chicken and vegetarian products for Muslims. Furthermore, most organisations in Antwerp and Barcelona differ their packages slightly by household composition (number of household members and whether they include babies/young children). In Antwerp, recipients bring their own bag and enter the organisation where products are stalled out. For some products, volunteers ask which product they would like to receive, for instance pasta or rice, oil or sugar, jam or chocolate spread. However, this is not the case for the majority of products.

All organisations seem to find it difficult to take food intolerances and allergies into account, as they are often dependent on other bodies for their food supply. Some organisations however indicate that they sometimes have gluten-free or lactose-free products, but this is not offered on a regular basis. The same holds for organisations who give different packages depending on the household composition: this is mostly done on an arbitrary basis by volunteers who try to estimate how much extra products they can and should give to larger families. Only in one Barcelona organisation, they have a more systematic way as they prepare six different package sizes according to the household size, and extra baby products.

A last interesting point regarding the distribution mode is that, although bigger organisations have generally more volunteers/staff and more resources to distribute more food, smaller organisations seemed to have the advantage that they made more personal contact with clients and listened to their preferences and needs. For instance, the smallest Helsinki organisation mentioned they knew one vegetarian client for whom they made a vegetarian package. Also in Antwerp the smallest organisation seemed to ask more about the preferences and needs of the clients. This organisation also works with appointments, so that the volunteers did not seem to be in a hurry. In larger organisations or organisations where everyone

stands in a line without appointment, volunteers or staff appeared to rush more during the distribution in order to be able to serve all the recipients. Nevertheless, as indicated above, also in some organisations where clients do come by appointment, there was sometimes a line of people queuing due to a shortage of volunteers or the large amount of recipients at peak hours.

5.2 Estimations of the monetary value of food parcels

This section gives more insight in the monetary value of charity food aid for families having financial difficulties, and whether this differs across and within countries and why. We also examine the importance of FEAD and we compare the food package values with the food basket cost, social assistance benefits and the at-risk-of-poverty threshold.

5.2.1 Absolute monetary value of food aid packages in four cities

Table 2 shows the calculations of the monthly market value of food aid packages in the four cities we studied: Antwerp, Barcelona, Budapest and Helsinki. Concretely, it presents the average monetary values of food aid packages of the three food aid organisations in each city for different household sizes. We observe huge cross-country variation: whereas in Antwerp and Barcelona packages are on average worth more than 100 euros a month, this is lower in Helsinki (80,93 euros) and especially Budapest (9,57 euros).

	ANTWERP	BARCELONA	BUDAPEST	HELSINKI
1 person	102,26	103,79	6,23	80,93
2 persons	105,95	108,07	6,23	80,93
3 persons	114,03	126,44	12,92	80,93
4 persons	131,96	132,90	12,92	80,93
Average	113,55	117,80	9,57	80,93

Table 2: Average monthly monetary value (in EUR) of food aid packages per city for different household sizes. Note: three and four person households include one or more children. Source: own elaboration.

Even when we take into account differences in purchasing power between countries, the overall picture remains the same. In Table 3 we express the values of the food parcels in purchasing power parities (PPPs)³⁶ instead of euros to make the results more comparable between cities. Because the cost of a particular quantity of goods and services differs between countries, for instance in Hungary and Spain you can buy a larger amount of food with a certain amount of money

³⁶ We used the 2021 PPPs of food and non-alcoholic beverages:
https://ec.europa.eu/eurostat/databrowser/view/PRC_PPP_IND_custom_3152660/default/table?lang=en

than in Belgium or Finland, we adjust the calculated euro values of the food aid packages with PPPs. Concretely, we divided the calculated values of our food packages by the PPPs of food and non-alcoholic beverages, so that we eliminate the effect of price level differences³⁷. Expressing the values in PPPs instead of euros results in a little decrease of the food package values of Antwerp and Helsinki because their food prices are above the EU27 average, whereas the values of Barcelona but especially Budapest slightly increase due to their below average food prices.

	ANTWERP	BARCELONA	BUDAPEST	HELSINKI
1 person	97,05	106,29	8,14	71,53
2 persons	100,55	110,68	8,14	71,53
3 persons	108,22	129,49	16,88	71,53
4 persons	125,23	136,11	16,88	71,53
Average	107,76 (↘)	120,64 (↗)	13,38 (↗)	71,53 (↘)

Table 3: Average monthly monetary value (in PPP) of food aid packages per city for different household sizes. Note: three and four person households include one or more children. Source: own elaboration.

An important aspect to explain these between-city differences in food package values seems to be the administrative and human capacity of organisations, as well as the broader food aid network in the municipality and country. We discussed earlier that especially in Antwerp and Barcelona, the municipality is more involved in food aid and gives more regular subsidies to food aid organisations (under certain conditions). On top of that, local social welfare centres often check the eligibility of potential food aid recipients. In Budapest and Helsinki however, food aid organisations seem to be less supported (both financially and in their operation) and the food aid network in the municipality and country as a whole appears to be a bit less coordinated and established. For instance, in Finland there is no national food bank federation and in Budapest, it seems that the organisations do not receive that many food products from the Hungarian food bank and not in a regular way. Moreover, it became clear from the interviews in Budapest that at least two out of the three organisations struggled with a lack of capacity to expand their food aid activities, for example to contact supermarkets themselves to receive their surpluses, because they do not have enough volunteers or staff, transport means or storage capacity (e.g. a fridge or freezer).

³⁷ <https://ec.europa.eu/eurostat/web/purchasing-power-parities>

5.2.2 Fluctuations within cities in the value of food aid packages

In addition to between-city variation, we also notice considerable variation between organisations within the same city, which is presented in Figure 4. Here we show the monthly monetary value of food aid packages in our twelve case study organisations for four specific household types: a single person, a couple, a single parent with two children and a couple with two children. The red lines show the average values for the three organisations per city. First of all, it is clear from Figure 4 that the value of the food parcels sometimes differs by household size or type. In some organisations values are higher for larger families, while other organisations distribute a uniform package independent of the family size³⁸. The latter was typical in Helsinki but to a lesser extent also in the other cities. Even if more products are distributed to larger families, this often happens in a discretionary and arbitrary way, as this depends on the stock of products available and the individual assessment of volunteers what to give to which family. Furthermore, we see that, for all four cities, there is considerable variation in the food package values between the organisations within the same city.

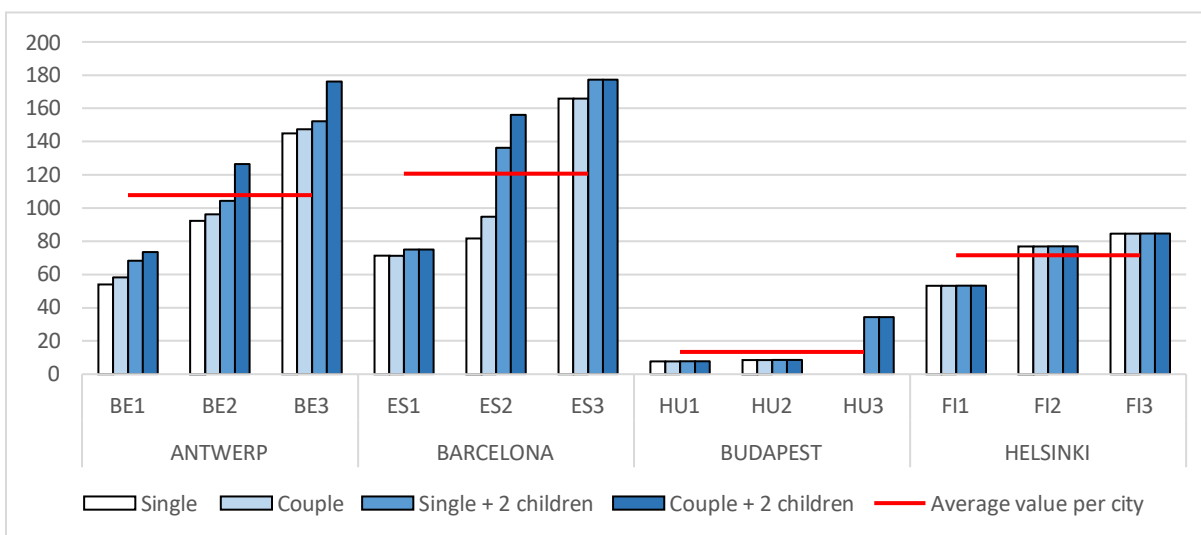


Figure 4: Monthly monetary value (in PPPs) of food aid packages in 12 organisations for different household types. Source: own elaboration.

³⁸ In Budapest organisation 1, the size of packages did differ by household size and type, although this is not visible in Figure 4. Because this organisation did not prepare the food packages beforehand, only when someone made an appointment to pick up a package, we could only register one package for a specific family during each week of data collection. In the first week a package was made for a single person, in the second and fourth week for a couple, and in the third week for a couple with two children. As it did not turn out that the packages for larger household sizes were necessarily bigger, we decided to use the values of the specific package of each week for all household types, so that we would have complete data for this organisation as well. The third Budapest organisation only distributed food to households with children, so in Figure 4 only for the two household types with children we present the values of the food parcels.

