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Financial and strategic management analysis of Farmer Foodshare Inc., a nonprofit food organization[1]

CASE STUDY

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Abstract

Following best financial management practices that increase the likelihood of long-term economic sustainability is likely not the primary concern of nonprofit organizations. Nonprofits focus their attention primarily on achieving mission-driven goals. However, research reports that balancing financial sustainability with an organizational mission is a core challenge for most nonprofits, particularly for organizations serving low-income households. This article provides a case study of Farmer Foodshare Inc., a US nonprofit social enterprise in the food sector working with financially challenged family farms, food-insecure households, and low-income elementary school students. This case study was prepared with primary data collected during interviews and secondary sources. In the summer of 2019, the management team of Farmer Foodshare needed to revisit the organization's operating model. Management in this organization was concerned about whether strategic decisions, such as discontinuing or re-designing some programs, should be made. The case provides firm and industry data to evaluate Farmer Foodshare's economic sustainability. Enterprise economic sustainability can be assessed by combining an inherent financial analysis with a strategic management analysis. The strategic management analysis, which complements the financial analysis, can be performed with an organizational strategic self-assessment framework by answering questions related to the organization's mission, results, and plans.

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A teaching note has been prepared for this case study. Interested instructors at educational institutions may request the teaching note by contacting the author or IFAMA.

[1] This case study was prepared solely to provide material for class discussion. The authors do not intend to illustrate effective or ineffective handling of a managerial situation. This article is one outcome of an interdisciplinary research project funded by the Southern Sustainable Agriculture Research and Education.

1. Introduction

In 2019, Farmer Foodshare Inc. (Farmer Foodshare hereafter), a nonprofit located in Durham, North Carolina, was a growing organization. Farmer Foodshare's continuous growth had created market opportunities for financially challenged family farms – from whom the organization purchased food products – and had increased access to local, fresh and nutritious foods for low-income, food-insecure families in North Carolina. However, it had become challenging to manage a fast-growing organization with the human and financial resources Farmer Foodshare had. Total revenue had grown every year since 2014, but expenses overgrew in recent years, causing financial losses. This situation raised concerns regarding the long-term economic sustainability of the nonprofit food organization.

To fulfill its mission-oriented goals of helping financially challenged family farms and low-income food-insecure households, Farmer Foodshare ran four programs, but only one generated sales revenue. Further, the sales revenue-generating program operated with losses partly because the organization paid its supplying farmers fair prices that allowed them to cover costs and generate a profit. To cover total operating expenses and continue operating, Farmer Foodshare relied on grants, donations, and similar streams of revenue. While economically challenging to sustain, this modus operandi is typical in nonprofit food organizations.

By mid-2019, Farmer Foodshare management expressed they intended to maintain their mission. However, it was unclear whether Farmer Foodshare's financial condition was strong enough to continue growing or supporting its four current programs without growth. A weak firm's financial situation might require adjustments or abandonment of some programs. A systematic financial analysis would provide an economic assessment for this organization. A strategic management analysis might also help the organization respond to whether the four programs aligned with Farmer Foodshare's mission and guide potential changes. This case study provides information needed to conduct a financial analysis and a strategic management analysis and recommend an action plan for Farmer Foodshare.

2. Farmer Foodshare

Farmer Foodshare was a nonprofit, public charity organization based in Durham, NC, with the mission to make fresh, local food available to everyone in the community and to ensure that the farmers growing it make a healthy living. Farmer Foodshare's logo, with a shovel and a fork, and the words 'fresh, local, food for all,' expressed its mission (Figure 1). Founded in 2009 by farmers and shoppers at the Carrboro Farmers' Market, Farmer Foodshare aimed to fill gaps in the local food system (US Fed News, 2014). More specifically, Farmer Foodshare sought to facilitate market access to financially challenged farmers and provide healthy food to low-income food-insecure households.

By mid-2019, Farmer Foodshare was governed by a board of directors that included individuals affiliated with BlueCross BlueShield of North Carolina, Duke University, North Carolina Board of Dietetics & Nutrition, and the University of North Carolina, among others (Farmer Foodshare, 2018). The organization operated four programs, which are discussed next.

2.1 The wholesale market program

In 2019, Farmer Foodshare purchased agricultural products from small and mid-scale farmers and aggregated, packaged, and distributed this locally grown produce through its wholesale market. To accomplish the goal of helping hard-working families to succeed in farming, the organization purchased food products mainly from financially challenged farmers: beginning farmers, small and medium-sized farmers, female farmers, and farmers who are black, indigenous, and people of color.

