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Creating Dignity, Not Dependence: Community Development & Food Security Implications of Mobile Food Vending

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CREATING DIGNITY, NOT DEPENDENCE: COMMUNITY DEVELOPMENT & FOOD
SECURITY IMPLICATIONS OF MOBILE FOOD VENDING

A Thesis Presented

By

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To

The University of Vermont

Honors College Committee

College of Agriculture and Life Sciences

Department of Community Development and Applied Economics

In partial fulfillment of the requirements for the degree of Bachelor of Science in Community
and International Development

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Applied Economics, UVM

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Abbreviations

GFT = The Good Food Truck

CEFS = The Chittenden Emergency Food Shelf

SNAP = Supplemental Nutrition Assistance Program

WIC = The Special Supplemental Nutrition Program for Women, Infants, and Children

CM = Community meal/s

PV = Private vending

CVOEO = Champlain Valley Office of Economic Opportunity

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“The proper aim of giving is to put the recipients in a state where they no longer need our gifts.”

—*C. S. Lewis*

“What would happen if we were to start thinking about food as less of a thing and more of a relationship?”

— Michael Pollan, *In Defense of Food: An Eater's Manifesto*

Abstract

Despite the ostensible abundance of “cheap food” today, food insecurity remains a complex issue that impacts 12.7 percent of American households. This paper investigates the efficacy and sustainability of an innovative approach to addressing community food insecurity launched by the Chittenden Emergency Food Shelf of Burlington, Vermont. Known as the Good Food Truck, this program has capitalized on the cultural trend of mobile food vending to create an inclusive space for low-income individuals to enjoy free, chef-inspired meals crafted with locally produced ingredients donated by Vermont farmers, gleaning teams, and larger entities. This operation is novel because it provides free meals to all community meal attendees, and because it operates as a social enterprise model by catering various events for profit. Net profits are used to subsidize free meals at three locations each week.

This study uses a mixed methods approach. Data was collected through surveys, observation, and interviews at community meals and vending events. Findings suggest that although the intervention does not eradicate chronic hunger, it complements existing social safety nets. Beyond a fresh, healthful meal, the truck provides a dignified space for all to engage in an increasingly popular dining experience, fosters social capital formation, provides experiential nutrition education through exposure to healthy, appealing foods, and transmits information about social services. Ultimately, the program is limited in scope due to resource constraints, but the model has the potential to target underlying causes of food insecurity with expanded programming and utilization of the truck as built capital.

Introduction

Food is an essential human need. It follows that food systems directly impact quality of life for all people. Therefore, food systems can be leveraged to address myriad societal problems from physical health to social disintegration.

Presently, a lack of access to fresh, nutritious foods for those of lower income status threatens the vitality of the United States population. The Food and Agriculture Organization (FAO) of the United Nations (2017) defines food security as having “physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.” This status is broken into four dimensions: food availability, economic and physical access to food, food utilization and stability over time (FAO, 2017). Yet, according to 2015 data, over 15.8 million U.S. households, or one out of every eight, is food insecure (USDA ERS, 2016). In this age of material abundance, where 40 percent of all food produced in the United States also goes to waste, this is an unacceptable state (Hall et al., 2009).

This trend, which is antithetical to democracy and hinders society’s productive capacity, has worsened since public funding for social welfare programs—including food assistance—was drastically cut in the 1970s and 1980s, perpetuating increased reliance on the private sector (Allen, 1999, p.118). Policymakers have therefore elevated the role of the private emergency food network, expecting it to fill the gaps (Allen, 1999, p.118).

The ranks of food pantry users continue to swell due to economic conditions, and what was previously an emergency network created to provide food to people in short-term crises, has become a regular supplement to inadequate food access (Feeding America, 2011). Moreover, economic inequality that has increased dependence on food shelves has also hindered the

capacity of low income individuals to purchase healthier, more nutrient dense foods (Drewnowski & Darmon, 2005, p. 265). Low income populations often face a tradeoff between inexpensive pre-processed foods and refined grains, and healthier produce that requires preparation and can be more expensive (Drewnowski & Darmon, 2005). Choosing higher volume over nutrition to prevent hunger has degraded the health and productive capacity of low income populations, reducing their human capital and perpetuating social inequity (FAO, 2008). Thus, coupled with the issue of food security is that of “food sovereignty,” or the “right to sufficient, healthy and culturally appropriate food for all” (U.S. Food Sovereignty Alliance, 2007). Food sovereignty requires not only increased economic access to certain foods, but the removal of intangible barriers such as limited information about available and affordable healthy foods, and how to prepare them.

Traditional food aid locations do not provide the positive engagement and interaction necessary to foster food sovereignty. However, community food security efforts can “empower people to improve their community food production and access systems in which self-determination becomes a key feature” (Allen, 1999, p.119). Allen (1999) also asserts that “locally based solutions are essential for people to improve the conditions that will enable them to become food secure” (p.119). Altering the misallocation inherent in the food system will require multiple efforts at various scales. An emergent and promising strategy involves utilizing comprehensive programs to positively expose low income individuals to healthy foods, educate about nutritious preparation, and increase awareness of social assistance programs. Ultimately, these forces converge to increase demand for nutritious foods as well as the capacity of vulnerable populations to procure them. In addition, programs that spread hunger awareness to

the greater population may have the potential increase community action aimed at reducing food insecurity.

This research about the Good Food Truck program seeks to analyze the ability of a partnership between the food assistance sector, the mobile food industry, and the Local Foods Movement¹ to combat poverty-driven malnutrition, increase food sovereignty, and contribute to greater community development.

Mobile food vending has emerged as a prevailing cultural trend by capitalizing on economic efficiency through lower fixed costs than permanent structures and avoiding constraints associated with fixed location. This strategy has also built in its own added-value by providing a space of positive community interaction that attracts more patrons (Matchar, 2015; Neumann, 2014; McIver, 2011). These qualities are equally beneficial for supplemental nutrition providers, as those in need can be met closer to their homes (Neumann, 2014). This service is especially impactful for those residing in food deserts who lack transportation to food outlets (Robinson, Weissman, Adair, Potteiger, & Villanueva, 2016). Additionally, mobile food events are a community activity, stimulating neighborhood interaction and communication, which aid social capital development. Increasing social capital has proven to enhance community resilience, inspire organization, and elicit concerted political action to pressure government bodies to meet their collective needs (Green & Haines, 2012).

With this context in mind, a novel program launched by the Chittenden Emergency Food Shelf, known as “The Good Food Truck” (GFT), has piqued national interest with its mission to address salient food insecurity issues by non-traditional means (ABC Television Network, 2016).

¹ The Local Food Movement has been defined as a “collaborative effort to build more locally based, self-reliant food economies - one in which sustainable food production, processing, distribution, and consumption is integrated to enhance the economic, environmental and social health of a particular place” (Definition provided by the Lewis Historical Society).

The following analysis is based on a case study and economic assessment of this program, located in Chittenden County, which operates on a mixed funding model in partnership with the Vermont Food Bank. The truck was outfitted with a \$125,000 grant from the Boston-based non-profit, Jane's Trust, and operates on cash donations to the food shelf as well as sales from private vending. When it acts as a social enterprise, the GFT sells at prices on par with competitors, but 100 percent of profits return to the program. Its primary role, however, is delivering free "locally sourced, globally inspired" meals to low income community members every week at multiple locations in Chittenden County (Chittenden Emergency Food Shelf, 2015). The GFT also partners with the Community Kitchen Academy (CKA), a culinary arts training program launched by the Chittenden Emergency Food Shelf (CEFS) to provide professional skills to unemployed and marginalized people. The GFT receives help preparing meals from CKA, and in exchange provide students with valuable experience in a market setting (CEFS, 2015).

This analysis of the program aims to provide an assessment and communication tool for the CEFS, which currently serves over 12,000 people each year, as well as establish a framework other municipalities and organizations can utilize in their context (CEFS, 2017). Expansion of this model could help address food insecurity while contributing to community and economic development at various scales. This analysis will also define limitations of this program and areas for improvement so others choosing to adopt a similar model can use their resources most efficiently.

Research reveals that emergent projects wherein food trucks partner with anti-hunger institutions and local food producers to improve community well-being have not been studied comprehensively to determine community development impacts, economic viability, or scalability. However, the relationship between social capital formation and food security has

been studied, where findings demonstrate a correlation between increasing social capital and decreased levels of food insecurity (Johnson, 2010; Brisson, 2012; Graham, 2015). Furthermore, myriad studies and articles have been published about the emergency food system and its limitations, mobile produce vending operations in food deserts, and the added-value and impacts of social enterprises.

The goal of this thesis is to contribute to the mission of reducing food insecurity and malnutrition among low income individuals. Therefore, the research objective of this thesis is to examine whether the model of Good Food Truck of the Chittenden Emergency Food Shelf can:

1. Effectively increase food sovereignty by building demand for nutritious foods among low income individuals;
2. Build social capital among low income populations to strengthen community resilience by providing a destigmatized, positive, dignified communal meal experience; and
3. Be scaled or expanded in other areas with similar food shelf operations and varied programming, based on economic feasibility of the social enterprise model.

This thesis includes a comprehensive literature review that provides justification for the model represented by the Good Food Truck, a study of community meal and private vending diners conducted from September to December of 2016, and a Results-Based Accountability (RBA) analysis of the three main goals listed above. RBA is a disciplined way of thinking and taking action to improve the quality of life for whole populations in a geographic area, and to improve the performance of programs, agencies, and service systems including the Vermont Agency of Human Services (AHS) (Vermont AHS, 2017). Developed by Mark Friedman, director of the Fiscal Policy Studies Institute of New Mexico, RBA is being used across the U.S.

in all 50 states, and in countries around the world to create measurable change in people’s lives and solve complex social problems (Vermont Agency of Human Services, 2017). This study includes an RBA analysis, following the framework of Vermont AHS (2017), that assesses “how much” the Good Food Truck is doing, “how well” it is doing it, and “if anyone is better off” because of its work. Figure 1 defines the metrics used for the RBA

analysis with research questions and corresponding indicators:

| How Much? | How well? | Is Anyone Better Off? |
|--|--|---|
| Who does the GFT serve? <ul style="list-style-type: none"> • Number of community meals • Number of sites • Do diners experience barriers (i.e. transport, time, money, education, & health) | Does the GFT provide healthful meals and an enjoyable experience? <ul style="list-style-type: none"> • Experience rating • Answered that GFT meal healthier than normal | Does the GFT promote social capital formation among diners at community meals? <ul style="list-style-type: none"> • Answered “yes” to meeting someone new |
| How much programming can the GFT offer? <ul style="list-style-type: none"> • Number of private vending events • Number of service providers at community meals | Can the GFT increase awareness about other social services and hunger in Vermont? <ul style="list-style-type: none"> • Answered “yes” to hearing of new services (CM) • Answered “yes” to gaining knowledge (PV) | Does the GFT introduce people to new, nutritious produce prepared in diverse ways? <ul style="list-style-type: none"> • Answered “yes” to tried new foods • Analysis of ethnic diversity and nutrition of new foods |
| Is the GFT a source of built capital with potential for other uses? <ul style="list-style-type: none"> • Potential as incubator to provide business skills and culinary skills training | Does the GFT have an economically viable model? <ul style="list-style-type: none"> • Cost vs revenue stream • Determine reliance level on food shelf | Do meals provided by the GFT change preferences/ demand among diners? <ul style="list-style-type: none"> • Answered “yes” to purchasing new foods after dining with the GFT |

Figure 1. Results Based Accountability research questions and indicators. CM = Community meals; PV = Private vending.

Literature Review

Accessibility Issues

Hunger and malnutrition represent complex, systemic issues widely cited as being connected to poverty, which limits economic as well as physical access to quality foods.

Inadequate physical access to nutritious foods has been extensively discussed in literature about “food deserts,” or “urban neighborhoods and rural towns without ready access to fresh, healthy, and affordable food” (USDA, 2013). The USDA’s Economic Research Service (USDA ERS) estimates that 23.5 million people live in food deserts, with “low access” to fresh foods, with over half of these people defined as “low income” (2015). The combination of financial and physical barriers to fresh food procurement contribute to food insecurity, according to the USDA Economic Research Service (ERS) (2009). The USDA ERS (2009) asserts that “under-consumption of fruits, vegetables, and milk is a major dietary deficiency facing Americans, especially low-income Americans” (p.68). The 2009 report also indicated that Supplemental Nutrition Assistance Program (SNAP) recipients that did not do most of their shopping at a supermarket “tended to purchase significantly smaller amounts of non-canned vegetables, non-canned fruits, and milk” (VerPloeg et al., 2009, p.68). Moreover, low income populations living in food deserts are subject to increased cost burdens when they shop in convenience rather than grocery stores (VerPloeg et al., 2009, p.79).

Hunger: A Misallocation Issue

In the United States, 12.7 percent of households are food insecure according to 2015 measurements, meaning they lack “access, at times, to enough food for an active, healthy life for all household members and limited or uncertain availability of nutritionally adequate foods” (USDA ERS, 2015). In Vermont, 11.4 percent of the population is food insecure, representing over 71,000 people (USDA ERS, 2015; US Census Bureau, 2016). Drastically rising levels of food insecurity are best understood by focusing on the increase in the number of food banks in America, which has risen from 200 in 1980 to over 40,000 today (Stanley, 2014). This trend even brought about a name-change in the policy arena as the federal government’s Temporary

Emergency Food Program (TEFAP) was renamed The Emergency Food Program in 1990 (Poppendieck, 1998). This signified the nation's acknowledgement that hunger was no longer seen as a temporary situation, but rather the new staple in the American Diet (Poppendieck, 1998, p. 141).

Ultimately, food is a basic resource necessary for human survival, and therefore at the subsistence level, demand is inelastic (Farley et al., 2014, p. 246). However, as one's discretionary income increases, they can afford to purchase more than they need, leading to greater choice as well as increased waste. For instance, The United States, with a population of 319 million, produces enough annually to feed nearly 400 million, yet wastes nearly 40 percent of all food produced (Stanley, 2014). Beyond the fact that exorbitant waste points to gross inefficiency in our food system, Farley et al. (2014) explain that the distribution of food as a commodity is a detrimental failure of the market economy. Utilizing the theories of Ecological Economics, Farley et al. (2014) assert:

“If we re-define efficiency as the maximization of human well-being from a given level of inputs, then markets characterized by wide disparities in purchasing power are inherently inefficient when allocating essential and non-substitutable resources... In an unequal world, markets respond to price increases by reducing food allocations to the destitute and malnourished, but not for the affluent...” (p. 244, 248).

Therefore, because “markets weight preferences by purchasing power, monetary value is maximized when we allocate the marginal unit of food to an affluent, overfed [person] who will throw it into the garbage instead of to a destitute... mother... as long as the former is willing to pay more for it” (Farley et al., p. 248). Thus, hunger has become an issue of misallocation wherein those of low-income status, who spend a much larger proportion of their budget on food, are forced to make tradeoffs to meet basic needs based on exclusionary prices. This effect then misrepresents their true demand for this critical resource. Therefore, solving the issue of hunger

requires connecting existing resources to those who need them most (Stanley, 2014; Farley et al., 2014).

Consumer Knowledge and Demand

Another key leverage point that can be manipulated to combat hunger is consumer demand for nutritious foods. Presently, however, Americans across the board do not consume enough fresh produce, and for many this is related to income and knowledge constraints. For example, a 2013 Harvard School of Public Health study showed that healthier diets consisting of lean meats, fish, nuts, and fresh produce cost an average of \$1.50 more per meal than unhealthy diets (Rao et al., 2013). However, it has also been found that some individuals and minority groups are able to eat better for less (Drewnowski & Kawachi, 2015, p.194). This phenomenon is called “nutrition resilience, given its relation to optimal decision making in face of economic adversity” (Drewnowski & Kawachi, 2015, p.194). However, Drewnowski and Kawachi (2015) assert that broader cultural acceptance of healthy yet inexpensive foods and the avoidance of calorie-dense packaged foods is a topic that needs further research.

Moreover, the literature indicates that insufficient demand for nutritious foods, namely fresh produce, is due to cost barriers as well as *perception* of cost barriers and undervaluation of the benefits derived from healthier diets. Golan et al. (2008) assert that “subjective notions about affordability undermine some healthy food choices [and] many U.S. consumers seem to think that healthy foods such as fruit and vegetables are too expensive.” For example, to consume the recommended daily values of fruits and vegetables, the lowest two income brackets would have to devote 43 to 70 percent of their food budget (Cassady, et al., 2007). Even when costs of healthy and less nutritious food options are equal, many consumers feel that they get more value from less nutritious food due to taste and convenience (Golan et al., 2008).

Furthermore, Stewart et al. (2003) confirm that poor households are found to spend less on fruits and vegetables than other households, and that an increase in income will not induce higher spending on these goods. Rather, the most salient influences are “tastes and preferences, time constraints, and too little information about how to purchase and prepare nutritious foods” (p. 465, 478). Thus, a climate has emerged wherein low income populations perceive healthy diets as inaccessible to them, lack accurate knowledge of affordable options, and do not understand the benefits of investment in quality nutrition. This perpetuates suboptimal demand for nutritious foods and maintains the trend of under-provision. Redirecting budgets to achieve healthier diets will therefore require education about affordable options and preparation (Dittus et al., 1995).

Additional research shows, however, that demand for nutritious foods, namely fresh produce, among low income populations is not only impacted by price (Okrent & Allston, 2012). USDA ERS (2012) research demonstrated that the price elasticity of demand for low income consumers is lower for a bundle of “healthy goods” than a bundle of “unhealthy goods” consumed at home. This finding reveals that the poor will consume more unhealthy foods than healthy ones when prices decrease. Specifically reducing prices of healthy foods may also have minimal impact on purchasing patterns based on their low price elasticity. Thus, price reductions alone are not enough to significantly alter demand for healthy foods. Moreover, behavioral economics studies have indicated that changing behavior—food purchases in this case—requires overcoming individual habits and the impact of one’s social environment (Ammerman, Hartman, & DeMarco, 2017; Leonard, McKillop, Carson, & Shuval, 2014). However, altering preferences and habits, especially those stemming from social norms, is a difficult and very slow process (Leonard et al., 2014). This challenge is compounded for interventions among low income

households. Being more risk-averse than higher income households, they tend to minimize the cost of uneaten and thus wasted foods by purchasing more calorie-dense, processed foods they know their children will eat (Ammerman et al., 2017).

This school of thought is supported by research conducted by the VT Fresh Program of the Vermont Food Bank, a partner of the Chittenden Emergency Food Shelf. This organization works to expand availability, access, and utilization of fresh produce among food insecure populations. VT Fresh increases physical access to fresh produce by expanding procurement and enhancing storage capacity and displays in local food shelves. VT Fresh also offers cooking demonstrations and taste tests to visitors at food shelves and other community locations to reduce knowledge barriers to access. This program has been implemented at 29 food shelves and is being offered during 10 VeggieVanGo produce distributions at hospitals and school as of 2016 (VT Foodbank 2016).