Organisations' administrative capacity and the number of volunteers and staff they have, seem to at least partly explain these variations, as well as the amount of subsidies they receive and connections to other food aid actors. Additionally, the frequency by which organisations distribute food aid matters. In Figure 5 we see that the organisations with the highest value of food aid packages distribute food aid more frequently in each of the cities (except for Helsinki where the frequency is the same in the three organisations).

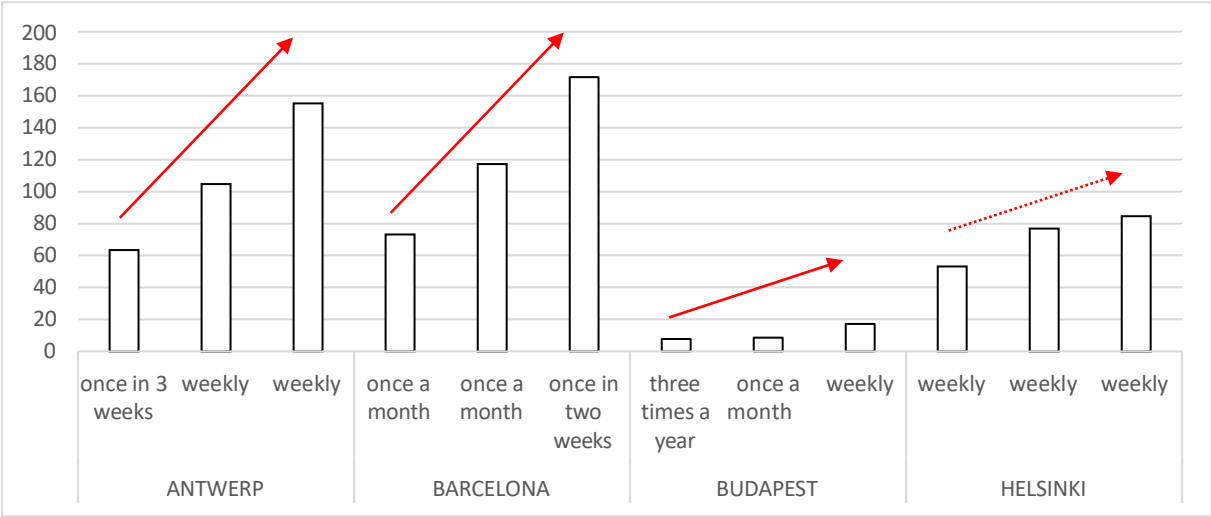


Figure 5: Association between value of food aid packages (in PPPs) and the frequency of food aid distribution. Source: own elaboration.

As mentioned in the methodology section, for products that were distributed on or after the expiration date, we applied a 30% discount. Figure 6 shows that using this discount rate makes a difference when calculating the total value of food aid packages, resulting in lower values: the values reduce between 0% (no expired products) to 30% (all products expired). Besides that, it also gives an indication of how many (almost) expired products are handed out by the organisations. In some organisations, many or all products are (almost) expired leftovers, while in other organisations such products are quasi not present in the food parcels. We observe huge variation between as well as within cities. In Budapest, the amount of (almost) expired products varies from 0% to 100%. Remarkably, in Barcelona, all organisations distribute a low share of expired products, varying between 3% and 4,6%. In Antwerp, the share of expired products varies between 9,4% to 29,3% and in Helsinki between 37,8% and 50,7%.

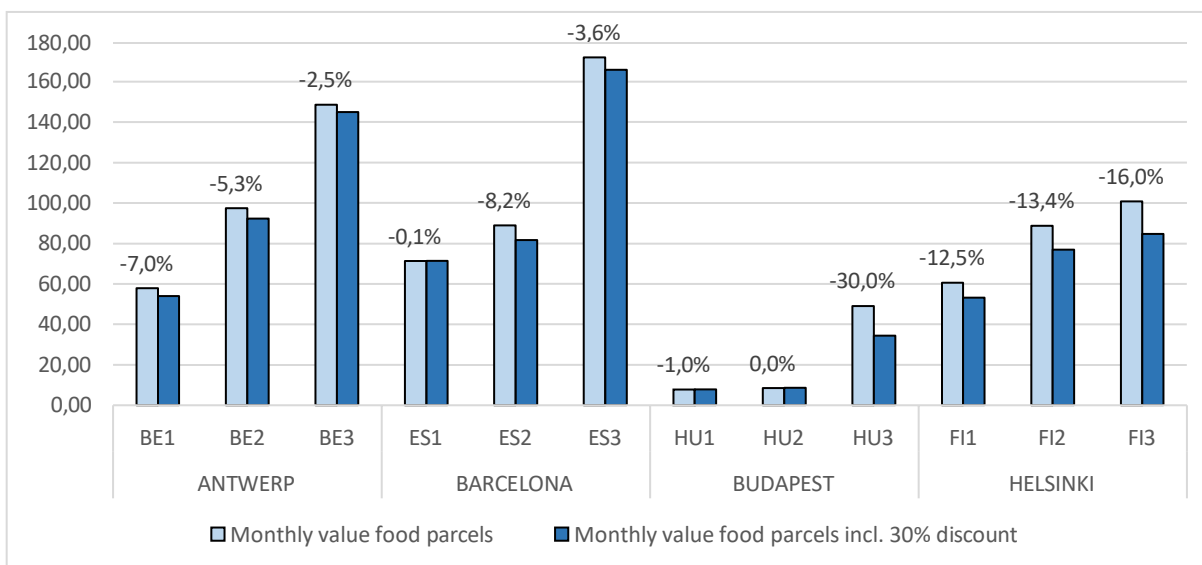


Figure 6: Monthly value (in PPPs) of food aid packages with and without 30% discount rate for expired products. Note: the figure shows the values for a one-person household. In the case of unisize packages the share holds for all household sizes. For organisation 3 in Budapest the values are for a household with children since they do not distribute food parcels to single person households. Source: own elaboration.

5.2.3 Fluctuations over time in the value of food aid packages

The previous tables and figures presented the average monetary value of food parcels from four measurements. In total, the content of the food aid packages was registered four times during four different weeks. As explained in the methodology section, the content (the type of products and the total quantity) and hence the value of food aid packages can vary quite a lot over time due to the dependency on unpredictable left-overs from supermarkets, the food industry, and so on. In this study, this also turned out to be true: from Figure 7, which shows the fluctuation in the monthly monetary value of food parcels during these four registrations, we can see that the value of food parcels is not very consistent over time in most organisations.

In some organisations, the value seemed to be higher during the first data collection and decreased afterwards. This might have to do with the fact that during the data collection, the Russian invasion of Ukraine started which led to a flow of Ukrainian refugees to other European countries and inflation in certain food products (e.g. grains, oils) and fuels. Especially Hungary, as a neighbouring country, experienced immediate effects of this crisis. Besides that, the FEAD 2014-2020 programme is coming to an end in 2022, meaning that organisations may be receiving less and less products from the FEAD. In some organisations, for instance two Budapest ones, the value did remain quite stable, which has to do with the fact that in these organisations a basic range of long-lasting products are

distributed. In one of these organisations, the same basket of products is handed out during each regular food aid distribution.



Figure 7: Fluctuation in monthly monetary value (in PPP) of food aid packages in four countries. Note: we show the average monthly monetary values for the four household types. Source: own elaboration.

5.2.4 Importance of FEAD products

Another aspect we were able to analyse with our data on the content of the food aid packages is the importance of FEAD products. In section 5.1.5, we already mentioned which organisations receive FEAD-financed food products and in which cities this seems to make up a larger share of the total food aid packages. In Figure 8, we show in monetary terms as well as in percentages how large on average the value of FEAD products is compared to other products in the food parcels. As mentioned before, in Budapest FEAD products are usually not handed out to food aid recipients in the form of products (only in the form of meals), so the share of FEAD is 0%. This makes Budapest an outlier case due to the specific design of the FEAD program in Hungary. In Helsinki, the picture is very divergent: one organisation did not receive any FEAD products during the four weeks of measurement, while the other two did. For one of the organisations, FEAD is quite important with an average share over 30%, which is mainly due to the fact that

they have a separate distribution with only FEAD products once a month. In Barcelona and Antwerp, all the studied organisations receive some FEAD products, although again we see substantial variation. In Barcelona, the FEAD share fluctuates between 3,3% and 18,1%. The FEAD share is somewhat higher in Antwerp, where it varies between 14,8% and 28,8%. In four organisations (2 in Antwerp, 1 in Barcelona and 1 in Helsinki), the value of the FEAD products is around 30 euros per month. In the other organisations, the value of FEAD products is less significant or even non-existent.

