

ACTUAL CORPORATE SOCIAL RESPONSIBILITY SPILLOVERS WITHIN ACTIVITIES OF FOODBANKS: FOCUS ON THE CZECH REPUBLIC

Andrea MARTINČIČ; Lukáš POLÁČEK; Jan VAVŘINA

Mendel University in Brno, Faculty of Business and Economics, Brno, Czech Republic

Abstract

Purpose: The sectoral point of view regarding food production and distribution determines food banks within intentions to reduce food waste by helping people in need. The growing trend in the use of food banks is mainly associated with changes in the living standards of the population, especially in connection with the current COVID-19 crisis.

Design/methodology/approach: In the current crisis, we can expect a growing need for help from food banks and the visibility of hidden problems in their operations. This article aims to identify the common factors for sustainable services provision of food banks and focuses on the situation in the Czech Republic

Findings: There are provided results of a questionnaire survey conducted among representatives and members of the Czech Federation of Food Banks, revealing identified common factors for sustainable services of food banks in the Czech Republic.

Research limitations: Although the current state of financial support for ensuring the activities of food banks by the state is assessed by food banks positively, the effort to change the scheme of financing food banks in the Czech Republic persists and it is even intensifying. The survey conducted among food banks also pointed out at the need to ensure non-financial support for the activities of food banks, including information support on the operations side.

Social implications: Partial results point out at the field of public awareness and a need for advisory support within operational activities of food banks in the Czech Republic. Food banks are intended to assist people in material need through charitable and humanitarian organizations acting as a cooperating organization within a respective region.

Key words: food banks, food waste, corporate social responsibility

Introduction

Food banks are regarded from the sectoral point of view of food production and distribution as institutions helping to reduce food waste by helping people in need. Food banks in their current form provide their services in the Czech Republic free of charge, however, their activities are closely linked to subsidies from public budgets. At present, there is a tendency to modify the financial scheme of operation of domestic food banks that arises also from the need to recover public finances after COVID-19 crisis. On the other hand, COVID-19 crisis put unprecedented challenges to foodbanks within not only a growing demand for food help, but also regarding system of their operation activities.

This article aims at identification of common factors for sustainable services provision currently affecting activities of food banks and focuses on the situation in the Czech Republic. Despite the fact that first food banks emerged their activities in current form in the Czech Republic after year 2006, there is still a lack of research

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focusing on the efficiency side of their activities, specifically in Central and Eastern European countries. We are trying to partially fill this gap by the conducted primary survey that took part during autumn 2020 among representatives and members of the Czech Federation of Food Banks. This survey allowed to identify some common factors for sustainable services provision by food banks in the Czech Republic within corporate social responsibility aspects of their operations. We focus regarding the aforementioned survey in this article on areas of food bank operations as implementation of new features in their managerial information systems, structure of donors, management for preventing food waste, usage of voluntary work force, information support from government bodies/other participating entities or influence of COVID-19 crisis on operations of food banks in the Czech Republic.

Literature review / Research Background

Despite a general positive perception on social corporate responsibility within activities of food banks worldwide, specifically in developed countries, its concept faced many challenges and developmental changes, such as the long-term dependence of food bank clients on the type of social services they provide or the growing share of consumption of unhealthy industrially produced food (e. g. Ballantyne et al., 2015; Wainwright et al., 2018).

Results of research conducted within economically developed countries provide findings on the US food bank network, where the improved cost management allows better food bank services. It addresses findings for tax cost management, mainly with the possibilities for improving communication and further cooperation of the involved food banks (Parker et al., 2020). Loopstra et al. (2019) provide findings on food banks operations out of the main food-banking network in England, regarding their dependency on unpaid voluntary work and sponsorship donations. In addition to the aforementioned findings, other study conducted in Great Britain pointed out the need to adjust the concept of food banks in order to improve the registration and information base not only with regard to local food production capacity, but also in the availability of information on living standards and related nutritional needs (Thompson et al., 2019). Similarly, Barker and Russell (2020) also argue recommendations for increasing the capacity of public authorities for the possibility of responding to deteriorating food security in Great Britain, improving the situation in the field of volunteering, or the possibility of taking into account the dietary restrictions of food bank clients.

