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Social entrepreneurship in agri-food systems: the case of food hubs

RESEARCH ARTICLE

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Abstract

Food hubs are nascent organizational innovations in local and regional food systems. Although the number of food hubs in the U.S. has grown over the past decade, their purpose in the food system is still debated. There is a lack of clarity in whether food hubs primarily pursue a social mission, economic value creation, or both simultaneously. To better understand the purpose of food hubs in the food system, this study draws from social entrepreneurship literature and examines the entrepreneurial processes by which food hubs were formed. By employing a comparative case study research method, the study examines four food hubs with different organizational models in the U.S. state of Michigan. The results show that food hubs are social enterprises aimed to simultaneously create social and economic value. Social value proposition, however, can be multifaceted and differs by food hub type. The key differences in food hub models stem from their legal business status, markets they serve, scope and scale of both mobilized resources and economic activities in ‘farm to fork’ supply chains.

Keywords: social entrepreneurship, food hubs, local and regional food systems, comparative case study

JEL codes: Q1, Q13

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1. Introduction

A food hub is a nascent organizational innovation typically associated in local and regional U.S. food systems. In this context, this type of enterprise sources local foods from small- and medium-sized farms and food entities and markets the foods locally or regionally. Although the number of food hubs in the U.S. has grown over the past decade (Feldstein and Barham, 2017), a dominant organizational model for these types of enterprises is still emerging. This may in part reflect the lack of a universal ‘food hub’ definition and the continued debate as to the purpose of food hubs in the food system that exists among practitioners and in academic literature. The existing literature points to three main research streams regarding the purpose of food hubs in the food system. The first body of literature proposes that food hubs are market-led innovations intended primarily to enhance market efficiency (Diamond et al., 2014; Matson and Thayer, 2013). The second body of literature proposes that food hubs are primarily community-level innovations aimed to create sustainable food production and a consumption culture for local foods (Blay-Palmer et al., 2013; Le Blanc et al., 2014). Finally, the third body of literature proposes that food hubs can simultaneously perform both of these functions (Fischer et al., 2015; Koch and Hamm, 2015).

The divergence regarding the purpose of food hubs creates ambiguity for strategy development for actual and potential food hub practitioners as well as for policy makers and other stakeholders involved in strengthening local and regional food systems. Since the number of food hubs has grown over the past decade (Feldstein and Barham, 2017) and food hubs are increasingly demonstrating a potential to be key drivers for improving the resiliency and strength of local and regional food supply chains (Bielaczyce et al., 2020), it is important to better understand the nature of food hubs and to provide clarity to their purpose whether it be a social mission, economic value creation, or both simultaneously.

This study proposes that in order to better understand the purpose of food hubs in the food system, it is important to examine the entrepreneurial processes by which they are formed. One approach towards implementing this examination is to identify and compare key similarities and differences between food hubs from the perspective of their founders and operating managers. This study employs a comparative case study research method (Yin, 2003) to examine four food hubs with different organizational models in the U.S. state of Michigan. In order to guide this comparative analysis, the study applies the social entrepreneurship framework proposed by Austin et al. (2006) to systematically analyze food hubs across the five dimensions of the framework, namely opportunity, context, people, capital, and social value proposition.

This paper is organized as follows. Section 2 presents literature review on food hubs. Section 3 describes the theoretical framework of the study, namely the social entrepreneurship framework. Section 4 presents the methods employed to collect and analyze data. Section 5 presents the results and discussion of the study. Finally, the paper concludes with final remarks and implications.

2. The purpose of food hubs

There are divergent views about the purpose of food hubs in a local or regional food system. In the literature, food hubs are commonly classified by their legal business status and the primary markets they serve (Barham et al., 2012). The findings of the U.S. National Food Hub Survey (Colasanti et al., 2018) indicate that out of the 131 regional food hubs that participated in the survey, they were identified in the following manner: 42% non-profit food hubs, 37% for-profit food hubs, 18% cooperatives and 3% publicly owned food hubs or another legal status. Food was also found to serve the following primary markets: 35% were farm-to-business/institution or wholesale models selling food to wholesale buyers (e.g. food cooperatives, grocery stores, institutions and foodservice companies), 19% were farm-to-consumer models selling directly to end-use consumers, and 46% were hybrid models selling both to wholesale buyers and directly to end-use consumers.