VT Fresh is inspired by behavioral economics findings that show modifying one's food environment can have a significant impact on food-related behaviors. They base their strategies on research that show vegetable consumption increases when there are more choices, when choices are displayed attractively and made convenient, and when there are risk-free opportunities to try new foods (Price & Riis, 2012, as cited by Vermont Foodbank, 2016). For instance, over a two year study period from February 2014 to September 2016, the VT Fresh Program conducted 589 cooking demonstrations and had 6,754 people participate in taste tests (VT Foodbank, 2016). Research conducted at these events found that 60 percent of charitable food recipients liked a particular vegetable more after the taste test. Moreover, 75 percent indicated that they were more likely to eat the vegetable again after the test (VT Foodbank,

2016). These findings support the notion that preference for nutritious foods among low income populations can be increased through adequate, pleasurable exposure that is risk-free.

This insight is crucial when considering the context in which people who are impoverished, or otherwise struggle financially, behave and make food choices. A prevailing sociological theory that explains behavior is the Social Identity Theory put forth by Tajfel & Turner (1979) that states that individuals will act in accordance with perceived normal behaviors of their specific social group, regardless of whether this group is considered superior or inferior (p. 10). Moreover, they assert that it is “difficult if not impossible to divest [oneself] of an unsatisfactory, underprivileged, or stigmatized group, and subordinate groups in terms of social status, often internalize beliefs of inferiority (Tajfel & Turner, p. 11)

This has important implications for behavioral intervention, specifically concerning the goal of increasing healthy eating among low income populations. As Banas (2015), Houser-Marko & Sheldon (2006), Brouwer (2012), and Carfora, Caso, & Conner (2015) assert, self-categorization theory and the identity-based motivation perspective suggest that motivation to engage in a particular behavior is stronger when that behavior is congruent with one’s salient social identity. In contrast, when social prescriptions like healthy eating are not linked with identity, one is less likely to perform them, even when she is aware of their benefits (Houser-Marko & Sheldon, 2006). Similar consumption behavior research has been conducted with people who identify themselves as a “self-as-doer,” or those who perceive themselves as agentic with high levels of self-efficacy. Studies showed these people are more successful in transitioning to positive behavioral change, independent of past experience and personality traits (Houser-Marko & Sheldon, 2006; Brouwer, 2012; Banas, 2015; Carfora et al., 2015).

Further research supports the hypothesis that there is a causal relationship between intervening to establish a self-as-doer identity and subsequent change in “healthy eater” identity, intentions, and behaviors. This type of motivation is powerful given its ability to overcome barriers such as aversion to the behavior or resource constraints, to result in persistent behavior change (Houser-Marko, Sheldon, 2006). This research has significant implications for increasing healthy food choices among low income populations. Association with groups of lower socio-economic status may drive people to avoid environments such as farmers markets when they are perceived as elitist, or unwelcoming. Moreover, one may be averse to choosing foods like fresh produce, which require preparation, over processed foods if she identifies as part of a group lacking culinary skills, or self-efficacy more broadly. Thus, the literature justifies the hypothesis that interventions that increase capacity and agency among low income individuals could influence their self-identity, aid in the development of a healthy-eater identity despite barriers, and ultimately change eating behaviors.

However, beyond underutilization of specific types of nutritious food, anti-hunger activists must also combat vast underutilization of supplemental nutrition programs due to lack of awareness. According to Feeding America’s 2014 Executive Summary, 20 percent of client households report never having applied for federal Supplemental Nutrition Assistance Program (SNAP) benefits. Of these households that have never applied for SNAP, 52 percent indicate not doing so because they didn’t believe they were eligible, though 72 percent of them report incomes that meet eligibility requirements (Feeding America, “Executive Summary,” 2014, p.18). In Vermont specifically, 50 percent of those who are eligible for SNAP benefits do not apply (K. Green, personal communication, October 3, 2016). These findings suggest that

additional SNAP education and outreach could benefit many households served by the Feeding America network, nationally, as well as Vermont communities.

Community Engagement Framework

Community Food Security

There is consensus within the literature that current food assistance is inadequate, and that people are becoming dependent upon emergency food shelves to supplement monthly shortages (Feeding America, 2011). As of a 2008 study, 54 percent of Feeding America's food bank clients visited a food pantry for at least six months or more during the year with 36 percent having used a food bank for 28 months consecutively (Feeding America, 2011).

There is also agreement that community based, participatory solutions are most effective at resolving widespread food insecurity (Wakefield, Klassen, Fleming & Skinner, 2012).

Community food security is defined as "a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice" (Wakefield et al., 2012). This emergent paradigm brings together the emergency food sector with environmental, agricultural, social service, and social justice sectors to achieve significant and lasting improvement of community health and well-being (Wakefield et al., 2012).

The community food security movement critiques traditional approaches to food security as being "fragmented and lacking an overarching vision and coherence" (Allen, 1999, p. 12). Conversely, community food security is holistic, embodying a localized, prevention-oriented framework that focuses on immediate and long term efforts (Allen, 1999). Furthermore, community food security projects "provide people with an opportunity to participate [and] feel they can make a difference," which augments long-term engagement in civic life (Allen, 1999, p.

120). Merely treating the symptom of hunger to reduce food insecurity has proved inadequate. However, moving beyond this strategy to create wider social safety nets and increase self-sufficiency has proven capable of addressing root causes (Martin et al., 2013). Such programs require a person-centered approach that allows food choices with dignity and builds the skills and resources for families to plan for their futures (Martin et al., 2013)

Importance of Social Capital for Community Food Security

Social capital has been defined as “the combined resources which derive from an individual’s mutually recognized social relations” (Bourdieu, 1986, as cited in Dean et al., 2011). The use of social capital “allows an individual access to resources,” and has three distinct effects: “It allows for greater social control, provides family support, and provides support and other benefits outside of families” (Portes, 1998, as cited in Dean et al., 2011).

Furthermore, this source of capital is of special importance for low income families, where it yields crucial supports through both weak and strong ties to others. Social ties exist on a continuum based on frequency and duration of interaction, level of emotional intensity and intimacy, homogeneity between members, and the reciprocal services found within the tie (Rademacher & Wang, 2014, p. 1213). Both serve different roles, and social network theory has championed the strength of weak ties which serve an important “bridging function...foster[ing] connections across cliques or subgroups, [and] opening paths for the rapid and efficient exchange of opportunities and information across social distance” (Rademacher & Wang, 2014, p. 1213) Resources embedded in these social networks can be employed by members of the community by exchanging them for real goods and services that range from information about services and employment opportunities, to food, childcare, and transportation (Brisson, 2012, p. 268). Validating these theories, Brisson (2012) conducted a study of a random sample of 1,495 low

income mothers in Boston, Chicago, and San Antonio to examine the relationship between individual perceptions of social cohesion and prevalence of food insecurity over three time periods. Results indicated that perceptions of neighborhood social cohesion are predictive of food insecurity, as a one unit increase in perception of social cohesion predicted an 83 percent lower likelihood of experiencing food insecurity from time period 2 to time period 3 (Brisson, 2012, p. 275). Thus, findings reveal that building social cohesion over time can serve to protect families from hunger and suggest that “designing programs to improve individual perceptions of neighborhood social cohesion could reduce food insecurity” (Brisson, 2012, p. 275).

Additional studies have examined the relationship between social capital and intake of nutritious foods, namely fruits and vegetables. An analysis by Johnson et al. (2010) found social capital to be a “highly significant influence on fruit and vegetable intake” among the 1,220 rural adults under study. The literature overwhelmingly supports the concept that social capital development has significant and positive impacts on individuals, especially those who are impoverished. Expanding on this evidence, Dean et al. (2014) stressed the need for social programs that foster social capital, asserting that, “Community-based efforts to improve participation in...congregate meals, and more frequent and wider delivery of meals to homebound older adults, will not only improve food access but are also likely to strengthen the social networks of older adults” (n.p.).

Assessing the lived experience of the food insecure, Graham et al. (2015) found that the primary focus of public health research and programs on nutritional quality holds little salience for this population whose greater concerns include paying their bills, securing housing and transportation, and ensuring children receive enough food at all. However, this type of research is popular because it is easy to quantify and establish the causal effects of altering nutritional

content on measurable physical health outcomes. These studies are problematic because they ignore holistic health aspects that are not so easy to quantify, including impacts of commensal and dignified eating on social capital formation, emotional well-being, confidence, and development of human capital² and agency (Graham et al., 2015). Graham et al. (2015) assert that the community meal “provides more than food” by offering an inclusive, humanizing space of positive interaction for marginalized or excluded people (p. 6). These meals facilitate the deepening and broadening of social support networks and help alleviate the negative impacts of poverty on overall health (Graham et al., 2015). Thus, findings widely support the creation and use of programs designed to foster social capital in emergency food provision settings, given their ability to reduce food insecurity and related problems.

Issues with Current Emergency Food Program Model

Critiques of the emergency food system are widespread in academic literature. They begin with the basic framing of the issue and the vocabulary surrounding it. For instance, the literature reveals a clear disconnect between the label of the “emergency food system” and the role it serves. Acute food insecurity is now understood to be a chronic condition, not a temporary emergency situation that can be solved by merely easing the symptom of hunger.

An enduring, seminal critique that has informed myriad others is Janet Poppendieck’s book, *Sweet Charity: Emergency food and the end of entitlement* (1998). Though published in 1998, findings presented in this work still resonate today, being cited in academic journals as recently as 2015 (McIntyre, Tougas, Rondeau, & Mah, 2015). (Poppendieck (1998) synthesizes the prevailing issues of food banks as encompassing “seven deadly ‘ins’”: (1) *inaccessibility*, (2)

² The intangible collective resources possessed by individuals and groups within a given population. These resources include all the knowledge, talents, skills, abilities, experience, intelligence, training, judgment, and wisdom possessed individually and collectively (Encyclopedia Britannica, 2015).

inadequacy, (3) *insufficiency*, (4) *inappropriateness*, (5) *inefficiency*, (6) *instability*, and (7) *indignity*. In addition to Poppendieck's seven original critiques, McIntyre et al. (2015) emphasized that other significant "ins" have emerged in the literature since Poppendieck's 1998 publication. In their 2015 study of 33 food bank critiques analyzed in light of *Sweet Charity*, McIntyre et al. (2015), found that *institutionalization* and *invisibility* are also salient problems in the field of "emergency food" provision. This study will examine the Good Food Truck program against these limitations of the traditional emergency food system, and this comparison will be presented in the discussion section. Poppendieck (1998) places special focus on indignity, and therefore it will be discussed last in greater detail.

Inaccessibility

The emergency food system is plagued by an excess of need relative to supply (Poppendieck, 1998). Poppendieck (1998) posits, "Kitchens and pantries spring up wherever someone is moved to create them...The overall system is fragmented...and there are gaps in coverage" (p. 221). A study conducted by Carnegie-Mellon University determined that in Allegheny County, PA, the only characteristic that systematically related to the proportion of needy served by a food bank was distance, not race or age (Poppendieck, 1998, p. 222). Moreover, barriers of awareness and transportation are augmented for those living in rural areas (Poppendieck, 1998). Additionally, the ability to establish a functional food bank is limited by the donor and volunteer base of the area.

Nutritional Inadequacy

Most food provided by food banks is non-perishable, and therefore often high in sugar and sodium, while being low in fiber, vitamins and minerals (Poppendieck, 1998). However, the large quantities of unhealthy, processed foods that make their way through food banks reflect

what is being produced in the United States, including goods produced to surplus and those sold at supermarkets which end up in food banks through the salvage process (Poppendieck, 1998, p. 216). Ultimately, crop subsidies at the farm level determine the most cost effective substances to derive food from, creating the glut of ostensibly cheap (though costly in terms of health) foods on the market, which are subsequently donated (Poppendieck, 1998). Poppendieck (1998) captures the issue, stating: “To the considerable extent that the emergency food system is supply driven, rather than need driven,” it will continue to distribute nutritionally inadequate foods (p. 216).

Insufficiency, Instability, and Institutionalization

Food banks are often unable to provide sufficient or other forms of support, which is perhaps a necessarily built in quality of the “emergency” food system, which was never meant to provide total, nor permanent, support. However, issues have been cited where food banks are unable to provide the same quality meal for everyone in need on a given day, and almost all pantries limit the frequency with which people can obtain food. Chittenden Emergency Food Shelf, for instance, provides a five day monthly supply of groceries as well as access to a produce and bread pantry every day (Chittenden Emergency Food Shelf, 2017).

Instability materializes in the emergency food sector when clients are unable to rely on food banks as a dependable resource (McIntyre et al, 2015). As mentioned above, reliance on donations and volunteer labor means these programs are supply-driven and can be incompatible with client needs (Daponte and Bade, 2006, as cited in McIntyre et al., 2015). These organizations also suffer from inconsistent support from government and other funding sources and can lack organizational effectiveness when they do not possess the resources to retain a fit leader (Berner and O’Brien, 2004 & Eisinger, 2002, as cited in McIntyre et al., 2015).

Institutionalization worsens these issues as food banks have adopted organizational structures that redirect priority away from providing nourishment and engaging in advocacy, and toward meeting bureaucratic targets and acquiring funding (McIntrye et al., 2015). Wakefield et al. (2012) assert that the food bank organizers they interviewed are “perpetually uncertain of where funding would come from and whether it would be enough... This continued state of uncertainty limits groups’ ability to advocate for broader systemic changes” as they must be wary of jeopardizing relationships with funders (p. 438). This uncertainty only compounds in the midst of increased competition among charitable organizations. This race to secure funds impedes collaborative efforts between organizations that could improve efficiency and effectiveness of services (Wakefield et al., 2015).

Moreover, findings show that demand for emergency food support and social services have expanded significantly following cuts to state and federal funding, and the increased need has far outpaced the capacity of the sector (Wakefield et al., 2012). With President Trump’s 2017 federal budget proposal indicating massive cuts to agencies that provide low-income Americans with crucial services, the impacts will be severe and will likely swell the ranks of food shelf users as greater shares of limited incomes go toward other basic needs (Semuels, 2017). Major cuts include: A \$6.2 billion (13.2 percent) cut for the Department of Housing and Urban Development, eliminating the Community Development Block Grant program that provides neighborhood investment; the HOME investment program, which helps low-income people purchase or repair homes; and the Choice Neighborhoods program that engages in community revitalization (Semuels, 2017). Trump is also proposing a \$4.2 billion cut in community-services programs from the Department of Health and Human Services such as the Low Income Home Energy Assistance Program, which provides funds to help poor people pay energy bills in winter

(Semuels, 2017). He also proposed cutting \$1.2 billion from the Department of Education, funds earmarked for before and after-school programs and summer programs (Semuels, 2017).

Inappropriateness & Inefficiency

Poppendieck (1998) asserts that though our consumer culture encourages the development of tastes and preferences, there is “simply no accounting for taste” in the emergency food system, which must allocate what food happens to be available to those seeking aid (p. 213). Poppendieck emphasizes the dissonance of this fact with American culture, explaining that “one must, to be a fully participating and mentally healthy adult, choose...not between peanut butter and jelly but between smooth or chunky peanut butter, between... industrial or organic...containing salt, and sugar and emulsifiers...or whole peanuts” (p. 214). In essence, the random donator is choosing foods for others whose tastes and preferences they may not share. Moreover, donations often end up as contributions because they are less desirable in general. Ethnic diversity, dietary constraints, and foods that are difficult to prepare also present special challenges for emergency food providers (Poppendieck, 1998).

Connecting hungry people to available resources also poses obstacles as elaborate systems are often plagued by duplicate efforts in some areas whereas others in desperate need suffer extreme lack of support (Poppendieck, 1998). This is also a product of the fact that the installation of such charitable efforts is not predicated first on need, but rather where the resources and volunteers willing to provide such support already exist. Conceptualizing efficiency as a ratio of output to input must also include explicit monetary costs, but the cost of donated food is not accounted for in the emergency food system.

Invisibility

Paradoxically, in their proliferation and attempt to address the growing need for emergency food relief, food banks have cultivated a consensus that food insecurity is being adequately addressed. This allows the general population—but more importantly, policy leaders—to remain in denial of hunger's prevalence (McIntyre et al., 2015). This unforeseen negative externality renders the problem invisible, and if complex problems are challenging to overcome, complex problems whose existence is not properly acknowledged are impossible to address (McIntyre et al., 2015).

Indignity

One of the principal challenges associated with addressing acute hunger is combatting the stigma associated with charitable actions. Aid cannot be effective if it mires people in an abject status where they feel less human and less agentic for having received help, or if it is refused when desperately needed due to the desire to uphold dignity (Poppendieck, 1998). One of the most crucial tenets of sustainable community development is that interventions must build the capacity within people to improve their own well-being (Green & Haines, 2012). However, charitable food programs often fail to provide these tools, and instead make those served feel inadequate and lesser (Poppendieck, 1998).

Janet Poppendieck (1998) describes indignity as stemming from the sense of dependency associated with asking for help to meet one of the most basic human needs. This request manifests as an admission of failure given the deeply ingrained cultural knowledge that independence is so vital to our humanity. Poppendieck (1998) explains that seeking this assistance is psychologically equivalent to reducing the client to the level of a child, doing little to inspire the confidence necessary to work toward improving one's situation. This has led

emergency food providers to focus on preserving adult roles, including the preservation of choice which implies “competence and individuality” and promotes agency (Poppendieck, 1998, p. 240). These efforts have materialized in many pantries that offer a shopping experience rather than providing pre-packed bundles. Soup kitchens face more difficulty in preserving dignity given the history surrounding their use and entrenched stigma. However, innovations have emerged such as offering table service and the establishment of cafés and restaurants where the homeless or otherwise struggling people can order from a menu in a pleasant atmosphere (Poppendieck, 1998).

Poppendieck (1998) ultimately asserts that the simplest and most obvious strategy for promoting dignity is engaging in a common meal that removes boundaries between givers and receivers. This follows from sociologist Erving Goffman’s dramaturgical theory that explains sites of interaction as stages where pre-defined roles are acted out and reinforced by dress, props, and modes of action (Poppendieck, 1998, p.249). Generally, the system in place excludes clients from roles of authority and full participation in their own food acquisition, and therefore constrains personal development. One way to re-integrate people in the enhancement of their own well-being is to offer opportunities to contribute in ways that are not monetized (Poppendieck, 1998). Poppendieck (1998) explains that social scientists regard reciprocity as a fundamental organizing principle in society where obligations to repay and give are maintained by social sanctions.

Thus, as anthropologist Mary Douglas argues, charity “wounds” because it does not allow the beneficiary to reciprocate in a cultural environment where societal value is defined by the fulfillment of this obligation (as cited in Poppendieck, 1998). This manifests as social “othering” where people are separated into groups of haves and have nots (Wakefield et al.,

2012). Ultimately, the prevailing philosophy surrounding charity is that it is “not something we offer to people we perceive as our equals,” and thus the very concept undermines the American ideology of equality, being antithetical to genuine democracy (Poppendieck, 1998, p.254). In response, some providers have sought out clients to serve as volunteers to provide an opportunity to give back. This can increase the capacity of the food aid provider to expand programming, facilitate social capital development among the diverse volunteer base, provide job skills, and increase the level of comfort and trust among other clients (Poppendieck, 1998).

Mobile Food Vending in America

History

Though mobile food provisioning units are not a new innovation, the industry has been experiencing unprecedented growth since 2007, manifesting in a new cultural trend toward diverse, unique, and convenient food sharing experiences (Weber, 2012). The United States specifically has seen a drastic rise in the food truck industry as it represented \$630 million in 2011, being cited by the National Restaurant Association as the “fastest growing sector of the restaurant industry” (Weber, 2012, p. 1). Additionally, Weber (2012) cites an American Express survey that showed the percentage of respondents who had visited a food truck doubled from 13 percent to 26 percent from August 2009 to July 2010 (p.1). The respected Zagat restaurant guide also began to include food trucks for the first time in 2011, and media coverage and television shows reflect the popularity of dining with food trucks as an engaging, social event that is becoming an integral part of contemporary urban life (Weber, 2012). Projections from Emergent Research, a partner of Intuit Inc., predict that the value of the food truck industry will reach \$2.7 billion in 2017 (Weber, 2012). As of 2015, the industry had grown by 12.4 percent and was

slated to continue the upward trend and with the 4,130 businesses predicted to amass \$1.2 billion in revenue (Myrick, 2015).

