

**Financial Sustainability of Nonprofit Organizations Covering Multiple Goals of the Food
Justice Mission: The Case of New Roots, Inc.**

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1 **Financial Sustainability of Nonprofit Organizations Covering Multiple Goals of the Food**
2 **Justice Mission: The Case of New Roots, Inc.**

3
4 **Abstract**

5
6 Using semi-structured interviews, financial records, and secondary information, this study
7 evaluates the financial sustainability of New Roots Inc., a nonprofit organization aiming to
8 address the food justice mission, as defined in this study. The results presented in this study show
9 achievements and challenges of New Roots Inc. in managing activities that fulfill its mission.
10 With an exception in 2018, the organization addressed food justice mission goals and remained
11 financially healthy from 2014 to 2019. Revenue volatility and human capital requirement are
12 identified as challenges that could put at risk the long-term financial viability of New Roots Inc.

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14 **Keywords:** food justice, financial sustainability, nonprofit organizations
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25

26 **INTRODUCTION**

27 Food justice concerns fairness and equity in the food economy. In the last two decades, the
28 number of studies on food justice has soared. There are many ways of defining what constitutes
29 food justice and what a “just food” economy looks like (Tanaka, 2020). Foci of food justice work
30 can include sustainability, food security, land access, gender equity, racial justice, fair trade, and
31 fair labor, to name a few (e.g., see Alkon, 2012; Alkon and Agyeman, 2011; Allen, 2004;
32 Holmes, 2013; Jaffee, 2007). In the context of local food systems, and for the purpose of this
33 study, we define food justice as sharing risks and benefits among participants of a given food
34 system, with an emphasis on rectifying historical inequalities and structural exclusions (Gottlieb
35 and Joshi, 2010). In order to empirically observe how the mission of food justice is translated
36 into actual business activities, we operationalize food justice work as pursuing the food justice
37 mission through three goals including: (1) facilitating low-income food-insecure households’
38 access to healthy foods (*food access*), (2) connecting small and medium-sized, limited-resource
39 farms to markets (*market access*), and (3) supporting community engagement that promotes and
40 supports sustainable food systems and healthy eating (*community engagement*).

41

42 Food justice organizations’ performance has not been evaluated nationally in the United States.
43 Research associated with food justice organizations has been comprised mainly of case studies of
44 specific organizations (Hislop, 2015). Nonetheless, there have been extensive analyses of
45 organizations that address at least one of the goals of the food justice mission, such as food hubs

46 and organizations and businesses from the community food services sector (Bielaczyc et al.,
47 2020; Roth, 2019; Wallace Center, 2018).

48
49 Food hubs are defined as businesses and organizations that aggregate, distribute, and market
50 food products mainly from local and regional producers, aiming to strengthen the ability of these
51 producers to reach wholesale, retail and institutional markets (Barham et al., 2012). Although
52 food hubs' main mission usually focuses on the supply side, according to the 2019 National Food
53 Hub Survey, about 50% of food hubs have a social mission that they fulfill by selling farm
54 products to lower-income communities or operating in lower-income areas (Bielaczyc et al.,
55 2020). Results from this survey also suggest that food hubs are actively engaging the
56 communities they serve in their decision-making processes (Bielaczyc et al., 2020).

57
58 Community food services organizations focus on the collection, preparation, and delivery of food
59 to low-income and vulnerable populations. Food banks, meal delivery programs, and fixed and
60 mobile soup kitchens are included in this category. Although these organizations indirectly
61 address the food justice component related to food access among low-income food-insecure
62 households, they do not necessarily focus on their access to *healthy* fresh foods, specifically farm
63 fresh produce. There are about 5,500 organizations in the United States included in this sector,
64 with a large percentage of these organizations incorporated as nonprofit operators (Roth, 2019).

65
66 Finally, there are organizations with a broad mission addressing the three goals of the food
67 justice mission, as defined above, such as New Roots Inc. New Roots Inc. is a nonprofit
68 organization that was founded on the idea that fresh food is a basic human right, like water and

69 air (New Roots, 2021). The signature initiative from New Roots Inc. is the Fresh Stop Markets
70 (FSM). The FSM are “pop up” farm-fresh food markets set up at local churches, community
71 centers, and businesses (e.g., B corps, public benefit corporations) every two weeks from June to
72 November in fresh-food insecure neighborhoods. The term “pop up” simply means that the
73 markets appear or are set up every two weeks at a specific location in a neighborhood. In FSM,
74 the food is paid for by consumers in advance to New Roots Inc.; these consumers are referred to
75 as “shareholders.” This payment in advance scheme reduces farmers’ level of marketing risk
76 relative to alternative market outlets such as farmers’ markets. Further, people from a fresh-food
77 insecure community pay on a sliding scale, with higher-income residents (from in or out of the
78 community) paying higher prices to ensure that all families can access the same quantity and
79 quality of farm fresh produce.

80
81 An important element of New Roots Inc., that makes this organization unique and the focus of
82 this study, is the community-organizing approach, where communities define the need for FSM,
83 and New Roots Inc. supports leadership development among those communities that help create
84 and sustain FSM. As suggested by Hyden (2017), the FSM model is unique in that it allows the
85 communities to define their problems and needs in terms of food justice, as the communities
86 themselves are the ones that contact New Roots Inc. as they see the need for a FSM in their
87 neighborhood (Figure 1). Additionally, New Roots Inc. uses and invests in the human and social
88 capital of the communities it serves, as it relies on volunteers that belong to the same
89 communities it serves and provides food justice classes and FSM training to leaders interested in
90 bringing this initiative to their communities. New Roots Inc. also provides seed funding to

91 launch new FSM. Figure 1 shows the steps to set up a FSM in a neighborhood as described
92 above.

93

94 In this study, we analyze New Roots Inc. as a case study of an organization pursuing the food
95 justice mission through the three goals defined above (i.e., *food access*, *market access*, and
96 *community engagement*) and compare it to food hubs and community food services
97 organizations. We specifically focus on the factors that put at risk the financial sustainability of
98 organizations focusing on the three goals mentioned above, such as New Roots Inc. We used
99 semi-structured interviews, New Roots Inc.'s financial statements, and secondary information
100 from other food sectors addressing the food justice mission to achieve the proposed objective of
101 this study.

102

103 **DATA AND METHODS**

104 We conducted two interviews with the executive director of New Roots Inc., in April and
105 October 2019. The April interview, which lasted about one hour, was conducted by telephone
106 following a semi-structured questionnaire designed to understand how New Roots Inc.
107 operationalizes the food justice goals defined in this study. In October, we met personally for
108 about two hours and discussed New Roots Inc.'s history and business model, opportunities and
109 barriers the organizations have faced in the last few years, and the organizations' vision for the
110 future.