Similarly, the need for adjusting the concept of foodbanks can be seen among newer member states of European Union, focusing on managerial approaches to mitigate food waste by a simultaneous synergy effects on people in need (e. g. Filimonau et al., 2019; Macková et al., 2019). Situation regarding operations of food banks in the Czech Republic is determined currently by active 15 regional food bank entities, including central distribution warehouse of the Czech Federation of Food Banks. Demand for help from foodbanks in the Czech Republic determines a year on year increase for about 60 %, i.e. distribution of foodstuff exceeding 7,000 tons in year 2020 (CFFB, 2021).

Methodology

Methods of analysis and synthesis of both foreign and domestic information sources are employed. Partial outputs of the implemented primary research of efficiency aspects of the activities of food banks in the Czech Republic were also used for the elaboration of this contribution. The primary questionnaire survey was carried out during autumn 2020. The sample of respondents to the preliminary survey is based on 15 food banks at the regional level including the central food bank based with its warehouse in Prague. The primary research employed electronic questionnaires distributed via the Google Forms service. The questionnaire combined closed, semi-open and open questions. Totally 7 subjects participated in the primary research.

Results of the primary research were analysed beside a basic descriptive statistics also by a two-way factorial design in order to reveal variance components regarding the dependent variable to be the amount of foodstuff distributed by respective food bank in tons per the employee headcount in year 2019. These variance components were estimated by the analysis of variance (ANOVA), employing the Satterthwaite method procedure for synthesized errors inbuilt in the software Statistica 13. Statistically significant components of variance are then regarded as effects of surveyed aspect on activities of foodbanks according to their provided perceptions.

Abbreviations of researched factors:

- A – Sharing information on foodstuff inventory;
- B – Implementing new features of MIS - inventory management;
- C – A typical donor of foodstuff – retail store;
- D – A typical donor of foodstuff – small agri businesses;
- E – A typical donor of foodstuff – foodstuff manufacturers;
- F – A typical donor of foodstuff – large agri businesses;
- G – A typical donor of foodstuff – citizens.
- H – Management for preventing foodwaste – staff checkout during storage;
- I – Food disposal of foodstuff due to exceeding “best before” date;
- J – Actual need for voluntary work;
- K – Future need for voluntary work;
- L – COVID-19 crisis effect on operations;
- M – Satisfaction level – public subsidies for operations;
- N – Usage facilities/approaches above minimum requirements;
- O – Satisfaction level – government information and consultation support;
- P – Existence of “public private partnership”.

Results and discussion

We consider an intensity indicator of food distributed per year by a food bank (data for year 2019) relativized to value per the employee headcount per year (including both paid and voluntary labour) as the ultimate measure of food banks’

operations effectiveness. The median value is 40 tons of food distributed per the employee headcount per year. Together with standard deviation at value 42.56, range of variation at nearly 80 %, it can be pointed out as a diverse situation in operations of foodbanks in the Czech Republic. The surveyed area covering new features in management of food banks' operations settled in the Czech Republic revealed mainly the fact that there is a lack of innovation activities' demand within their managerial information systems. Analysis of the questionnaire survey using ANOVA factorial design is showing the following finding in the aforementioned area (Table 1). The amount of food distributed per employee is not significantly distinguished neither by partial individual factors, nor by their interaction within aspects of sharing information and implementing new features of managerial information systems. This finding is consistent with identified mean level of satisfaction of surveyed regional food banks on their current managerial information systems regarding inventory management (median on Likert scale at value 5, standard deviation at 1.32). Consequently, a low perception of surveyed banks on a need for new features within inventory management (median on Likert scale at value 1, standard deviation at 1.36). On the other hand, the current best practise principles of the food banks' operations management inevitably leads to smarter approaches. Among representatives of these smart approaches can be mentioned dynamic shelf-life prediction or sequential resource allocation for more efficient services of food banks (e.g. Lien et al., 2014)

Table 1. Analysis of variance components in the surveyed area "New features in management of food banks' operations settled"

Factor	Effect	df	MS	dfE	MSE	F	p
{1}A	Random	1	592.01	2.16	1994.03	0.30	0.64
{2}B	Random	3	113.81	2.00	5872.00	0.02	1.00
1*2	Random	0	0.00	-	-	-	-