There are three main streams of research explaining the emergence of food hubs, especially regarding their purpose in the food system (Barham et al., 2012; Morley et al., 2008). The first body of literature proposes
that food hubs are organizations created to enhance market efficiency in local and regional food systems (Cleveland et al., 2014; Day-Farnsworth and Morales, 2011; Diamond and Barham, 2012; Diamond et al., 2014; Matson and Thayer, 2013; Matson et al., 2013; Reynolds-Allie et al., 2013). According to this stream of research, food hubs emerged as ‘logistical vehicles’ that efficiently connect producers to wholesale buyers and individual consumers (Matson and Thayer, 2013). In this context, a food hub is defined as ‘a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand’ (Barham et al., 2012: 4). This stream of research emphasizes the economic value creation motive of food hubs through efficient aggregation, distribution, and marketing – ‘the “missing middle” of local food infrastructure’ (Morley et al., 2008: 2).

The second stream of research proposes that food hubs are organizations aiming to create a sustainable production and consumption culture for local foods. It refers to food hubs as sustainability- and community-oriented organizations (Le Blanc et al., 2014; Blay-Palmer et al., 2013). Within this approach, food hubs are considered to be community-based initiatives aimed at directly linking producers and consumers to bring about social change through civic agriculture, food justice, community education, healthy eating, ecological well-being, community cohesion, local food access, among other social initiatives. Blay-Palmer et al. (2013: 524) consequently define food hubs as ‘networks and intersections of grassroots, community-based organizations and individuals that work together to build increasingly socially just, economically robust and ecologically sound food systems that connect farmers with consumers as directly as possible.’ Thus, this approach emphasizes that food hubs as social innovations emerging at the community level in contrast to market-led innovations.

Finally, there is an emerging body of literature proposing that food hubs can perform both efficiency (e.g., purchasing and distribution) functions and meet social mission goals together (Fischer et al., 2015; Koch and Hamm, 2015). In this context, food hubs support values-based agri-food supply chains. Fischer et al. (2015) propose that food hubs not only serve as regional food aggregators and distributors, but also implement key social functions (or, as the authors state, ‘plus’ functions) that distinguish them from other types of businesses involved in regional food purchasing and distribution. These social functions include: helping to grow regional food systems, increasing healthy food access, and having positive impacts on local economies in which the food hub operates. Fischer et al. (2015: 97) further suggest that ‘[f]ood hubs are, or intend to be, financially viable businesses that demonstrate a significant commitment to place through aggregation and marketing of regional food.’ As the authors state, the term ‘commitment to place’ is used in order to articulate the ‘plus’ nature of food hubs. This literature highlights a number of social mission goals of food hubs through which benefits for society are created, including: actively helping to grow local and regional food systems, enhancing the competitiveness of small- and medium-sized producers in securing access to larger markets, improving local economies by creating jobs and circulating resources within the region, helping to increase access to healthier food, and creating demand for local foods through education and outreach (e.g. in hospitals and schools) (Berti and Mulligan, 2016; Fischer et al., 2015).

3. Social entrepreneurship framework

The social entrepreneurship literature offers a unique perspective regarding the social and economic value creation motives of an enterprise. Social entrepreneurship is a relatively new, emerging field of study within entrepreneurship research, one rife with various conceptualizations and definitions of social entrepreneurship (Rey-Martí et al., 2016). The main distinguishing characteristic of social entrepreneurship from commercial entrepreneurship is that social enterprises are created in response to social needs or for catalyzing social change (Bornstein and Davis, 2010; Mair and Martí’, 2006; Zahra et al., 2009). Focusing solely on the social mission, however, is not sufficient for defining social entrepreneurship. The economic outcomes should be an integral part of the mission of a social enterprise. That is, these enterprises have the important task of balancing economic and social value creation. Without economic value creation the social enterprise and its mission will not be sustainable (Mair and Martí’, 2006; Zahra et al., 2009). Thus, in social entrepreneurship,
a social value creation mission does not preclude economic value creation motives. Economic value creation, in fact, is critical for the viability of a social enterprise because financial resources are crucial for continuing social value creation (Dacin et al., 2011).