111

112 In addition, between January 12 and 15, 2020, we conducted semi-structured interviews with
113 farmers who are currently selling or have sold farm products through FSM. In particular, we

114 conducted two interviews with farmers working with New Roots Inc. providing farm products
115 for their FSM, and three interviews with farmers who used to sell products for FSM but were no
116 longer working with New Roots Inc. at the time of the interview. We specifically asked farmers
117 about the advantages and disadvantages of selling products through FSM, benefits and
118 challenges from selling products through FSM, how does FSM market compare in terms of
119 prices and labor needs to other market outlets they sell products to, and about the factors that
120 make FSM a successful and sustainable business model from the consumers' and the farmers'
121 perspectives. Analyzing information elicited from farmers selling or who have sold products
122 through FSM is important because a key element of assessing the financial sustainability of this
123 market model is the ability to retain producers and cover operating expenses while paying fair
124 prices to farmers. Additionally, we collected information from farmers to have a perspective of
125 New Roots Inc. financial sustainability different than the one obtained from the executive
126 director of New Roots Inc. and the one portrayed by the financial records.

127

128 To better understand the financial sustainability of New Roots Inc., we also collected and
129 analyzed the 990 forms from this organization for the years between 2014 and 2019. These
130 forms, which were provided to the authors by New Roots Inc., are filed by nonprofit
131 organizations with the Internal Revenue Service, and contain income statements and balance
132 sheet information, among other data. We used this information to evaluate major sources of
133 revenue and revenue variability, cost structure, and financial viability.

134

135 Finally, we used secondary information from food hubs and organizations and businesses from
136 the community food services sector that helps understand the financial sustainability of these
137 sectors and factors influencing that sustainability compared to New Roots Inc.

138

139 **ANALYSIS AND DISCUSSION**

140 In this section, we discuss challenges and opportunities related to New Roots Inc. financial
141 sustainability, and compare elements of financial sustainability between food hubs, the
142 community food services sector, and New Roots Inc.¹

143

144 Additionally, we describe farmers' perceptions about the FSM model, the main program
145 supported by New Roots Inc., including benefits and challenges related to selling farm products
146 through FSM, and long-term sustainability and replicability of the model, and the implications of
147 these perceptions for New Roots Inc.

148

149 *New Roots Inc.*

150 New Roots, Inc. was formed by five residents of West Louisville, Kentucky, a USDA designated
151 food desert², in May of 2009 with the support of some members of the West Chestnut Street
152 Baptist Church and the Concerned Association of Russell Resident, a neighborhood association

¹ Financial sustainability for a nonprofit is defined as 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, Staplefoote, and Gonzalez-Morganti, 2012).

² USDA defines food deserts as low-income census tracts (i.e., county subdivision containing between 1,000 and 4,000 people) with a large percentage of the population (i.e., 500 and/or 33 percent of the tract population) having low access to supermarkets and large grocery stores (i.e., living more than 1 mile from a supermarket or large grocery store in urban areas) (Dutko, Ver Ploeg, and Farrigan, 2012).

153 aiming to address the long-term sustainability of the Russel Neighborhood in Louisville,
154 Kentucky. Three of the initial founders self-identified as African Americans. Karyn Moskowitz,
155 who identifies herself as ethnically Jewish, is currently the executive director of New Roots Inc.
156 All founders had roots in community organizing. New Roots Inc. officially became a 501(c)3
157 nonprofit organization at the end of 2010.

158

159 While working as a community organizer for the Community Farm Alliance (CFA) in Louisville,
160 Kentucky, and before she became part of New Roots Inc., Karyn Moskowitz had the opportunity
161 to meet with staff and volunteers of a Cleveland, Ohio initiative called City Fresh. City Fresh³ is
162 a program offering pre-ordered fresh food boxes (e.g., a share is a box of produce that could feed
163 a family of two to five people, depending on the share size) at discounted prices for limited-
164 income families located in food deserts. Share pick-up locations (Fresh Stops) are set up at
165 institutions within the communities served by City Fresh (e.g., churches, schools). Karyn
166 Moskowitz brought the idea back to her community and received the support of other community
167 members, including the leaders of community churches. The City Fresh model was slightly
168 modified to fit the needs and resources available in the Louisville area. New Roots Inc. set up
169 FSM only on areas identified as food deserts by the U.S. Department of Agriculture.
170 Additionally, no large investments were made to handle the logistics of food distribution.
171 Finally, New Roots Inc. decided to invest in the human and social capital of the communities
172 being served by the FSM through leadership development and education.

173

³ <https://cityfresh.org/>

174 As of the end of 2019, New Roots Inc. had two program services or operational segments: Fresh
175 Stop Markets (FSM) and leadership development, skills-building and food education (LFE).
176 FSM is the main program supported by New Roots Inc. The LFE operation segment has been
177 critical in supporting community leadership that promotes and supports sustainable food systems
178 and healthy eating. New Roots Inc. identifies leadership qualities in the FSM shareholders and
179 helps them strengthen those qualities by allowing them to participate as volunteers in the FSM,
180 and giving them the opportunity to eventually become New Roots Inc. board members or paid
181 FSM managers. Furthermore, New Roots Inc. promotes professional development for the leaders
182 by supporting their participation in professional conferences. An example of how New Roots
183 Inc. has supported leadership development is the creation of a food justice workshop for Latinx
184 communities for middle schoolers and parents created by one of the FSM leaders.

185
186 FSM are “pop-up” markets set up in fresh food insecure neighborhoods. FSM are set up every
187 two weeks at a designated location (e.g., church, community center, business). Previous literature
188 has determined food-insecure neighborhoods by utilizing zip codes (Kaiser, Dionne, and Carr,
189 2019). For example, Kaiser, Dionne, and Carr (2019) determined food insecure neighborhoods as
190 a set of zip codes with statistically significant higher rates of food-insecure households when
191 compared to other zip codes within a city. They measured food security using the Six-Item Food
192 Security Scale developed by the National Center for Health Statistics (USDA ERS, 2012). In
193 contrast, New Roots Inc. defines fresh food-insecure neighborhoods as those areas within a city
194 identified as food deserts or areas where households are facing limited resources⁴ or have limited

⁴ New Roots Inc. defines households facing limited resources based on USDA income requirements for participation in the WIC program (between 100 and 185 percent of the federal poverty income guidelines) (USDA, Food and Nutrition Service, 2021).

195 access to healthy and affordable food (Hyden, 2017). New Roots Inc. has expanded the
196 definition of food deserts to include shareholders that might live close to a grocery store and/or a
197 farmers market but might not be able to afford fresh foods due to high prices compared to
198 processed or fast-food prices. The demographic composition of the areas where FSM are set up
199 is represented by an average of 35 percent of African Americans, with an average age of 45 years
200 old, and 75 percent of individuals that fall at or below 185 percent of the U.S. poverty
201 guidelines⁵.