Farmer Foodshare maintained commercial relationships with a group of food buyers, including schools, grocery stores, nonprofit agencies, and universities. Buying universities included Duke University and the

Figure 1. Farmer Foodshare logo (https://www.farmerfoodshare.org/).

University of North Carolina at Chapel Hill through Aramark. On a few occasions, Farmer Foodshare secured grant funding to buy and resell food to hunger relief organizations targeting food-insecure households. However, as discussed in the next section, Farmer Foodshare targeted these households mainly by donating fresh produce to food pantries and distribution hubs.

Farmer Foodshare's gross profit margin was low because prices paid to farmers were set relatively high compared to other market outlets (e.g. wholesale) to benefit farmers with fair prices. However, Farmer Foodshare's management believed that gross margins would need to increase in the future to make the organization economically sustainable because operating this business model was expensive. During 2018, for instance, Farmer Foodshare's wholesale market program revenue totaled $775,988, and running this program cost $944,539 before management, general, and fundraising expenses. Thus, by operating with a low gross margin, Farmer Foodshare paid farmers fair prices and sold their goods below operating costs, putting the organization's economic sustainability at risk. Tables 1 and 2 provide historical income statement and balance sheet data.

It was estimated that farmers made around 20 to 25% operating profit margin on sales through Farmer Foodshare. Operating profit margin varied depending on the farm business' cost structure, yields, and revenue. Farmer Foodshare bought produce from around 60 farmers every year. In 2018, two farms supplied 19% of Farmer Foodshare's total sales. These farms produced high-value products, mainly fruits. Farmer Foodshare's portfolio of food products purchased and sold in 2018 included fresh produce (67%), processed produce (10%), dairy (19%), eggs (2%), and others (e.g. grains, honey, and jam) (2%).

Farmer Foodshare planned to continue supporting farmers by increasing purchased volume. However, this effort was economically challenging because the wholesale market program operated with a negative operating margin, or equivalently, with a food cost to food revenue ratio above 1.0.[2] For each dollar of food revenue in 2018, Farmer Foodshare spent $1.22 (e.g. $944,539 wholesale market program expenses divided by $775,988 wholesale market program revenues, Table 1) before paying management and general expenses. In 2017, the food cost to food revenue ratio was higher, at 1.36. Farmer Foodshare relied on contributions, gifts, grants, or accumulated cash from previous accounting periods to cover those negative margins. However, grant funds in

[2] As shown in Table 1, only the wholesale market program generated sales revenues. Thus, Farmer Foodshare's operating margin is calculated as follows: (sales revenue wholesale program – cost & expenses allocated to the wholesale program) / sales revenue wholesale program. Equivalently, the operating margin can be expressed in terms of the food cost to food revenue ratio (e.g. cost and expenses allocated to the wholesale program/ sales revenue wholesale program). Formulas of financial ratios are provided in Appendix 1 of the Supplementary Material.

Table 1. Historical income statement data for Farmer Foodshare ($).[1]

	2018	2017	2016	2015	2014	2013
Total revenue	1,446,008	932,892	718,988	705,036	447,100	413,403
Grants and other[2]	641,929	435,743	498,612	536,242	336,114	369,845
Government	81,714	68,154	53,243	44,709	6,000	0
Non-government	560,215	367,589	445,369	491,533	330,114	369,845
Wholesale market[3]	775,988	477,916	209,060	151,158	110,643	43,541
Investment income	7,555	7,657	5,623	3,608	106	17
Other income	20,536	11,576	5,693	14,028	237	0
Total cost and expenses	1,393,091	1,075,239	752,792	468,518	393,273	213,151
Cost allocated to programs	1,188,017	890,339	632,069	391,392	319,576	159,429
Wholesale market[4]	944,539	649,214	522,801	261,322	217,671	85,714
Donation stations	138,039	173,608	84,540	102,798	82,532	44,892
Community sites	47,344	40,387				
Food ambassadors	58,095	27,130	24,728	27,272		
Other					19,373	28,823
Management[5]	142,432	118,586	88,909	57,938	54,821	38,634
Fundraising expenses	62,642	66,314	31,814	19,188	18,876	15,088
Revenue surplus (deficit)[6]	52,917	(142,347)	(33,804)	236,518	53,827	200,252

[1] Assembled by using the information in Farmer Foodshare Inc.'s 990 forms filed with the Internal Revenue Service. Available at: https://projects.propublica.org/nonprofits/organizations/273717889.