In light of this recent growth, it is important to note where this industry began in the United States. Mobile food vendors grew up with most major trade centers and urban development, beginning with pushcarts and food carts run by Dutch immigrants in New York City in the 1690s (Weber, 2012). The next stage in the mobile food evolution was the “chuck wagon,” a form of mobile kitchen that emerged in the late 1860s to feed cattle hands crossing the country. In the 1870s another popular trend was the *tameleros*, or tamale carts, in Los Angeles, where over 100 sprung up. These were the precursor to the *lochero*, or taco truck, which has dominated Los Angeles for most of the twentieth century. The first food truck that resembles modern operations was created by Walter Scott in Providence, RI in 1872. His wagon sold breakfast sandwiches and pies to nearby workers, and this “lunch wagon” design was patented in 1891 by Charles Palmer (Weber, 2012).

By the early 1900s mobile food had become extremely popular with thousands of vendors on the streets of New York alone. This is thought to be the result of the shift from agricultural labor to other work outside the home, and the subsequent growth of urban environments. Food carts also began to operate after dark, accommodating the growing nightlife in urban areas. As technology advanced, wagons transformed into trucks, and immigrants controlled the majority of the mobile food scene due to lack of regulation in predominantly immigrant areas (Weber, 2012).

In the 1950s the association with immigrant culture and foreign ethnic food led to industry decline throughout the mid-twentieth century. Food trucks were also mainly associated

with blue-collar society as they tended to serve cheaper lunches near construction sites. However, a paradigm shift took place in the industry in the 2000s as the economic downturn reduced the number of construction sites, decreasing the number of lower quality trucks in operation. Simultaneously, the decline put many highly skilled chefs out of work, leading to the rise of the “gourmet food truck.” By 2008, the success of KogiBBQ in L.A., the pioneer gourmet food truck, and the shift of the food truck manufacturing industry from lunch trucks to custom models, signaled the evolution of the food truck landscape. Since then, food trucks have penetrated the restaurant industry as dominant review guides like *Zagat* have established food truck categories, and culinary schools now offer mobile food classes (Weber, 2012).

According to Weber (2012), the food truck industry is far from its peak as customers appreciate the value and quality of mobile food. Moreover, their staying power is compounded by their symbiotic relationship with urban spaces as they “create a sense of community” in addition to supporting economic growth (Weber, 2012). For instance, the industry offers municipalities tax revenue, additional jobs, a new market for supporting industries and farmers, tourism, activation of public space—sometimes otherwise unused—and fosters entrepreneurship among those who would not have been able to secure the resources for a larger operation (Weber, 2012).

Economic advantages of the food truck model

This growth in the food truck sector has also come during a time of economic decline for the hospitality industry overall, following the 2008 recession (Weber, 2012). The advantages of food trucks over brick-and-mortar locations include the flexibility to engage in rapid prototyping of menu items, change location, and adapt hours to market needs. They also conserve resources through lower overhead costs. Additionally, food truck operations can remain in tune with

customers through close interaction in-person and through social media, which provide instant feedback. The food truck industry has also tapped into powerful consumer trends, specifically the desire for fresh, local, quality food served quickly and conveniently (Weber, 2012).

Using mobile food operations to address food insecurity

The current body of research, though limited, focuses on mobile markets, or farm stands on wheels. These operations bring fresh produce and other staples into neighborhoods, especially those in food deserts where access to full-service grocery stores is limited (Robinson et al., 2016). The United States has undergone a vast suburbanization over the past 75 years leading to the flight of grocery stores from impoverished areas, and reductions in access to nutritious foods for these populations (Robinson et al., 2016). Documented mobile markets currently operate in approximately 50 communities in the United States, with the earliest notable example being the People's Grocery Mobile Market which launched in 2003 and operated for five years in West Oakland, CA (Robinson et al., 2016).

The goal of these operations is to increase availability, accessibility, and affordability of healthy food for those living in food deserts, and they often take the form of renovated buses, trucks, vans, or carts (Robinson et al., 2016). This design allows them to quickly and efficiently serve communities in need at a much lower overhead cost than establishing a grocery store or food shelf. Few mobile markets operate in rural areas; however, they often serve those with limited physical mobility at senior assisted living facilities and public housing complexes.

Some mobile markets also address economic disparities by selling produce at or below cost, or accept vouchers from United States Department of Agriculture (USDA) nutrition programs like SNAP or Women, Infants, and Children (WIC). Some operations use other

strategies such as acting like mobile food pantries that give away donated food to low-income communities. Additionally, many markets have explicit community development goals, including the creation of social capital among shoppers and vendors, establishing a larger sense of community, and breaking down social barriers to food access (Robinson et al., 2016). Models like the Memphis Green Machine go as far as tailoring foods to meet cultural needs of ethnic areas they operate in and offer cooking demonstrations of their products.

One of the greatest strengths of mobile markets is their flexibility and inherent diversity based on their context. They tend to operate at the neighborhood scale, allowing meaningful interaction with their clients and agile adjustment. Additionally, the Arcadia Center for Sustainable Food and Agriculture noted in its 2012 report:

“Mobile markets leverage the same resources that fuel the Food Truck movement: the provision of a high quality product to consumers in an otherwise untapped market. With little overhead expenses and greater flexibility... [they] are an excellent means of addressing food access inequalities where conventional markets have hitherto failed” (As cited in Robinson et al., 2016, p. 879).

Although few markets can cover operating expenses without grants and donations, their economic model presents an opportunity to generate revenue to support activities and decrease dependence on external resources. They also engage in a mutually beneficial relationship with regional producers by providing new retail opportunities (Robinson et al., 2016).

Despite these advantages, mobile markets also face many challenges when trying to address food insecurity. Beyond financial issues mentioned previously, they also operate on a mainly seasonal basis when produce is fresh and abundant, rather than addressing food insecurity year round. Robinson et al. (2016) assert that mobile markets may not be a viable long-term strategy to address food insecurity and disparity of healthy food consumption. This is due to financial imperatives of operation, and the present inability to ameliorate the tension between

providing affordable nutritious food and operating a sustainable business. For instance, at the time of their research, Robinson et al. (2016) emphasized that several exemplary markets under study had suspended operations until additional funding could be secured. The limited impact of mobile markets up to this point is described by Robinson et al. (2016) as stemming from seasonal, small-scale operation, lack of food staples beyond fresh produce, and the fact that “improved availability does not necessarily translate to better consumption habits” (p. 880). Furthermore, reliance on free market economics and the need to generate revenue, influences site selections and ultimately limits their capacity to address disparities in food access. Strategies to address these issues include balancing more profitable sites with less profitable or using a tiered pricing system where wealthier customers subsidize poorer customers (Robinson et al., 2016).

Moving beyond mobile markets, there is also a large gap in the literature regarding the food security impacts of food trucks that use a model similar to those described above. However, existing literature does provide strong support for conducting research to analyze food trucks as a means of addressing food insecurity and combatting the challenges mobile markets face. For example, the fields of community and urban development have widely cited the ability of food trucks to be a catalyst for positive social interaction, and they are a common tool employed in placemaking³ (National League of Cities, 2013; MacIver, 2011; Project for Public Spaces, 2013; Portland Bureau of Planning & Urban Vitality Group, 2008). As William Whyte writes in *The Social Life of Small Urban Spaces* (1980), “If you want to seed a place with activity, put out food, food attracts people who attract more people” (as cited in Neumann, 2014).

Acknowledging the truth of this statement, many cities are encouraging food trucks to do

³ Placemaking is a multi-faceted approach to the planning, design and management of public spaces that capitalizes on a local community's assets, inspiration, and potential, with the intention of creating public spaces that promote people's health, happiness, and well-being. It is both a philosophy and a process (Project for Public Spaces, 2009).

business in struggling districts to enliven the area, stimulate other business activity, and provide healthier food choices where few previously existed (Neumann, 2014). Research by Robinson et al. (2016) critically examining mobile markets revealed that mobile markets build community by creating a social space for customers, and this is “vitally important” for seniors who are motivated to leave isolated apartments and socialize (p. 888). Robinson et al. (2016) also acknowledged the ability of mobile markets to expand the reach of regional farmers and increase public engagement with local agriculture.

As Matchar (2015) asserts, food trucks have materialized as a new “third space,” a term coined by influential sociologist Ray Oldenburg to describe places outside of home and work where people can gather and interact. These spaces promote social equity by leveling status, facilitating public association, providing a setting for grassroots politics, and offering emotional support (Project for Public Spaces, 2009). An ideal third place is a lighthearted environment, welcoming to people of different social classes, is free or inexpensive, and serves both regulars and non-regulars (Matchar, 2015). Moreover, the poverty think tank, Poverty Thought Force (2014) also specifically advocated “subsidizing regular food-truck presence in underserved neighborhoods” to address food insecurity as part of their comprehensive plan to eradicate poverty.

Despite these affirmations of the ability of food trucks to aid community development goals, Robinson et al. (2016) assert that research on the relatively new phenomena of mobile markets and food trucks, and their impact on food security, is limited. This gap is even more apparent in terms of measuring the ability of mobile markets to change consumption habits (Robinson et al., 2016). Therefore, this thesis focused on assessing the ability of a free mobile food provisioning program, the Good Food Truck, to foster social capital as well as address

underlying issues related to food insecurity—such as shifting demand. This thesis was driven by the need to add crucial information to the body of knowledge in the fields of community development and hunger eradication.

Caring Capitalism & Added-Value

An influential phenomenon emerging in our economy is the rise of the social enterprise and the idea of “caring capitalism,” described by Barman (2016) as a shift of the economy toward providing social goods and combatting social inequities through private, non-governmental organizations. This reflects the notion that for-profit companies with a tangible social mission can both do well (profit) and do good (help society). They may even be more successful than charities, non-profits, and government agencies due to economic self-sufficiency and greater potential to scale up given reductions in public funding (Barman, 2016).

Though ultimately addressing the institutional inequalities underlying poverty and hunger may require sweeping policy change rather than market solutions, social enterprises have proven to generate an added-value for the goods and services they provide (Ferreira, Avila, & Faria, 2010). This supports the notion that they have the capacity to generate enough resources to meet social goals and maintain commitments in the long-term (Ferreira et al., 2010). This added-value stems from the emotional benefits that stream from helping others through an act of purchase (Mohr & Webb, 2005; Bhattacharya & Sen, 2004; Strahilevitz, 1999, as cited in Ferreira et al., 2010). Moreover, customer surveys have proven that corporate social responsibility (CSR) results in greater perceived value of the offer (Ferreira et al., 2010). Findings also showed consumers were willing to pay 10 percent more for products produced by socially responsible companies, and this added-value is greater when the social action includes a benefit related to the consumer’s interest. Thus Ferreira et al. (2010) contend that it is necessary for consumers to

attain a level of knowledge and education related to the issue that allows them to distinguish companies committed to their mission from those that erratically contribute to isolated projects.

Case Studies of Programs Serving Vulnerable Populations

A survey of scholarly databases including, Academic Search Premier, JSTOR, ProQuest Central, Sage Journals, ScienceDirect, Springer Journals, Web of Science, Wiley Online Library, and Google Scholar, using the key search terms “food truck,” “free meal,” and “low income,” found a wealth of sources about national summer meal programming for children. However, less than 30 of these results profiled programs similar to the Good Food Truck (GFT) that were not mobile markets or summer meal programs. Moreover, a Google search with this same array of search terms fielded less than 100 results highlighting models similar to the GFT. Of these results, most were news stories about free meal provision services. No scientific studies or thorough impact analyses beyond program scope were found for models outside of Summer Feeding and Meals on Wheels as of the search period from January 2016 to April 2017. Following is a summary of case studies that employ aspects of the Good Food Truck model, although mobile produce markets are omitted due to previous discussion.

National programs utilizing mobile food

Despite limited examples of models that mimic the Good Food Truck, the United States does have two very successful mobile food provision programs that serve two especially vulnerable populations: Seniors and children. However, these programs differ from the Good Food Truck model in key ways.

Meals on Wheels

Meals on Wheels facilitates community support through check-ins but does not always integrate recipients into the wider community or engage them in a commensal meal setting. It also does not allow the person much freedom of meal choice beyond their dietary restrictions and is not necessarily free of cost. However, this program, serving 2.4 million people in 2017, has proven to improve nutrition, physical health, and well-being, especially by reducing loneliness (Carroll, 2017; Meals on Wheels America, 2015).

Summer Food Service Program

The Summer Food Service Program is crucial, providing meals to 3.9 million of the 22 million children who rely on free and reduced priced school meals (Orovecz, Pincus, Todd, & Welch, 2015). However, these programs differ from the GFT because they serve a single demographic with few cases where some form of food is provided for other household members. Additionally, these programs operate on a more limited time frame, solely during summer months. Despite these limitations, they have proven to reduce food insecurity, improve physical and mental health, and increase nutritious food consumption (Orovecz et al., 2015).

Regional organizations utilizing food trucks

Though free meal provision through food trucks is not yet commonplace, there are examples of individual organizations and social-entrepreneurs deploying food trucks for the benefit of various underserved populations including the impoverished, mentally ill, and homeless. Specific examples include Share a Meal, a truck in Los Angeles created by Khalsa Peace Corps, which serves burritos to the homeless. This organization serves approximately 800 meals per week that are vegetarian to maintain inclusivity, while ensuring a dignified experience.

Share a Meal formerly operated with funds from food truck sales, but currently they operate solely on donations and personal funds of the owners (Rendon, 2014).

Another example is the United Samaritans' Daily Bread Ministry which deploys a fleet of four food trucks to 46 sites in nine communities in Stanislaus County, CA. The trucks serve hot meals three days per week, sandwiches twice per week, and distribute three-day emergency food boxes at two sites at the end of the month when budgets are leanest. This program also relies on cash as well as food donations, and has been in operation since 1994 (Aredas, 2016).

Holistic community food security center model: Freshplace

Freshplace is a novel emergency food provision model that goes beyond providing food alone, much like the GFT. This community food security center focuses on helping clients gain skills and resources necessary to address the multifaceted causes of food insecurity. Freshplace provides fresh foods and support services to 100 families in Hartford, CT, and engages in a holistic approach to breaking the cycle of food insecurity through a client choice pantry, motivational interviewing, and targeted referrals to varied support services. Based on a one year study, Freshplace patrons have demonstrated significantly lower rates of hunger, significantly higher rates of self-sufficiency (an indicator of human capital development), and better diet quality than the control group (Martin, Wu, Wolff, Colantonio, Grady, 2013). Furthermore, 68 percent of patrons enrolled in public benefits, 63 percent participated in nutrition education, and 33 individuals have "graduated" due to the success of their Freshplace utilization (Chrysalis Center Inc., 2017). However, unlike the GFT, this is a brick-and-mortar operation, limiting its access for those without transportation.

Symbiotic food security model

These models employ a comprehensive strategy that utilizes integrated programming such as free meals for vulnerable populations, food rescue, community garden projects, culinary skills training, and social enterprise. They also collaborate with other social service organizations to provide a suite of services that targets root causes of poverty.

DC Central Kitchen

DC Central Kitchen is located in Washington D.C., and its mission is to use food as a tool to “strengthen bodies, empower minds, and build communities” (DC Central Kitchen, 2015). This program operates under the philosophy that “we cannot feed our way out of hunger, because hunger is a symptom of the deeper problem of poverty” (DC Central Kitchen, 2015). Rather, DC Kitchen focuses on building an equitable food system and perpetuating self-sufficiency rather than dependence. The organization rescues wasted food and transforms it into nutritious meals for shelters and non-profits through their truck fleet. They use this process to train unemployed, marginalized adults with culinary arts training. These graduates are then employed to fulfill revenue-generating contracts as part of the DC Kitchen’s social enterprise, Fresh Start Catering. The program has now expanded to include fresh produce provision to 67 corner stores in D.C. food deserts, provision of healthy school meals to low-income students, and the launch of the national Campus Kitchens Project, which takes food destined for waste from universities and converts it into meals for those in need.

During 2015, DC Central Kitchen graduated 102 people with an 89 percent job placement rate. It also served 1.8 million meals to those in need through 82 organizations and 870,000 healthy school meals to low-income children, an investment of \$296,000 in local agriculture (DC Central Kitchen, 2015). The organization also recovered 743,885 pounds of food. Furthermore,

2015 was the fifth consecutive year that social enterprise revenues exceeded charitable donations (DC Central Kitchen, 2015). This model employs many of the same strategies and programs as the GFT, albeit on a larger scale. As an exemplary case, DC Kitchen's success provides ample evidence that food aid models that go beyond delivering a meal and integrate social enterprise, culinary skills training, food recovery, community engagement, and links to social services, are not only more successful, but also more environmentally and fiscally sustainable.

This model was so effective that DC Central Kitchen founder, Robert Egger, launched a second operation in Los Angeles, CA in 2013 (L.A. Kitchen, 2016). L.A. Kitchen, an ambitious hybrid nonprofit and social enterprise, serves as both a nonprofit culinary job training center for former inmates and at-risk youth — where students use donated produce and food that would otherwise go to waste — and a separate, for-profit catering enterprise. This arm of L.A. Kitchen, called Strong Food, employs program graduates to prepare healthy food aimed at feeding low-income seniors (L.A. Kitchen, 2016).

Nashville Food Project

The Nashville Food Project (NFP) located in Nashville, TN, has been cooking and serving hot meals using produce grown from urban gardens they have created across Davidson County as well as recovered and gleaned produce. The Nashville Food Project's mission is to “bring people together to grow, cook and share nourishing food, with the goals of cultivating community and alleviating hunger” (M. Hersh, personal communication, Feb. 15, 2017).

Ultimately, “hunger is a symptom of poverty, but isolation and lack of access to assistance compound the problem— and the Nashville Food Project works to improve all three (Soltes, 2014). Therefore, the NFP focuses on using food as a “tool to reduce social isolation, cultivate community, and bring people together” (M. Hersh, personal communication, Feb. 15, 2017).

In 2016 the NFP served over 3,100 meals and snacks per week, engaged 600 volunteers every month throughout their programs, and recovered 108,000 pounds of food (M. Hersh, personal communication, Feb. 15, 2017) Additionally, the NFP has strategically aligned itself with a variety of meal distribution partners, including nonprofits and community groups, which aids their unique missions by freeing up resources and bringing their clients together on a regular basis (NFP, 2017). In this way, NFP meals contribute to a broader solution to hunger and poverty.

According to the NFP's Associate Director, Malinda Hersh, there is a genuine need for the expansion of this innovative model across the country, especially those that craft meals with recovered food and share it in the community (personal communication, Feb. 15, 2017). When asked about the costs associated with running this program that could present barriers for other organizations, Hersh stated that main costs include staff and administration as well as some pantry staples, produce, and proteins at various levels depending on the season. She went on to explain that because of the "diverse ways food is supplied and the amount of volunteer help...direct meal costs are extremely low. [However], if other programs do not have these important factors, it could present barriers to their success" (personal communication, Feb. 15, 2017). When asked about research and analysis of the program, Hersh stated that the NFP is "currently engaged in developing evaluative tools to help determine qualitative impacts on wellbeing, community connectivity, environmental impact and economic support," but has not published research as of April 2017.