While there are several studies that refer to food hubs as social enterprises (e.g. Berti and Mulligan, 2016; Fischer et al., 2015), these studies have not explicitly adopted the theoretical concepts and frameworks of the social entrepreneurship literature nor conducted empirical tests to examine the extent to which food hubs are consistent with existing social enterprise definitions. To address this issue, this study adopts a social entrepreneurship framework proposed by Austin et al. (2006) (Figure 1). This framework allows to systematically examine food hub models from the perspective of entrepreneurship processes by which they were formed. The framework includes five key components: namely opportunity, people, capital resources, social value proposition, and context. The major premise of the framework is that a social value proposition is the central construct (i.e. purpose or mission) of a social enterprise and integrates the opportunity, people, and capital resources of an enterprise. Austin et al. (2006) argue that social enterprises are ventures with social responsibility (i.e. ‘social value proposition’) at the core of their mission and strategy.

In the social entrepreneurship framework, social value proposition refers to the distinctive purpose of a social enterprise and the nature of social value creation. The people and capital categories refer to human and capital resources, respectively. In the model, economic and human resources are separated as distinct variables for analytic reasons. The reason for this separation is the recognition that financial and human resources are mobilized in social enterprises very differently from each other as well as from commercial entrepreneurship. For example, one of the distinguishing characteristics of social entrepreneurship is that social entrepreneurs often successfully mobilize resources they do not possess themselves. The opportunity is defined as an activity that promises a better or desired state in the future. The nature of opportunity and how it is viewed is one of the important distinctions of social entrepreneurship. For example, certain situations that may look unattractive for commercial entrepreneurship, resulting in market failures, may be seen as attractive for social entrepreneurship. The context refers to factors that an entrepreneur has no control over. These elements, however, greatly affect the success or failure of an enterprise (e.g. demographics, lifestyles, sociocultural factors, the macroeconomy, regulatory structure, and political environment). In the words of Austin et al. (2006: 16), ‘what might be deemed an unfavorable contextual factor for market-based

![Figure 1. Social Entrepreneurship Framework (Austin et al., 2006). SVP = social value proposition.](https://example.com/figure1.png)
commercial entrepreneurship could be seen as an opportunity for a social entrepreneur aiming to address social needs arising from market failure.’

In order to be able to deliver effectively on the social value proposition, a state of alignment (both externally and internally) among the key components of the framework – the opportunity, people, capital, and context – must be achieved by the social enterprise. The external alignment, specified through the category context, is more complicated because of the dynamic nature of change forces (Austin et al., 2006).

4. Methods

This study employs a comparative-case study research design (Yin, 2003) to conduct a comparative analysis of four food hubs with different organizational models located in the U.S. state of Michigan. A purposive sampling strategy was employed to select four food hubs with different organizational models. Actual names of the food hubs are represented by pseudo names – names of lakes in the state of Michigan including Erie, Huron, Michigan, and Superior – to protect the identity of the food hub and individuals employed therein. The food hubs include a non-profit organization (Erie Food Hub), a for-profit organization (Huron Food Hub), an organization that operates as one of the separate projects of a larger non-profit (Michigan Food Hub), and an organization that is a partnership between two different entities (Superior Food Hub). Sampling of food hubs’ informants was based on the expert sampling principle. This type of purposive sampling is based on individuals having particular expertise and knowledge that most likely can meet the research needs. In the case of food hubs, in order to construct case studies, it was important to interview individuals who were the most knowledgeable and aware of each organization’s management and relations to its key stakeholders. Therefore, the respondents for this sample are top managers or founders of the food hubs.