[2] This includes income from contributions, gifts, grants, and similar sources.

[3] Refers to sales revenues from the wholesale market program.

[4] Refers to costs and expenses allocated to the wholesale market program.

[5] It includes management and general expenses.

[6] Revenue surplus (deficit) is also referred to as profit (losses).

Table 2. Historical balance sheet data for Farmer Foodshare ($).[1]

	2018	2017	2016	2015	2014	2013
Cash[2]	105,627	168,487	237,530	292,465	406,145	362,664
Pledges and grants receivable	45,000	13,150	40,000	75,000	8,990	20,916
Accounts receivable	114,926	34,811	77,018	33,030		
Other current assets	2,500	2,500				
Net PP&E[3]	13,321	18,652	27,362	38,371	42,788	31,426
Financial investments[4]	290,771	288,650	279,632	246,303		
Other long-term assets			4,500	6,923		
Total assets	572,145	526,250	666,042	692,092	457,923	415,006
Accounts payable	25,344	22,935	16,833	8,421	11,254	22,161
Other current liabilities			4,500	6,923		
Total liabilities	25,344	22,935	21,333	15,344	11,254	22,161
Unrestricted net assets	404,301	438,315	504,709	457,181	440,003	306,595
Temporarily restricted net assets	142,500	65,000	140,000	219,567	6,666	86,250
Total net assets or fund balances	546,801	503,315	644,709	676,748	446,669	392,845

[1] Assembled by authors using the information in Farmer Foodshare Inc.'s 990 forms filed with the Internal Revenue Service. Available at: https://projects.propublica.org/nonprofits/organizations/273717889.

[2] This includes cash, savings, and temporary investments.

[3] Property, plant, and equipment.

[4] Financial investments include publicly traded securities.

the US were awarded competitively, and it was becoming challenging to obtain them. In addition, increasing purchased volume from farmers would require additional human resources. In 2019, Farmer Foodshare had about 15 employees and anticipated no hires soon. Farmer Foodshare employees had several responsibilities and believed the organization was probably running more programs than needed to fulfill its mission.

In trying to make the wholesale market program economically sustainable, Farmer Foodshare was intentionally improving this program's gross margin. For the first time, Farmer Foodshare reported a positive gross margin in 2018 (although it still reported a negative operating margin, as discussed above). Table 3 shows that at $775,988, sales revenue was above the cost of food (cost of goods sold) at $702,275 in 2018. In previous years, food costs were above sales revenues, indicating negative gross margins. Table 3 also shows that the wholesale program's sales revenues represented about one-half of Farmer Foodshare's total revenue.

2.2 The donation stations program at farmer markets

In 2019, Farmer Foodshare provided food-insecure individuals access to healthy food through the donation stations program.[3] This program was operated mainly with the help of volunteers, who encouraged farmers market shoppers to donate cash. Volunteers used cash donations to purchase fresh produce from farmers that collaborated with Farmer Foodshare. Food purchased with donated money and unsold produce donated by farmers were given to local hunger relief agencies supporting food-insecure individuals.

Farmer Foodshare volunteers contributed about 5,000 hours of their time to help in 38 donation stations at farmers markets. More than 67,000 pounds of fresh produce were collected and purchased in 2017, feeding around 21,500 individuals.[4] However, despite this high number of donated working hours, Farmer Foodshare sometimes experienced problems running this program because of labor shortages. The donation stations program was a labor-intensive operation requiring many staff work hours during the week. In contrast, volunteers were able to help during the weekends mainly. Farmer Foodshare's management team believed that having corporations sponsoring this program might mitigate this problem because the organization would obtain additional funding to pay for labor. However, as of 2019, Farmer Foodshare did not have a strategy to attract corporations sponsoring this program.

The operating cost of coordinating the efforts in the donation stations program was covered with grant funding and cash donations. In 2018, expenses for the donation stations program totaled $138,039, representing 12% of the organization's total direct expenses, excluding management and general expenses (Table 1).