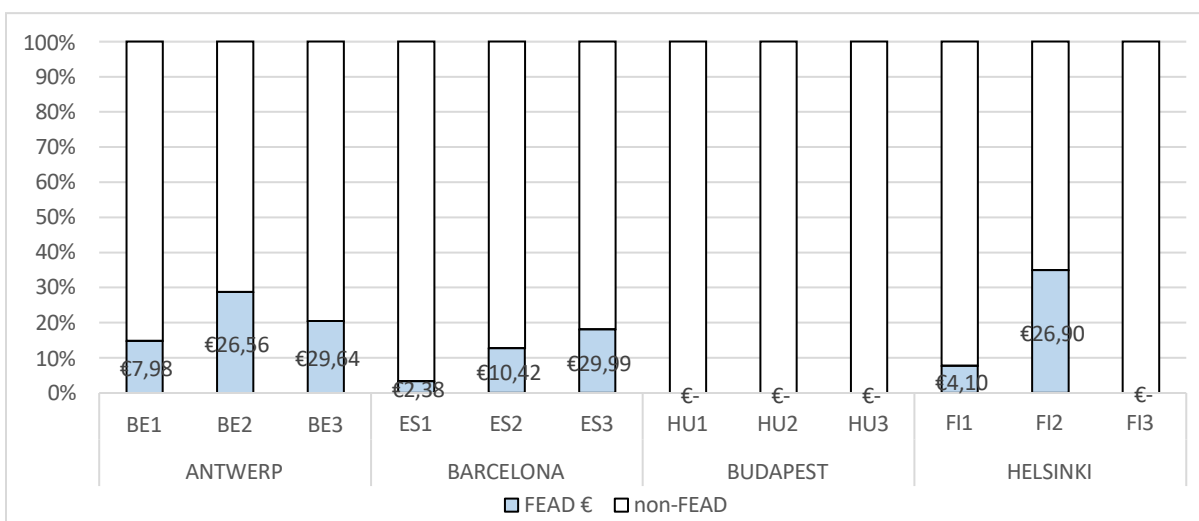


Figure 8: Value (in PPP) and share of FEAD in the total monthly value of food aid packages (2022). Notes: the share of FEAD in the total food aid package was calculated for a one-person household. In the case of unisize packages the share holds for all household sizes. For organisation 3 in Budapest the values are for a household with children since they do not distribute food parcels to single person households. Source: own elaboration.

5.2.5 Relative monetary value of food aid packages compared to the food basket

Besides estimating the absolute monetary value of food aid packages in different organisations, it is also interesting and relevant to get an idea about the relative importance of these food aid package values. Therefore, in a first step, we compare the monthly value of food aid packages in different organisations for different household types with the monthly value of a healthy and varied diet for the same household types in different countries, which is calculated in the food basket. This is a useful exercise for several reasons. First, it will give a better insight to what extent food aid packages (assuming that they are healthy and varied) can cover a substantial share of the minimum necessary cost of a healthy and varied diet. Second, because the necessary minimum budget for a healthy and varied diet can vary greatly across countries, comparing the value of the food aid packages with the minimum necessary food budget in these four countries will

allow a better evaluation of the financial importance of the food aid packages in one city in each country respectively.

In Table 4 we first zoom in on the food basket cost³⁹ calculated for four household types in Antwerp, Barcelona, Budapest and Helsinki. Overall, we can observe that the minimum necessary food budget differs strongly between countries and cities: Antwerp and Budapest have the lowest necessary food cost, followed by Barcelona and eventually Helsinki. Concretely, for a single man his necessary food cost in Helsinki is 22,2% higher than in Barcelona, 43,3% higher than in Budapest and even 53,2% higher than in Antwerp. Evidently, the minimum food budget rises as more persons are living in the household, but due to a small amount of economies of scale the cost does not increase proportionately.

	ANTWERP	BARCELONA	BUDAPEST	HELSINKI
Single	184,75	226,52	195,94	277,44
Couple	347,07	427,44	373,00	523,49
Single + 2 children	473,23	597,49	511,27	664,84
Couple + 2 children	657,98	824,01	706,48	942,16

Table 4: Food basket monthly values in EUR for four household types in Antwerp, Barcelona, Budapest and Helsinki. Source: derived from Carrillo-Alvarez et al. (forthcoming).

In Figure 9, we show the relative financial importance of food aid packages by comparing the monthly values of the food aid packages with the monthly food basket values for several household types. For each organisation, we also include the average ‘coverage percentage’ of the food aid packages relative to the food basket values. It is important to keep in mind that here we exclusively compare the monetary values of the food aid packages with that of the food basket, not what products they should contain to meet the requirements of the food basket.

³⁹ We use the total healthy food budget cost multiplied by 10%. The cost for kitchen equipment is not included.

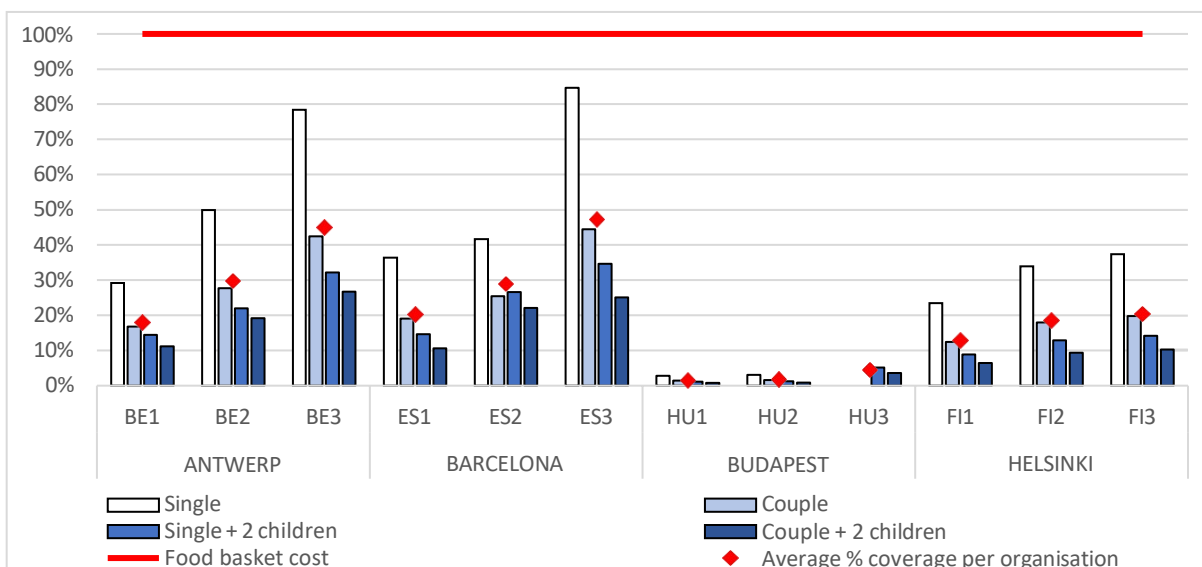


Figure 9: Monthly value of food aid packages expressed as a percentage of the food basket cost. *Source: Food basket data and food aid package data, own elaboration.*

We can see that, not unexpectedly, none of the food aid organisations is able to cover households' monthly minimum food costs. Nevertheless, in some cities and organisations, the values of food aid packages seem quite substantial relative to the food basket value. Similar to the values in absolute terms, the highest relative values of the food aid packages are also found in Barcelona, covering between 20,2% to 47,2% of the food basket value, depending on the organisation. In Antwerp, the three organisations hand out food aid packages that can theoretically cover on average between 17,9% to almost 45% of the minimum food cost, whereas in Helsinki and especially Budapest these values are lower, covering between respectively 12,8% to 18,5% and 1,6% to 4,4%. Again, we also observe large within-city variation, certainly in Budapest, Antwerp and Barcelona. Lastly, Figure 9 clearly reveals (as we have already discussed earlier) that smaller households have an advantage over larger households: the share of the food aid package values relative to the food basket values decreases substantially as families consist of more household members. Although larger households experience a certain degree of economies of scale, these are rather limited with respect to the necessary food budget. As the food aid packages do not sufficiently differentiate by household size and composition, this results in a lower relative value of the food aid packages for larger households.

5.2.6 Relative monetary value of food aid packages compared to social assistance benefits and the at-risk-of-poverty line

As a final interpretation exercise on the meaning of the monetary value of food aid packages, we take a broader viewpoint and compare the value of food packages with inadequate social assistance benefits for working-age persons. Ultimately, we estimate the potential effect of food aid packages in closing the poverty gap for social assistance beneficiaries. It is particularly useful to compare the value with social assistance benefits. First, social assistance benefits, more generally referred to as minimum income benefits, serve as a last-resort social floor for those without access to higher-tier social protection (Bahle et al., 2011). Second, social assistance benefits are almost everywhere inadequate compared to the at-risk-of-poverty and reference budget thresholds (e.g. Cantillon et al., 2019). This also includes Belgium, Finland, Hungary and Spain, although, as we will see below, benefit levels differ greatly across these countries. Third, at least partly driven by the substantial inadequacy of social assistance benefits, social assistance recipients are overrepresented among food aid beneficiaries (Holmes et al., 2018; Tarasuk et al., 2014).