Semi-structured interviews served as the main instrument for data collection. Face-to-face interviews were conducted with food hub managers or founders from July-November of 2015. The interviews were recorded, transcribed, and coded (Creswell, 1998; Patton, 2002). A comparative case study analysis of four food hubs across the five dimensions of the social entrepreneurship framework (Austin et al., 2006) were performed to identify key similarities and differences between the case study food hubs.

It is important to note that the framework used in this study is neither definitive nor exhaustive, but rather serves as a tool to guide the comparative analysis. Since the comparison is performed in the form of qualitative analysis, the dimensions of the social entrepreneurship framework are operationalized as follows. The opportunity and context dimensions of food hubs were identified by learning the foundation history of each of the four hubs and their trajectory. The goal was to identify and analyze the nature of opportunities captured by food hubs, and the contextual factors that were favorable for the establishment of each food hub. The capital dimension of the food hubs was identified by learning about how food hubs mobilized and continue to mobilize capital to organize and maintain their operations. Specifically, key funding- and revenue-sources were explored. The study specifically focused on how the food hubs organize entrepreneurial processes instead of the numerical value of their financial resources per se. To operationalize the people dimension of the framework, the food hubs were asked about key individuals involved in the establishment of their food hubs. Finally, the social value proposition of the food hubs was identified by asking food hubs about their long-term mission and short-term goals (Table 1).

5. Results and discussion

5.1 The social value proposition

The results show that the long-term missions of food hubs are rooted in social value creation. The nature of social value creation is multifaceted and focuses on: (1) helping small- and medium-sized producers to reach markets beyond the farmers markets and rely on farming for their livelihoods; (2) fostering the emergence of beginning farmers and engaging youth in agriculture; (3) improving access to healthy food
These are social value creation areas. First, supporting local farmers and supporting the emergence of beginning farmers are considered social value creation because they have major economic implications not only for the independent farms, but also social and environmental implications for society at large. Among the major social and environmental benefits, the independent family farms (‘agriculture-in-the-middle’) generate are providing consumers with an opportunity to choose foods with desirable attributes (i.e. diversity of food and choice), providing habitat for wildlife, crop diversity (as opposed to monocrops), and diversified farmland (Kischernmann et al., 2008). The decline of these family farms will result in long-term losses for society in terms of diversity of food and environmental resources. Second, building locally and regionally integrated resilient, safe and socially just food systems and preserving farm identity throughout the ‘farm to fork’ supply chain has both social and environmental sustainability implications. Previous research has shown regional food systems offer a response to some environmental and social sustainability challenges (Mittal et al., 2018). Finally, food access is a prevailing social issue within the context of food insecurity. Fostering access to healthy local food and/or buying local foods in local communities addresses one specific dimension of food security – food access.

The results also show while the long-term mission of each food hub is rooted in social value creation, the short-term goals, on the other hand, revolve around building an economically sustainable enterprise through economic value creation (e.g. revenue) and capacity building (Table 2). For example, when asked about the mission of the food hub, the respondent from Huron Food Hub stated, ‘Build a resilient and socially just food system ... and become the experts in food safety.’ When asked about short-term goals, the same respondent stated, ‘We are going to measure our success, one, on how well and how often we are able to bring more people to the table. And two, how often we are asked to be at another table or to help address issues in food.’ When asked about the long-term mission, the respondent from Michigan Food Hub stated, ‘The long-term mission is that we will be able to support and grow the supply and the demand side to getting more local foods in this community, in this area, in this region. So that farming can be a livelihood for small and medium-sized growers. And that we can help with those institutions that say they want to do 20% by 2020 on local food, that we can help meet that demand. And really just helping, it is all about helping our growers and our food producers and helping those families access healthy foods in the low-income families or low access families in our communities, being able to access healthy locally produced foods.’ Regarding the short-term goals of the Michigan Food Hub, the respondent stated, ‘The short-term goals are building the [food hub], seeing more sales, helping with building more of that capacity with the growers ... and getting our dry and cold storage capacity filled up more.’ These suggest that the food hubs pursue social and economic value simultaneously (see Table 2 for all food hubs).