Methods

This study was conducted using a mixed methods approach that included surveys at three community meal sites and two private vending events, on-site observations at a total of eight

community meals and two private events, and key informant interviews with the manager of the Good Food Truck, Emmet Mosely as well as Malinda Hersh, the director of a similar program called The Nashville Food Project. Observation and surveying took place from June through November of 2016, and interviews were conducted throughout this period but continued through April of 2017. Survey data were analyzed with the IBM SPSS statistical software package (Version 24, SPSS Inc., Chicago, IL).

The assessment of the capacity of this model to achieve the community food security goals outlined previously is divided into two parts: A mixed qualitative and quantitative analysis investigating the impact of the model on participant well-being, and a quantitative analysis to determine the financial viability of the model.

Participants

This project utilized information provided voluntarily by residents of Chittenden County receiving GFT services, as well as consumers at private vending locations. Participants taking part in the survey and interview process were age 18 or older. All procedures performed in studies involving human participants were in accordance with the ethical standards of the Institutional Review Board and informed consent was obtained from all individual participants included in the study. Additional informed consent was obtained from all individual participants for whom identifying information is included in this study.

Procedures

As the Primary Investigator, I observed vending locations and, without engaging with clients, kept record of diner demographics as well as the types of interactions that took place between diners. In the second part of my investigation, I asked those over the age of 18 to voluntarily participate in an anonymous survey. After presenting the information sheet and

obtaining informed verbal consent, I delivered the survey for the participant to complete, offering assistance to those participants with limited English and literacy skills.

During key informant interviews with Emmet Mosely and Malinda Hersh, an interview guide was presented prior to interaction, and these guides can be found in the appendix. Formal interviews with Emmet Mosely were conducted on February 10, 2017 and April 7, 2017, while informal interviews were conducted during GFT events and via email correspondence throughout the period from June 2016 to April 2017. The interview with Malinda Hersh of the Nashville Food Project took place on February 15, 2017.

Instruments

Participants were asked to take anonymous surveys which were dispersed at vending locations. The system already set in place by the Chittenden Emergency Food Shelf to quantify participation through an electronic ordering system called, Square Up, was also employed.

The survey provided to free meal recipients was minimally invasive, beginning with brief demographic information that cannot be made identifiable. The questions investigated the impact of the GFT based on the Results-Based Accountability framework which assessed “how much” the Good Food Truck does, “how well” it does it, and “if anyone is better off” because of its work. Impact was measured by the GFT’s ability to expose diners to: 1) New, nutritious foods in positive ways to increase participants’ feelings of sovereignty by taking part in the increasingly popular mobile food marketplace; 2) New people to broaden social networks; and 3) New social services that could enhance well-being. Assessment was based on survey results pertaining to: Overall experience; whether participants tried new foods; number and types of news foods tasted with the GFT; whether GFT meals were healthier than normal diets; whether participants met

someone new; and whether they heard of a new service with the GFT. Impact on behavior was measured by the GFT's influence on food purchases of diners in other environments.

Surveys distributed at private vending stops focused on whether the GFT increased awareness about hunger and opportunities for volunteer involvement. At both community meals and private events, observations were used to supplement information gathered from surveys.

The quantitative analysis of the GFT relied on numerical and financial data provided by the Chittenden Emergency Food Shelf, the Champlain Valley Office of Economic Opportunity, and the Vermont Food Bank. This data included the number of meals served at free and private meal sites, program expenses, and revenue from sales and donations. This information was analyzed to illuminate costs of continued operation and assess the model's financial sustainability.

Study Locations

Harbor Place

Comprised of 59 units, Harbor Place is a transitional housing facility for the homeless that provides safe housing when shelters are full, as well as support services. It assisted 600 families and individuals in 2015 (University of Vermont Medical Center, 2016). Formerly a hotel, the property located on Shelburne Road in Shelburne, VT, was bought and converted into transitional housing by the Champlain Housing Trust, and now allows state and community organizations to pay discounted rates to house homeless clients. Organizations that can refer clients to Harbor Place include the State of Vermont, local community mental health agencies, and the University of Vermont Medical Center (Torpy, 2014). During the 2016 Season, the GFT served free meals to Harbor Place residents at approximately 5:30 p.m. each Thursday from May to December.

Beacon Apartments

Beacon Apartments, located on Route 7 between Burlington and Shelburne, provides permanent housing for 19 chronically homeless individuals who struggle with medical issues. The Beacon Apartments are a project of the Champlain Housing Trust, the Burlington Housing Authority and Safe Harbor, which is the Community Health Centers of Burlington's health care program for homeless people (True, 2016).

The 19 studio and one-bedroom apartments are not transitional housing. Tenants can stay forever if they choose, however amenities are limited as some units do not have stoves and tenants must make due with microwaves as their cooking tool (Pollak, 2016).

Potential tenants are selected by caseworkers of the founding groups who work with United Way. Prime candidates are those who are homeless and most likely to cycle through emergency rooms (Pollak, 2016). The 19 tenants pay 30 percent of their income in rent, the definition of affordable housing, and the Burlington Housing Authority provides vouchers that cover the balance (True, 2016). Additionally, Safe Harbor has a team of caseworkers who help tenants at the Beacon Apartments enroll in public benefit programs such as 3 Squares (Vermont's SNAP equivalent) and Medicaid, or Supplemental Security Income (SSI) for those with disabilities. Transportation to medical appointments, employment assistance, and guidance on how to be a good tenant and neighbor are also provided. During the 2016 Season, the GFT served free meals at Beacon Apartments each Thursday evening at 4:30 p.m. from May to December.

Northgate Apartments

Northgate Apartments is comprised of 336 units located on North Avenue in Burlington, VT (Vermont Affordable Housing Coalition, 2011). The property is owned by New Northgate

Housing LLC, which is comprised of the Northgate Residents Ownership Corporation, a resident-controlled organization. Northgate is also the largest single subsidized apartment development in the state and is perpetually affordable, by virtue of a Vermont Housing & Conservation Board Housing Subsidy Covenant.

Additionally, Northgate is a mixed-income, diverse, and multi-generational community. Incomes range from 30 percent to 95 percent of area median income, and the over 900 residents include Vermonters as well as people from 14 other countries, with ages ranging from one to 95. There is also a full time on-site youth services coordinator that offers programming to residents (Vermont Affordable Housing Coalition, 2011). During the 2016 Season, the GFT served community meals at no cost each Wednesday at 4:30 p.m. from May through December.

Intervale Center

With a mission to strengthen community food systems, the Intervale Center was founded in 1988 and manages a 360-acre campus of farmland, trails and open space along the Winooski River in Burlington, VT. Along with their farm incubator and community-supported agriculture (CSA) programs, the Intervale Center also has a “Fair Share” program that is integrated with their Gleaning & Food Rescue Program. This part of the operation rescues fresh vegetables from Intervale farms and farms in Chittenden County. Every week gleaned produce is distributed to 150 income-eligible households and 15 social service agencies at no cost (Intervale Center, 2017). The 16-week Fair Share Program runs from July to October with pickups taking place every Monday afternoon at the Intervale Center. During these pickup times, Hunger Free Vermont provides taste tastes, culinary demonstrations, and food and nutrition education activities (Intervale Center, 2017). Additionally, during the 2016 Season, the GFT served free community meals to shareholders on three select pickup dates.

Results

Overview of GFT programming

The principal activity of the GFT program is provision of free community meals at sites defined as low income. This status is determined by the Vermont Housing and Urban Development (HUD) office as earning 80 percent of median income with variation based on household size. During this study from June through November of 2016, the GFT visited three low income housing sites, Northgate Apartments, Harbor Place, and Beacon Apartments, as well as the Intervale Center during its Fair Share CSA distribution. During the 2016-2017 season, the following social service providers were able to engage in outreach among current and potential clients at community meals: Champlain Valley Office of Economic Opportunity (CVOEO) Mobile Home Program, Women, Infants and Children (WIC), Jobs for Independence, Vermont Foodbank 3 Squares Outreach Program, Vermont Tenants Program, Community Kitchen Academy, Vermont Department of Health, and NOFA (Northeast Organic Farming Association) Crop Cash Program. This is a vast increase over the first season which only included the Vermont Foodbank 3 Squares Outreach Program, CVOEO Mobile Home Program, and the Community Kitchen Academy.

Tables 1 and 2, on the following page, describe the scope of the GFT community meal program since its inception in 2015.

Table 1

Community Meals served by location for the Good Food Truck from 2015-2017

| | Total residents | Average meals per visit | Total visits | Total community meals served ^a |
|---|------------------|-------------------------|--------------|---|
| VSHA Windermere Mobile Home Park, Colchester | | | | |
| 2015-2016 Season | 83 | 40 | 3 | 120 |
| 2016-2017 Season | - | - | - | - |
| Cathedral Square | | | | |
| 2015-2016 Season | 83 | 30 | 1 | 30 |
| 2016-2017 Season | - | - | - | - |
| Milton Co-op | | | | |
| 2015-2016 Season | 200 | 65 | 12 | 780 |
| 2016-2017 Season | - | - | - | - |
| Beacon Apartments | | | | |
| 2015-2016 Season | - | - | - | - |
| 2016-2017 Season | 19 | 15 | 26 | 390 |
| Intervale Free Share | | | | |
| 2015-2016 Season | 90 | 49 | 3 | 150 |
| 2016-2017 Season | 90 | 69 | 3 | 205 |
| Harbor Place | | | | |
| 2015-2016 Season | 100 ^b | 45 | 12 | 540 |
| 2016-2017 Season | 100 | 36 | 26 | 936 |
| Northgate Apartments | | | | |
| 2015-2016 Season | - | - | - | - |
| 2016-2017 Season | 900 | 88 | 22 | 1,932 |

Note. ^aCalculated by taking mean of approximated average meals per visit, multiplied by number of visits. ^bResidents for Harbor Place are an average as population fluctuates.

– indicates GFT did not operate at location during specified season.

Data sources: Emmet Moseley, Vermont State Housing Authority, & Pollak (2016).

Table 2

Actual GFT Visits and Community Meals Sold by Season

| Season | Total Visits | Total Community Meals Served |
|------------------|--------------|------------------------------|
| 2015-2016 Season | 31 | 1,799 |
| 2016-2017 Season | 77 | 4,072 |
| Total | 108 | 5,871 |

Note. Data retrieved from GFT Square Up point of sale system.

Qualitative Impact Analysis

In-depth information about GFT programming, including explanation of methods, its mission, goals, impacts, and its expansion, were gleaned from key informant interviews with the manager of the GFT Program. Additional data were gathered from surveys of community meal and private event diners and on-site observations at three community meals and two private vending events in the fall of 2016.

In-Depth Program Description: Interviews with GFT Manager, Emmet Mosely

Designing the GFT model

The original inspiration for the GFT came from CEFS Executive Director, Rob Meehan, who was seeking an innovative solution to the many issues faced by charitable food providers including client transportation issues, limited space, the fact that utilizing food shelves is a highly stigmatized activity, and public perception of low quality food being served by the food shelf. As Mosely explained, the CEFS reaches over 12,000 of the 18,000 to 20,000 food insecure Vermonters each year, however, this leaves 6,000 to 8,000 people unserved. One truck clearly cannot reach them all, so “the Good Food Truck is not a total solution per se, but is a move in the right direction as one building is currently tasked with serving the entire Chittenden County with limited space and hours that are not conducive to the schedules of working families.”

Mosely asserted that this model was designed to address transport issues by bringing services to people where they live, serving when people return home from work, and providing a fun and accessible environment to combat stigma associated with seeking food assistance. He stressed that the GFT has been a “crucial part of changing the CEFS public profile as part of a larger rebranding as a full-service food organization, not a soup kitchen or pantry. The goal is to move beyond this role to include education and empowerment, and the GFT is another step in that direction.”

The GFT is also asserting itself “as part of the new local food movement,” Mosely stated, and by “bringing people that we serve into that movement... We are directly combatting the perception that the [CEFS] cares more about getting *something* to [clients] versus transforming the way people eat. We are focusing on healthy food as a key component of living a good life, regardless of income.”

GFT impact

The impact of the GFT is “several fold, though this meal is not meant to end chronic hunger,” Mosely asserted. Rather, the GFT is meant to give diners the “feeling of being taken care of, valued, and to ultimately feel *good*.” Mosely justified the GFT strategy, explaining,

“Previous work demoing healthy foods at the food shelf helped people become more comfortable with trying new foods. You don’t need a full prep course—it’s about breaking down barriers by exposing people to new things in a comfortable setting so they have the opportunity to make the decision later. It’s a low risk environment—no one is telling you that ‘you *must* eat it because it’s good for you.’ We’re not explicitly saying ‘the purpose of you eating here is to change your diet,’ but we are giving people the experience they need to eventually do so.”

Regarding impact on specific populations, Mosley explained that those in transitional housing are extremely appreciative and communicate that “this will be one of the only hot meals

they get that week.” In permanent housing settings, the GFT is “really something positive for the community and helps build a community identity. People meet each other, families share a meal they pick up at home, and many kids who are unsupervised at home pick up meals for the entire family...Northgate is also a much more diverse set of people with many New Americans from Africa, the Balkans, and all over...” and GFT meals bring these people together in a positive way. Additionally, various social service providers conduct outreach at community meals and are able to increase their impact by connecting with current and potential clients.

When asked about the impact of this program in contrast to Meals on Wheels or mobile markets, Mosely stated that “Meals on Wheels closest thing to us, but we offer better quality food. All season we have fresh, raw vegetables, and some kind of salad. Fresh ingredients are harder to do when sealing them in a tray to be reheated later. Ultimately, we do more interesting food, and it will taste better because it’s not reheated.” Beyond the higher quality of the meals themselves, Mosely also emphasized that GFT meals facilitate “community building through a communal meal experience...A host of other community interactions happen when you draw people out of their homes...Plus, we’re only giving people food that they want and helping people eat together.” Mosely did stress, however, that Meals on Wheels and mobile markets are extremely valuable, and that the GFT works best in conjunction with these existing programs.

Site selection process

According to Mosely, the goal guiding site selection is “creating access and addressing transport issues. We chose sites that specifically house vulnerable people who otherwise weren’t making it in [to the food shelf].” This was a key reason the GFT operated at the Milton Mobile Home Cooperative during its first season and will return in the 2017-2018 season. “Milton is

among the furthest towns from the food shelf in Chittenden County, with one of the highest poverty rates,” making this site especially vulnerable.

Additionally, Mosely explained that transitional housing sites, specifically Beacon Hill and Harbor Place, were chosen strategically based on their much higher level of poverty and subsequent lack of transportation. To prove this point, Mosely emphasized that despite having 59 units at Harbor Place, there “is only every about five cars in the parking lot.” The only mixed-income site, Northgate Apartments was chosen based on its large population of New Americans who experience many barriers, including “intolerance among other food shelf clients, which is nearly impossible to avoid when culturally diverse groups interact in the food shelf in a scarcity situation.”

Another crucial component of compatible sites is the presence of an “involved community partner,” according to Mosely. For instance, he described the three women who headed the Milton Mobile Home Park as a crucial part of the GFT’s success there, given that they would “encourage people to come out, save and deliver portions to people who were still at work, and deliver meals to seniors who were home-bound.” There is also a dedicated community builder who fills the same role at Northgate Apartments, caseworkers who take the opportunity to connect with residents at Beacon Hill, and the staff at Harbor Place will call rooms to ensure people know the food truck has arrived.

Meal composition

Mosely explained that community meals are always made from scratch, high in fresh produce, and seasonally appropriate. “Our goal is having at least 50 percent of the plate be vegetables, and we hit that about 90 percent of the time,” Mosely confirmed. Furthermore,

“about 80 percent of the vegetables are local for both community meals and private vending events, and usually sourced from the same farms—just some are gleaned and donated seconds, and some are purchased firsts.” The biggest difference between community meals and private vending meals is the proteins as 70 to 80 percent are local for private events whereas they are rarely local for community meals due to much higher cost. There can also be a difference in menu labeling as Mosely attested that the strategy of using “flowery, descriptive language that adds value to private meals, actually creates barriers at community meals. The more simple the language, the more likely people are to try something new.”

Dignity as part of GFT experience

Mosely described community meals as a “dignified, fun experience, because it’s here if you want it, but you’re not forced to have it.” Furthermore, “it’s especially fun for kids, being that food trucks are such a trendy thing—and with us, they get their own”. Expounding the merits of the GFT program, Mosely stated:

“The experience at the food shelf is entirely different. [At community meals] there are very few crowds, it’s very convenient, and there’s very little stress in the entire interaction. There is no stress about being able to afford the food because there are no prices. There is no concept of scarcity because we do not run out and may only swap an item if necessary. There is also no intake process... We’ve removed every possible barrier to access we could think of. The only real barrier is that they need to be there at the right time, but making relationships with the community can ease that.”

Mosely also highlighted the differences between the environment created at community meals and other food procurement environments like the grocery store and farmers’ markets:

“It’s also a public space, but it’s a community space where you’re familiar with others around you, and feel less atomized... There can be a cultural gap between the Burlington ‘foodie scene’ and surrounding communities, making certain spaces feel like they’re ‘not for me’ [in the eyes of community meal diners]... When you feel among neighbors, it reinforces that ‘this *is* for me.’ The power of meeting people where they live and are comfortable shouldn’t be underestimated.”

Offering a “powerful anecdote” to justify these claims, Mosely said:

“We have on average once per day some violent behavior at food shelf—aggression, shouting, intoxication, or some mental health crisis... We can’t prevent that, but can react to it. That has *never* happened a single time at a community meal even though we’re serving a similar population, it’s just people are more comfortable in their spaces... It says a lot about how comfortable the process is.”

Resource requirements for GFT model

When asked about what another operation adopting this model would need in terms of staff, Mosely explained that it would be “hard to start this as a standalone operation; it plugs into so many things we have established here [at the food shelf]—an amazing commercial kitchen, large volunteer base, relationships with food donors and growers, and storage infrastructure. With all that in place, it was simple to just insert the food truck.”

In terms of staff, the first season was lean, however in the 2016-2017 season Mosely added four student interns from the University of Vermont who volunteered for 5 to 10 hours per week from April to December. This coming season, the GFT team will expand to include a 20 hour per week Food Truck Assistant who will “focus on preparing food so the truck can be out maximizing its use... This also makes the building more accessible for volunteers, adds an educational component with workshops during food preparation, and gets more people involved who are clients of the food shelf and want to help.” Mosely emphasized that having a “second part time person who is charismatic and knows how to cook is huge. Booking events, doing the taxes, reaching out to community partners, doing prep etc. is too much for one person.” This additional staff will allow expansion of private events and Fridays will now become “Food Truck Fridays” at local businesses with connections to the food shelf, increasing the revenue that will go back into the program.

The GFT also benefits from its connection to the CEFS Community Kitchen Academy (CKA) program which provides culinary skills training and financial education to unemployed and underemployed Vermonters (CEFS, 2017). Mosely emphasized the increased use of the CKA students in the coming season, which is mutually beneficial for the CKA and GFT because “students will practice skills while helping prepare meals and be able to fill in at revenue generating events to gain real world experience... The main thing lacking from CKA is pressure during a real experience in a busy setting.” Mosely also highlighted the story of a recent CKA graduate who worked on the GFT four times during its first season and has now created her own successful Thai food truck, ImSabai. He asserted that “the GFT could create more opportunities like this as an incubator for small food businesses, especially alongside the Financial Futures training that is part of CKA.”