Own processed output from software Statistica 13

Main aspect of corporate social responsibility of food banks activities is regarded a reduction of food waste via a simultaneous helping to people in need. Thus, abilities of food banks in coordination among their respective stakeholders were researched using respective partial factor design in the conducted questionnaire survey (Table 2). There were identified two main factors as a common effect regarding the area of donors to food banks on the observed dependent variable, i. e. the amount of food distributed by food banks per year per the employee headcount. These are typical donors to foodbanks to be small agriculture businesses (significance level at 10 %) and a typical donors to be citizens (significance level at 5%), which are identified as significant variance components to the observed dependent variable. In other words, small agriculture businesses and citizens are not regular donors to foodbanks in the Czech Republic, mainly because of the coordination constraints. Therefore, the food collection campaigns are rather a seasonal one in comparison with regular supplies from retail stores chains and wholesales.

Table 2. Analysis of variance components in the surveyed area “Typical donors to food banks”

Factor	Effect	df	MS	dfE	MSE	F	p
{1} C	Random	3	1124.89	2.11	1894.35	0.59	0.67
{2} D	Random	2	4609.13	1.00	84.50	54.55	0.10
1*2	Random	0	0.00	-	-	-	-
{1} E	Random	2	526.38	3.05	2123.21	0.25	0.79
{2} F	Random	1	1536.00	3.00	3362.89	0.46	0.55
1*2	Random	0	0.00	-	-	-	-
{1} D	Random	2	3255.09	0.99	5662.85	0.57	0.68
{2} G	Random	1	5304.50	3.00	287.58	18.45	0.02
1*2	Random	0	0.00	-	-	-	-

Own processed output from software Statistica 13

An insight into the perception of foodbanks on food waste reduction within their own operations are provided using a partial factor design of researched elements, regarding food banks' management for preventing food waste and related incidence of food disposal (Table 3). The mutual interaction of both aforementioned factors are statistically significant variance components to the observed dependent variable of food distributed per year per the employee headcount. This finding implies on the need of staff workers to a continuous checking process of best before and time of consumption dates regarding the shelf-life of the foodstuff. Together with a lack of processes' automatization among food banks in the Czech Republic (response of foodbanks regarding a managerial information system features regarding shelf-life management reveals median value on the Likert scale to be 1 and standard deviation to be 1.36) it could be partially concluded as a source of partial inefficiency of food banks' operations in the Czech Republic.

Table 3. Analysis of variance components in the surveyed area “Food banks' management for preventing food waste”

Factor	Effect	df	MS	dfE	MSE	F	p
{1}H	Random	1	6508.93	1.01	4632.62	1.41	0.44
{2}I	Random	2	295.96	1.00	5631.60	0.05	0.95
1*2	Random	1	5250.08	2.00	163.25	32.16	0.03

Own processed output from software Statistica 13

Previous results arising from the analysis of variance using a factorial design in Table 3 can be further analysed via an existence of effect on observed variance within amount of food distributed by food banks, employing factor of voluntary work demandingness of food banks in the Czech Republic (Table 4). Both actual and future need for voluntary work were not identified as a distinguishing factor for foodstuff distribution by domestic food banks. Along with the identified persisting preference of domestic food banks in actual and future usage of voluntary work force (actual usage with the mean preference on the Likert scale at value 3 with standard deviation value 0.53, for future usage, respectively, is

the mean of preference on the Likert scale at value 4 with standard deviation value 1.40).

Table 4. Analysis of variance components in the surveyed area “Perception on voluntary work”

Factor	Effect	df	MS	dfE	MSE	F	p
{1}J	Random	2	643.31	3.99	2590.64	0.25	0.79
{2}I	Random	1	1498.13	3.00	3297.56	0.45	0.55
1*2	Random	0	0.00	-	-	-	-
{1}K	Random	1	836.01	0.54	119.79	6.98	0.37
{1}I	Random	2	210.46	3.00	3806.83	0.06	0.95
1*2	Random	0	0.00	-	-	-	-

Own processed output from software Statistica 13

An insight into the perception of foodbanks on influence of COVID-19 crisis within their operations is provided via a suitable factor design (Table 5). It can be concluded that despite a reported influence of COVID-19 crisis on operations of domestic food banks in this observed area (mean value of impact perception on the Likert scale at value 4 with standard deviation value 0.70), the COVID-19 crisis in 2020 cannot be regarded as a negative effect on their ability to distribute food to their clients. However, this finding has to be discussed in mutual interaction of assessed factor named satisfaction level with financial support to foodbanks by public budget (mean value 4 at the Likert type scale with standard deviation at value 0.93), proving a high level of foodbanks' satisfaction with current subsidies from public budget for their operations.