These findings align with the theory of social entrepreneurship according to which social enterprises balance social and economic value creation (Dacin et al., 2011; Mair and Martí’, 2006; Zahra et al., 2009).

### Table 1. Operationalization of the social entrepreneurship framework for food hubs.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Operationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity and context</td>
<td>Foundation history and trajectory</td>
</tr>
<tr>
<td>People</td>
<td>Key individuals involved in the establishment of the food hubs</td>
</tr>
<tr>
<td>Capital</td>
<td>Key funding- and revenue-sources critical for food hub establishment, survival and growth</td>
</tr>
<tr>
<td>Social value proposition</td>
<td>Long-term mission and short-term goals</td>
</tr>
</tbody>
</table>

in local communities for low-income population or for institutions seeking to buy local foods; (4) building locally and regionally integrated resilient, safe and socially just food systems; and/or (5) preserving farm identity throughout the ‘farm to fork’ supply chain (Table 2). Each food hub has a multifaceted social value proposition which, however, differs by food hub type.
Three out of four food hubs were originally founded in response to the needs of local farmers or local community in general. They captured opportunities that align with their social value proposition. These opportunities include local community members’ concerns for food access (Erie Food Hub), local farmers’ needs to expand their markets beyond the farmers market (Michigan Food Hub), and local farmers’ challenges (e.g. infrastructure, storage, distribution, aggregation, and food safety) in trying to market their products to larger buyers such as restaurants (Superior Food Hub). The Huron Food Hub, on the other hand, was originally founded as a small commercial venture selling local foods to local community members, but over time restructured its organizational model by incorporating a social mission into the core of its business strategy and decision-making. The food hub prioritizes maintaining farm identity throughout the supply chain and allows growers to have part in decision-making (Table 3).

While it would not be feasible to include all contextual factors that played a role in food hub establishment, the results show that the food hubs followed a four-step process for their establishment. First, they identified
particular needs or issues faced by local farmers and community members, such as food access, market access, and scale-appropriate food safety procedures. This step was followed by identifying interested stakeholders and partners who were willing to contribute and form formal or informal networks. This largely determined the resource pool available for starting a food hub. In step three, the legal business status of the food hub was chosen. The selection of legal business status for the food hubs was mainly for financial reasons. It was not related to their social value proposition. It was more about the capacity to create something that would generate enough revenue in the short run to fund staff and cover operational costs. One respondent expressed it like this:

There is so much overlap in the work we do. We did not have the capacity to create something that was going to generate enough revenue in the short term to fund staff. In order to create a separate legal entity, we would have to figure out how to do the work on top of what we were already doing. We identified what the needs are, who the interested parties are. We focused on identifying what the partners can do to support the different pieces and figuring out how that works within their existing structure rather than saying, ‘Here is the structure, now let’s figure out how to do this.’

– Respondent, Superior Food hub

Finally, at some point food hubs needed a brick-and-mortar building as aggregation points, office space, etc. Some of them acquired abandoned buildings through the mobilized funds and utilized local community members’ support to renovate the buildings.

5.3 People

In terms of people involved in the establishment of food hubs, three main similarities were identified. First, the results show that people who were pivotal in the food hub establishment process had experience in working with local farmers or their local community, in general. These experiences revolve around working with local

Table 3. Nature of opportunities captured by case study food hubs.