Table 3. Farmer Foodshare's selected items.[1]

	2018	2017	2016	2015	2014	2013
Revenue FF	1,446,008	932,892	718,988	705,036	447,100	413,403
Sales revenue WMP	775,988	477,916	209,060	151,158	110,643	43,541
Cost of food WMP	702,275	491,542	325,022	161,103	131,337	46,736
Revenue FF	100%	100%	100%	100%	100%	100%
Contributions FF[2]	44%	47%	69%	76%	75%	89%
Sales revenue WMP	54%	51%	29%	21%	25%	11%
Other revenue FF	2%	2%	2%	3%	0%	0%
Number of volunteers	263	234	350	150	130	100

[1] FF = farmer foodshare; WMP = wholesale market program.

[2] Includes contributions, gifts, grants, and similar.

[3] Food-insecure individuals are those living in fresh food deserts, not knowing how to prepare healthy fresh food, not having enough income to purchase healthy fresh food, consuming pantry staples like canned and boxed foods mainly, or having health issues because of their diet.

[4] Farmer Foodshare Impacts Report, 2017 (Farmer Foodshare, 2018).

This program was run as a break-even, covering the cost of goods, and did not generate revenue for Farmer Foodshare other than through operations grants.

2.3 The community sites program

The community sites program was the newest in Farmer Foodshare's portfolio. This program was launched in 2017 with funding from a three-year grant by the United States Department of Agriculture (USDA). Farmer Foodshare needed to evaluate whether this program contributed to the organization's mission and whether Farmer Foodshare had the human and financial resources to continue running it after the expiration of the grant.

This program connected community partners serving food-insecure families and farmers. Farmer Foodshare administrated produce-buying clubs that operated in sites of diverse community partners. One community partner, for example, was Iglesia Hispana Emanuel, a Hispanic church pantry. Church members could buy healthy local products from Farmer Foodshare at reduced prices and pay with Supplemental Nutrition Assistance Program (SNAP) or Women, Infant, and Children (WIC) food stamps.

Each community site project was tailored according to inputs from partners and using the partners' assets and unique needs. This made the community sites program difficult to standardize and operate. Nonetheless, the food buying mechanism was somehow standardized. Like in the community-supported agriculture (CSA) model,[5] buyers (i.e. shareholders) bought shares, a basket of food products, during the harvesting season. The traditional CSA model required shareholders to buy shares for the full harvest season and pay in advance. One advantage of Farmer Foodshare community sites over traditional CSAs was that food-insecure buyers could purchase food packages weekly during the season rather than in advance and at reduced prices if they qualified for SNAP benefits. Another advantage was that the price of each share (basket of produce), $18 and $12 for low-income qualifying individuals, was below what it would cost to buy those foods at grocery stores. Some shareholders in these communities were also encouraged to donate shares to households that could not afford them. Operating this program cost $47,344 in 2018 (Table 1).

2.4 The food ambassadors program

In 2019, the food ambassadors was an educational program operated in low-income elementary schools supporting local food education. This program engaged volunteers, cafeteria managers, and students. In 2017, more than 1000 volunteer hours were dedicated to running fruit and vegetable taste tests and nutrition and food system educational programming engaging more than 9,000 students. This program focused on school districts in northeastern North Carolina with low-income students experiencing high levels of food insecurity. In addition to providing students with healthy foods through the school cafeterias, Farmer Foodshare coordinated activities that showed students how to prepare and store fruits and vegetables.

Operating the food ambassadors program cost $58,095 in 2018. Like the donation stations program, the food ambassadors program was a labor-intensive program to run. Farmer Foodshare's staff members and more than 200 volunteers were insufficient to efficiently coordinate and manage the food ambassadors and donation station programs. It was estimated that volunteers contributed roughly 6,000 hours of work, with 5,000 hours dedicated to the donation stations and 1000 to the food ambassadors program. Table 3 shows the number of volunteers collaborating with Farmer Foodshare over time.

[5] Additional information on this program is available at: https://www.nal.usda.gov/legacy/afsic/community-supported-agriculture

3. Food hubs and local foods

The USDA defined food hubs as businesses or organizations that actively aggregate, distribute, and market food products mainly from local and regional producers (Barham *et al.*, 2012). Two hundred twenty-six food hubs across the United States were listed in the USDA food hub directory (USDA AMS, 2022).

Traditionally, the markets targeted by food hubs included wholesale customers such as institutions, restaurants, and grocery stores (Matson *et al.*, 2013). However, some food hubs focused on direct-to-consumer market sales (Bielaczyc *et al.*, 2020). Additionally, food hubs facilitated local consumers' access to farm products produced by local producers. Farmer Foodshare could be considered a food hub with a wholesale business model given its mission and the activities performed by this organization through its wholesale market program.