Before we compare the food aid package values with social assistance benefits and the poverty threshold, we present in Table 1 the adequacy of net disposable social assistance benefits in the four countries, by comparing them with the at-risk-of-poverty threshold. We can observe that none of the countries succeeds in providing adequate minimum income benefits, but there are large cross-country differences. Minimum incomes are most inadequate in Hungary, ranging between 19,9% and 29,8% of the poverty line depending on the household type. In Spain, social assistance benefits, relative to the at-risk-of-poverty line, vary between 56% and 69% and in Belgium between 64% and 81%. Finland has the most generous minimum incomes, varying between 78% and 84% of the poverty threshold.

	BELGIUM	FINLAND	HUNGARY	SPAIN
Single	74,0%	78,4%	19,9%	69,1%
Couple	65,7%	82,4%	25,2%	69,1%
Single + 2 children	81,4%	84,0%	29,8%	64,4%
Couple + 2 children	63,6%	81,8%	29,0%	55,6%

Table 5: Adequacy of net disposable social assistance benefits in Belgium, Finland, Hungary and Spain (2021). *Source: MIPI-HHoT data.*

In Figure 10, the values of the food aid packages are recalculated to 2021⁴⁰ and expressed as a percentage of net disposable social assistance benefits. Presented in this way, food aid is, not surprisingly, relatively more important in countries with more inadequate social assistance benefits. While Budapest showed the lowest absolute food package values of all four countries, this is not the case here. Budapest food aid packages represent on average 5,9% of net minimum income benefits. Helsinki, who has the highest minimum income adequacy levels, now has the lowest relative food package values, representing on average 3,8% of social assistance benefits. Due to the high absolute food package values of Antwerp and especially Barcelona, their relative food aid package values are again the highest: on average, they represent respectively 7% and 11,2% of social assistance benefits.

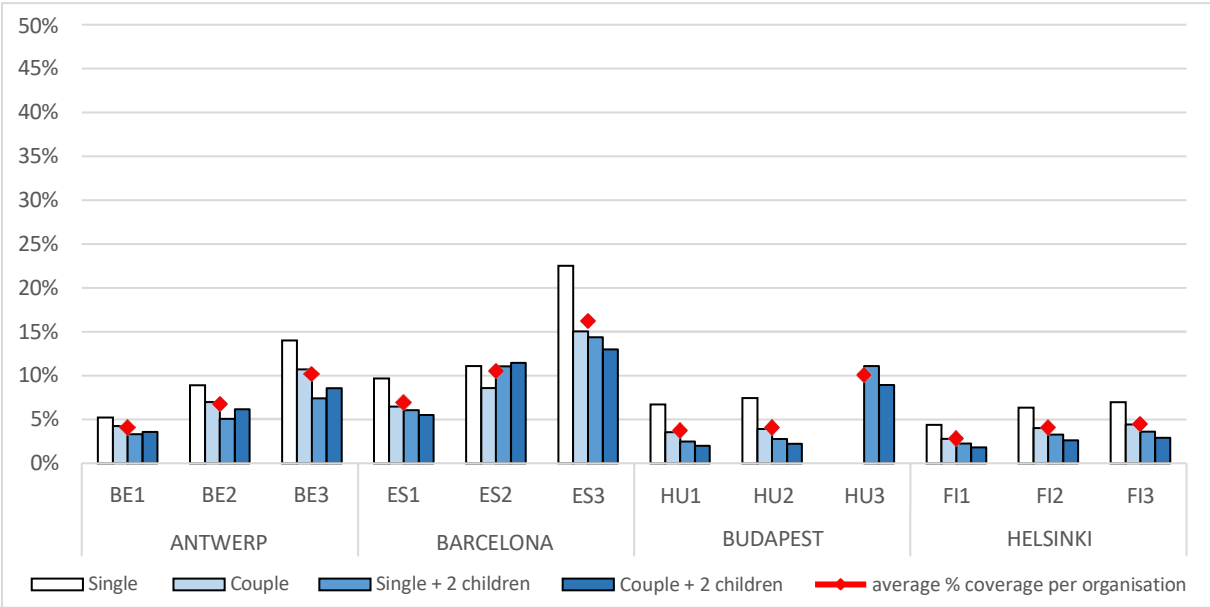


Figure 10: Monthly value of food aid packages expressed as a percentage of net disposable social assistance benefits (2021). Source: MIPI-HHoT and food aid package data, own elaboration.

Lastly, in Figure 11, we add the average value of food aid packages per city on top of the level of social assistance benefits in each country, and we compare this with the level of the at-risk-of-poverty threshold. We observe that in Spain, the maximum impact food aid can have – based on the results of the three Barcelona organisations – is to raise the average net disposable income from 64,5% to 71,8%

⁴⁰ Because the food aid packages were priced in May and June 2022 whereas the MIPI-HHoT data about social assistance dates back to June 2021, we used the Harmonised Index of Consumer Prices (HICP) for food and non-alcoholic beverages to recalculate the values of the food aid packages to June 2021.

of the poverty threshold, decreasing the poverty gap by only 7,3 percentage points. In other countries, the possible impact of food aid packages is lower as net disposable incomes added with a food package top-up remain substantially below the at-risk-of-poverty threshold. In Hungary, the value of a food aid package in one of the three Budapest organisations increases the net disposable income of social assistance recipients at best from 26% of the poverty threshold to 27,3%, in Belgium from 71,2% to 76,1% and in Finland from 81,7% to 84,7%. Hence, we conclude that the food aid packages in all twelve organisations belonging to four different countries are not able to close the poverty gap for households receiving insufficient social assistance benefits.

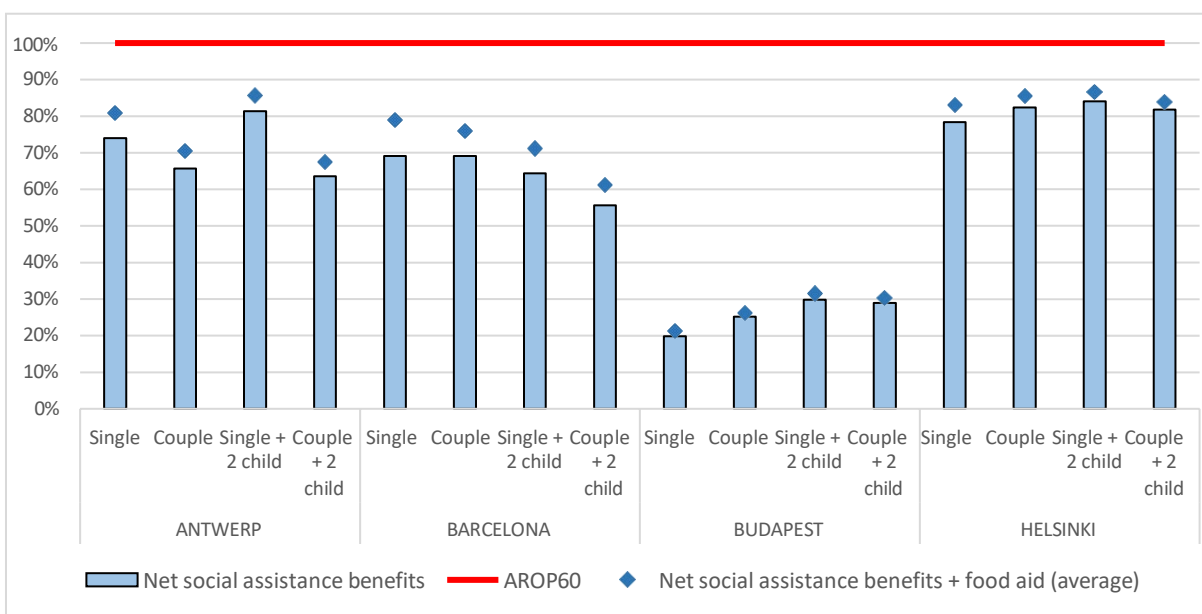


Figure 11: The level of social assistance benefits and the top-up of food aid packages, compared to the 60% at-risk-of-poverty line (June 2021 prices, in euros). Source: own calculations based on the MIPI-HHoT database and Eurostat. Note: AROP60 = 60% at-risk-of-poverty threshold.

5.3 Evaluation of the content of food aid packages

In section 5.2.5, we estimated to what extent food aid packages *can potentially* cover households' minimum necessary food costs for a healthy and varied diet. However, this exercise only took into account the calculated market value of the food aid packages and did not consider whether the content of the packages include healthy and varied products. As discussed before, in reality the recipient value that food aid recipients attach to the received food aid packages, will usually be lower than our estimated market values for various possible reasons. In this section, we make a basic evaluation of the content of food aid packages by comparing the monetary importance of each food category in these packages with

the presence of food categories of two other data sets: 1) the food basket, and 2) the household budget survey (HBS). By doing so, we assess two vital elements of the food aid packages: 1) do the products in the food aid packages reflect a healthy and varied eating pattern?, and 2) do the products in the food aid packages reflect people's average consumption habits? The latter is used as a proxy for analysing whether the content of the food aid packages correspond with people's food preferences. Crucially, this assessment explores the monetary importance of each food category in the total food aid package value, the necessary food cost (food basket) and the food expenses (HBS), not the importance of each food category in terms of weights or quantity of food products intake.