202
203 Shareholders of FSM sign up for the entire 22 week season, and pay one week in advance to
204 receive about nine varieties of produce (one share), including certified organic vegetables and
205 some fruit. Although each shareholder receives the same amount of food, they pay a different
206 price based on household income, with prices set at \$6, \$12, \$25, or \$40 per share. Only
207 shareholders who have ordered shares in advance are able to pick up shares at the FSM. In 2019,
208 the largest percentage of shares were sold at \$12 per share. On average, 70 percent of shares,
209 which represent about 540 shares of the total 770 shares sold in 2019, were sold either at \$6 or
210 \$12. These shares were purchased by 540 families (feeding about 1,400 individuals) that were
211 considered facing limited resources. About 26 percent of shares (i.e., 200 shares) were sold at the
212 \$25 price level, and only 4 percent (i.e., 30 shares) were sold at the food justice share price of
213 \$40. New Roots Inc. called the \$40 per share product the “food justice share”, because
214 households choosing this product pay a higher amount to subsidize the value of shares for those
215 households facing limited resources.

216

⁵ <https://aspe.hhs.gov/poverty-guidelines>

217 FSM are run by shareholders who volunteer their time. New Roots Inc. allows communities to
218 run their markets to empower them in meeting their fresh-food needs. With a few exceptions
219 (i.e., residents from the pediatric residency program from the University of Louisville), New
220 Roots Inc. does not encourage volunteers from outside of the community or outside of their
221 shareholder base to participate in FSM.

222

223 Although the FSM model differs from the traditional community supported agriculture (CSA)
224 model, where members share production risk with farmers and shareholders pay for shares
225 before each growing season, the FSM model is similar to CSA-like models that better
226 accommodate multi-farm scale economies with payment flexibility where shareholders do not
227 have to pay for all shares before the growing season (Woods, Ernst, and Tropp, 2017). Interest
228 has grown among farms or organizations running CSA-like models to access a broader base of
229 customers, including lower-income shareholders, but the interest has not necessarily translated
230 into a critical mass of CSA-like models targeting low-income consumers (Woods, Ernst, and
231 Tropp, 2017). In contrast to New Roots Inc., those who are running CSA-like models targeting
232 residents of low-income neighborhoods, like Farmer Dave’s Northeast Organic Farming Alliance
233 located in Boston, Massachusetts, tend to focus on delivering products to families located in
234 these neighborhoods with the support of local organizations without necessarily engaging the
235 individuals they serve in the planning and logistics of running this kind of market models
236 (Woods, Ernst, and Tropp, 2017). Furthermore, as stated above, unlike CSA-like models, the
237 need for FSM is not imposed by an organization or farmers themselves, rather community
238 members are the ones identifying the need of a FSM in their community.

239

240 Farmers selling produce to FSM are considered small and medium-sized local farmers.
241 Currently, FSM procures products from nine farms, and three of them provide more than 50
242 percent of the products purchased by New Roots Inc. Before 2018, FSM procured products from
243 more than 50 farms (Hyden, 2017). New Roots, Inc. tries to purchase produce from small farms
244 producing fruits and vegetables using organic practices that can guarantee a consistent supply of
245 products to meet the shareholder needs. The three farms currently providing more than 50
246 percent of FSM products have between 2 and 22 acres in vegetable production and diversify their
247 operations with cattle, sheep, chicken, and pork production. Before 2018, New Roots Inc. used to
248 purchase products from a larger proportion of smaller vegetable farms (less than one acre), but
249 the logistics associated with coordinating purchases in this model demanded staff time that, as
250 we will explain later in this study, was not available any longer after 2018 due to the financial
251 challenges New Roots Inc. faced in 2018. In 2019, farm sales through FSM represented about
252 \$142,238. Between 2014 and 2019, farm sales to New Roots Inc. increased by about 500 percent,
253 from \$23,248 to \$142,238.

254
255 Before 2017, farmer liaisons coordinated the procurement of farmer-fresh products for FSM.
256 Farmer liaisons were FSM shareholders that volunteered to communicate with farmers regarding
257 produce needs for markets, shareholder preferences, and purchase orders (Hyden, 2017). The
258 communication between farmers and farmer liaisons became chaotic as multiple individuals
259 (farmer liaisons) were communicate with farmers and placing orders last minute, as they did not
260 fully understand farmers' ability or lack of fulling orders last minute. In 2018, New Roots Inc.
261 tried to address communication problems by creating an uber farmer liaison position. The uber
262 farmer liaison was a paid position that coordinated the procurement of farmer-fresh products for

263 FSM with farmers and farmer liaisons. The uber farmer liaison specifically communicated with
264 farmers to assess produce supply for each week and created a spreadsheet with this information.
265 This individual shared supply information with farmer liaisons from each FSM. The farmer
266 liaison selected the products they needed for the specific FSM based on shareholder preferences
267 and communicated those preferences to the uber farmer liaison and not the farmers. The uber
268 farmer liaison was responsible for placing orders with farmers and managing orders and
269 invoices. Shareholders (i.e., individuals paying in advance for food shares) and farmers met
270 every year in January to discuss what vegetables and fruits communities wanted to purchase and
271 what producers could grow. Based on previous years' information, staff from New Roots Inc.
272 projected the number of shares to be provided for a specific year. Similarly, based on historical
273 price trends, New Roots Inc. negotiated with farmers product prices based on a share cost goal
274 established by New Roots Inc. For example, in 2019, the share cost was set at \$19 per share.

275
276 At harvest time, farmers transported the produce to the FSM location. Alternatively, farmer-
277 liaisons tried to accommodate farmers' needs by picking up farm products from farmers when
278 needed. Given the financial challenges experienced by New Roots Inc. that we will explain later
279 in this section, the FSM model was slightly modified to reduce the required staff coordinating
280 FSM. In 2019, New Roots Inc. decided to eliminate the uber farmer liaison and farmer liaison
281 positions and created a non-paid farmer leader or "farmer-anchor" position. The executive
282 director of New Roots, Inc. took over some of the uber farmer liaison and farmer liaisons'
283 responsibilities. A farmer anchor, a farmer selling produce through FSM, coordinated the
284 aggregation of food from various farms and delivered products to FSM. The farmer-anchor
285 communicated with only one staff member at New Roots Inc. (the executive director) to

286 coordinate purchase orders and product delivery. Those farmers providing more than 50 percent
287 of the produce for FSM communicate with the farmer anchor, but other farms providing specific
288 products in smaller quantities (e.g., fruits) communicate directly with the executive director of
289 New Roots Inc. to coordinate orders and deliveries. This new model has worked well given that
290 New Roots Inc. reduced the number of farms they procure farm-fresh products from to adjust to
291 the financial challenges experienced in 2018. Figure 2 summarizes some of the logistics related
292 to FSM with the model adopted after 2018. The arrows mainly represent communication
293 channels among all individuals involved with the FSM supply chain. We used a Stacked Venn
294 diagram to represent overlapping relationships between New Roots Inc. staff, shareholders,
295 volunteers, and leaders. Additionally, we used this kind of diagram to show how the idea of FSM
296 comes from within the fresh-food insecure neighborhood it serves and that the food justice needs
297 defined by these communities are the ones driving the need for FSM. Also, this diagram reflects
298 the fact that New Roots Inc. is embedded within the communities it serves and depends on the
299 community members to support the FSM program.