Furthermore, some food hubs have added education, environmental, and social outcomes to their mission. Examples of social outcomes include the fair compensation of farmers and farm workers and facilitating local fresh food access to low-income and food-insecure households (Bielaczyc *et al.,* 2020; Matson *et al.*, 2013). As discussed in the previous section, in 2019, Farmer Foodshare was an example of those food hubs.

According to the 2019 national food hub survey (NFHS) report (Bielaczyc *et al.*, 2020), about half of US food hubs were located in low-income and low-food access communities, and sales to low-income customers or businesses in low-income areas represented about 20% or less of total sales. A study on Michigan food hubs indicated that a small percentage of food hubs were committed to addressing social missions such as equitable food access (Hoey *et al.*, 2018). The Michigan food hubs study suggested that those food hubs committed to increasing healthy food access to low-income households were newer, highly dependent on external funding, and more likely to have nonprofit tax status. This study also suggested that operational constraints and financial viability prevented food hubs from focusing on equitable food access.

Challenges food hubs perceived they would encounter moving forward included balancing supply and demand, managing growth, and negotiating prices that meet the needs of both producers and customers. Food hubs also anticipated that demand for products and services would continue to grow, and therefore, the competition for customers will increase over the next few years. More than three-quarters of the 2019 NFHS respondents considered distributors as competition, and two-thirds of these food hubs perceived farmers selling wholesale as future competition (Bielaczyc *et al.*, 2020).

4. Economic sustainability of nonprofits

Following best financial management practices that increase the likelihood of long-term economic sustainability is likely not the primary concern of nonprofit organizations. Nonprofits focus their attention primarily on achieving mission-driven social rather than profit-oriented goals. However, research suggested that balancing financial sustainability with an organizational mission was a core challenge for most nonprofits (Sontag-Padilla *et al.*, 2012). The economic difficulties nonprofits faced were more salient in organizations serving financially challenged customers in rural areas, like Farmer Foodshare. These organizations tended to rely more on grants and donations than membership fees or sales revenue.

By mid-2019, Farmer Foodshare management expressed they intended to maintain their mission. However, management recognized they needed to be realistic about what it would take to run an economically sustainable organization. Without a solid financial condition, a nonprofit might not be sustainable in the long term. Long-term economic sustainability for a nonprofit was related to its ability or flexibility to maintain or expand services within the organization while developing resilience to occasional economic shocks in the short-term (Sontag-Padilla *et al.*, 2012).

Beaton (2021) analyzed three nonprofit case studies finding that management in these organizations conceptualized achieving profit margins – and following business-like practices in general – as a means to complete the organizations' social missions. According to management, the Farmer Foodshare wholesale market program had the potential to continue growing. Management recognized the organization had the operating capacity to grow but limited investment capacity. Management stated that another challenge of growing would be to generate high profit margins to sustain Farmer Foodshare and food supplying farmers while helping food-insecure households. Farmer Foodshare's balance sheet shows that while the organization had relatively high accumulated cash reserves, these have been decreasing lately due to financial losses (Table 2).

5. Financials of food hubs

The 2019 NFHS (Bielaczyc *et al.*, 2020) and a benchmark survey conducted by the Wallace Center (Wallace Center, 2018) were current relevant sources of financial information on US food hubs. While these surveys did not focus on nonprofits exclusively, nonprofit food organizations like Farmer Foodshare could use financial metrics from these surveys as benchmarks when assessing their financial performance.

5.1 The national food hub survey

The NFHS was considered the best source of national longitudinal data for US food hubs (Bielaczyc *et al.*, 2020). The 2019 NFHS report summarized selected financial data from about a fifth (98 total food hubs) of all active food hubs in the US. Since 2012, when the first NFHS was conducted (Fischer *et al.*, 2013), food hubs have demonstrated longevity and financial viability (Bielaczyc *et al.*, 2020). The 2019 survey results suggested that the food hubs that have been in business for more than five years have increased since 2012. About 51% of food hubs that responded to the food hub survey indicated they have been in business for six years or more, and the average length food hubs have been in business is 9.6 years (Bielaczyc *et al.*, 2020).