First of all, we compare the content of the food aid packages with that of the food basket, to evaluate their variation and healthiness. Importantly, we assess here the average composition of food aid packages across four measurements in time, whereas, as stated in section 5.2.3, there are large fluctuations over time in the type and quantity of products in the packages. In Figure 12, the share of these food categories in the food baskets of Belgium, Finland, Hungary and Spain are presented. In general, the food categories that have a larger or smaller share in the total food basket are quite similar across the four countries, such as a small share of liquids, fats and residual products and a large share of meat, fish and eggs (partly explained by the fact that the products in this category are more expensive). Nevertheless, we can observe some differences, for instance a larger share of fats and bread, grains, legumes and potatoes in Belgium and a smaller share of vegetables and fruits. The Spanish food basket has a larger share of fruits than the other countries, whereas the Finnish food basket has a larger share of meat, fish and eggs. Hungary and Finland also have a slightly higher share of dairy products in their food basket. These (small) differences can be explained by the fact that the content of food baskets are adapted to the food based dietary guidelines and cultural eating habits of a specific country, as well as because the prices of certain food products differ between countries.

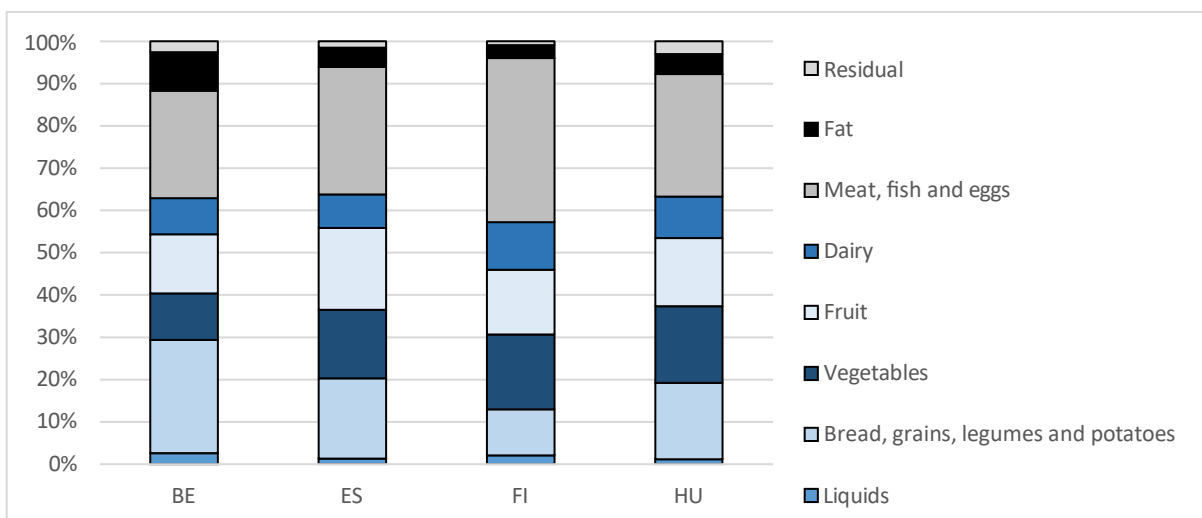


Figure 12: Food basket values divided by food categories (in %) of Belgium, Spain, Finland and Hungary (2022). Source: derived from Carrillo-Alvarez et al. (forthcoming).

Figure 13 compares the shares of the food categories in the food aid packages with that of the food baskets, to assess – on a basic level – whether the food aid packages reflect a healthy and varied diet. This comparison is done separately for each country, meaning that the content of the food aid packages of one country is only compared with the content of the food basket of that country. We first discuss the contents of the food aid packages for each country separately and then make some general remarks and between-country comparisons.

The food aid packages of the three Antwerp organisations are considerably varied, but they still differ to some extent with the food basket. All three organisations offer food aid packages that contain too many ‘residual’ food products, which are often not very healthy. Furthermore, while the share of fruits is too low in all food aid packages, the share of vegetables is exceeding that of the food basket. There is also a shortage of fats in all three Antwerp food aid packages and a shortage of bread, grains, legumes and potatoes in two out of the three organisations. Lastly, one organisation offers a lower share of dairy products than the food basket, whereas their share of ‘meat, fish and eggs’ products is higher than the food basket. In Barcelona, the content of the three average food aid packages also deviates slightly from the food basket. On the one hand, the packages contain too little products of the following categories: fruits, bread, grains, legumes and potatoes and in two organisations also vegetables, meat, fish and eggs. On the other hand, the food aid packages consist of too many residual products, fats, and dairy products as compared to the food basket. If we compare the Helsinki food aid packages with the food basket, it is again the case that they contain too many

residual products. Besides that, there is also an overrepresentation of dairy products in all organisations and an overrepresentation of bread, grains, legumes and potatoes in two organisations. On the contrary, the packages of two organisations contain too little meat, fish and egg products, and one organisation has a clear shortage of fruits, vegetables and fats in their packages. Lastly, the Budapest food aid packages differ quite significantly with the food basket. In two organisations, there is a total absence of some food categories in the food aid packages (fruits in two organisations and fats in one organisation). Besides that, all organisations have too little vegetables and meat, fish and eggs in their packages, and one organisation also bread, grains, legumes and potatoes and another organisation dairy products. It is remarkable that in two organisations, there is a strong overrepresentation of certain food categories. In organisation two, almost half of the monetary value of the food aid packages consists of bread, grains, legumes and potatoes and around 20% of fats. The values of the food aid packages of organisation three consist of two thirds of dairy products and 17% of liquids. Nevertheless, this is the only organisation who does not have too many residual products in their packages. Especially organisation one contains too many residual products in their packages, which is almost one quarter of the total value.

In general, we can conclude that in all twelve organisations the content of the food aid packages do not entirely reflect a healthy and varied diet, as some (unhealthy) food categories are overrepresented (e.g. residual) while others are underrepresented or even absent (e.g. fruits, vegetables). However, the degree of variation and healthiness varies across as well as within cities. Based on the findings in our case studies, in Antwerp, the content of the food aid packages matches best that of the food basket, followed by Barcelona, Helsinki and finally Budapest where the degree of resemblance is the worst. Besides that, we observe considerable variation between organisations in the same city, which is remarkable given that there is a large similarity in the food sources and suppliers of organisations located in the same city.

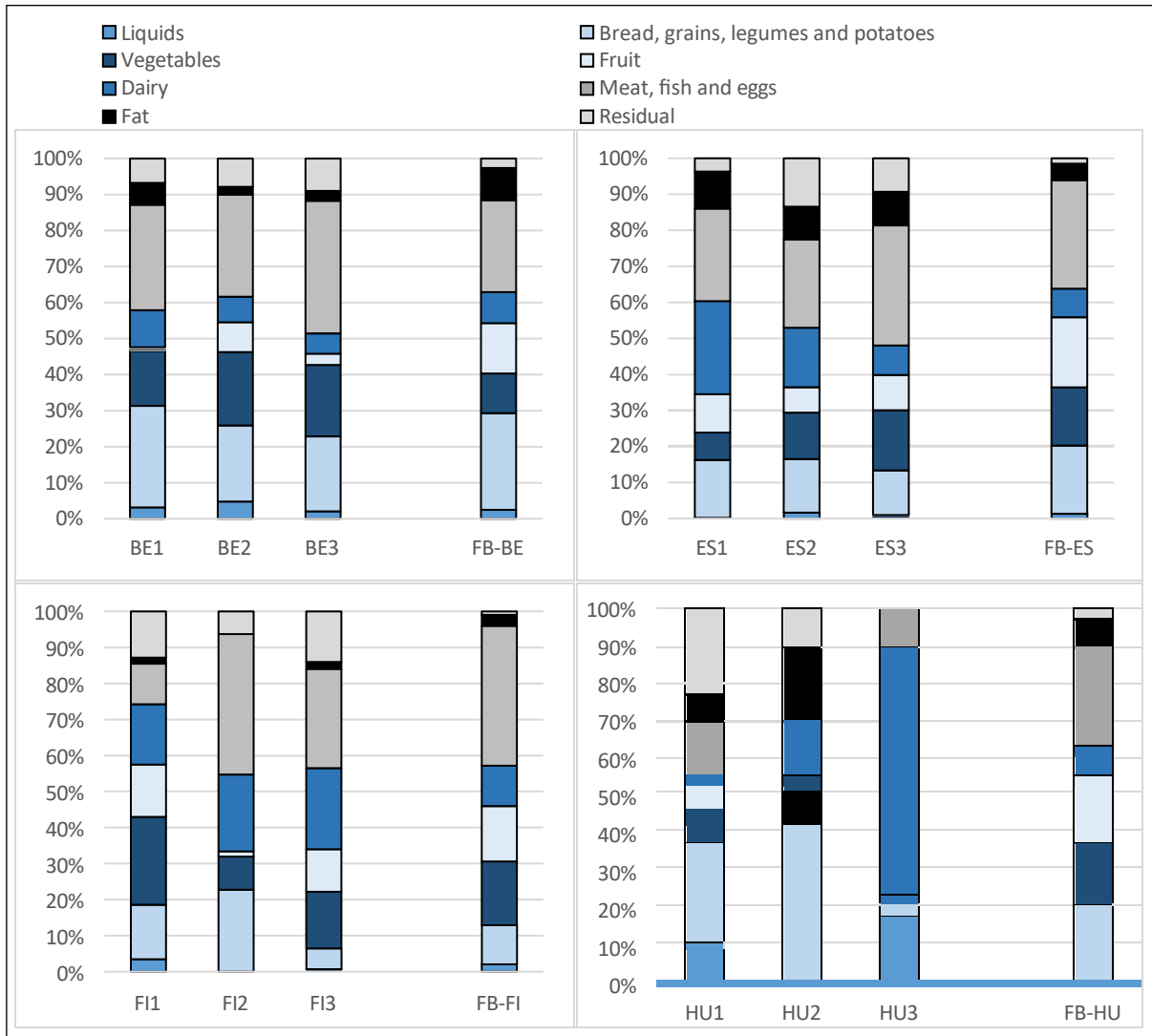


Figure 13: Content of the food aid packages compared to food basket data (in %). Source: own elaboration, food basket data.