300

301 A large percentage of New Roots Inc.'s total revenue was received from grants and similar
302 contributions. For example, in 2019, New Roots Inc. received a total of \$170,240 in
303 contributions (72% of the 2019 total revenue) from various government organizations and
304 foundations, including the Norton Foundation, Presbyterian Hunger Program, Lift a Life
305 Foundation, Southern Sustainable Agricultural Research and Education (through the University
306 of Kentucky), the Gendler Grapevine Project, Brown-Forman, and the Louisville Metro
307 Government. Table 1 provides selected items of New Roots Inc.'s income statements and
308 balance sheets from 2014 to 2019. Grants and similar contributions have represented more than

309 90% of New Roots Inc.'s total revenue since 2014. As shown in Table 2, which presents New
310 Roots Inc.'s financial ratios, about 19% of those contributions were related to government grants
311 during 2014-2019. The majority of contributions were related to foundation donations. Table 2
312 also shows that a large percentage of expenses was related to employees' salaries and benefits,
313 which could be explained by the high level of coordinating activities required in food justice
314 related organizations. About 67% of total expenses were related to salaries, other compensations,
315 and employee benefits from 2014 to 2019. During the same period, New Roots Inc. employed on
316 average 6.5 employees. In 2014, New Roots, Inc. had only two employees, while between 2015
317 and 2018, the organization employed between seven and nine employees, with this number
318 dropping to five in 2019 due to a financial problem faced by New Roots Inc. in 2018. Aside from
319 employees covering various activities related to coordinating the FSM and other functions
320 related to leadership development, skills-building and food education, New Roots Inc. depended
321 heavily on volunteers to run their programs. New Roots Inc.'s average reported number of
322 volunteers between 2014 and 2019 was 233.

323
324 The FSM program covered the full costs of goods sold related to farmer products' purchases in
325 2014 and 2019. In other words, the average price per share was at least equal to the average price
326 paid to farmers. However, this was not the case between 2015 and 2018, as shown in line "cost
327 of goods sold to sales revenue" in Table 2. The median value of the cost to sale ratios during
328 2014-2019 is 1.02, indicating that New Roots Inc. works around break-even, defined as sale
329 revenue minus cost of sales. This means that the combined share price paid by both low and
330 high-income shareholders is completely passed on to farmers, achieving the organization's

331 mission to pay producers fair prices. However, New Roots Inc. has the challenge of covering its
332 operating expenses from other sources of revenue in order to be financially sustainable.

333
334 Between 2014 and 2017, New Roots Inc. reported an average net income of \$53,454 (Table 1).
335 However, total revenues variability was highly sensitive to two sources of cash inflows: grants
336 and foundation donations, and less sensitive to revenues from shares or produce sales. Grants and
337 donations varied from year to year depending on changes in federal and state government
338 budgets, and foundations' budgets and missions. This source of variability caused New Roots
339 Inc.'s \$170,534 loss in 2018 (Table 1), the only year the organization reported negative profit
340 from 2014 to 2019, and a relevant event as the focus of analysis in this case study.

341
342 A critical event occurred in 2018 when New Roots Inc. did not receive anticipated funding from
343 a foundation associated with a for-profit US health insurance company and reported a net loss in
344 the 2018 fiscal year. This foundation (labeled as contributor #8 in Table 3) had been New Roots
345 Inc.'s main contributor from 2014 to 2017, with its contribution representing around one third of
346 New Roots Inc.'s total contribution. Given New Roots Inc.'s revenue growth (Table 1) and
347 expected continuation of funding by contributor #8 given historical trends (Table 3), the
348 organization decided to build capacity by expanding the number of FSM in 2016 from three to
349 six. To support this expansion, New Roots Inc. hired additional staff, purchased other resources
350 to run the markets (e.g., tents, tables), and trained their staff.

351
352 In 2018, the foundation (contributor #8) changed its focus away from food justice to focus on
353 other determinants of people's health, including financial literacy and post-secondary education,

354 and decided to fund alternative initiatives, ending funding for New Roots Inc. after four years of
355 contributions. Thus, New Roots Inc. lost the contributor that represented the highest source of
356 revenues for the organization. Although volunteers supported some of the organization's
357 expanded operations, at this point, New Roots Inc. depended heavily on paid labor to run the
358 organization and the increased number of FSM.

359
360 As a result of the 2018 funding problem, in 2019, New Roots Inc. revisited its business model.
361 The organization reduced staff to run their FSM as explained above, increased reliance on
362 volunteers to run FSM, added a software (FARMINGO) to receive recurring shareholder
363 payments and improve operational efficiency, reduced the number of FSM by consolidating
364 existing markets to guarantee a minimum of 70 shareholders per market, and reduced the number
365 of farmers they worked with to source fresh food for FSM, as explained above. These two last
366 changes allowed New Roots Inc. to reduce the number of staff members necessary to coordinate
367 FSM.

368
369 Revisiting New Roots Inc.'s business model proved to be financially sound for the organization.
370 As shown in Table 3, most financial ratios improved in 2019, reaching again levels observed
371 from 2014 to 2017. As results in Table 3 show, with the exception of 2018, New Roots Inc. has
372 been a financially healthy organization given its relatively high return on assets, revenue growth
373 rates, high levels of cash, among other financial metrics.

374
375 The analysis in this section reveals several aspects of the business model and financial
376 performance of New Roots Inc. from 2014 to 2019. The organization: (1) provided affordable

377 healthy fresh food to households facing limited resources by implementing a sliding scale price
378 policy encouraging higher-income residents to contribute to those households facing limited
379 resources, (2) passed on prices paid by shareholders to small- and medium-scale farmers, thus
380 achieving the organization's mission to connect farmers to markets that pay them fair prices, and
381 (3) supported community leadership that promotes and supports sustainable food systems and
382 healthy eating. With an exception in 2018, the organization addressed the three goals of the food
383 justice mission, as defined in this study, and remained financially healthy. However, as shown
384 precisely during 2018, fulfilling all food justice goals and remaining financially healthy
385 presented some challenges.