The labor needs for the 2017-2018 GFT program outlined by Mosely are presented in Table 3 below.

Table 3

Labor Requirements for GFT in 2017-2018 Season

| Position | Number of People | Hours/ Day | Days/ Week | Total Hours/ Week |
|----------------------------|---------------------|---------------|---------------|----------------------|
| Manager | 1 | 8 | 5 | 40 |
| Assistant Manager | 1 | 4 | 5 | 20 |
| Food Preparation Volunteer | 3 | 4 | 5 | 60 |
| GFT CM Server | 1 | 3 | 3 | 9 |
| GFT PV Server/ Outreach | 3 | 4 | .5 | 6 |

Note. CM = Community meal. PV = Private vending.

Italics indicate calculated average as large private events do not occur every week and may require less than 3 staff.

Total staff required is approximately 6 to 9 people, working 135 total hours per week, with 2 of these people paid for a total of 60 hours per week (E. Mosely, personal communication, Feb. 10, 2017).

GFT barriers and limitations

Mosely identified the main barriers and challenges for the GFT as seasonality, inclement weather, limited window of opportunity to reach clients, and adequate production space. Attendance is much lower during the shoulder seasons in April and December when it is too cold to wait outside for meals, and other weather events have similar effects on turnout. Mosely also expressed his issue with vending in extreme cold or rain as it reduces the dignified nature of the experience to go to such lengths for a free meal. Mosely also pointed out that people tend to eat dinner between 5:00 p.m. and 7:00 p.m., so serving community meals before or after will be much less successful. Therefore, hours of operation are limited by social norms, restricting how many sites can be visited with a single truck per night.

Potential for private vending component

When asked to describe whether the GFT has a unique added value over other food businesses given its social mission, Mosely explained that purchase motivation is highly dependent on the particular event. He asserted that the social mission has the largest impact on sales at private catering events where the truck is specifically sought out because of a client's connection to its mission. At these more focused events, the GFT is able to communicate its mission better and garner more volunteers. Furthermore, engagement is more successful when service is less busy and staff can spend more time speaking to customers. Mosely emphasized, however, that he has had many experiences where communicating the GFT's mission in a busier festival setting elicited emphatic and positive responses, indicating an added value for the buyer of GFT meals.

Additionally, Mosely stated that private events are a key tool the program uses to attract volunteers. He explained that the type of volunteer work offered by the GFT attracts a diverse

array of people who differ from those who generally tend to volunteer at the food shelf. He specifically indicated increasing volunteerism among younger people given that hours are not during the work day.

Mosely also stated that given more resources, the GFT could increase private vending and revenue to further offset program costs. The goal of the program was to secure one paid event per week during the first two seasons and has increased to two per week for the third season. Mosely estimated that he was forced to turn down 15 to 20 events last season due to lack of staff and organizational capacity. He went on to highlight, “that level of interest was without any marketing, so there is huge potential and demand among businesses who would like to host the truck.”

Ability of GFT to increase hunger awareness

When asked about the GFT’s ability to educate customers about the issue of hunger in Vermont at private events, Mosely described their strategy as a successful but “light approach. [The GFT] increases awareness about what [the food shelf] does, but we stay positive” to match the setting. However, Mosely did emphasize the ability of the GFT to

“Put people buying our food in the same exact position as those who are hungry... It’s the same truck, same quality food, and a direct way to put someone in another’s shoes without hitting them over the head with how much worse off someone else is... You would probably not find the same customer on the other side of the hot bar at the soup kitchen, but our service reduces barriers by creating that close psychological connection, which reduces division between the types of people we serve.”

GFT Program Evolution

When asked about the expansion potential of the GFT program, Mosely emphatically stated, “You could absolutely do this elsewhere.” He clarified by saying the GFT is very “indebted to gleaners and the agriculture community that wants to support us.” Mosely asserted

that “anywhere there are people growing vegetables” has the potential to support a similar model, and although the GFT “is unique in offering free meals,” similar projects are popping up across the country because “it just makes sense.” Mosely went on to emphasize that model’s like the GFT are going to “become more and more necessary” based on increasing needs and budget cuts in the non-profit sector.

In addition to expansion of the program beyond Vermont, Mosely discussed the evolution of the GFT in its third season as it has expanded to include not only two other meal sites, more social service providers engaging in outreach, and an assistant manager, but also a Good Food Trailer. This additional refrigerated unit will accompany the GFT at each of the six meal sites once per month to deliver fresh produce, meats, pantry items, and prepared foods during the community meal service. It will also circulate among agencies serving low income Vermonters. The GFT community meals that include the Good Food Trailer will serve as a demonstration for some of the ingredients delivered that week. Table 4 on the following page details the expansion of the GFT program in its third season.

Table 4

Elements of GFT Program Expansion in 2017-2018

| Type of Expansion | Details | Impact |
|--|---|--|
| Additional Meal Sites | <ul style="list-style-type: none"> • Returning to Milton Mobile Home Cooperative • Canal Street Veterans Housing; 28 units in Winooski, VT • Partnering with Health Care Share Program for monthly cooking demos of produce in prescribed CSA shares at 4 sites • Collaborating with Burlington School Food Project’s Summer Meal Program and providing additional weekly adult meals | <ul style="list-style-type: none"> • Increasing reach to other underserved communities • Increasing partnerships and collaboration among other non-profits and community organizations to enhance the impact of each organization’s efforts • Increasing awareness about the GFT and other social programs to expand utilization |
| Good Food Trailer | <ul style="list-style-type: none"> • Mobile produce vending unit will provide free fresh produce and groceries at each community meal site monthly • GFT meals will serve as demos of ingredients delivered that week | <ul style="list-style-type: none"> • Directly including nutritional/ culinary education with CM • Removes lag time between tasting new, healthy food and having opportunity to obtain • Free provision further reduces risk of trying new foods • Could increase influence on purchase behaviors with no-risk practice/ experience picking ingredients in “market” setting |
| Assistant Food Truck Manager | <ul style="list-style-type: none"> • 20 hour/ week position • Will run food preparation sessions during evenings • Provide education about culinary skills | <ul style="list-style-type: none"> • Delegating preparation and service allows the truck to operate at full capacity • Provides more opportunities for people, especially food shelf clients, to volunteer • Charismatic assistant able to increase program promotion |
| Increased Partnership with Community Kitchen Academy | <ul style="list-style-type: none"> • New CKA chef embedding GFT in program • Every student will work a GFT event • CKA will assist with CM food preparation | <ul style="list-style-type: none"> • Increases CM capacity, quality, and variety • Provides real experience for CKA students • Increases GFT capacity as incubator for entrepreneurs |
| Additional Private Vending Events | <ul style="list-style-type: none"> • 17 PV events in 2016-2017 • At least 20 pre-scheduled for 2017-2018 | <ul style="list-style-type: none"> • More PV events increase revenue and make program more financially sustainable • Increases programming capacity overall |
| Increased Sponsorship | <ul style="list-style-type: none"> • Additional \$30,000 grant from UVM Medical Center • \$10,000 grant from City Market for Good Food Trailer • Beneficiary of 2017 Burlington Wine & Food Festival | <ul style="list-style-type: none"> • Funds will help expand programming, increase community meal provision, and provide an additional \$8,000 for CM ingredients • Increase quality of CM proteins and use of local producers |

Note. Health Care Share is a program created through a partnership between the University of Vermont Medical Center, the Vermont Foodbank, and Northeast Organic Farming Association (NOFA) to prescribe patients free fresh produce to improve their health (E. Mosely, personal communication, April 7, 2017). CM = Community meal; PV = Private vending; CSA = Community-supported agriculture; CKA = Community Kitchen Academy.

Addressing research questions

Tables 5 and 6 below describe the reach of the GFT surveys at community meals and private events. The following survey results are organized according to the original research question they address, with its specific indicator bulleted below. Figures 2 through 4 and Table 7 at the end of this section depict a summary of the quantitative survey results.

Table 5

Community Meal Survey Respondent Demographic Frequencies

| Variable | Frequency | Percent of Total Respondents |
|--------------------------------|-----------|------------------------------|
| Location | | |
| Beacon Apartments | 6 | 14.3 |
| Harbor Place | 3 | 7.1 |
| Northgate Apartments | 33 | 78.6 |
| Age Group | | |
| 18-34 | 16 | 40.0 |
| 35-44 | 17 | 42.5 |
| 55+ | 7 | 17.5 |
| Services Received Group | | |
| None | 12 | 28.6 |
| 1 Service | 11 | 26.2 |
| >2 Services | 19 | 45.2 |

Note. (n = 42). Age descriptive statistics: Min. = 21; Mean = 41; Max = 76.

Table 6

Private Vending Survey Respondent Demographics

| Variable | Number of Respondents | Percent of Total Respondents |
|---------------------|-----------------------|------------------------------|
| Location | | |
| Shelburne Museum | 6 | 21.6 |
| Shelburne Vineyards | 13 | 68.4 |
| Age Group | | |
| 18-34 | 8 | 44.4 |
| 35-44 | 7 | 38.9 |
| 55+ | 3 | 16.7 |

Note. (n = 19). Age Group descriptive statistics: Min. = 21; Mean = 38; Max = 74.

1. *Does the GFT serve people who benefit from its services? (i.e. barriers including transport, time, money, education, & health)*
 - *Demographic information*

The demographic data gleaned from surveys demonstrated that the GFT serves a mixed population which includes many people who utilize social services and have health issues, indicating vulnerability, and others who do not. However, only 21.4 percent of the 42 respondents received no social service of any kind, 40.5 percent received 3 Squares Supplemental Nutrition Assistance, and 35.4 percent said they had visited the food shelf in the last six months. Moreover, of the 64.6 percent who had not recently visited the food shelf, 10 percent indicated the reason was because “others need it more,” whereas 35 percent indicated resource constraints including lack of transport, time, and awareness, prevented them from utilizing the food shelf.

Additionally, 52.9 percent of community meal diners who were recipients of 3 Squares Supplemental Nutrition Assistance Program (SNAP) benefits also reported visiting the food shelf in the last 6 months. This result was significant at the .05 level and was higher than expected.

Therefore, even those already receiving food assistance required additional assistance from the food shelf, indicating a need among this population for the service provided by the GFT.

2. *Does the GFT provide healthful meals and an enjoyable experience?*

- *Answered “yes” to “is this meal healthier than you normally eat”*
- *Experience rating*

Surveys revealed that 64.3 percent of community meal (CM) diners ate healthier than their normal diet with the GFT. When comparing between age groups, surveys revealed that 71.4 percent of those over 55 ate healthier than normal with the GFT whereas this was true for 64.7 percent of 35 to 54 year-olds, and for 56.3 percent of those 18 to 34. Furthermore, 63.6 percent of those who stated they have diet-related medical conditions, 66.7 percent of those who visited the food shelf in the last 6 months, and 70.6 percent of 3 Squares recipients, also stated the GFT meals were healthier than their normal diet. In these instances, the GFT was able to engage vulnerable populations with limited income in healthy eating behavior.

In terms of overall experience, 83 percent of CM diners rated their experience with the GFT as “Very Good,” the highest possible rating. Specifically, 78.6 percent of those who tried a new food also rated their experience as “Very Good,” and the same was true for 74.1 percent of those who ate healthier with the GFT. This result was statistically significant at a .1 level, and the count was slightly higher than expected. This indicates that those who ate healthier with the GFT were more likely to rate the experience as “Very Good,” which has implications for potential behavioral change. These results show that the GFT was able to provide a positive exposure to new, healthy foods for the majority of diners. Furthermore, no respondents rated their experience as “Okay,” or “Bad.” Of the 19 private vending (PV) survey respondents, 83 percent also rated their experience as “Very Good” with no respondents selecting “Okay” or “Bad.”

3. *Does the GFT introduce people to new, nutritious foods prepared in diverse ways?*

- *Answered “yes” to “tried new foods with the GFT”*
 - i. *Listed new foods tried*
 - ii. *Analysis of new foods tried*

Of the 42 community meal diners surveyed, 68.3 percent (28 diners) tried a new food at a GFT meal. The survey also asked what new foods were tried, specifically, and analysis of the 21 written responses revealed common themes among new foods tried. For instance, vegetables processed in diverse ways like beet soup, various slaws, and interesting vegetable preparations including eggplant, squash, kale, and salad were mentioned 17 times. Six additional diners wrote that “all” or “many” of the foods they tried were new. Another theme among new foods tried was culturally diverse cuisine types. Ethnic foods including curry, tacos, and innovative fish preparations were cited 5 times.

Additionally, cross-tabulations revealed that 85.7 percent of those over 55 tried a new food. This result was significant at a level of .1 and the count was higher than expected for the 35-54 age group and for the over 55 group, but slightly lower for the 18-34 group. Of the PV survey respondents, 78.9 percent also said they tried a new food with the GFT. These results indicate that the GFT encourages people to try new foods, specifically among populations known to be more habitual. This was also true regardless of whether one had to engage in a financial risk to do so.

4. *Does the GFT promote social capital formation among diners at community meals?*

- *Answered “yes” to “meeting someone new at GFT meal”*

When asked “Have you met anyone new at a Good Food Truck community meal,” 50 percent of respondents said they had. Additionally, 47.4 percent of PV respondents also stated they met someone new at a GFT meal.

Furthermore, 54.5 percent of those receiving one social service met someone new at a GFT meal and 50 percent of those receiving more than one service also confirmed they met someone new. Among those who visited the food shelf in the last 6 months, 53.8 percent met a new person. 55.6 percent of those receiving Social Security, 66.7 percent of WIC benefits receivers, and 50 percent of 3 Squares users also reported meeting someone new. The age group with the highest proportion was the 35-54 group with 62.5 percent reporting they met someone new. The fact that these results were not statistically significant based on a Chi Square test only indicates that there was no significant difference between those who received these services and those who did not, meaning that a large proportion of all survey participants had novel social interactions.

Additionally, of those who indicated receiving Social Security, often older or otherwise more home-bound individuals, 77.8 percent had a “Very Good” experience. Positive experiences are a crucial to ensure this demographic engages in programming outside of the home where they have the opportunity to expand their social support network. These results were not statistically significant; however, this again indicates that the majority of all types of diners rated their experience as very good, and their experience was not influenced by age.

5. *Do meals provided by the GFT change preferences/ demand among diners?*

- *Answered “yes” to purchasing new foods after dining with the GFT*

Among CM respondents, 31.7 percent stated their “experience with the GFT led [them] to purchase new foods.” This result occurred in the absence of any external income increase as research proved that the minimum wage in Vermont remained static, WIC benefits actually slightly decreased, and no significant increases of other supplemental nutrition benefits occurred during the 2016-2017 season (USDA Food & Nutrition Service, 2017). 50 percent of those

receiving one social service and 21.1 percent of those receiving more than one service reported purchasing a new food because of their GFT experience. Additionally, 37 percent of diners who tried a new food with the GFT also purchased a new food. Among those specifically receiving WIC benefits, 44.4 percent purchased a new food because of their GFT experience, and the same was true for 14.3 percent of those who had visited the food shelf in the last 6 months. Of those who ate healthier with the GFT, 34.6 percent also confirmed their experience led them to purchase new foods. These findings indicate that vulnerable populations with especially limited incomes still engaged in new purchase behavior based on the GFT intervention.

6. *Does the GFT increase awareness about other social services/ have the potential to?*

- *Answered “yes” to heard of new service or gained new knowledge (CM/ PV)*

Among CM respondents, 26.8 percent indicated that they heard of a new social service at a GFT meal. Awareness about the food shelf was greatly increased among PV respondents with 78.9 percent saying they gained new knowledge about the food shelf. Additionally, 21.1 percent of PV respondents said they gained new knowledge about hunger in Vermont, while only 11.1 percent of those surveyed learned about volunteer opportunities with the food shelf.

There were also differences in gaining awareness about social services between age groups: 50 percent of those age 35 to 54 heard of a new service, whereas this was true for no respondent over 55 and only 18.8 percent of those 18 to 34. Additionally, among the service receiver groups, 40 percent of those receiving one service heard of a new one, while 26.3 percent of those receiving more than one were informed about a new service. For WIC recipients specifically, 44.4 percent heard of a new service, and this was also true for 29.4 percent of 3 Squares recipients. These results indicate the ability of the GFT to expand awareness of services but show there is room for improvement.

7. Does the GFT possess an added-value at private vending events due to its social mission?
 • Experience rating and comments

The experience described by PV respondents was extremely positive as indicated above.

Of the 27.3 percent who wrote comments, 83.3 percent left very positive feedback, with “Great Work!” and “Excellent” mentioned frequently.

Figures 2 through 4 and Table 7 depict a full summary of the results described previously.

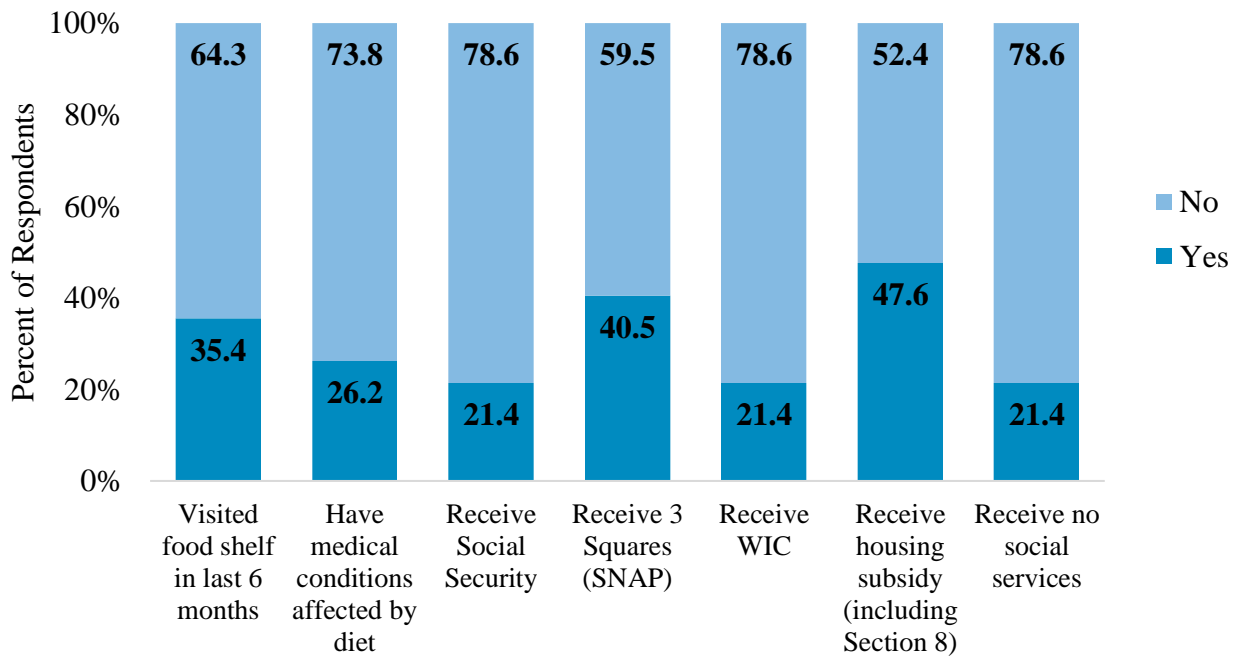


Figure 2. Community meal survey demographic responses by percent. There were 42 responses to this survey taken from October to November of 2016.