Secondly, we assess whether the food aid packages correspond to people’s average consumption patterns, which gives an indication about their eating preferences. Importantly, food expenses of individuals, certainly those of the poorest, do not fully reflect their food preferences because when purchasing food products people also consider the cost of food products, the availability, or other criteria that influence the choice for purchasing more/less products from certain food categories. Before we go into detail in the different food categories people spend – on average – their budget on, it is useful to mention that the aggregate HBS data also includes information about total food expenses per income quintile, making clear that individuals belonging to lower income quintiles spend a higher share of their total budget on food and non-alcoholic beverages. Concretely, in

Belgium, individuals belonging to the lowest income quintile spend 4,5% more of their total expenses on food than individuals of the highest quintile. In the other countries this difference is even higher: in Finland the lowest income quintile spends 14,1% more on food than the highest income quintile, in Hungary this is 23,5% and in Spain 34,5%. Hence, this confirms that lower income groups spend a higher share of their budget on a basic need as food, leaving fewer resources for other consumption categories such as clothing, transport or leisure. Compared across countries, Hungarian low-income groups spend the highest share of their income on food (22,6%), followed by Spain (19,2%), Belgium (13,4%) and Finland (12,8%).

Figure 14 shows the 2015 data on the average⁴¹ individual food consumption expenditure (in %) of these food categories in Belgium, Spain, Finland and Hungary. Overall, the food consumption patterns are quite similar across countries. Small differences exist due to for instance different cultural eating patterns, accessibility and availability of certain food items (e.g. fish, fruits and vegetables) also related to the different climates.

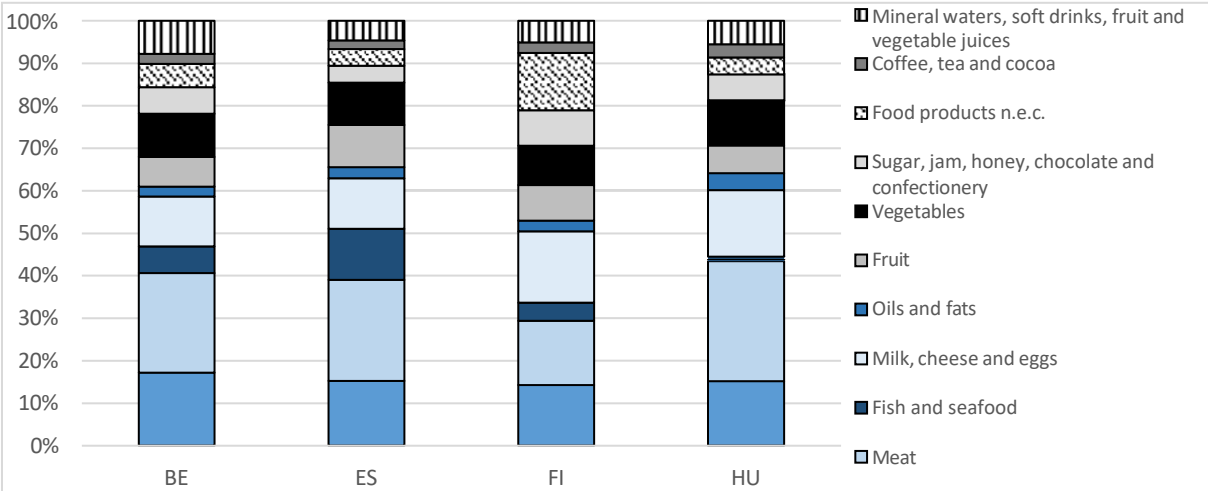


Figure 14: Food consumption data divided by food categories (in %) of Belgium, Spain, Finland and Hungary (2015). Note: n.e.c. = not elsewhere classified. Source: HBS data 2015.

In Figure 15, we explore whether the content of food aid packages corresponds to people’s average consumption behaviour. We first focus again on each country

⁴¹ As the aggregate HBS data at European level does not distinguish these food category consumption patterns across income quintiles, we show the average consumption data instead of the categories for low-income groups. However, the Belgian HBS data did include this data for four income quartiles, which showed that the shares of food category expenditure of the lowest quartile was almost the same as that of the higher income quartiles, making this average data also useful.

separately, whereafter we make some general conclusions and comparisons between countries. Overall, in Antwerp, the food aid packages correspond quite well to the HBS food consumption data. For some food categories however, there are some differences with the HBS data: the share of meat and mineral waters, soft drinks and juices in the food aid packages is significantly lower in all organisations, as well as the share of fruit in two organisations and milk, cheese and eggs in one organisation. On the contrary, the share of food products n.e.c. is higher in all organisations, as well as the share of vegetables and fish in two organisations and oils and fats and bread and cereals in one organisation. The Barcelona food aid packages also contain all food categories of the HBS structure, but also here some categories are over- or underrepresented. For instance, the share of bread and cereals, meat and water/juices/soft drinks is lower in all organisations, as well as the share of fish, fruit, and sugar products in two organisations. Other products are overrepresented in the food aid packages: vegetables, oils and fats, as well as milk, cheese and eggs (in two organisations). In Helsinki, the food aid packages differ strongly from real food consumption for a number of categories. For example, all three organisations do not contain fish/seafood or coffee, tea and cocoa in their packages. In two organisations, there is also an absence of other beverages and in one organisation of oil, fats and sugar products. Other remarkable shortages are seen in the categories of bread and cereals in two organisations and of meat, fruits, sugar products and food products n.e.c. in one organisation. Other categories have an excess, most notably vegetables and fruits in organisation one, meat, bread and cereals in organisation two and dairy products and vegetables in organisation three. Finally, the Budapest food aid packages, as we already saw from the comparison with the food basket, are less varied along the different food categories. The first organisation distributes food aid packages where almost all food categories are present. However, there is a clear excess of sugar products, food products n.e.c., coffee, tea and cocoa products, while there are little products from the categories of meat, milk, cheese and eggs, fruits and waters, soft drinks and juices. In organisation two, the share of bread and cereals, oils and fats and sugar products is overrepresented, while the share for all other categories is lower than the real food consumption. In organisation three, there is a deficit of almost all categories except for milk products and mineral waters, soft drinks and juices.

Generally speaking, most food aid packages contain products from all food categories, but there is often a considerable difference in the proportion of these categories compared to the household budget data. Compared across cities,

based on the data of our case studies, the Antwerp food aid packages correspond best to people's average food consumption patterns, followed by Helsinki, Barcelona and eventually Budapest. However, even though the studied food aid packages correspond to a certain extent to general food patterns of these countries, this does not mean that they also automatically correspond to the individual preferences of all recipients. The degree to which the content of food aid packages reflects people's eating habits and preferences, is different for every recipient based on their individual preferences and needs.