386

387 The organization relied on soft money coming from contributions, gifts, and grants to cover all
388 its fixed and variables expenses not related to the cost of goods sold. Those contributions highly
389 varied from year to year, as shown in Table 3. To cover this risk, New Roots Inc. followed a
390 financially conservative approach by saving relatively high amounts of cash over time, which
391 allowed the organization to face its 2018 financial difficulty. Additionally, New Roots Inc.
392 depended on a high number of volunteers that support its activities and on the willingness of
393 groups to organize FSM. This required high human capital within the organization (i.e., strong
394 leadership) and outside of the organization (i.e., grassroots organizations' willingness to
395 collaborate). Finally, New Roots, Inc. relied on active and persuasive leadership to maintain
396 funding from contributors.

397

398 Moving forward, by the end of 2019, the executive director of New Roots Inc. believed that
399 diversifying the organization’s revenues might contribute to long-term financial viability.
400 Specifically, she wanted to explore New Roots Inc.’s ability to generate income from its LFE
401 segment, and to access corporate donations sponsorships to support FSM operations. She
402 specifically was evaluating the ability to offer leadership and community organization consulting
403 services. New Roots Inc. would also like to explore the possibility of merging with other
404 nonprofit organizations to run the programs more efficiently and at a lower cost.

405

406 *Differences and Similarities between New Roots Inc. and Food Hubs*

407 As stated in the introduction section, food hubs aggregate, distribute, and market food products
408 from local and regional producers (Barham et al., 2012). Although New Roots Inc. aggregates
409 food on a limited basis (e.g., they have a donated walk-in cooler they use when needed), and
410 therefore does not require significant investment related to infrastructure to aggregate food, it
411 does focus on distributing and marketing farm fresh produce to households facing limited
412 resources. New Roots Inc. also tries to source products from small- and medium-scale local and
413 regional producers. Therefore, there are similarities between food hubs and organizations
414 pursuing multiple goals related to the food justice mission, such as New Roots Inc. (Table 4).
415 There are some food hubs that have a social mission that they fulfill by selling farm products to
416 lower-income communities or having businesses in lower-income areas (Bielaczyc et al., 2020).
417 Similar to New Roots Inc., food hubs are actively engaging the communities they serve in their
418 decision-making processes (Bielaczyc et al., 2020). Nonetheless, as stated above, New Roots Inc.
419 is different from food hubs in the way it fulfills its social mission. Instead of simply providing
420 access to farm products to low-income families, New Roots Inc. allows the communities to

421 define their problems and needs in terms of food justice, and uses and invests in the human and
422 social capital of the communities it serves (Table 4).

423
424 The majority of food hubs focus mainly on increasing human health by providing access to fresh,
425 healthy foods and increasing market access for small- and medium-scale producers. A study on
426 Michigan food hubs suggests that there is a small percentage of food hubs committed to
427 addressing equitable food access, one of the main missions of New Roots Inc. (Hoey, Fink
428 Shapiro, and Bielaczyc, 2018). This study suggests that those food hubs committed to increasing
429 healthy food access to low-income households are newer food hubs, are highly dependent on
430 external funding, and are more likely to have a nonprofit status, just like New Roots Inc. Results
431 from this study also suggest that factors that prevent food hubs from focusing on equitable food
432 access are operational constraints and financial viability (Hoey, Fink Shapiro, and Bielaczyc,
433 2018).

434
435 Similar to New Roots Inc., most food hubs are mission-driven businesses and therefore tend to
436 trade off or sacrifice profits to fulfill their social goals related to paying fair prices to farmers and
437 facilitating low-income communities' access to healthy foods (Wallace Center, 2018). A food
438 hub benchmark study conducted by the Wallace Center, which included information from 50
439 food hubs in the US, suggests that those food hubs that perform better (e.g., top 25% of all food
440 hubs ranked by net margin) are close to breaking even or generating a profit. This study advises
441 that regardless of the tax status of food hub businesses, whether they are for-profit or non-profit,
442 food hubs need to generate a profit to guarantee the sustainability of the business model. As

443 discussed in the previous section, New Roots Inc. have managed to maintain a financially
444 healthy position while fulfilling its food justice mission

445
446 According to the 2019 National Food Hub Survey, about 40% of food hubs were nonprofit
447 organizations, about 36% were for-profit organizations, and the rest were cooperatives or
448 reported not having a formal legal structure. Since New Roots, Inc. is a nonprofit organization, it
449 is important to highlight specific characteristics of those food hubs that are nonprofit
450 organizations. In 2019, nonprofit food hubs generated on average a seven percent net profit
451 margin, defined as gross revenue divided by total expenses. In 2019, New Roots Inc.'s net profit
452 margin was 15 percent (Table 4), which indicates that, in 2019, New Roots Inc. performed better
453 than aggregated nonprofit food hubs in terms of profitability (Table 4).

454
455 Similar to New Roots Inc., those food hubs with a nonprofit designation are more likely to
456 depend on grant funding. According to the 2019 National Food Hub Survey more than half
457 (62%) of those hubs that reported being highly dependent on grant funding had a nonprofit
458 designation like New Roots Inc. About half (54%) of the food hubs represented in the 2019
459 survey perceived their dependence on grants would stay the same, while about 16% recognized
460 their dependence on grant funding would increase over time (Bielaczyc et al., 2020). As stated
461 above, New Roots Inc.'s executive director perceives that income diversification and the ability
462 to generate income from the LFE segment might contribute to the financial sustainability of the
463 organization. Therefore, in contrast to food hubs with a nonprofit designation, we can infer that
464 New Roots Inc. is hoping to slightly decrease dependence on grant funding to guarantee long-
465 term financial viability.

466

467 *Differences and Similarities between New Roots Inc. and Community Food Services Sector*

468 Similar to New Roots Inc., businesses in the community food services sector are not profit-
469 driven and depend on funding from the public and private sectors (Table 4). An important source
470 of revenue for this sector is government programs, specifically the USDA Food and Nutrition
471 Service's programs. This source of revenue represents a more stable source of revenue compared
472 to private donations, but private donations, specifically individual and corporate donations,
473 represent a large percentage of this sector's donations (Roth, 2019).