<table>
<thead>
<tr>
<th>Food hub name</th>
<th>First established as</th>
<th>Nature of captured opportunities</th>
<th>Current legal business status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erie Food Hub</td>
<td>Community garden organization</td>
<td>Local community building through gardening Youth involvement in farming/food production Improving food access</td>
<td>Non-profit corporation, 501(c)(3)</td>
</tr>
<tr>
<td>Huron Food Hub</td>
<td>Small commercial operation</td>
<td>Preserving family farms Maintaining farm identity throughout the supply chain Allowing growers to participate in decision making Food safety</td>
<td>For-profit LLC</td>
</tr>
<tr>
<td>Michigan Food Hub</td>
<td>A separate project of a larger non-profit entity</td>
<td>Local farmers and food processors’ identified need that there was a gap between the demand for local food in the area and the way to get it to those who needed it</td>
<td>A separate project of a larger non-profit corporation, 501(c)(3)</td>
</tr>
<tr>
<td>Superior Food Hub</td>
<td>Partnership between two entities</td>
<td>Local farmers’ challenges in trying to market their products to larger buyers such as restaurants Food safety</td>
<td>Partnership/initiative between a cooperative and a university extension</td>
</tr>
</tbody>
</table>
farmers’ markets from a marketing or tourism standpoint, leading local community development initiatives such as neighborhood clean-up, having regular interactions with farmers within the cooperative extension or community outreach, and working for a local food business. These regular interactions allowed them to notice the needs the farmers or local community members had and seek to find ways to help them address the needs. Second, there was multi-stakeholder involvement to establish the food hubs. Stakeholders helped build capacity and mobilize resources, and included organizations such as a local conservation district, local community development organizations and businesses, and the Michigan Food Hub Learning & Innovation Network. Third, both the founders and supporting stakeholders had a strong commitment to local and regional food initiatives or community development. One of the respondents expressed it like this:

I am a big believer in preserving the family farm. [Our food hub] maintains farm identity all the way through. People want to connect to their food. It is really about connections. If I really reflect on it, it is more about ‘you need to have those connections.’ That is what is vanishing in society today and in our culture. Let’s see if we can make connections.

– Respondent, Huron Food Hub

5.4 Capital

The results show that food hubs mobilized capital through grants, donations, and/or private investments (Table 4) as well as engaged in revenue-generation activities through aggregation, distribution, and/or sales of local foods. Food hubs strategically identified and established diversified and complementary funding sources to pay their employees, build infrastructure for aggregation, distribution and sales. The most commonly used funds were from philanthropic organizations (e.g. foundation) and federal government agencies. Some food hubs were able to acquire funds from state government programs to build infrastructure and achieve cost savings. As shared by the respondents, stakeholders that provided funds (e.g. private investors, federal government agencies, foundations) had a commitment to strengthening local and regional food systems and/or local communities.

Despite these similarities, the food hubs have some key differences regarding the leverage of their funding sources. The for-profit food hub was established primarily based on private investments. The other three food hubs – NGO, partnership, and project of a larger NGO – had two major funding (grants or donations) providers: philanthropic organizations (supporting local community development and/or local, fair, healthy food initiatives) and the federal government.

Table 4. Major funding sources of food hubs.

<table>
<thead>
<tr>
<th>Food hub name</th>
<th>Funding source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erie Food Hub</td>
<td>Foundation</td>
</tr>
<tr>
<td></td>
<td>Non-profit organizations</td>
</tr>
<tr>
<td></td>
<td>Local community foundation</td>
</tr>
<tr>
<td></td>
<td>Federal government programs</td>
</tr>
<tr>
<td>Huron Food Hub</td>
<td>Private investments</td>
</tr>
<tr>
<td></td>
<td>State government program</td>
</tr>
<tr>
<td>Michigan Food Hub</td>
<td>Non-profit organization and its respective funding sources</td>
</tr>
<tr>
<td>Superior Food Hub</td>
<td>Federal government programs</td>
</tr>
<tr>
<td></td>
<td>State government program</td>
</tr>
<tr>
<td></td>
<td>Privately held company</td>
</tr>
<tr>
<td></td>
<td>University</td>
</tr>
</tbody>
</table>
In addition to mobilizing capital from various sources, food hubs generate economic value (i.e. revenue) through aggregation, distribution, and/or sales of food products sourced from local producers. The scale and scope of their involvement in the ‘farm-to-fork’ supply chain, however, differs. Some food hubs are fully integrated in the supply chain (from product pickup from the producer to distribution and sales to end-consumer or wholesale buyer). Others have more limited scope of activities such as only aggregation or providing only an online platform to connect individual producers to end-consumer or wholesale buyer (Table 5). The scope of activities in the ‘farm-to-fork’ supply chain is related to a number of factors. The first key factor food hubs have considered is their own capacity to consistently deliver the quality and quantity of products demanded by a particular customer along with other requirements. In turn, this largely depends on food hub suppliers’ ability to consistently meet the quality and quantity required to satisfy customer demand. For example, the Michigan Food Hub has adapted a multi-farm CSA model to mitigate issues related to consistency of quality and quantity of products supplied by producers. This strategy has allowed the food hub to consistently deliver quality food to its customers as well as build capacity of suppliers to meet the demand requirements over time. Those food hubs that overcame food supply inconsistency and scale issues and established sound infrastructure (e.g. refrigerated trucks, warehouses) were able to adapt a growth strategy. They started to work with retailers such as large chain grocery stores. This plays a key role for food hubs to be able to work with retailers. Selling to retailers not only expands opportunities for small- and medium-sized farm and food entities to have access to larger markets, but it also helps to mitigate food access issues in areas where consumers have limited healthy and nutritious food options (i.e. food deserts).