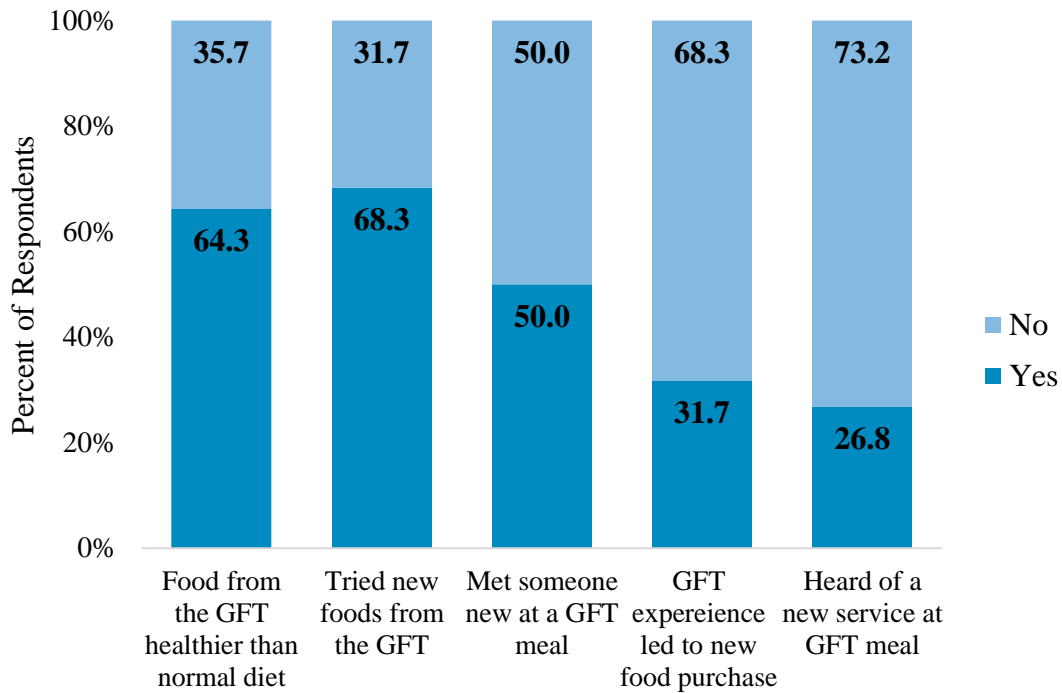


Figure 3. Community meal survey impact responses by percent. There were 42 responses to this survey taken from October to November of 2016.

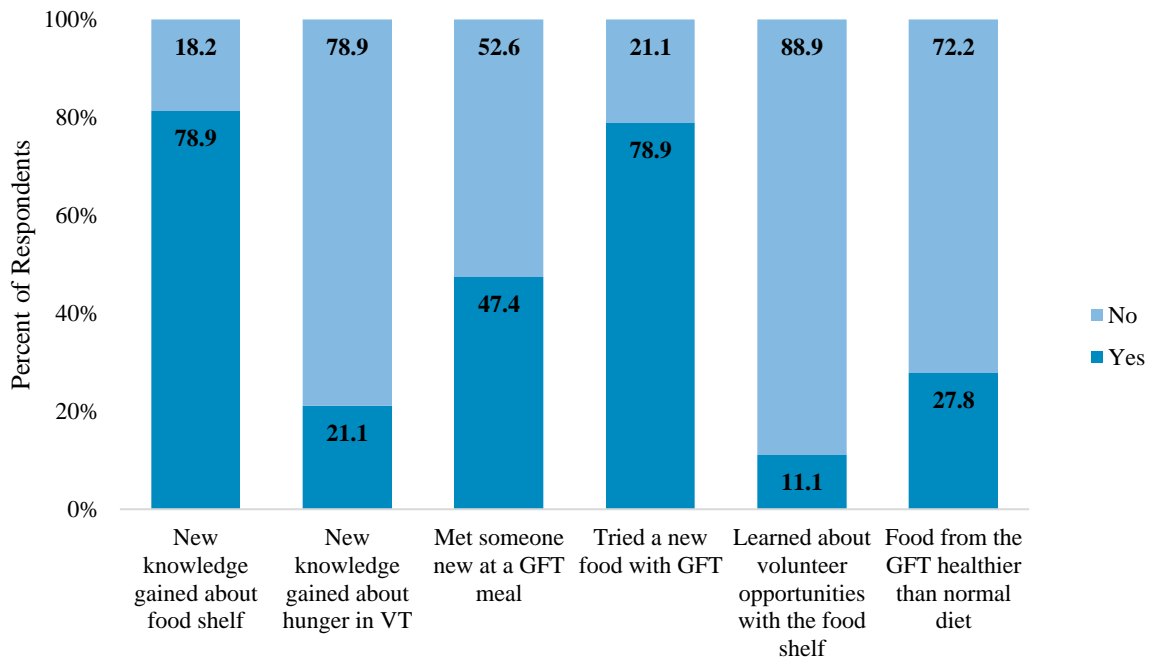


Figure 4. Private vending survey responses. There were 19 respondents to this survey taken from October to November of 2016.

Table 7 displays cross-tabulations of variables from survey data taken at community meal sites. The cells indicate the percentage of those within the independent variable group who exhibited the dependent variable attribute.

Table 7

Cross-tabulations of Community Meal Survey Variables by Percent

| Independent Variable | Dependent Variable | | | | | | |
|--|-----------------------------------|---|-------------------------------|------------------------------------|---|--|--------------------------------------|
| | <i>Tried new food at GFT meal</i> | <i>GFT experience led to new purchase</i> | <i>Ate healthier with GFT</i> | <i>Met someone new at GFT meal</i> | <i>Heard of new service at GFT meal</i> | <i>Visited food shelf in past 6 months</i> | <i>Very good experience with GFT</i> |
| <i>Age Group</i> | | | | | | | |
| 18-34 | 46.7* | 25.0 | 56.3 | 46.7 | 18.8** | 18.8** | 75.0 |
| 35-54 | 76.5* | 47.1 | 64.7 | 62.5 | 50.0** | 29.4** | 82.4 |
| >55 | 85.7* | 14.3 | 71.4 | 28.6 | 0.0** | 71.4** | 57.1 |
| <i>Service Receivers Groups</i> | | | | | | | |
| None | 63.6 | 33.3 | 58.3 | 45.5 | 16.7 | 16.7* | 91.7 |
| 1 | 72.7 | 50.0 | 72.7 | 54.5 | 40.0 | 27.3* | 63.6 |
| >1 | 68.4 | 21.1 | 63.2 | 50.0 | 26.3 | 52.6* | 73.7 |
| <i>Tried new food from GFT</i> | - | 37.0 | 71.4 | 55.6 | 33.3 | - | 78.6 |
| <i>Ate healthier with GFT</i> | - | 34.6 | - | 34.6*** | 26.9 | - | 74.1* |
| <i>Diet-related medical conditions</i> | 80.0 | 40.0 | 63.6 | 54.5 | 18.2 | 36.4 | 90.9 |
| <i>Visited food shelf in last 6 months</i> | 73.3 | 14.3* | 66.7 | 53.8 | 21.4 | - | 73.3 |
| <i>Receive Social Security</i> | 33.3 | 33.3 | 77.8 | 55.6 | 22.2 | 55.6 | 77.8 |
| <i>Receive WIC benefits</i> | 55.6 | 44.4 | 44.4 | 66.7 | 44.4 | 22.2 | 77.8 |
| <i>Receive 3 Squares (SNAP)</i> | 76.5 | 23.5 | 70.6 | 50.0 | 29.4 | 52.9** | 70.6 |

Note. (n = 42). Values indicate percentages of those within independent variable group who exhibited the dependent variable trait. Blank cells indicate repeated combinations of variables.

* $p < .1$, ** $p < .05$, *** $p < .01$

Site Observations

Scientific observations were conducted during the period of June to November of 2016 four times on three randomly selected community meal service dates and during two private vending events. Notes were categorized into the following themes: Demographic characteristics of diners, types of diner interactions, meal composition and number, and anecdotes. All photos were taken by me or GFT manager, Emmet Mosely, and all photos are displayed with permission. Faces of diners have been covered to protect their privacy.

Demographic characteristics

Those present at community meals were a diverse mix of various ages, genders, ethnicities, income levels, mobility levels, and physical and mental health status. Having this type of mix is an integral part of the creation of ideal third spaces where all feel welcome.

Diners at Harbor Place and Beacon Apartments were generally between the ages of 20 and 65, with far fewer children present at Harbor Place, and no children present at Beacon Apartments. Many diners at Harbor Place exhibited health issues and mobility difficulties. On average, approximately half the diners at Beacon Apartments exhibited intoxication or displayed mental health issues. Diners at Northgate Apartments ranged from infants to elderly people up to age 79. During some meals up approximately half the population of diners was below the age of 18 at Northgate. On-site observation at Northgate on November 2, 2016 revealed that 31 diners were unaccompanied minors, many of whom ordered extra meals to take home to their families. A total of 101 community meals were served at this event, demonstrating the substantial

presence of this population. Observations at Northgate also found that on average, approximately 13 families, defined as two or more related people, attended GFT meals together.



Figure 5. Line for community meals at Northgate Apartments; Burlington, VT; October 26, 2016. Demonstrates significant presence of unaccompanied minors. Source: M. Noth.

Certain diners also exhibited vulnerable characteristics that were unexpected. For instance, one diner at Beacon Apartments was missing a limb, multiple unaccompanied children at Northgate were seen taking home more than four meals for family members, and one survey participant at Harbor Place communicated that he was illiterate and requested my assistance in completing the survey form.

Types of diner interactions

Many interactions between diners were observed at all community meal sites including myriad micro-conversations while waiting in line, especially at larger sites like Northgate. When weather permitted, many people, especially minors, also enjoyed their meal together in close proximity to the truck. Additionally, while observing participants waiting in line, I overheard conversations where diners exchanged information about resources and support. For instance, at

Northgate on November 2, 2016 I heard approximately 8 conversations between parents about their children, and one specific conversation between two mothers about where one of the mothers' children could to obtain a free flu shot.

At the transitional housing sites, I was also able to observe various supportive interactions. For example, at Beacon Hill I witnessed case managers at the facility come out of their offices to enjoy meals and converse with residents. Additionally, I witnessed one woman take her meal back to her apartment and shortly after, another woman who received a meal walked a chair to the first woman's front door. They then dined together in the entranceway. Interactions between Emmet and diners were also innumerable as he spoke personally with each diner, explaining each menu option, and taking their order. He was also able to have more in-depth conversations when time allowed, and had established relationship with the diners, knowing many of the residents at Beacon Apartments by name.

Community meals

Figures 6 through 9 are photos of various community meals served by the GFT during the 2016-2017 season, used with permission. Captions describe the ingredients used and many of the local producers (indicated in captions by proper name). These photos depict the concerted efforts of the GFT to serve fresh, local, seasonal, high quality, and nutrient dense meals to low income diners. These meals clearly include large volumes of fresh produce, processed and presented in attractive, enjoyable formats.



Figure 6. Chicken tenders with Lewis Creek Farm roasted beets, mashed butternut squash, and spinach salad. 61 meals served. Photo taken at Northgate Apartments; Burlington, VT; October 26, 2016. Source: M. Noth.

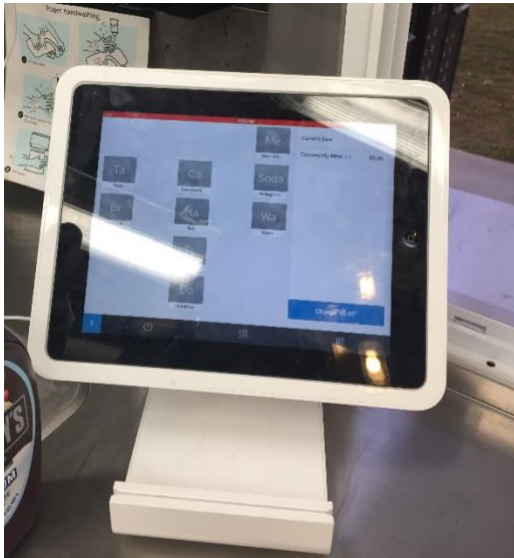


Figure 7. Square Up register system used by GFT. Photo taken in Burlington, VT; October 26, 2016. Source: M. Noth.



Figure 8. GFT set up and menu boards. Photo taken at Northgate Apartments in Burlington, VT; October 26, 2016. Source: M. Noth.



Figure 9. Black River VT raised & Cold Hollow cider brined, pulled pork sandwich left over from private event. VT Bread Company whole wheat bun, beet soup comprised of Intervale Community Farm beets and Digger's Mirth carrots. Salad of tomato, eggplant, tahini, and local Maplebrook feta. Lime slaw with cabbage from Harlow Farm of Brattleboro, VT and Digger's Mirth carrots. Photo taken at Northgate Apartments on November 2, 2016. 110 meals served. Source: M. Noth.



Figure 10. Boyden Farm beef curry with coconut rice and side salad of local greens with Cabot cottage cheese. Photo taken at Northgate Apartments; May 25, 2016. 80 meals served. Source: E. Mosely.



Figure 11. Beef stew made by CKA students with steamed broccoli and local green salad with homemade lime dressing and Maplebrook Farm feta. Photo taken at Harbor Place; Shelburne, VT; May 5, 2016. 65 meals served. Source: E. Mosely.



Figure 12. Von Trapp Farmstead pork belly sandwich on August First brioche bun, local roasted tomato and eggplant salad with Maplebrook feta, homemade sauerkraut, and local mesclun greens. Photo taken at Beacon Apartments; Shelburne, VT; August 4, 2016. 38 meals served. Source: E. Mosely.

Significant anecdotes

During on-site observation, out of the ordinary and moving instances were also recorded. One example was at a Harbor Place community meal on November 10, 2016, where a middle-aged African American woman who was a first-time diner approached the truck inquiring about the service. She was delighted to hear of such a “kind” effort, but said she was actually already heading to the convenience store to pick up dinner for herself. She had some mobility issues and walked away with a limp. Thirty minutes later she returned and explained that she had attempted to get to the store but found out along the way that it was much too far to walk. She asked about the various components of the meal and decided to take one, although she had never tried some of the ingredients. She then pulled up a chair Mosely brought for people filling out surveys. She dined and conversed with Emmet, revealing some of her personal history, and thanked Emmet profusely for the “delicious food” (personal communication, anonymous community meal diner, Nov. 10, 2017). This interaction demonstrated not only the many barriers to food access experienced by community meal diners, but also the capacity of the GFT to foster positive social interaction.

Another significant instance occurred at a community meal at Northgate Apartments on November 2, 2016. During this meal, many unaccompanied minors ordered from the food truck which was not unusual. However, many of the children ordering for themselves elected not to include the local roasted beets or salad. However, the server on the truck encouraged one young boy between the ages of 8 and 10 to try the beets. He exhibited great pride in the decision, and excitedly told the three other boys around him that the beets “looked awesome,” and that *he* was getting them (personal communication, anonymous community meal diner, Nov. 2, 2016).

Following his lead, the other boys each emphatically requested that they get beets on their plates

as well. This domino effect demonstrated the ability of commensal GFT meals to influence healthy eating behavior based on making such behavior both desirable and normalized. This is especially important among vulnerable populations like children who are forming the habits they will carry into their adult lives.

Quantitative Economic Feasibility Analysis

1. Does the GFT have an economically viable model?
 - Cost vs revenue stream

Table 8 depicts the fixed and operational average costs of running a food truck at three different price points with a comparison to the actual fixed and operational costs of the GFT, provided by the Champlain Valley Office of Economic Opportunity.

Table 8

Annual Food Truck Cost Comparison for 120 Day Season

| Truck Asset Costs | Low | Medium | High | GFT |
|---------------------------------|-------------|--------------|--------------|--------------|
| Truck Subtotal | \$35,600.00 | \$65,900.00 | \$209,000.00 | \$125,000.00 |
| Preopening/ Ongoing Subtotal | \$40,219.61 | \$58,701.27 | \$89,025.50 | \$89,114.14 |
| Misc. Subtotal | \$5,518.66 | \$8,432.19 | \$14,085.68 | \$5,518.66 |
| Total | \$81,338.27 | \$133,033.46 | \$312,111.18 | \$225,649.12 |

Note. Table adapted from *The Food Truck Handbook* (p. 186), by D. Weber, 2012, Hoboken, NJ: John Wiley & Sons Inc. Copyright 2012 by David Weber. Full cost breakdown provided in Table 11 in the Appendix.

¹Cost information for Good Food Truck provided by Champlain Valley Office of Economic Opportunity (CVOEO) and the Chittenden Emergency Food Shelf.

²Costs not included by Weber (2012) but accounted for by CVOEO were calculated based on ratio of GFT cost to truck subtotal for fair comparison.

Table 9 provides a breakdown of the GFT revenues for Fiscal Year 2016 and compares this income to the annual program expenditures to demonstrate the ability of the GFT to cover all

costs with private sales and various forms of donation. GFT manager Emmet Mosely asserted that with its reach and popular programming, the GFT is able to garner much more donation revenue than other types of CEFS programming that do not have such a significant presence throughout the state (personal communication, Feb. 10, 2017).

Table 9

GFT Revenue & Balance Breakdown FY 2016

| Funding Source | YTD Actual |
|-----------------------------|---------------|
| Private Organizations | \$17,000 |
| Foundations | \$0 |
| GFT Event Sales | \$14,542.40 |
| Donations (Cash) | \$3,921.51 |
| Donations (Credit Cards) | \$9,795.45 |
| | |
| Total Revenue | \$45, 259.36 |
| Interim Balance | \$54, 812.65 |
| Transfer Funds ¹ | (\$54,812.65) |
| | |
| Final Balance | \$0 |

Note. Data Source: CVOEO Inc. Income Statement FY 2016.

¹Transfer funds are added to total revenue. They are sourced from the CEFS General Operating Fund, including GFT specific funding, donations explicitly designated for the GFT, and additional undesignated funds to cover remaining costs (E. Mosely, personal communication, April 7, 2017). Transfer funds are displayed less \$306.98 in variance listed in official Income Statement.

SWOT Analysis

Based on the qualitative and quantitative data collected in this study, I conducted an analysis of the strengths, opportunities, weaknesses, and threats (also known as SWOT) of the GFT model as a strategy to address food insecurity. Figure 10 provides an overview of this

analysis by condensing specific elements into thematic groups for each quadrant. The specific strengths, weaknesses, opportunities, and threats of the GFT are then discussed in detail.

| | |
|--|--|
| <p>Strengths:</p> <ul style="list-style-type: none"> • Increases access to nutritious foods by reducing/ eliminating many types of barriers • Economic advantages • Expands local food market for consumers and producers • Promotes dignity • Builds social and human capital • Sustainability | <p>Weaknesses:</p> <ul style="list-style-type: none"> • Seasonality • Resource limitations • Gap between intervention and opportunity to procure nutritious foods • Requires skilled, charismatic leadership • Not fully self-sustaining |
| <p>Opportunities:</p> <ul style="list-style-type: none"> • Syncing with related producers, businesses, and organizations • Increasing outreach (diners and volunteers) • Expanding use of built capital | <p>Threats</p> <ul style="list-style-type: none"> • Funding cuts • Competition • Damages and unforeseen issues |

Figure 13. SWOT Analysis of GFT model as method to address food insecurity.