Table 5. Analysis of variance components in the surveyed area “COVID-19 crisis effect”

Factor	Effect	df	MS	dfE	MSE	F	p
{1}L	Random	2	1533.05	2.20	2402.83	0.64	0.60
{2}M	Random	2	4574.42	2.00	231.25	19.78	0.05
1*2	Random	0	0.00	-	-	-	-

Own processed output from software Statistica 13

Our findings regarding a perception of domestic food banks on their stable financial position have to be discussed within a persistent need to change the system of financing of food banks' operation in the Czech Republic. Ministry of Agriculture of the Czech Republic (2019) states a need for finding an alternative way for providing finance to sustain food banks' services in the Czech Republic, in order to anchor their role in a social responsibility concept of helping people in need by a simultaneous addition to food waste reduction.

An insight into the perception of foodbanks on a need for the information support of government authorities is provided via a respective factor design (Table 6).

Table 6. Analysis of variance components in the surveyed area “Need for the information support of government authorities”

Factor	Effect	df	MS	dfE	MSE	F	p
{1}O	Random	2	1033.05	1.24	5480.44	0.19	0.85
{2}N	Random	1	4332.00	1.00	5461.33	0.79	0.54
1*2	Random	1	5461.33	2.00	409.00	13.35	0.07
{1}O	Random	2	1033.05	2.53	2683.98	0.38	0.71
{1}P	Random	2	4359.38	1.00	1797.21	2.43	0.41
1*2	Random	1	1874.57	1.00	18.00	104.14	0.06

Own processed output from software Statistica 13

The employed factors, which were surveyed in the information support area to foodbanks revealed a following findings. Firstly, a statistically significant interaction both of the factor that reveals the satisfactory level with information support to food banks provided by government authorities together with the usage of facilities and approaches above the minimum requirements for food handling. Secondly, a positive influence of public private partnership cooperation between food banks and private business entities. Interaction within the both aforementioned factors' groups is statistically significant at a 10 % significance level. So, despite a reported lower satisfactory level of foodbanks on information support of foodbanks, there are prevailingly employed facilities and approaches above minimum required standards among domestic food banks, which are relevant components of observed variance in the amount of food distributed. This finding is consistent with results of other foreign studies on food banks' operating activities, which stress a need for rigorous information support to be a common factor of their efficient service provision (e.g. Barker and Russell, 2020; Parnham et al., 2020). Subsequently, the identified lower level of satisfaction within cooperation of food banks on the basis of public private partnership together with satisfaction level regarding the factor government information and consultation services of government authorities also allow to significantly distinguish the variance within amount of food distributed by food banks.

Conclusion

Food banks provide an inevitable assistance to people in material need through charitable and humanitarian organizations, acting as stakeholders of the respective regional food bank in the Czech Republic. The support of their activities by the government authorities is currently perceived as indispensable for food banks' sustainable operations. These are not only subsidies for the operations of food banks itself, but also for investments related to the possibility to sustain and expand their services. Although the current state of financial support for the provision of food bank activities is perceived positively by domestic food banks, there is an existing effort to change the scheme of financing food banks in the Czech Republic. Consequently, despite a nowadays perceived stable financial situation thanks to subsidies from public budgets, domestic food

banks rely on voluntary workforce, and this voluntary work is also regarded as inevitable for future services by food banks in the Czech Republic. New challenges for food banks brought the COVID-19 crisis. The primary questionnaire survey carried out among food banks pointed to the need to ensure non-financial support for the activities of food banks in the field of public awareness and advisory support for operational activities. This fact is consistent with a need to catch up on best practise in the provision of food banks' services that is inevitably bound with introduction of innovations to their activities and related services. Presented article is a partial output of an ongoing research focused on the identification of current trends and best practices of sustainable operations of food banks. Future research on activities and current trends in food banks' services is going to be focused more on stakeholders of food banks, specifically within Central and Eastern European Countries, where empirical studies are not so common, in order to identify intentions and other important aspects to be reflected towards a sustainable development and service of food banks networks.

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