About 40% of food hubs in the 2019 survey were nonprofit organizations, while 36% claimed to have a for-profit tax status. Regarding business model, 39% of respondents to the food hub survey stated their primary business model was wholesale. In comparison, about 32% indicated having a hybrid model, distributing food both wholesale and directly to consumers. The rest of the food hubs indicated having a direct-to-consumer business model only (Bielaczyc *et al.*, 2020).

The median food hub total revenue reported by food hubs in the 2019 survey was \$495,000, and the median sales revenue was \$300,000 (Table 4). Most (66%) food hubs reported \$1 million or lower total revenue.[6] The median total revenue of nonprofit food hubs was \$362,000, about half of the revenue reported by for-profit food hubs. Around 46% of the food hubs responding to the survey reported non-sales revenue, including income from foundations, federal, or state agencies.

According to the 2019 NFHS, food hubs reported median operating expenses of \$522,241. Food product purchases represented 60% of total expenses for those food hubs that reported costs in that category. Payroll expenses accounted for about 24% of total operating expenses (Table 4). This survey indicates that nearly two-thirds of US food hubs had operating expenses to revenue ratio (OER) ≤1.00, which means food hubs were breaking even or had a positive profit margin. The median OER for US food hubs was 0.96, according to the 2019 survey (Table 4). Nonprofit food hubs reported a median OER equal to 1.00 – ranging from 0.51 to 1.21 – compared to for-profit food hubs reporting a median of 0.96. Wholesale food hubs' median OER was 0.93, and hybrid food hubs' median OER was 1.00. In general, operating expenses to revenue ratios have been relatively stable over time, according to three recent survey editions (Table 4). Table 4 also provides other selected results from the NFHS.

[6] We focus the discussion on median rather than average values, given that variability of reported financial values across food hubs in the NFHS is very high. For instance, the average food hub revenue among the 73 respondents to the food hub survey who responded to the question related to revenue was \$2.8 million, ranging from -\$3,000 to \$100 million. Average sales revenue was reported at \$2.4 million per hub, with median sales revenue of \$300,000.

Table 4. Selected results from the national food hub survey.[1,2]

	2019	2017	2015
Total revenue ($ median)	495,000	489,000	351,000
Sales revenue ($ median)	300,000	NA	NA
Operating expenses ($ median)	522,241	378,000	238,000
Food purchases	60%	53%	59%
Employee salary and benefits	24%	34%	24%
Other	16%	13%	17%
Operating expenses to revenue (median)	0.96	0.97	0.94
Nonprofits	1.00	1.01	0.90
For-profits	0.96	0.97	0.92
Wholesale	0.93	0.93	0.94
Hybrid	1.00	0.99	0.92
Direct to consumer	0.96	0.92	0.92
Did not apply for long-term debt capital	54%	NA	NA
Applied and received long-term debt capital	45%	NA	NA
Denied long-term debt capital	1%	NA	NA
Did not apply for short-term loans	63%	NA	NA
Had access to short-term loans	37%	NA	NA
Food hubs located in low-income and low-access communities	51%	NA	NA
Sales to low-income customers or low-income areas	37%	NA	NA
Community plays an active role in the food hub's decision-making process	35%	NA	NA
Track progress toward non-financial mission goals	42%	42%	NA

[1] Assembled from different reports available at: https://www.canr.msu.edu/national_food_hub_survey/

[2] NA = not available.

The NFHS provided relevant information that individual nonprofit food organizations, such as Farmer Foodshare, could use as a benchmark for financial evaluation. However, this survey focused almost exclusively on operating margin and income statement-related items of food hubs and lacked balance sheet-related financial ratios.[7]

5.2 The Wallace Center benchmark study

The benchmark study by the Wallace Center contained responses from 50 food hubs across the country (Wallace Center, 2018). About 40% of food hubs in this survey reported being nonprofit organizations. Unlike the NFHS report, this study also reported balance sheet-related financial ratios.

Food hubs in this survey reported a gross margin of 7.1% and a negative net income margin of -1.4%.[8] Thus, according to the Wallace Center study, benchmark food hubs generated economic losses (even after considering revenue from grants and similar contributions) but were close to breakeven, consistent with NFHS results. Overall, profit margins for this group of nonprofit and for-profit food hubs are very low compared to profit margins in a typical publicly traded agribusiness firm (Trejo-Pech *et al.*, 2016).