The strengths of the GFT as a tool to address food insecurity include the fact that it is mobile, therefore removing barriers like lack of transport or time required to get to the food shelf. Concerted efforts are also made to reduce other types of barriers like stigmatization of charitable food and complex language that could create aversion to trying new foods. Economic advantages include the lower fixed-costs of the truck as compared to a stationary kitchen, and the ability to utilize pre-existing resources like the food shelf’s commercial kitchen and the human capital of the CKA students.

The GFT also promotes dignity and increases human capital through individual food choices and experiential education about nutritious foods. The GFT meals also provide

opportunities for increased social interaction and expansion of social support networks.

Additionally, the GFT is more sustainable than other charitable food provision models, both economically and environmentally, given its ability to offset its own costs as well as its utilization of gleaned produce that would otherwise be wasted.

Weaknesses of the GFT program include seasonal constraints, the effect of inclement weather on turnout and therefore potential for impact, and resource limitations that restrict the number of community meal and private vending sites that can be served. Additionally, the GFT only serves 1 meal per week and therefore cannot solve an individual's chronic hunger. There is also a gap between the intervention of the GFT where diners can try new foods, and the opportunity to procure these new foods for home consumption if they are enjoyable. This may diminish the power of the intervention to influence healthy eating behavior. Another weakness is that the GFT staff is also less capable of educating people and recruiting volunteers when they are extremely busy serving meals. The built capital of the truck itself could also be more efficiently utilized as it is not operational for many hours each day.

Weaknesses in terms of scalability include the fact that the GFT's creation relied heavily on a generous \$125,000 grant and continues to require support from general food shelf funding. The model is not wholly self-sustaining at this stage, and therefore vulnerable should budgets be slashed in the future. This program is also reliant on other forms of capital including human capital represented by the charismatic leadership of Emmet Mosely and others who are extremely passionate, skilled, and committed to this project. Finally, the GFT owes much of its success to the vast and supportive network of local farms that provide gleaned produce and are willing to assist the program.

Opportunities for the GFT program include expanding collaborative efforts with additional farmers, social service organizations, and businesses to increase resources as well as revenue to sustain the program and enhance impact. More and more diverse volunteers could also be recruited. This includes increased recruitment of community meal recipients to enhance opportunities for reciprocity and create an even more dignified experience. The built capital of the truck itself could also be utilized more efficiently by inserting programming such as small business incubation or renting the unit out to other organizations when it is not being used for community meals or private events. Resources might be more effectively used if the relationship with the Community Kitchen Academy expanded and the truck was used as a food enterprise incubator. For instance, entrepreneurs could pay a below-market fee to rent the equipment and host pop-ups to build a customer base. Additional trucks could also be added in the future to create a fleet to serve many more food insecure Vermonters as well as serve additional private events.

Threats to the GFT program include potential budget cuts or reductions in donations that could reduce the GFT's capacity to serve low income communities. Additionally, federal budget cuts to social benefits programs could drive up food insecurity despite GFT efforts, and the CEFS may then have to direct funds away from the GFT to meet increased demand. Unforeseen mechanical issues or damage could also interfere with meal provision. Additionally, increased competition from other food trucks at private events could reduce the profitability of the GFT and therefore reduce the amount of funds funneled back into the community meals.

Results-Based Accountability Analysis

The final analysis of the results of this study culminated in a Results-Based Accountability (RBA) assessment which assessed "how much" the GFT accomplished, "how

well” it accomplished its goals, and whether participants were “better off” because of its work.

The original RBA guide including final results is shown in Figure 11.

| How Much? | How well? | Is Anyone Better Off? |
|---|--|---|
| <p>Who does the GFT serve?</p> <ul style="list-style-type: none"> • Number of community meals increased from 1,799 to 4,072 for a total of 5,871 • Number of site visits increased from 31 to 711 • Surveys revealed that many CM diners experience barriers to healthy food access (i.e. transport, time, money, education, & health) | <p>Does the GFT provide healthful meals and an enjoyable experience?</p> <ul style="list-style-type: none"> • Experience rating was “Very Good” for 83% of CM and PV diners with no “Bad” or “Okay” ratings • 64.3% answered that GFT meal healthier than normal (proportion greater among some vulnerable populations) (CM) | <p>Does the GFT promote social capital formation among diners at community meals?</p> <ul style="list-style-type: none"> • 50% answered “yes” to meeting someone new • Proportion was higher among some vulnerable populations |
| <p>How much programming can the GFT offer?</p> <ul style="list-style-type: none"> • Number of private vending events increased from 12 to 17, and will increase again next season • Number of service providers at community meals increased from 3 to 8 | <p>Does the GFT increase awareness about other social services and hunger in Vermont/ have potential to?</p> <ul style="list-style-type: none"> • 26.8% answered “yes” to hearing of new services (CM) • 21.1% answered “yes” to gaining knowledge about hunger (PV) • Room for improvement and increased outreach effort | <p>Does the GFT introduce people to new, nutritious produce prepared in diverse ways?</p> <ul style="list-style-type: none"> • 68.3% answered “yes” to tried new foods (CM) • New foods tried were culturally diverse and nutritious |
| <p>Is the GFT a source of built capital with potential for other uses?</p> <ul style="list-style-type: none"> • Success stories indicate potential as incubator to provide business skills and culinary skills training • Increasing collaboration with CKA in second and third season | <p>Does the GFT have an economically viable model?</p> <ul style="list-style-type: none"> • Total revenues including food shelf donations covered all expenditures • Able to garner more donations with greater reach • Program offsets own costs, but not yet self-sustaining | <p>Do meals provided by the GFT change preferences/ demand among diners?</p> <ul style="list-style-type: none"> • 31.7% answered “yes” to purchasing new foods after dining with the GFT • Proportion higher among some esp. risk averse vulnerable populations |

Figure 14. Summary RBA analysis of GFT Program. CM = Community meal result; PV = Private vending result.

Discussion

The findings of this study of the Good Food Truck indicate that this innovative model addresses many of the challenges faced by traditional charitable food providers as outlined in the literature. Furthermore, there is strong theoretical support for the methods utilized by the GFT to genuinely reduce food insecurity.

As a mobile food provisioning unit, the GFT inherently overcomes accessibility issues regarding distance of clients from the food shelf. Moreover, as Mosely described, the GFT program has eliminated almost all barriers to access including cost, transportation, time, stigma, and culinary ability. Nutritious food provision at no cost also overcomes the market failure of food commoditization in a capitalist economy by ensuring that all people can enjoy a healthy meal regardless of income level. However, this is not to say that providing an occasional meal is adequate. Rather the GFT acts as a hub that integrates a suite of services capable of working in concert to genuinely reduce food insecurity. Johnston (2003) provides a useful analogy, explaining, “Student nutrition programs do not solve the problem of child poverty, but they do feed thousands of kids and mobilize popular energy behind the need for a universal school lunch program. Community kitchens do not eliminate the problem of inadequate income, but they can break the social isolation of low-income women struggling to make ends meet” (p. 29).

The literature explains that although food cost can be a barrier, perceptions of higher cost and self-conception as part of a group for whom purchasing and utilizing fresh produce is not normalized or understood as within the realm of possibility, also perpetuate underutilization among vulnerable populations. However, the GFT program increased instances of trying new foods for 68.3 percent of diners surveyed. It has also provided opportunities for individuals to exert food sovereignty by making food choices based on preferences in a format that may not

otherwise be available to them. This exhibition of agency is similar to those described by Banas (2015), Houser-Marko & Sheldon (2006), and Brouwer (2012), which resulted in increased healthy eating behaviors in their studies despite barriers. The intervention of the GFT as a positive dining experience proved to lead 31.7 percent of respondents to purchase a new food. Though this was not the majority, the fact that habitual behavior is extremely hard to change, and the populations served are especially risk-averse due to financial constraints, emphasizes the importance of this result (Leonard et al., 2014; Ammerman et al., 2017). This finding supports the hypothesis that the GFT can foster self-as-doer identities among vulnerable populations and elicit behavioral changes that could result in the development of healthier preferences in the long term.

The literature also cites the underutilization of social services, like the Supplemental Nutrition Assistance Program (SNAP), among those who need them most (Feeding America, 2014). The GFT holds promise as a vehicle for necessary outreach, especially given the expansion of collaborative efforts with service providers in the upcoming season. However, results of this study indicate much room for growth as resource constraints presented a barrier to achieving this goal.

In terms of social capital formation, the literature emphasizes the importance of increasing social capital to reduce instance and severity of food insecurity (Brisson, 2012; Rademacher & Wang, 2014; Johnson et al., 2010; Dean et al., 2014; Graham et al., 2015). Additional work describes the positive impact of “third places,” that are public, welcoming, lighthearted, and unsegregated, on social capital formation (Matchar, 2015; Project for Public Spaces, 2009). Others confirm that food trucks create ideal third places and can be key community development tools by creating sites of interaction and support networks among

patrons (Robinson et al., 2016). The GFT proved to increase instances of social interaction among 50 percent of diners surveyed. This proportion was even greater among especially vulnerable populations such as WIC recipients, recent food shelf visitors, and those receiving Social Security, at 53.8, 55.6, and 66.7 percent respectively. As the literature indicates, these are some of the populations who would benefit most from enlarged support networks that can offer benefits such as child care exchange, resource information, and more frequent wellness checks (Brisson, 2012).

The literature on improving the emergency food provision system also specifically emphasizes the need to address issues of inaccessibility, nutritional inadequacy, insufficiency, instability, institutionalization, inappropriateness, inefficiency and invisibility. A summary of these critiques as well as an analysis of the GFT's ability to resolve them is presented in Table 10 on the following two pages.

Table 10

Ability of the Good Food Truck's to Address Salient Issues within the Emergency Food System

| “Deadly In/s” | Summary of Critique | Elements Addressed by GFT | Elements Not Fully Addressed by GFT |
|--|--|---|--|
| Inaccessibility | There are barriers to clients’ use of food banks | <ul style="list-style-type: none"> • Mobile, meets diners at their homes • Food already prepared, does not require time or knowledge • Meal is free, eliminating cost barrier | <ul style="list-style-type: none"> • Serves during a period where some may not have returned from work, reducing access • Serves a limited number of communities in need |
| Nutritional Inadequacy | Food provided by food banks are not nutritious | <ul style="list-style-type: none"> • Serves local, fresh produce • Concerted effort by chef to prepare healthful, colorful meals with half of the plate being vegetable-based | <ul style="list-style-type: none"> • Is not completely sovereign from donation stream, but more choice than other models |
| Insufficiency | Food banks are often unable to provide sufficient food or other forms of support | <ul style="list-style-type: none"> • Exists as complement to existing resources • Always prepares more than enough food with back-up options • Has never been unable to serve diners • Offers ability to try many parts of meal | <ul style="list-style-type: none"> • Provides meal once per week; does not eliminate chronic hunger directly • Limited number of communities can be served |
| Instability, Institutionalization | <p>Food bank clients are not always able to rely on food banks as a dependable resource;</p> <p>Food banks have adopted organizational structures that resemble an institution. Institutionalized food banks are more concerned with meeting bureaucratic targets and staying in business than fulfilling original mission</p> | <ul style="list-style-type: none"> • Arrives at a known time and location each week • Two paid positions (FT manager and PT assistant) to maintain charismatic and talented leadership • Budding internship program to source passionate and talented staff • Operates on private vending profits and donations, decreasing reliance on outside sources • Profits help free the program to increase advocacy and reduces engagement in competitive funding environment • Encourages collaboration and establishes links with social service organizations by allowing tabling at events • Not so beholden to corporate and donor interests | <ul style="list-style-type: none"> • Diners do not know what their options will be • The program still relies on donations, state support, and volunteer labor—just to a lesser extent |

| “Deadly In/s” | Summary of Critique | Elements Addressed by GFT | Elements Not Fully Addressed by GFT |
|---|--|---|---|
| | | <ul style="list-style-type: none"> • Exists as an advocacy and educational tool to inform the public about hunger and volunteer opportunities | |
| <p>Inappropriateness;</p> <p>Inefficiency</p> | <p>Food provided by the food bank does not meet the needs (dietary, cultural, or personal preferences) of clients;</p> <p>Resources and programming do not always match up with greatest need, with duplicate efforts in some areas whereas others are underserved, or not served at all</p> | <ul style="list-style-type: none"> • Offers options for dietary restrictions, prepares meals to order • Purposefully selects communities in need with lack of access to food shelf services • Makes use of gleaned (otherwise wasted) produce and leftovers from private vending events • High attendance points to utility among receiving communities | <ul style="list-style-type: none"> • Limited number of options for a given meal as truck must use prepared ingredients on hand |
| <p>Invisibility</p> | <p>Food banks have cultivated the impression that food insecurity is being adequately addressed, thus rendering the problem invisible</p> | <ul style="list-style-type: none"> • Engages in widespread education about the CCEFS, its programs, and the issue of hunger in VT • Eye-catching appearance attracts attention • Ability to reach many types of people of various social status at private events | <ul style="list-style-type: none"> • Suffers from lack of dedicated outreach person at all events to thoroughly communicate the severity of the issue and where efforts are needed |

Note. Table adapted from “‘In’-sights about food banks from a critical interpretive synthesis of the academic literature,” by McIntyre et al., 2015, *Agriculture and Human Values*, 33(4), p. 854-855. Copyright 2015 by Springer Science & Business Media.

In terms of economic sustainability, the literature emphasizes the economic advantages of food truck enterprises as they have much lower fixed costs than brick-and-mortar service establishments (Weber, 2012). The industry is also still growing at a steady rate, indicating the lasting popularity of this service format, the ability to remain successful in the market, and the opportunity for new entrants to prosper (Weber, 2012). Moreover, the literature regarding the added-value of embedding social missions in private business activities confirms that consumers are willing to pay more for goods and services offered by social enterprises. The data gleaned from the GFT program proved that utilizing a food truck as a social enterprise can generate enough revenue to significantly offset costs, ultimately reducing annual operational costs of \$100,649.12 by \$14,454.40 through private sales alone. The additional reach of the truck to a wider audience of donors was cited by the GFT manager as significantly increasing donations to the CEFS, and both private event revenues and donations are expected to increase with expanded resources in the coming season.

Ultimately, this study addressed gaps in the research regarding the capacity of mobile food provision programs to increase opportunities for new social interactions, facilitate introductions to new, healthful foods, provide positive new, healthful food experiences, and influence purchase patterns. With further research, these relationships could be shown to be linked to demand change among vulnerable populations. The Results-Based Accountability analysis determined that the GFT had a significant reach and provided a genuinely beneficial and impactful service to those utilizing its services.

Limitations & Areas for Future Research

The limitations of this study include the fact that the indicators were based on certain assumptions informed by theory related to this model. For instance, my indicator for increasing social capital among community meal diners was that survey participants answered “yes” to “meeting someone new at a GFT community meal.” This language was chosen strategically to avoid posing a leading question by being too specific about the type of interaction. However, the verb “meet” was chosen based on a meeting being understood to involve an introduction of sorts or some form of conversation. Ultimately, however, this indicator is a proxy for social engagement. It cannot gauge the depth of this interaction, nor the impact on forming genuine social bonds and networks beyond those I observed. Another indicator predicated on assumptions was an answer of “yes” to “hearing about a new social service at a GFT meal.” I used this indicator to demonstrate the GFT’s ability to increase awareness about additional social services not being utilized, however, I assumed this would not be understood to include the GFT itself as a “new service” one discovered.

Other limitations of this research include the IRB restrictions that prevented data collection about diners under the age of 18. This population comprised a significant proportion of those served, and future research should aim to assess the impact of the GFT on this vulnerable group. Additionally, of my results only one variable could indicate any form of causation (i.e. question regarding new purchase), whereas the rest of the study established correlations between variables from which justifiable hypotheses can be generated based on the theory and prior research. This study also only collected surveys from 42 community meal diners and 19 private vending diners.

This study exposed many fruitful realms for future research including the need to conduct longitudinal studies of specific participants to accurately gauge long-term impacts of the GFT program. Such research could determine if the GTF intervention results in sustained behavior change that impacts health and food security status. Additional research about rates of food insecurity among diners would also be necessary to determine the impact of the GFT on food security status. The evolution of the program in the 2017-2018 season also elicits a need for further study given the inclusion of the Good Food Trailer at community meals, increased service provider outreach, increased collaboration with the Community Kitchen Academy, and additional private events that could significantly influence the efficacy and impact of this program.

Conclusion

As many researchers, social scientists, service agents, and activists acknowledge, charitable food cannot eradicate food insecurity and only eases immediate hunger. To date, the strategy of intermittent food provision alone has proven insufficient as the “emergency” food network has only exponentially expanded operations over the last three decades without significantly reducing food insecurity. Going beyond treating the symptom of hunger to eliminate the poverty that causes food insecurity requires addressing underlying “wicked problems” of income disparity and structural inequality based on race, gender, class, and other factors. This mammoth task will demand collaboration from a range of fields and the creation of coalitions that are able to make genuine policy change. Therefore, an innovative, holistic, community-based strategy is necessary to truly address chronic food insecurity. Programs that adapt this model to their context, including the Good Food Truck, have the capacity to connect diners to support networks and services, foster demand for nutritious foods, provide nutrition

education, and aid larger policy action through their reach and ability to shed light on the severity of the issue. These forces, compounded with those of other comprehensive service providers, have the potential to permanently break the cycle of food insecurity. Ultimately, though incapable of being a single, final solution to hunger, the Good Food Truck does serve a host of intangible benefits alongside its colorful plates. Consequently, this model, operating symbiotically with a concert of integrated services, has proven to impact diners in ways that can contribute to significant and lasting reductions in food insecurity.