474

475 Similar to New Roots Inc., operators in the community food services sector have experienced
476 higher operating costs due to higher demand and expansion of their services. The expansion of
477 operating costs is mainly due to expanded budgets for food purchases. Employment in this sector
478 increased at an annualized rate of 2.8% between 2014 and 2019 to 47,218 employees,
479 representing \$1.5 billion in wages, to meet the growing demand for food services. Similar to
480 New Roots Inc., operators in this sector rely heavily on volunteers as a strategy to minimize costs
481 while expanding services, with some small and local organizations being entirely operated by
482 volunteers. As operators expand their services and increase their operating costs, profits fall. In
483 general, this sector's profit margins are low to moderate, as most operators' expenses are close to
484 the revenue they generate. In 2019, estimated profit margins for this sector were 7 percent (Le,
485 2020). New Roots Inc.'s profit margins are much higher than this sector's (Table 4). Most of the
486 surplus revenue reported in this sector is related to restricted contributions that cannot be easily
487 spent, which is not the case with New Roots Inc.'s balance sheet position (Table 1).

488

489 The long-term financial sustainability of these organizations is related to changes in consumers’
490 disposable per-capita income, corporate profits, and federal funding (Le, 2020). It is expected
491 that as consumer disposable income increases, private donations will increase. Additionally, it is
492 expected that as corporate profits recover after the COVID-19 pandemic, corporate charitable
493 contributions will increase and become a stable source of income for these organizations.
494 Interestingly, New Roots Inc. foresees corporate donations as a potential source of income for its
495 organization that could help stabilize revenue over time. But given the community food services
496 sector outlook suggests this source of income is an important source of revenue for this sector,
497 New Roots Inc. might be competing with this sector for corporate charitable contributions.

498

499 *Farmers’ Perceptions about FSM and Implications for New Roots, Inc.*

500 We conducted personal interviews with five farms, two selling products to FSM at the time of
501 the interview and three who used to sell products through FSM but were no longer selling
502 produce through FSM. The two farms currently selling produce through FSM reported they had
503 between 15 and 22 acres in vegetable production. For these farms, sales to FSM represented
504 between eight to 20 percent of total gross sales. In contrast, the three farms no longer selling
505 products through FSM reported having less than four acres in vegetable production. Although
506 these farmers did not estimate the percentage of gross sales through FSM, information gathered
507 through the interviews suggests FSM represented a small percentage of overall gross sales for
508 these farms. Some of them reported selling to FSM surplus produce they were not able to sell
509 through other market outlets such as CSA and farmers markets. The differences in farm size
510 between farmers selling and farmers no longer selling through FSM reflect changes in the FSM
511 business model. As stated above, New Roots Inc. reduced the number of farms they procure

512 farm-fresh products from to adjust to financial challenges. Reducing the number of farms New
513 Roots Inc. procures products from also resulted in procuring more products from larger and
514 fewer farms that could provide products regularly. All farmers we interviewed for this analysis
515 perceived many benefits associated with selling products through FSM, including: (1) less labor-
516 intensive market outlet compared to other outlets such as farmers markets and CSA; (2)
517 guaranteed and timely payment; (3) lower marketing efforts compared to other market outlets;
518 and (4) ability to move larger volumes of product compared to other outlets. Below we present
519 opinions from some of the farmers we interviewed regarding the benefits associated with FSM:

520 "We are going to be investing in advertising and Facebook advertising and stuff like that
521 this year to build our CSA, and we did not have [to make] that investment with the
522 FSM."

523 "It is a guaranteed payment and a timely payment which is not consistent across other
524 markets."

525 "Packing 350 shares worth of produce for FSM is less labor-intensive than packing 350
526 individual shares for CSA members because we are sending items wholesale packed to
527 them, [for instance,] we are sending 200 bunches of kale and 200 bunches of radishes and
528 200 pounds of yellow squash, and [we] are just sending that to neighborhoods, and they
529 [New Roots Inc.] are assembling that market box."

530 "We sold to restaurants for a long time, we did [sell in] farmers markets, but none of
531 those outlets for us ever generated the volume that FSM is generating, and so we have
532 enjoyed being able to grow our business and grow our production to meet that demand."

533 Another motivation or benefit some farmers perceived related to their participation in FSM is
534 that of the food justice mission of FSM that allows farmers to sell products to households facing
535 limited resources without compromising their farm business financial viability:

536 “FSM allow us to build food justice into our business plan”

537 “FSM is making it affordable and accessible to people who maybe couldn’t afford our
538 CSA”

539 Most of the farmers’ opinions related to the challenges of selling farm products through FSM,
540 were related to communication problems, specifically, communication with the uber farmer
541 liaison and farmer liaisons. As described above, prior to 2018, farmers were informed by the
542 uber farmer liaison or farmer liaisons about the products that were needed to satisfy shareholder
543 needs, and delivery times were set around FSM schedule and not farmer availability and
544 logistics. This model posed some logistic challenges for farmers selling products to FSM because
545 delivery times and days, as well as the distance to be traveled, imposed high transaction costs to
546 farmers. Additionally, there were some communication problems related to multiple individuals
547 (farmer liaisons) communicating from different FSM, with some of them not understanding
548 farmer logistics and their ability to deliver products quickly. Two farmers who used to sell
549 products for FSM said:

550 “Yeah, it started to get a little bit chaotic with the last-minute orders, and then it was too
551 much for the coordinator to handle.”

552 “The communication could have been better.”

553 As explained above, the FSM model changed in 2018 to address New Roots Inc.’ financial
554 challenges associated with losing one of their main sources of income. New Roots Inc. reduced

555 the number of FSM and the number of individuals to run the FSM. The uber farmer liaison and
556 farmer liaison positions were eliminated, the executive director of New Roots Inc. took over
557 some of these positions' responsibilities, and a farmer anchor position (i.e., farmer selling
558 produce to FSM and coordinating aggregation and delivery with other farmers) was created,
559 improving communication between New Roots Inc. and farmers (see Figure 2). The FSM model
560 has changed to pursue a better balance between shareholder and farmer needs. Some farmers
561 perceived the previous model to be slightly "chaotic" as different individuals representing
562 different FSM were communicating with farmers trying to fulfill shareholder needs:

563 "So each different market was communicating with all the different farms to try to order,
564 and that was a bit chaotic, that was hard."

565 The distribution model revisited by New Roots Inc. in 2019 tried to reconcile what the farmer
566 was producing with the market's needs. Furthermore, this new model reduced transaction costs
567 associated with participating in FSM by having one individual (e.g., farmer anchor or New Roots
568 Inc.'s executive director) rather than multiple individuals (i.e., uber farmer liaison or farmer
569 liaisons) communicating with farmers and coordinating the distribution of produce. The new
570 model also considered the timing of growing cycles and the variability of products available due
571 to weather risk. A farmer who used to sell farm products to FSM also perceived the new model
572 as one that reduces transaction costs for both farmers and New Roots Inc., as after revising its
573 business model the organization started to work with larger farms – that still classify as small
574 and medium-sized farms and consistently supply larger volumes and achieve scale economies—
575 than the ones it used to work with. Additionally, this farmer believed that working with larger
576 farmers might be the only way for New Roots Inc. to meet the needs of an increasing number of
577 shareholders.