Regardless of the scale and scope of activities in the ‘farm-to-fork’ supply chain, all four food hubs are actively involved in establishing a diversified customer base for local producers (see Table 6). They often

Table 5. Food hub involvement in the ‘farm to fork’ supply chain.

<table>
<thead>
<tr>
<th>Food hub name</th>
<th>Erie Food Hub</th>
<th>Huron Food Hub</th>
<th>Michigan Food Hub</th>
<th>Superior Food Hub</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key supply chain functions</td>
<td>Procurement from producer</td>
<td>Procurement from producer</td>
<td>Procurement from producer</td>
<td>Create online platform</td>
</tr>
<tr>
<td></td>
<td>Pick-up</td>
<td>Pick-up</td>
<td>Producers drop off products</td>
<td>Connect producers and customers</td>
</tr>
<tr>
<td></td>
<td>Aggregation</td>
<td>Aggregation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Distribution</td>
<td>Distribution</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fully owns the product after purchasing from producers</td>
<td>Fully owns the product after purchasing from producers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key activities</td>
<td>Charges commission fees</td>
<td>Charges commission fees</td>
<td>Charges commission fees</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Offers product pick up and distribution as key functional areas of the enterprise</td>
<td>Offers product pick up and distribution as key functional areas of the enterprise</td>
<td>Utilizes a third-party distributor from local community</td>
<td>Does not take ownership of products</td>
</tr>
<tr>
<td></td>
<td>Utilizes leased transportation infrastructure</td>
<td>Utilizes own transportation infrastructure</td>
<td></td>
<td>Charges commission fees</td>
</tr>
<tr>
<td></td>
<td>Adds food hub’s brand on the product Actively creates customer base</td>
<td>Adds food hub’s brand on the product Actively creates customer base</td>
<td>Focuses more on creating a customer base in the region</td>
<td>Mainly serves as a connection facilitator between producers and customers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Brings together buyers and producers to identify mutual expectations and specific needs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Actively promotes local foods and local farmers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No contractual relationship between producer-food hub or food hub-customer</td>
<td></td>
</tr>
</tbody>
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use non-traditional marketing tools to for relationship building with customers and sharing with them the greater mission and vision of the organization. As one of the respondents stated:

We also do farmer-buyer meet and greets. We get them in the same room ... The idea is to get them talking, not only tell them about resources that are available like the online marketplace, try to get both sides on the marketplace, but at the same time get them in the room.

– Respondent, Superior Food Hub

These findings reinforce the social entrepreneurship theory regarding capital and economic value creation, in general. Food hubs founders or managers mobilized resources they did not possess themselves as well as engaged in creation of economic value (e.g. revenue) that aligns with their mission to ensure continuity of the operation.