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Appendix

Good Food Truck Full Expenditure Breakdown

Table 11

Complete Annual Food Truck Cost Comparison for 120 Day Season

| Truck Asset Costs | Low | Medium | High | Good Food Truck |
|-------------------------------------|-------------|---------------|--------------|------------------------|
| Step Van | \$5,000.00 | \$20,000.00 | \$120,000.00 | - |
| Mechanic Inspection | \$100.00 | \$400.00 | \$500.00 | - |
| Fabricator Fees | \$20,000.00 | \$25,000.00 | \$50,000.00 | - |
| Kitchen Equipment | \$5,000.00 | \$10,000.00 | \$20,000.00 | - |
| Generator | \$2,000.00 | \$6,000.00 | \$12,000.00 | - |
| Painting | \$1,500.00 | \$2,000.00 | \$3,000.00 | - |
| Truck Wrap | \$2,000.00 | \$2,500.00 | \$3,500.00 | - |
| Truck Subtotal | \$35,600.00 | \$65,900.00 | \$209,000.00 | \$125,000.00 |
| | | | | |
| Preopening/ Ongoing Expenses | Low | Medium | High | Good Food Truck |
| Insurance ^a | \$300.00 | \$500.00 | \$1,000.00 | \$2,020.00 |
| Smallwares ^b | \$400.00 | \$500.00 | \$800.00 | \$1,625.99 |
| Register/ POS | \$200.00 | \$1,000.00 | \$2,000.00 | \$200.00 |

CREATING DIGNITY, NOT DEPENDENCE: MOBILE FOOD VENDING

| | | | | |
|---|-----------------------|---------------------|---------------------|-------------------------------------|
| Licenses/ Permits | \$300.00 | \$500.00 | \$1,000.00 | \$2,190.01 |
| Phone/ Internet | \$100.00 | \$200.00 | \$250.00 | \$180.00 |
| Music | \$100.00 | \$200.00 | \$300.00 | - |
| Payroll Setup | \$0.00 | \$100.00 | \$150.00 | - |
| Office Setup | \$100.00 | \$400.00 | \$800.00 | \$407.82 |
| Website/ Advertising | \$2,500.00 | \$4,000.00 | \$9,500.00 | \$3,400.47 |
| Printing (Menu etc.) | \$500.00 | \$750.00 | \$1,000.00 | \$122.50 |
| T-Shirts | \$0.00 | \$250.00 | \$500.00 | - |
| Fuel | \$200.00 | \$250.00 | \$300.00 | \$1,354.70 |
| Maintenance | \$500.00 | \$1000.00 | \$2000.00 | \$1,555.61 |
| Ingredients (120 Days) | \$13,714.00 | \$17,142.86 | \$25,714.29 | \$13,794.01 |
| Paper Products | \$200.00 | \$250.00 | \$1,500.00 | N/A (incl. in Smallwares) |
| Labor ^d (1 Person, 52 Weeks) | \$20,800.00 (\$10/hr) | \$31,200 (\$15/ hr) | \$41,600 (\$20/ hr) | \$61,361.47 (incl. fringe benefits) |
| Workers' Compensation | \$305.61 | \$458.41 | \$611.21 | \$901.56 |
| Preopening/ Ongoing Subtotal | \$40,219.61 | \$58,701.27 | \$89,025.50 | \$89,114.14 |
| | | | | |
| Miscellaneous | Low | Medium | High | Good Food Truck |
| Deposits | \$500.00 | \$1,000.00 | \$2,000.00 | - |
| Bank Charges | - | - | - | \$293.86 |

| | | | | |
|-----------------------|-------------------|-------------------|-------------------|--------------|
| Commissary | \$1,600.00 | \$3,200.00 | \$4,800.00 | - |
| Rent | - | - | - | \$300.00 |
| Indirect ^f | <i>\$3,146.44</i> | <i>\$3,720.13</i> | <i>\$5,666.23</i> | \$9,977.16 |
| Depreciation | \$272.22 | \$512.06 | \$1,619.45 | \$963.96 |
| Misc. Subtotal | \$5,518.66 | \$8,432.19 | \$14,085.68 | \$11,534.98 |
| | | | | |
| Final Total | \$81,338.27 | \$133,033.46 | \$312,111.18 | \$225,649.12 |

Note. Table adapted from *The Food Truck Handbook* (p. 186), by D. Weber, 2012, Hoboken, NJ: John Wiley & Sons Inc. Copyright 2012 by David Weber.

^aInsurance cost taken from Myrick (2016).

^bAccording to the IRS (2016), smallwares generally consist of the following categories: “glassware, flatware, dinnerware, pots and pans, table top items, bar supplies, food preparation utensils and tools, storage supplies, service items and small appliances costing \$500 or less.”

^cTotal outfitting cost for the Good Food Truck provided by a \$125,000 grant from Jane’s Fund and was not broken into line items. Cost information for Good Food Truck provided Champlain Valley Office of Economic Opportunity (CVOEO) and the Chittenden Emergency Food Shelf.

^dLabor based on 8 hour work day and includes training.

^e*Italics* indicate calculated cost for values included in GFT expenditures and not specified by Weber (2012).

^fIndirect costs calculated by replicating ratio of GFT indirect cost to truck cost, less commissary cost that is included in GFT indirect costs.

GFT Community Meal Survey Instrument

The Good Food Truck Community Meal Survey 2016

*Please only complete this survey if you are 18 years of age or older.

1. What is your age?
2. How would you rate your experience with the Good Food Truck? Circle One.

Bad OK Good Very Good
3. Have you visited the Food Shelf on North Winooski Avenue in the last 6 Months? Yes/No

If No, Why Not?
4. Have you tried any new foods on the Good Food Truck? Yes/ No

If yes, which ones?
5. Have you met anyone new at a Good Food Truck community meal? Yes/No
6. Has your experience with the Good Food Truck led you to purchase any new foods? Yes/ No
7. Is the food from the Good Food Truck healthier than what you usually eat? Yes/No
8. Do you have any medical conditions that are affected by your diet (ex. High Blood Pressure, Diabetes or Hypertension)? Yes/No
9. Which of these services are you currently receiving? Check any of the following that apply:

__SSI/SSDI (disability) __ 3 Squares (food stamps) __WIC __Section8 __Housing Subsidy
__Other
10. Have you learned about any services at a Good Food Truck event that you had not heard of before? Yes/ No
11. Do you have any suggestions for making the program better? Please share them here.

*If you are interested in being involved in an informal interview about your experience with the Good Food Truck, please meet with Mariah Noth after your survey is completed.

GFT Private Vending Survey Instrument

The Good Food Truck Private Vending Survey

*Please only complete this survey if you are 18 years of age or older.

1. What is your age?
2. How would you rate your experience with the Good Food Truck? Circle One.

Bad OK Good Very Good
3. Did you gain any new knowledge about the Food Shelf and its programs through your experience with the Good Food Truck? Yes/ No

If yes, what did you learn?
4. Did you gain any new knowledge about the issue of hunger in Vermont through your experience with the Good Food Truck? Yes/ No

If yes, what did you learn?
5. Did you learn about opportunities to volunteer with the Food Shelf and its affiliated programs? Yes/ No
6. Have you tried any new foods on the Good Food Truck? Yes/ No

If yes, which ones?
7. Have you met anyone new at a Good Food Truck event? Yes/No
8. Is the food from the Good Food Truck healthier than what you usually eat? Yes/No

*If you are interested in being involved in an informal interview about your experience with the Good Food Truck, please meet with Mariah Noth after your survey is completed.

Key Informant Interview Guide: Emmet Mosely, GFT Manager

Emmet Mosely Interview Guide

- **-History of the truck/ inspiration for idea**
- **-Mission**
- **-How you select sites**
- **-Your role (and what type of person/people would be needed in a similar model elsewhere)**
- **-The cost/revenue stream of the truck (fixed & operational)**
 - **--Food/cash donations/ gleaning**
 - **--Volunteers/interns**
 - **--Role of CKA**
- **-Barriers/issues/ limitations**
- **-Overall perception of success of program--does it provide an added-value that differs from "meals on wheels"/ mobile markets?**
- **-Anecdotes about impact/ experiences at meal sites**
 - **--Does the social mission produce added-value (caring capitalism) at private events?**
 - **Comments on ability of truck to increase hunger awareness/ recruit volunteers**
 - **Element of dignity? Feeling included in social setting (vs elitist farmers' markets)**
- **-Comments about ability to impart info about services/mission at events**
- **-Opportunities for the future/ scaling program to other places?**
 - **Is Burlington a special bubble, or is this applicable elsewhere?**

Key Informant Interview Guide: Malinda Hersh, Director of The Nashville Food Project

1. Is this a hot meal service, served to people or more of a packaged meal delivery?
2. What was the inspiration for this program--from what needs did it arise?
 - What is the mission of this program, and how do mobile meals influence that mission?
 - What is the program's history?
3. Do you have any research or impact analyses about your program? (Number of meals, qualitative impacts on well-being?)
4. What kind of costs are associated with running this additional program that could present barriers for other organizations?
5. Do you see a need for similar programs across the country?

GFT Detailed Expenditures and Revenues FY 2016

STATEMENT OF FUNCTIONAL REVENUES & EXPENSES
 CEIS GOOD FOOD TRUCK
 FISCAL YEAR 2016

| | October 2015 | November 2015 | December 2015 | January 2016 | February 2016 | March 2016 | April 2016 | May 2016 | June 2016 | July 2016 | August 2016 | September 2016 | YTD ACTUAL | VARIANCE |
|--------------------------|---------------------|--------------------|----------------------|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|----------------------|--------------------|---------------------|-----------------------|
| REVENUE | | | | | | | | | | | | | | |
| Private Organization | 10,000.00 | - | - | - | 2,000.00 | - | - | - | - | - | 5,000.00 | - | 17,000.00 | (3,000.00) |
| Foundations | - | - | - | - | - | - | - | - | - | - | - | - | - | (31,463.00) |
| Sales | 780.65 | - | - | - | - | - | 117.43 | 1,655.82 | 646.71 | 3,544.26 | 2,386.90 | 5,890.63 | 14,542.40 | (457.60) |
| Donations | 226.00 | 549.00 | - | - | - | 300.00 | 510.40 | 64.75 | 112.24 | 1,465.48 | 166.65 | 536.99 | 3,921.51 | 3,921.51 |
| Donations - Credit Cards | 170.00 | 90.00 | 3,238.00 | 3,695.00 | 110.00 | 115.00 | 860.00 | 90.00 | 787.45 | 120.00 | 150.00 | 380.00 | 9,795.45 | 9,795.45 |
| TOTAL REVENUE | \$ 11,776.65 | \$ 639.00 | \$ 3,238.00 | \$ 3,695.00 | \$ 2,110.00 | \$ 415.00 | \$ 1,477.83 | \$ 1,820.57 | \$ 1,546.40 | \$ 5,119.74 | \$ 7,713.95 | \$ 6,807.62 | \$ 45,293.36 | \$ (21,143.04) |
| EXPENSES | | | | | | | | | | | | | | |
| Salaries - Full Time | 2,994.93 | 3,327.70 | 3,327.70 | 4,991.55 | 3,327.70 | 3,327.70 | 3,327.70 | 3,327.70 | 4,825.17 | 3,494.08 | 3,327.70 | 4,159.62 | 43,759.25 | (330.25) |
| Fringe Benefits | 1,188.99 | 1,321.10 | 1,321.10 | 1,981.65 | 1,321.10 | 1,321.10 | 1,321.10 | 1,321.10 | 1,915.60 | 1,387.15 | 1,321.10 | 1,551.37 | 17,372.46 | (130.46) |
| Workers Compensation | 1,125.00 | 68.56 | 68.56 | 102.84 | 68.56 | 68.56 | 68.56 | 68.56 | 99.41 | 71.99 | 68.56 | 65.70 | 801.56 | 223.44 |
| Program Materials | - | - | - | - | - | - | - | - | - | 71.63 | - | - | 71.63 | (71.63) |
| Client Services: Food | 630.31 | 524.97 | 592.64 | - | 25.76 | 47.25 | 425.92 | 666.63 | 2,007.85 | 1,452.73 | 2,865.51 | 4,304.44 | 13,794.01 | (4,494.01) |
| Variante | - | (306.00) | - | - | - | - | - | (3.00) | 0.49 | 2.36 | (0.27) | (0.50) | (306.98) | 306.98 |
| Office Supplies | 250.00 | - | - | 126.25 | - | - | - | 53.91 | - | 114.96 | 15.99 | 96.69 | 407.82 | (157.82) |
| Supplies - Kitchen | 700.00 | - | - | - | 88.10 | - | - | 353.10 | 200.37 | 269.20 | 434.85 | - | 1,370.62 | (670.62) |
| Supplies - Maintenance | 350.00 | 69.43 | - | - | - | - | - | 146.10 | 43.99 | 112.24 | - | - | 455.37 | (105.37) |
| Printing | 300.00 | 122.50 | - | - | - | - | - | - | - | - | - | - | 122.50 | 177.50 |
| Advertising | - | - | 2,250.06 | - | - | - | 223.00 | - | 655.00 | - | - | - | 3,328.06 | (3,328.06) |
| Fees & Dues | 2,500.00 | 1.12 | - | - | - | - | 996.58 | 60.20 | 131.03 | 81.23 | 27.53 | 374.66 | 1,894.51 | 815.49 |
| Bank Charges | 250.00 | 5.10 | 97.14 | 110.85 | 3.30 | 3.45 | 25.50 | 2.70 | 23.62 | 3.60 | 4.50 | 11.40 | 293.66 | (43.66) |
| Local Travel | 1,750.00 | - | - | - | - | - | - | - | 75.00 | - | - | 28.20 | 28.20 | 1,721.80 |
| Training | - | - | - | - | 154.74 | - | - | - | - | - | - | - | 229.74 | (229.74) |
| Vehicle Insurance | - | - | 1,894.00 | - | - | - | - | - | - | - | 126.00 | - | 2,020.00 | (2,020.00) |
| Equipment: Under \$5,000 | 1,000.00 | - | - | - | - | - | - | - | - | - | - | - | 1,000.00 | 1,000.00 |
| Equipment Maintenance | - | - | - | - | - | - | - | - | - | - | 972.54 | - | 972.54 | (972.54) |
| Vehicle Registration | 465.00 | - | - | - | - | - | - | - | 429.50 | - | - | 76.00 | 565.50 | (20.50) |
| Vehicle Maintenance | 250.00 | - | - | - | - | 391.84 | 107.90 | 40.68 | - | 42.65 | - | - | 565.07 | (333.07) |
| Vehicle Gas & Oil | 1,000.00 | 274.46 | 182.04 | 53.35 | - | 66.61 | 78.00 | 214.42 | 124.30 | 183.76 | 148.56 | 1,326.50 | 3,265.50 | (326.50) |
| Indirect | 9,902.00 | 682.85 | 758.72 | 1,138.08 | 758.72 | 758.72 | 758.72 | 758.72 | 1,101.14 | 796.65 | 758.72 | 948.40 | 9,977.16 | (75.16) |
| Depreciation | 965.00 | 80.33 | 80.33 | 80.33 | 80.33 | 80.33 | 80.33 | 80.33 | 80.33 | 80.33 | 80.33 | 80.33 | 965.96 | 1.04 |
| Rent | - | - | 300.00 | - | - | - | - | - | - | - | - | - | 300.00 | (300.00) |
| Telephone | 1.00 | - | - | - | - | - | - | - | - | - | 120.00 | 60.00 | 180.00 | (179.00) |
| Transfer | (24,356.00) | - | (278.63) | (4,836.55) | (3,718.31) | (5,503.62) | (6,595.67) | (5,570.91) | (10,306.41) | (4,577.74) | (1,188.02) | (5,218.19) | (55,082.78) | 30,686.78 |
| TOTAL EXPENSES | \$ 66,403.00 | \$ 6,021.44 | \$ 5,874.54 | \$ 3,457.67 | \$ 2,110.00 | \$ 495.33 | \$ 795.25 | \$ 1,624.82 | \$ 1,693.51 | \$ 3,547.38 | \$ 9,138.00 | \$ 6,807.62 | \$ 45,293.36 | \$ 21,143.04 |
| EARNINGS | \$ - | \$ 5,155.21 | \$ (5,235.54) | \$ (219.67) | \$ - | \$ - | \$ (80.33) | \$ (301.25) | \$ (147.11) | \$ 1,572.36 | \$ (1,425.25) | \$ - | \$ - | \$ - |

2/15/2017 5:26:45PM

**Champlain Valley Office of Economic Opportunity, Inc
Income Statement**

| | Budget 9/30/2016 | Period Ending 9/30/2016 | YTD Actual 9/30/2016 | Balance |
|---|-----------------------------|------------------------------------|-------------------------------------|-------------------------|
| 24600 - CEFS Food Truck | | | | |
| Revenues | | | | |
| 2-4320-20-240 Private Organization | 20,000.00 | 0.00 | 17,000.00 | 3,000.00 |
| 2-4330-20-240 Foundations | 31,403.00 | 0.00 | 0.00 | 31,403.00 |
| 2-4522-20-240 Sales | 15,000.00 | 5,890.63 | 14,542.40 | 457.60 |
| 2-4600-20-240 Donations | 0.00 | 536.99 | 3,921.51 | (3,921.51) |
| 2-4601-20-240 Donations - Credit Cards | 0.00 | 380.00 | 9,795.45 | (9,795.45) |
| Totals for Location(s) 240 - CEFS Food Truck: | <u>66,403.00</u> | <u>6,807.62</u> | <u>45,259.36</u> | <u>21,143.64</u> |
| Total Revenues | <u>66,403.00</u> | <u>6,807.62</u> | <u>45,259.36</u> | <u>21,143.64</u> |
| Expenses | | | | |
| 2-5010-20-240 FT Salary | 43,430.00 | 4,159.62 | 43,759.25 | (329.25) |
| 2-5500-20-240 Fringe | 17,242.00 | 1,651.37 | 17,372.46 | (130.46) |
| 2-5505-20-240 Workers Compensation | 1,125.00 | 85.70 | 901.56 | 223.44 |
| 2-6100-20-240 Program Materials | 0.00 | 0.00 | 71.63 | (71.63) |
| 2-6710-20-240 Client Services: Food | 9,300.00 | 4,304.44 | 13,794.01 | (4,494.01) |
| 2-6796-20-240 Variance | 0.00 | (0.56) | (306.98) | 306.98 |
| 2-7010-20-240 Office Supplies | 250.00 | 96.69 | 407.82 | (157.82) |
| 2-7015-20-240 Supplies - Kitchen | 700.00 | 0.00 | 1,370.62 | (670.62) |
| 2-7020-20-240 Supplies - Maintenance | 350.00 | 0.00 | 455.37 | (105.37) |
| 2-7100-20-240 Printing | 300.00 | 0.00 | 122.50 | 177.50 |
| 2-7105-20-240 Advertising | 0.00 | 0.00 | 3,328.86 | (3,328.86) |
| 2-7200-20-240 Fees & Dues | 2,500.00 | 374.66 | 1,684.51 | 815.49 |
| 2-7210-20-240 Bank Charges | 250.00 | 11.40 | 293.86 | (43.86) |
| 2-7300-20-240 Local Travel | 1,750.00 | 28.20 | 28.20 | 1,721.80 |
| 2-7310-20-240 Training | 0.00 | 0.00 | 229.74 | (229.74) |
| 2-7405-20-240 Vehicle Insurance | 0.00 | 0.00 | 2,020.00 | (2,020.00) |
| 2-7820-20-240 Equip: under \$5,000 | 1,000.00 | 0.00 | 0.00 | 1,000.00 |
| 2-7840-20-240 Equip Maintenance | 0.00 | 0.00 | 972.54 | (972.54) |
| 2-7850-20-240 Vehicle Registration | 485.00 | 76.00 | 505.50 | (20.50) |
| 2-7851-20-240 Vehicle Maintenance | 250.00 | 0.00 | 583.07 | (333.07) |
| 2-7852-20-240 Vehicle Gas & Oil | 1,000.00 | 149.56 | 1,326.50 | (326.50) |
| 2-7960-20-240 Indirect | 9,902.00 | 948.40 | 9,977.16 | (75.16) |
| 2-7970-20-240 Depreciation | 965.00 | 80.33 | 963.96 | 1.04 |
| 2-8000-20-240 Rent | 0.00 | 0.00 | 300.00 | (300.00) |
| 2-8200-20-240 Telephone | 0.00 | 60.00 | 180.00 | (180.00) |
| 2-9800-20-240 Transfer | (24,396.00) | (5,218.19) | (55,082.78) | 30,686.78 |
| Totals for Location(s) 240 - CEFS Food Truck: | <u>66,403.00</u> | <u>6,807.62</u> | <u>45,259.36</u> | <u>21,143.64</u> |
| Total Expenses | <u>66,403.00</u> | <u>6,807.62</u> | <u>45,259.36</u> | <u>21,143.64</u> |