578 Regarding the sustainability of FSM, some farmers were concerned about the financial viability
579 of the model. They perceived that it might be challenging to provide fair prices to farmers while
580 covering overhead costs associated with running all operations associated with FSM:

581 “I feel very confident that we as a farm are getting compensated very fairly for the
582 product that we are sending. But I am also seeing New Roots [Inc.] have to infuse a lot of
583 their nonprofit capital into making the whole thing work.”

584 The long-term viability of New Roots Inc. is also a priority for farmers as it is this organization
585 that provides them the opportunity to sell large volumes of products at a fair price:

586 “I think about all the other things beyond the check that comes to my farm, I feel very
587 invested in the long-term viability. And there is economic viability because FSM is about
588 20% of our overall sales so [FSM’s long term viability] is very important.”

589

590 **Closing**

591 The analysis presented in this study reveals New Roots Inc.’s ability to cover multiple goals of
592 the food justice mission, as defined in this study, while remaining financially healthy.

593 Nonetheless, this study also reveals some challenges associated with remaining financially
594 healthy over time. Specifically, sources of revenue volatility and human capital requirement are
595 some of those challenges that could put at risk the long-term financial viability of an
596 organization trying to address multiple goals of the food justice missions such as New Roots Inc.

597

598 Similar to other organizations related to the food justice mission, such as community foodservice
599 organizations, New Roots Inc. depends heavily on donations and grants from the public and
600 private sectors. Decreasing dependency on these sources of revenue is not feasible given the

601 mission and nature of the organization. Like community foodservice organizations, New Roots
602 Inc. needs to evaluate periodically the mix between private and public funding that could help
603 address revenue volatility.

604

605 Although New Roots Inc. foregrounds its mission of access to healthy food as a human right
606 while providing access to markets to small and medium-scale, limited resource farmers,
607 operational constraints, and financial viability make it challenging for this organization to
608 address various problems in the food system. The logistics necessary to purchase produce from
609 some small limited-resource farms create additional needs in terms of personnel/staff, potentially
610 putting at risk the financial viability of the organization. As Hoey, Fink Shapiro, and Bielaczyc
611 (2018) note in their evaluation of Michigan food hubs, any organization trying to address food
612 system problems needs to address financial viability before being able to address all problems in
613 this system. For an organization to address multiple problems of the food system while
614 remaining financially viable, it might need to partner with other organizations related to the food
615 justice mission. For example, to support New Roots Inc.'s ability to work with more small farms
616 with low sales and/or beginning minority farms, they would need to partner with organizations
617 that can provide technical assistance to support product quality and consistency to meet New
618 Roots Inc.'s needs. Although New Roots Inc. works closely with farmers in planning, there are
619 limitations regarding the support they can give to farmers requiring additional technical
620 assistance.

621

622 Finally, high human capital needs (e.g., volunteers, leadership) associated with running an
623 organization such as New Roots Inc. might not pose a problem in the short-run or for the region

624 where the organization is located. There might be a big pool of volunteers willing to help run
625 activities related to FSM in this region. Additionally, organization leaders are not planning to
626 retire anytime soon. Nonetheless, in the absence of strong leaders or a strong pool of volunteers,
627 one might question the long-term sustainability and replicability of a business model that is
628 highly dependent on specific human capital requirements that are likely to change over time and
629 by location.

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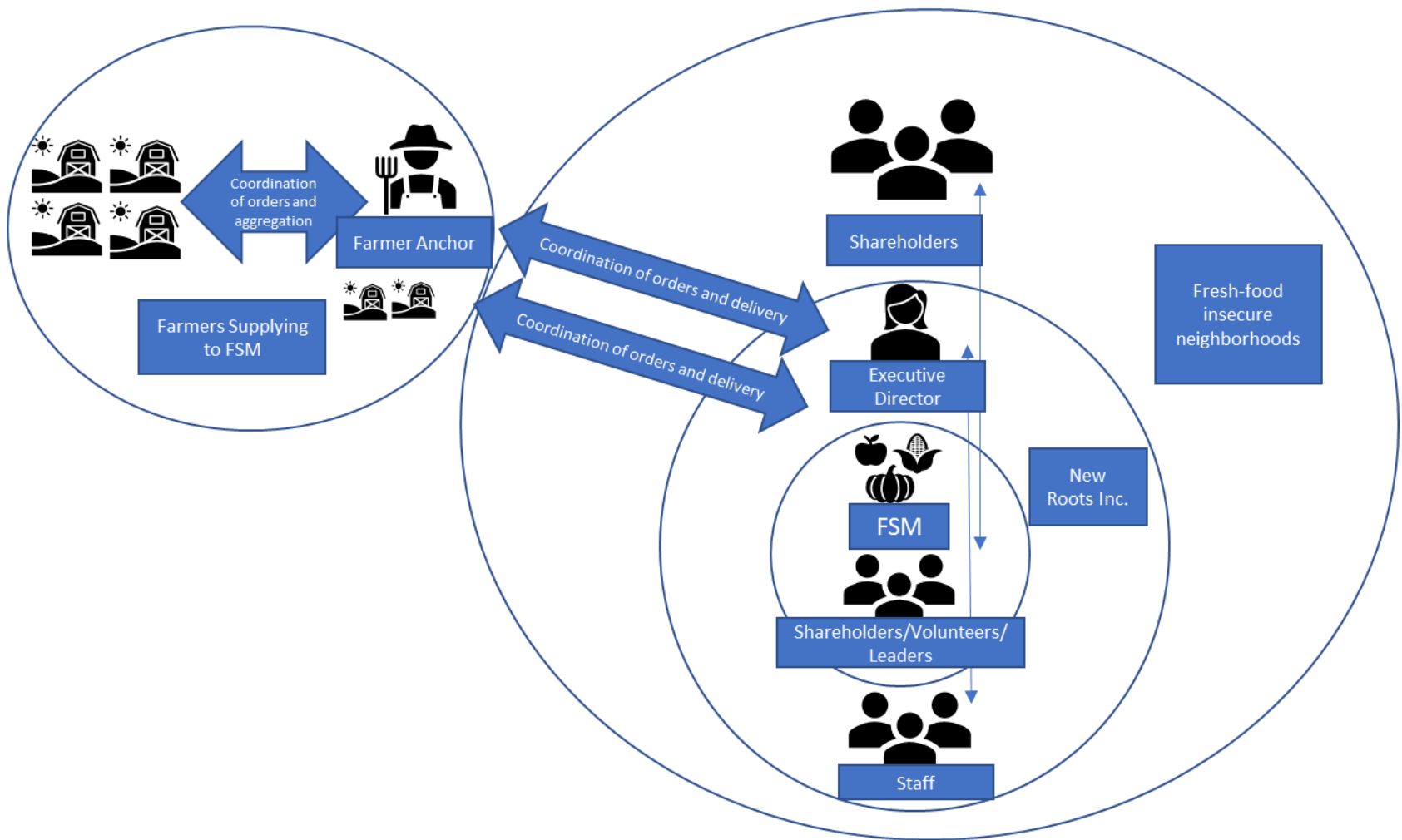
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710 Source: New Roots Inc website (<https://newroots.org/>).