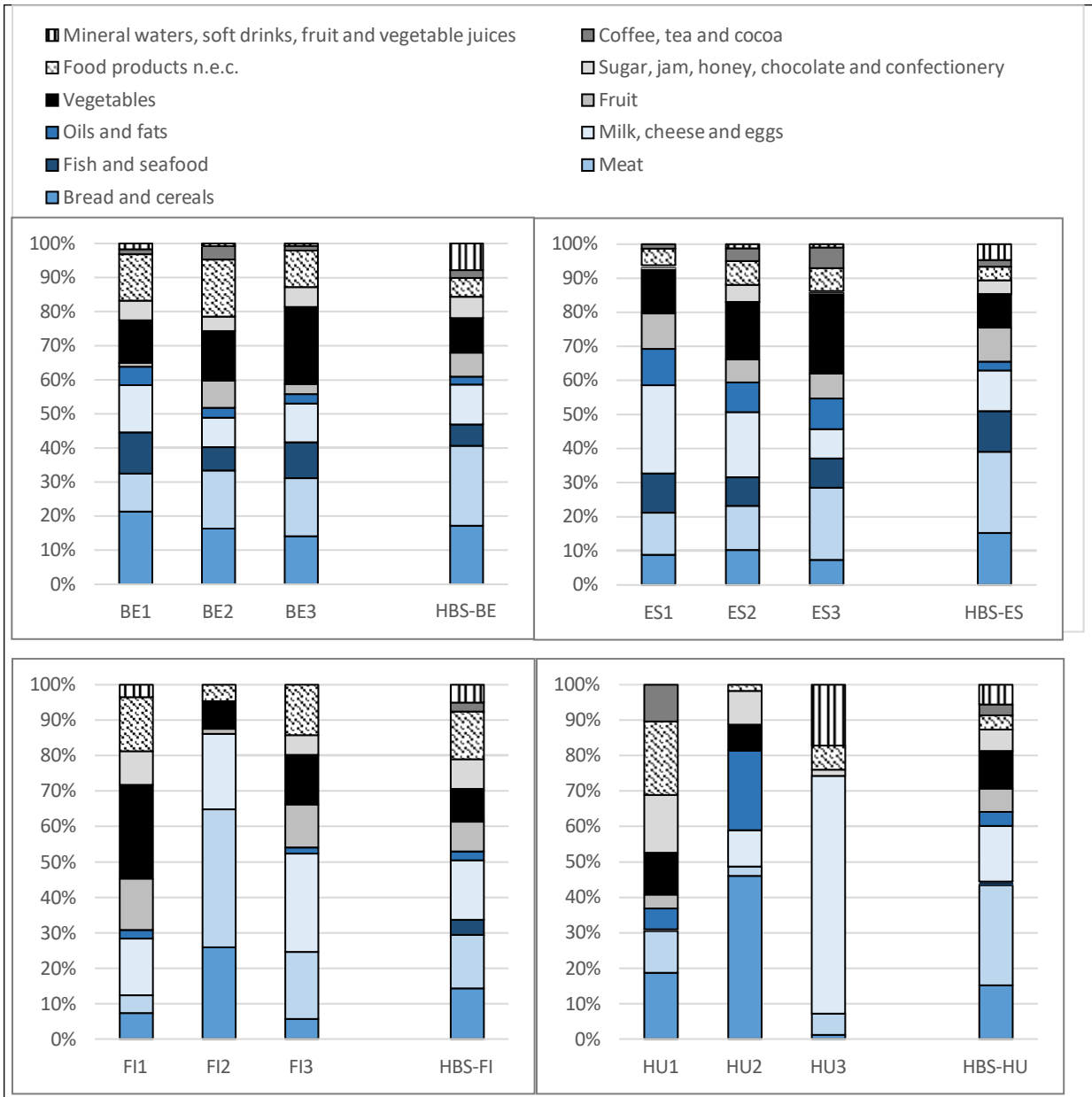


Figure 15: Content of the food aid packages compared to HBS data representing real food consumption (in %). Source: own elaboration based on food aid package data and HBS data.

Overall, the comparison of the content of the food aid packages with the content of the food basket and HBS data, shows that – although we observe large variation – the food aid packages do not entirely represent a healthy and varied basket and that they do not fully correspond to people’s own consumption choices. Hence, because of these deviations in the food aid packages, it is very likely that food aid recipients will attach a lower value to the packages than the estimated market values. The degree to which this is true differs however per food aid recipient,

depending on their food preferences, cooking and storage capacities and possible food restrictions.

6. Conclusion and discussion

The aim of this study was to gain a better understanding of the financial importance of food aid packages for vulnerable families depending on it, while taking account of the degree to which these packages reflect a varied and healthy diet corresponding to people's preferences. We devote specific attention to the latter, because some previous studies have found differences between objectively calculated 'market values' of food aid, and the recipients' own valuation of the support ('recipient value'). Concretely, using an exploratory case study approach, we estimated monetary values of food aid packages in twelve local food distribution points in Antwerp, Barcelona, Budapest and Helsinki by using the cross-country comparable food reference budget approach. Additionally, we studied the content of the food aid packages by comparing them with food basket and HBS data. Lastly, we conducted interviews in the local food charities to get a better insight in the (variation of) profile characteristics of these organisations, as well as to give context to the food aid package values.

Based on the results in our twelve case studies, we find substantial between- and within-city variation in the absolute monthly monetary market values of food aid packages. Overall, the highest food package values are found in Barcelona, expressing on average 120,64 euros adjusted for PPPs per month. In Antwerp, the average monthly value is 107,76 in PPPs while in Helsinki (71,53) but especially Budapest (13,38) this is much lower. The share of EU-financed FEAD products in this total monetary value varies strongly from 0% in Budapest due to an absence of FEAD products (only meals), up to on average 11,4% in Barcelona, 14,2% in Helsinki and 21,3% in Antwerp. In addition to between-city variation, we also notice considerable variation in the food package values between organisations located in the same city, meaning that it makes a big difference for food aid recipients in which organisation they receive support. For instance, some organisations offer monthly food aid packages that are worth three or even four times more than the packages of another organisation in the same city. Furthermore, in several organisations in Antwerp, Barcelona and Budapest, the food aid packages differ depending on the household size and type, resulting in higher food package values for larger families. However, this distinction often happens in a discretionary and arbitrary way and a comparison of the food aid package values with the food basket value showed that larger households are at a disadvantage because their

necessary food cost is much higher while they only receive slightly larger food packages.

Besides calculating absolute monetary values of food aid packages, we also focused on the relative importance of food aid. On average, for all three organisations and household types, Barcelona food aid packages can cover up to 32,1% of the food basket value. In Antwerp, the three organisations hand out food aid packages that can theoretically cover on average 30,9% of the minimum food cost, whereas in Helsinki and especially Budapest these values are lower, covering respectively 17,2% and 2,6% of the minimum food cost. Expressing the food aid package values as a percentage of net disposable social assistance benefits, showed that food aid is, unsurprisingly, relatively more important in countries where social assistance benefits are more inadequate. On average, in Budapest food aid packages represent 5,9% of minimum income benefits, whereas in Helsinki, having the highest social assistance benefit levels, this is only 3,8%. Due to the high absolute food package values of Antwerp and Barcelona, these values represent respectively 7% and 11,2% of their social assistance benefits. Nevertheless, if we add the food aid package values on top of insufficient social assistance benefit levels, we can see that in none of the four countries food aid is able to close the at-risk-of-poverty gap.

Several factors, which are related to the studied profile characteristics of the different organisations, influence the between- and within-city variation in the monetary food aid package values. An important aspect to explain the between-city differences in food package values seems to be the administrative and human capacity of organisations, as well as the broader food aid network in the municipality and country. The support of and cooperation with municipalities and other food aid actors is remarkably stronger in Antwerp and Barcelona, partly resulting in more available food resources. However, the financial support from municipalities is not unconditional. The organisations in Antwerp and Barcelona experience a heavy administrative burden (paperwork), and more strict eligibility criteria are in place for people wanting to receive food aid. In Budapest but especially Helsinki, food aid is less means-tested. In Helsinki, queuing for food aid is sufficient to receive a package. However, this also seems to influence the connection with social inclusion activities, which is very limited in Helsinki. In some organisations in the other cities, additional support measures (e.g. referral to or advice on social services, budget management) are offered to recipients. Regarding the variation between organisations within cities, organisations'

distribution frequency, which varies from three times a year up to weekly distributions, seems to play a role. Furthermore, the administrative capacity, number of volunteers and staff members, amount of subsidies and connections to other food aid actors also seems to matter.

This study did not only focus on calculating a monetary value of food aid packages, but also on the content of these packages. The comparison of the average content of food aid packages in twelve food aid organisations with food basket and household budget survey data has showed that some food categories are clearly over- or underrepresented in these packages. This is especially the case in Budapest, but to a lesser extent also in Helsinki, Barcelona and Antwerp. Hence, in general, the food aid packages do not entirely represent a healthy and varied diet and they do not fully correspond to people's average consumption choices. This finding is not very surprising and can at least partly be explained by the fact that most organisations heavily depend on unpredictable food surpluses over which volunteers have no control. Although some organisations (especially in Antwerp and Budapest) also purchase (extra) products, the extent to which the packages are adapted to specific households' needs is limited to for instance excluding meat products due to religious or cultural reasons. Furthermore, the freedom of choice in the received food aid products is also restricted in all organisations, due to food availability reasons and limited capacity of volunteers to take account of this. Hence, food aid packages show deviations from a varied and healthy diet and do not correspond to people's average eating preferences. Because of this, food aid recipients will presumably attach a lower recipient value to the packages than the estimated market values, although this varies per recipient based on their individual preferences, cooking and storage capacities and possible food restrictions.