6. Conclusions and implications

The findings of this study show that food hubs are social enterprises aimed to simultaneously create social and economic value. Food hubs were established in response to particular social needs or sought to catalyze social change through food-related activities in local communities. That is, social value creation is at the core of their strategy and decision making. The social value proposition, however, is multifaceted and differs by food hub type. Social value is created by addressing the needs of small- and medium-sized farmers that rely on farming for their livelihoods and require access to larger markets to maintain viability, establishing scale-appropriate local and regional food infrastructure and food safety procedures, involving youth in farming, improving access to healthy food in local communities, preserving family farms, maintaining farm identity throughout the supply chain, and/or strengthening local and regional systems as a whole. This finding suggests that a given food hub can have one or more social mission goals. One common thread was that all four food hubs included supporting local small- and medium-sized farms as part of their mission. Therefore, this study concludes that missions to offer such support should be included as one of the key distinguishing characteristics of food hubs and considered as an important social mission. Supporting local small- and medium-sized farms has major implications not only for the independent family farms, but also for local communities or region in terms of food access and diversity of food and environmental resources.

Simultaneously, food hubs meet one or more of the abovementioned social needs or catalyze social change in local communities or region by engaging in economic activity within the context of local and regional food markets. Economic value creation (i.e. revenue) is an integral part of their strategy. They actively

<table>
<thead>
<tr>
<th>Food hub name</th>
<th>Target customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erie Food Hub</td>
<td>Institutions (schools, hospitals and senior living homes) Food-service companies (restaurants)</td>
</tr>
<tr>
<td>Huron Food Hub</td>
<td>Food-service companies (restaurants) Retailers (grocery stores) Institutions (schools and hospitals)</td>
</tr>
<tr>
<td>Michigan Food Hub</td>
<td>Institutions (workplaces and schools) Food-service companies (restaurants) End-consumer (individuals)</td>
</tr>
<tr>
<td>Superior Food Hub</td>
<td>Retailers (natural foods co-op stores) Food-service companies (restaurants) Institutions (school)</td>
</tr>
</tbody>
</table>
pursue revenue-creation activities to have economically viable enterprises in the long run. These results are consistent with the social entrepreneurship literature. Food hubs balance economic value creation with social value creation.

The key differences in food hub models stem from their legal business status, the markets they serve, their level of involvement in the supply chain (e.g. only aggregation; aggregation and distribution, etc.) and the scale and scope of mobilized resources. The legal business status does not define whether or not a food hub pursues a social mission. The selection of legal business status largely depends on the best fit for a food hub’s financial situation and availability of resources, such as financial, human and infrastructure resources. That is, the diversity of food hub models in terms of these factors does not prohibit food hubs from creating both social and economic value. Existing practitioners can use these insights for restructuring their food hub models, if needed. Potential practitioners, on the other hand, can use these insights while establishing a food hub. Examples of such applications include developing and implementing scale-appropriate resource mobilization strategies, defining organizational boundaries in terms of scale and scope of the involvement in supply chain activities, opportunity recognition and exploitation, adapting and responding to contextual changes, and achieving and maintaining strategic alignment with social value proposition. The study, moreover, informs the policymakers and other stakeholders interested in the advancement of local and regional food systems or local communities. The findings of this study point to the purpose of food hubs as a supply chain participant in the food system and the specific ways in which food hubs create social and economic value in local communities or the region in which they operate.

The key limitation of this study is the focus on food hubs in one state (i.e. Michigan). Therefore, future research can apply the social entrepreneurship framework through the case study method for a greater number of food hubs in other contexts (e.g. state or country) to identify further context-specific factors and the scope of food hub social value proposition.

It is important to note the study was conducted before the COVID-19 pandemic. The findings of the study align with what we see regarding the role of food hubs in the food system since the COVID-19 pandemic. The important role of food hubs has been amplified since the COVID-19 pandemic. The pandemic disrupted food supply chains in the U.S. and globally. During this critical time, food hubs across the U.S. demonstrated resilience and adapted to meet the critical needs of their communities as it relates to supplying food directly to consumers, distributing food boxes weekly through the USDA Farmers to Food Box program, reducing or eliminating food waste and ensuring farmers continued to have a market for their products (Bielaczyc et al., 2020). Therefore, future research can explore the scope and scale of social and economic value creation by food hubs in different contexts (state or country) after the COVID-19 pandemic.

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Conflict of interest

The authors declare no conflict of interest.

References