Regarding liquidity, the current ratio for food hubs in the benchmark Wallace Center survey was equal to 1.8. As a percentage of annual expenses, working capital (i.e. current assets minus current liabilities) was

[7] To the best of our knowledge, no known research or publication provides a comprehensive list of financial ratio benchmarks for nonprofit food organizations. In this case study, we provide financial statement data and financial ratios from nonprofit and food nonprofit organizations that we gather from several research or extension publications. This information could guide financial performance evaluation of nonprofits.

[8] The Wallace Center reported weighted average financial ratios.

5.0%. Food hubs reported a negative EBITDA margin equal to -2.0%.[9] This benchmark study also noted that the equity to total asset ratio for benchmark food hubs was, on average, 37%, suggesting that leverage was relatively high for these organizations. Farmer Foodshare's balance sheet shows that this organization had no debt by the end of 2018 (Table 2). The absence of debt could cushion potential debt funding when organizations decide to grow or when they face short-term financial shocks. Further, Farmer Foodshare had accumulated over time cash balances the organization invested in financial securities (e.g. publicly traded securities, in Farmer Foodshare's balance sheet).

Paying higher prices for products benefits farmers, which is one of the missions of food hubs. Nonetheless, according to the Wallace Center benchmark study, the ability to fulfilling the mission of a food hub related to providing fair prices to farmers should not get in the way of building an economically sustainable business (Wallace Center, 2018). In general, generating a high enough profit margin to remain financially viable while paying fair food prices to supplying farmers to fulfill a social mission was a necessary trade-off any nonprofit food organization like Farmer Foodshare should continuously evaluate.

Nonprofit food hubs can operate at a loss due to their reliance on grants, contributions, and similar streams of revenue, which allows nonprofits to cover the costs of programs that are not designated to generate revenue but rather to fulfill a mission-driven cause and cover for some of the losses (Wallace Center, 2018). These funds are essential to running mission-driven programs and critical for achieving financial viability (Matson *et al.*, 2016). However, these types of revenues represent a risk for sustaining mission-driven programs in the long run because these funds can get cut at any point in time.

6. Other financial benchmarks for nonprofits

Financial ratio benchmarks for food hubs, available from the two survey reports discussed above, were limited to profit margin, liquidity, and leverage financial ratio categories. Financial ratios in other categories, including profitability, efficiency management, and solvency, were unavailable for food hubs. However, the financial economics literature provided financial ratios for US nonprofit organizations in these categories. While not specific to food organizations, these financial metrics may complement the benchmarks available for food hubs when evaluating the financial performance of nonprofit food organizations.

Nonprofits do not pay income taxes or dividends because they technically do not have owners. However, nonprofits need to remain profitable to continue supporting their social mission. Profitability in nonprofits could be evaluated with the return on assets ratio (ROA). Bowman (2011) proposed 3.4% as a benchmark or status quo ROA for nonprofits. Bowman (2011) argued that nonprofits' profitability should be at least large enough for organizations to replace their assets as they wear out or become obsolete. The 3.4% ROA benchmark proposed by Bowman (2011) is the historical inflation rate from 1920 to 2006 in the US.[10]

Tuckman and Chang (1991) included the asset turnover ratio (ATO), a proxy for asset efficiency management, in a study evaluating the economic vulnerability of US nonprofits. On average, ATO was 1.02 for the whole sample of nonprofits assessed, while nonprofits at severe risk of financial vulnerability had ATO equal to 0.14. The equity to assets ratio (e.g. equity ratio), another balance sheet ratio reported as relevant for nonprofits, has been reported to be, on average, 0.72 for US nonprofit organizations (Bowman, 2011).

Financial ratios unique to nonprofits were the fund mix and program emphasis ratios (Francois, 2015). The fund mix ratio, calculated by dividing unrestricted funds by total assets, is a solvency ratio. The fund mix ratio recognizes that nonprofits' fund balance has two components – unrestricted and restricted funds – and only unrestricted funds can be spent at the discretion of management and the organization's board. While

[9] EBITDA margin is earnings before interest, taxes, depreciation, and amortization divided by total revenue.
[10] Profitability ratios commonly used in for-profits, such as the return on equity and the return on investment (Trejo-Pech *et al.*, 2015) might be irrelevant for nonprofits because they technically do not have owners.

Francois (2015) did not suggest a benchmark value for this ratio, the higher the fund mix ratio, the better the organization's financial flexibility.