711 **Figure 1.** Infographic Explaining How Fresh Stop Markets are Created and Run with Farmer

712 Liaisons

713



714

715 **Figure 2.** Stylized FSM Supply Chain after 2018 with an Emphasis on Communication Flows.

Table 1. New Roots Inc.'s selected income statement and balance sheet items (\$)

	2019	2018	2017	2016	2015	2014
Total revenue	235,516	169,033	379,576	289,485	219,700	212,731
Contributions, grants, and similar	226,120	162,160	378,970	293,302	223,656	175,411
Program service (consulting, training)	705	10,050	1,965	2,176	100	4,868
Net income (loss) from sales of inventories (FSM)	8,079	-3,177	-1,359	-5,993	-4,056	32,452
Expenses ¹	201,665	339,567	320,958	234,924	209,114	122,680
Net Income (loss)	33,851	-170,534	58,618	54,561	10,586	90,051
Cash plus savings and temporary investments	110,239	70,529	192,503	181,148	160,849	122,576
Pledges and grants receivable			44,582			
Net land, buildings, and equipment	15,139	20,794	24,048	19,356	3,507	2,243
Total liabilities	3,489	3,285	2,561	550	30,770	2,469
Unrestricted net assets in fund balance	120,593	81,372	214,489	185,486	133,586	123,000
Restricted net assets in fund balance	1,296	6,666	44,083	14,468		

Source: assembled by authors using information in New Roots Inc.'s 990 forms, provided by the organization.

¹Dissaggregated expenses by category can be found at <https://bit.ly/3lSEZJm>.

Table 2. Selected financial ratios of New Roots Inc.

	Median	2019	2018	2017	2016	2015	2014
Government grants to total contributions	0.19	0.31	0.34	0.06	0.06	0.24	0.14
Salaries and related to total expenses	0.67	0.60	0.68	0.61	0.66	0.67	0.71
Cost of goods sold (COGS) to sales revenue	1.02	0.95	1.02	1.01	1.08	1.05	0.42
Operating expenses (excluding COGS) to total revenue	0.76	0.79	1.81	0.76	0.75	0.77	0.46
Total expenses to total revenue	0.85	0.86	2.01	0.85	0.81	0.95	0.58
Net income (loss) to total revenue	0.15	0.14	-1.01	0.15	0.19	0.05	0.42
Year-to-year revenue growth	0.31	0.39	-0.55	0.31	0.32	0.03	NA
Year-to-year expenses growth	0.12	-0.41	0.06	0.37	0.12	0.70	NA
Net income (loss) to total assets	0.25	0.27	-1.87	0.22	0.27	0.06	0.72
Cash plus savings to total assets	0.89	0.88	0.77	0.74	0.90	0.98	0.98
Total revenue to total assets	1.57	1.88	1.85	1.45	1.44	1.34	1.70
Liabilities to assets	0.02	0.03	0.04	0.01	0.00	0.19	0.02
Debt to assets	0.00	0.00	0.00	0.00	0.00	0.07	0.00

Source: estimated by authors using financial data in New Roots Inc.'s 990 forms, provided by the organization.

Table 3. Main entities contributing with gifts, grants, and similar revenue to New Roots Inc. (share relative to total contributions)

ID	2019	2018	2017	2016	2015	2014
1	41%	34%	7%	6%	11%	4%
2	21%	0%	3%	4%	3%	7%
3	12%	0%	0%	0%	0%	0%
4	9%	0%	3%	4%	0%	0%
5	9%	0%	5%	0%	0%	0%
6	6%	6%	3%	4%	5%	0%
7	3%	9%	5%	9%	14%	20%
8	0%	0%	31%	36%	22%	27%
9	0%	6%	3%	4%	5%	13%
10	0%	28%	14%	15%	11%	0%
11	0%	0%	5%	5%	0%	0%
12	0%	0%	3%	0%	0%	0%
13	0%	0%	19%	0%	0%	0%
14	0%	0%	0%	9%	8%	0%
15	0%	11%	0%	2%	0%	0%
16	0%	0%	0%	4%	0%	0%
17	0%	0%	0%	0%	3%	12%
18	0%	0%	0%	0%	6%	4%
19	0%	0%	0%	0%	8%	0%
20	0%	0%	0%	0%	3%	0%
21	0%	0%	0%	0%	0%	7%
22	0%	6%	0%	0%	0%	0%
23	0%	0%	0%	0%	0%	7%

Source: estimated by authors using information in New Roots Inc.'s 990 forms (schedule B), provided by the organization. ID is an identifier to disguise the contributor's name.

Table 4. Comparison between Food Hubs, Community Food Services Organizations, and New Roots Inc.

	New Roots Inc.	Food Hubs¹	Community Food Services Organizations²
Functions covered by the organization	Distributes and markets food. Community organizing, leadership development, and food education.	Aggregate, distribute and market food.	Collects and distributes food, provides soup kitchens and on-site meals, food pantry and food bank services.
Sources of revenue	Foods sales, government grants, and similar contributions (e.g., foundation donations).	Food sales, federal/state/local government funding, foundation grants, donations, membership fees, in-kind support, income from other organization programs.	Funding and donations from public and private sectors.
Strategies to fulfill the food justice mission or food justice-related goals	Lets communities define their problems and needs in terms of food justice. Uses and invests in the human and social capital of the communities it serves to run programs. Uses a sliding-scale based on household income strategy to allow limited resource households access fresh foods.	Locate in low-income and low-food access areas, sell food to low-income businesses or customers, accept SNAP benefits.	Collect, prepare and deliver food to persons at risk of hunger.
Selected financial ratios	Profit margins (2019)= 0.15	Average profit margins (2019) ³ =0.07	Average profit margins (2019)=0.07

¹²General characteristics based on the 2019 National Food Hub Survey, and IBISWorld Industry Report. There might be specific cases of organizations similar to New Roots Inc. that are not captured by these information sources.

³ The 2019 National Food Hub Survey report shows an average operating efficiency ratio for nonprofit food hubs (total expenses divided by gross revenue) of 0.93, which is equivalent to an average profit margin of $1-0.93=0.07$. It is unclear whether this estimate includes interest expenses in total expenses.