Finally, our study is subject to several limitations and context-related issues. First of all, it is important to stress that the results of this study represent the circumstances of spring 2022, while since then the situation concerning food aid has drastically changed. The soaring inflation rates, strongly driven by very high levels of energy and food prices, have further increased the demand for food aid in many countries, while at the same time food banks and local food aid organisations are struggling to meet this demand as they receive less food donations⁴². In Spain for instance, the Barcelona Food Bank indicates a 30%

⁴² See for instance: <https://www.euronews.com/2022/06/20/food-bank-demand-rising-in-germany-amid-record-high-inflation>; <https://www.nytimes.com/2022/08/04/business/food-banks-inflation.html>

increase in demand due to the inflation crisis⁴³. Saving on food is often used by families experiencing social exclusion as a cost-reducing strategy when they are unable to pay other more fixed expenses like housing, electricity and water bills (Ayala Cañon, Laparra Navarro & Rodríguez Cabrero, 2022). In Finland and Belgium, food aid organisations also observe an increase in the demand of food aid, and notice a remarkably larger amount of people with jobs⁴⁴. Furthermore, especially in Hungary, the amount of Ukrainian war refugees has grown a lot, also influencing the demand of food aid.

Second, although our pricing method, i.e. the reference food budget approach, allowed to calculate monetary values of food aid products in a cross-national way, this method also includes an important limitation. By using food basket data to price the food aid packages, which includes low prices from affordable supermarkets, we only calculate a market value of the food aid packages. However, as discussed earlier, previous research has showed that the market and recipient value of the SNAP food stamps in the US can differ quite a lot from each other. Usually, the value that recipients attach to the in-kind support is lower than the 'objective' market value. Nevertheless, applying this methodology to the case of charitable food aid packages is not straight-forward since they differ in many aspects from the SNAP voucher program. Although it was not feasible in this study to calculate one specific recipient value for each organisation, which lies somewhere between 0% and 100% of our estimated market values, we do devoted specific attention to this issue by additionally assessing the content of the food aid packages and contextualising the calculated values with the interview data.

Finally, as an exploratory case study research, our results only apply to the twelve case study organisations, and the monetary values can only be interpreted correctly by acknowledging the different circumstances and the different contexts of how food aid is distributed in the four cities and countries. Therefore, the results are not representative for the entire cities and not directly comparable across countries. Especially in Hungary and more specifically Budapest we observe some important differences in food aid operation from the other countries: here, distributing food aid in the form of meals was very common and in the case food products were distributed, this often happened in an irregular way. Besides that, no FEAD food products are distributed in Budapest (these go to poorer regions of the country), contrary to the three other cities. Hence, Budapest is a special case

⁴³ <https://diocesanaterrassa.caritas.es/noticias/canvi-paradigma-dret-alimentacio-dignitat-persona/>

⁴⁴ <https://www.vrt.be/vrtnws/nl/2022/07/14/vraag-om-voedselhulp-stijgt-maar-donaties-dalen/; https://yle.fi/news/3-12465635>

in this study, making it somewhat harder to directly compare the low outlier monetary value of food aid packages in Budapest with the higher values in the other cities. To address this limitation, we attach specific attention to contextualising the results by the literature review and our interview data. For future research, it would be interesting and useful to expand this kind of research to other types of food aid common in certain countries (for instance meals) or to repeat this research in other organisations within the same cities since our case study results are not representative for the whole city. Lastly, it would be valuable for future research to study other cities, regions or European countries which have different socio-economic situations and food aid circumstances.

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Appendix 1: Questionnaire for interviews with the local food aid organisations

General information (+- 10 min.)

Q1 First, I would like to understand what type of organisation your organisation is:

- Is your organisation governmental (=public) or non-governmental?
- Is your organisation faith-based (=affiliated with, or based on a religion) or not faith-based?

Q2 In which year did your organisation start with the distribution of food aid?

- Why did your organisation start with distributing food aid?

Q3 How many people in your organisation are active in food aid activities (either directly or indirectly) as volunteers, and how many as employee?

Q4 Is your organisation associated with one or more larger associations? Which one(s)?

Q5 Does your organisation receive any financial subsidies or financial donations from the central/local government, a welfare organisation, a religious institution or service clubs?

- *If yes (for each donator):* What is the financial subsidy/donation for?
- Are there any conditions or administrative burdens attached to receiving this subsidy?
 - *If yes:* what are these conditions?

Q6 Besides food aid, does your organisation offer any other types of support or activities to persons in need?

- *If yes:* please specify.
- Are these activities voluntary or mandatory in order to be able to receive food assistance?

Food aid recipients (+- 15 min.)

Q7 Which persons are able to receive food aid in your organisation; are there any eligibility criteria?

- *If yes:* What are these eligibility criteria?
 - do people need to prove by certain documents that they are eligible for food aid?
 - Is it mandatory to be referred by another (governmental) organisation?
- Is a distinction made between persons who may receive continued support and persons who are only able to receive one-time emergency aid?

Q8 Do you know how many households receive food aid from your organisation on a yearly basis?

- *If yes:* could you provide me the data for each year that the amount is known?
- *If not:* can you make an estimation of the number of households before the COVID-19 pandemic (i.e. before March 2020) and the number since the COVID-19 pandemic?

Q9 Do you have any data on what profiles the food aid recipients in your organisation mostly have?

If yes, please specify: / If not, can you make an estimation:

- Regarding main sources of income: no income, social assistance benefits, unemployment benefits, sickness/invalidity benefits, pension, wage from full-time work, wage from part-time or temporary work, income from work in the informal economy or any kind of mix of these income sources?

- Regarding household types: singles, single parents with children, couples without children, couples with children, other (*e.g. differences by the number of children*)?
- Are there any other vulnerable groups that regularly receive food aid in your organisation? (*for example: ethnic or migrant background, disability or other kind of long-term care need in the household, elderly or students, homeless persons, etc.*)

Q10 Do you have data on how long persons on average receive food aid in your organisation?

- *If yes:* please specify.
If not: can you make an estimation?
- Are there restrictions on how long people can receive food aid, and if yes, what are these?

Q11 With what frequency can households receive food aid from your organisation?

Q12. Do you know whether the food aid recipients receive food or other monetary or in-kind support from other organisations besides your organisation?

Distribution and content of food aid packages (+- 10 min.)

Q13 Does your organisation distribute food for free or is a small fee asked from the food aid recipients?

- *If a fee is asked:* How much is the fee?
- Why did your organisation choose to ask a small fee?

Q14 Where does the food in the food aid packages come from?

- Does your organisation buy products?
 - *If yes:* which products are bought and why these products?
- Does your organisation receive FEAD products financed by the European Union?
 - *If yes:* Do the recipients recognize the FEAD products?
 - *If yes:* What do they think of FEAD products?

Q15 How is the food aid distributed in your organisation at the moment: Are food aid packages fixed (*no freedom of choice*) or can persons choose to some extent which products they want to receive?

- *If some freedom of choice is included:* can you describe the principles behind the choice and how this is realised?
- Are cultural or religious preferences taken into account somehow in the food distribution?
- Are food intolerances and allergies taken into account somehow in the food distribution?
- Before COVID-19, was the way the food aid is distributed different?
 - *If yes:* in what way?

Q16 Do food aid packages differ in size (amount of products) depending on the household size and/or household type? If yes, how?

Appendix 2: Classification of individual consumption by purpose (COICOP) explanation: ‘Food and non-alcoholic beverages’

01	Food and non-alcoholic beverages
01.1	Food
01.1.1	Bread and cereals: rice; flours and other cereals; bread; other bakery products; pizza and quiche; pasta products and couscous; breakfast cereals; other cereal products
01.1.2	Meat: beef and veal; pork; lamb and goat; poultry; other meats; edible offal; dried, salted or smoked meat; other meat preparations
01.1.3	Fish and seafood: fresh or chilled fish; frozen fish; fresh or chilled seafood; frozen seafood; dried, smoked or salted fish and seafood; other preserved or processed fish and seafood and fish and seafood preparations
01.1.4	Milk, cheese and eggs: whole milk; low fat milk; preserved milk; yoghurt; cheese and curd; other milk products; eggs
01.1.5	Oils and fats: butter; margarine and other vegetable fats; olive oil; other edible oils; other edible animal fats
01.1.6	Fruit: citrus fruits; bananas; apples; pears; stone fruits; berries; other fresh or chilled fruit; other frozen fruit; dried fruit and nuts; preserved fruit and fruit-based products
01.1.7	Vegetables: leaf and stem vegetables; cabbages; vegetable grown from their fruit; root crops, non-starchy bulbs and mushrooms; fresh, chilled or frozen vegetables other than potatoes and other tubers; dried vegetables, other preserved or processed vegetables; potatoes; crisps; other tubers and products of tuber vegetables
01.1.8	Sugar, jam, honey, chocolate and confectionery: sugar; jams, marmalades and honey; chocolate; confectionary products; edible ices and ice cream; artificial sugar substitutes
01.1.9	Food products n.e.c.: sauces, condiments; salt, spices and culinary herbs; baby food; ready-made meals; other food products n.e.c. (baker’s yeast, dessert preparations, soups)
01.2	Non-alcoholic beverages
01.2.1	Coffee, tea and cocoa: coffee, tea, cocoa and powdered chocolate
01.2.2	Mineral waters, soft drinks, fruit and vegetable juices: mineral or spring waters; soft drinks; fruit and vegetable juices

Source: https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL_LINEAR&IntCurrentPage=2&StrNom=CL_COICOP&StrLanguageCode=EN