The program emphasis ratio has been suggested to evaluate the organization's ability to manage the resources and programs to fulfill the mission and vision of nonprofits (e.g. effectiveness). The program emphasis ratio is calculated by dividing management and fundraising expenses by revenue. There was agreement among stakeholders that nonprofit organizations should spend at least 65% of their resources on program support expenditures (Francois, 2015).

7. Strategic management analysis

To address Farmer Foodshare management concerns in 2019 (discussed in the introduction), a financial performance evaluation could be conducted with traditional tools like financial ratios, financial statement items trends, and benchmark analysis (Francois, 2015). A solid financial condition may or may not imply that Farmer Foodshare should continue supporting its four current programs. A weak financial situation would likely call for adjustments or the abandonment of some programs. A strategic management analysis might help the organization respond to whether the four programs aligned with Farmer Foodshare's mission and guide potential changes. Drucker's (2008) organizational strategic self-assessment framework is a tool that could be used for strategic management analysis in nonprofits. Drucker's (2008) framework consisted of responding to five questions focused on the organization's mission, results, and plans: (1) what is our mission; (2) who is our customer?; (3) what does the customer value?; (4) what are our results?; and (5) what are our plans?

Drucker's framework starts by asking what the organization's mission is and whether this mission needs to be revisited based on the organization's aspirations or changing circumstances. Farmer Foodshare management expressed in 2019 that the organization wanted to keep its mission without changes. Regarding the second question (who is our customer?), Drucker's framework suggests nonprofits identify groups of primary and supporting customers. For example, Farmer Foodshare's primary customers included financially challenged farmers and other groups whose lives were most impacted by the organization's work. Supporting customers included volunteers, employees, and funders.

Identifying all customer groups and the specific programs that served these customers was essential to detect potential redundancies – for example, two programs serving the same group of customers – and whether Farmer Foodshare had enough resources to continue serving these customers. Responding to this second question may help organizations identify if they need to add groups of customers or stop serving some customers. Nonprofits may give up serving specific customers if the organization lacks economic resources or competencies, if the customer's needs do not fit the organization's mission, or if other organizations can help customers more effectively.

In trying to respond to the third question (what does the customer value?), Farmer Foodshare should identify what the organization does that fills a specific need, provides satisfaction or offers a benefit to primary and supporting customers that they do not receive from another source. A financial analysis could help respond to the fourth question (what are our results?). Food hub benchmarks may help Farmer Foodshare evaluate its results and identify what activities or programs contribute to achieving these results. Results can also be assessed qualitatively, for instance, in terms of how well satisfied or dissatisfied primary and supporting customers are.

Drucker's framework ends with a potential action plan. Responses to the previous four questions should help nonprofits respond to the last question (what are our plans?) in Drucker's framework. More specific or guiding questions for an action plan include: What have we learned from the analysis and what do we recommend? Where should the organization focus its efforts? What, if anything, should be done differently?

For Farmer Foodshare, the overall analysis should respond, for instance, to whether its programs are aligned or not with the organization's mission, whether some programs should be reinforced or others abandoned given the organization's resources and results, and in general, what specific actions are likely to improve the economic sustainability of this organization.

8. Follow-up

The authors contacted Farmer Foodshare in fall 2021. Management confirmed that, indeed, Farmer Foodshare had made some strategic changes in 2019 and 2020. Some programs were adjusted, and others were discontinued. Students working on this case are expected to recommend informed decisions based on a financial and strategic management analysis, as outlined in this article.

In 2021, Farmer Foodshare still ran the wholesale market program. Sales revenues from this program had more than doubled recently, growing from $775,988 in 2018 to $1,032,459 in 2019 and $1,687,620 in 2020. While Farmer Foodshare improved profit margins to sustain the organization economically, the organization reported financial losses in 2019 and 2020. However, losses in 2019 were lower than in 2017, and losses in 2020 were very low, close to break-even. Losses in 2020 were most likely related to increased operating costs due to the COVID pandemic.

The organization is currently collecting information from farmers regarding their farm business characteristics to evaluate creating a new program to help farmers access funds to expand and improve their farm business. If Farmer Foodshare can help these farmers improve their farm business, those farmers will be less dependent on relatively high prices paid by Farmer Foodshare. This, in turn, should also increase the likelihood of financial sustainability of Farmer Foodshare and affiliated farmers.

Supplementary material

Supplementary material can be found online at https://doi.org/10.22434/IFAMR2022.0012

Appendix 1. Proposed financial ratios for analysis.

Conflict of interest

The authors declare that there is no conflict of interest.

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