

# JOURNAL OF FOODSERVICE MANAGEMENT & EDUCATION

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## RESEARCH CONTRIBUTIONS:

**Assessing the Impacts of Local Hospital Food Procurement: Results from Vermont**

**Understanding Stakeholder Viewpoints for Foodservice Localization: The Potential of the Leadership Viewpoint**

**Restaurant Employee Attitude and Behavior towards Sustainability Practices**



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# ABSTRACTS

## Research Manuscripts

### **ASSESSING THE IMPACTS OF LOCAL HOSPITAL FOOD PROCUREMENT: RESULTS FROM VERMONT**

Many institutions have enacted local food procurement programs. This paper looks at the activities of a large regional hospital in Vermont with a well-established local food program. We use a mixed methods approach to measure how the program impacts the local economy, its vendors, and its customers. We find that the hospital's foodservice contributes \$2,746,493 to the local economy. It provides high quality, affordable food to customers. It maintains close relationships with vendors which contribute both directly and indirectly to their economic well-being. We conclude with implications for foodservice management which are to focus on forming and maintaining relationships with vendors to continue flow of benefits.

### **UNDERSTANDING STAKEHOLDER VIEWPOINTS FOR FOODSERVICE LOCALIZATION: THE POTENTIAL OF THE LEADERSHIP VIEWPOINT**

Localization has been identified as an area to improve foodservice sustainability. We asked the research question "What are the dominant shared stakeholder viewpoints about local food in a college foodservice and how might an understanding of these be used to help management localize the foodservice?"

We used Q methodology to group stakeholders (students, foodservice manager and staff, college staff and food suppliers) into four dominant shared stakeholder viewpoints. "The Leadership Viewpoint" showed the capacity to drive foodservice change. The study explores "The Leadership Viewpoint" of stakeholders in a college foodservice setting, which other dietetic professionals can compare to their own organizations.

### **RESTAURANT EMPLOYEE ATTITUDE AND BEHAVIOR TOWARDS SUSTAINABILITY PRACTICES**

Environmental sustainability initiatives are a necessity for restaurants today in order to lessen the negative impacts inflicted by restaurants on the environment. Success of environmental initiatives is contingent upon the buy-in and commitment of restaurant employees. This study investigated restaurant employees' reactions to restaurant environmental sustainability initiatives. Qualitative analysis consisted of document review, on-site observation, and semi-structured interviews with 29 restaurant employees from two restaurants located in the Midwestern United States. Findings revealed that the employees in this study were environmentally aware, and possessed job satisfaction, pride, and loyalty.

## ASSESSING THE IMPACTS OF LOCAL HOSPITAL FOOD PROCUREMENT: RESULTS FROM VERMONT

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### ABSTRACT

Many institutions have enacted local food procurement programs. This paper looks at the activities of a large regional hospital in Vermont with a well-established local food program. We use a mixed methods approach to measure how the program impacts the local economy, its vendors, and its customers. We find that the hospital's foodservice contributes \$2,746,493 to the local economy. It provides high quality, affordable food to customers. It maintains close relationships with vendors which contribute both directly and indirectly to their economic well-being. We conclude with implications for foodservice management which are to focus on forming and maintaining relationships with vendors to continue flow of benefits.

**Keywords:** institutional food procurement, local food, economic impact study, food suppliers

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### INTRODUCTION

Many institutions have enacted local procurement programs. These efforts, often under the auspices of farm to institution programs, are motivated by a desire to support local farms and other businesses, contribute to the local economy, improve food quality and enhance the institutions' educational efforts. This paper looks at the local procurement efforts of a large regional hospital in Vermont, using a variety of data sources, including purchasing data, a customer survey, and interviews of the institutional buyer and vendors. The goals of this paper are to report the economic impact of this buying program, highlight customer and vendor motivations and perceptions, and outline how the institution has overcome common barriers in local procurement. It begins with a review of literature on institutional food procurement, including motivations, benefits, and barriers. It then describes the hospital's efforts, including goals, origins, accomplishments, and keys to success. Next, it presents results of an input-output study which measures the impact to the state economy. It then presents findings from a customer survey as well as vendor and buyer interviews. It concludes with implications for foodservice operations and educators.

### SELECTED LITERATURE

#### Institutional Procurement

Institutional foodservice has attracted the attention of scholars and community stakeholders due to its potential to contribute to local food systems sustainability (Conner, Abate, Liquori, Hamm, & Peterson, 2010; Feenstra, Allen, Hardesty, Ohmart, & Perez, 2011;

Vogt & Kaiser, 2008). These efforts are often discussed and studied under the term farm to institution. Many national organizations support farm to institution and related efforts to improve the quality and values associated with institutional food products, including efforts in schools (National Farm to School Network, School Food FOCUS), colleges (Real Food Challenge), and hospitals (Health Care Without Harm).

#### Food Systems and Economic Development

Farm to institution efforts are widely seen as fostering closer community ties and engagement around food issues (Schafft, Hinrichs, & Bloom, 2010). Farm to institution and local food purchases provide markets for farms, often those at the urban fringe that face highest development pressure and provide a variety of ecosystems services compared to developed land (American Farmland Trust, 2009). Local food purchases can contribute to local economies and farm viability by providing revenue to farmers and other food businesses.

Spending money locally can have large indirect impacts on the economy as well. A number of studies have used input-output models to calculate the direct and indirect economic benefit from increased purchases of local foods by consumers (Conner, Knudson, Hamm, & Peterson, 2008; Swenson, 2006; Swenson, 2010). Other studies have attempted to calculate the multiplier effect of local food purchase. Depending on the methods and contexts used, the multipliers range from 1.4 to 2.6, meaning that every dollar spent locally generates another \$0.40 to \$1.60 in the local economy rather than leaking away to distant regions (Meter, 2008; Sonntag, 2008).

In input-output models, direct effects represent the initial change, in this case, the purchase of local food by University of Vermont Medical Center (UVMCC). Indirect effects represent the changes on the suppliers as they respond to the demand; for instance a bakery purchasing flour to fill the UVMCC order. Induced effects represent changes that households make to their spending in response to fluctuations in income. The indirect and induced effects of an economic impact constitute the multiplier (Mulkey & Hodges, 2004). The larger the multiplier, the greater the local economic activity is and the fewer the leakages are. Leakages represent money from the activity that is leaving the local area.

#### Local Food and Institutional Procurement

Local food purchases have the potential to benefit foodservice operations and their supply chain partners as well. Foodservice operations cite increased access to healthy and nutritious foods, meeting demand for locally grown foods, contributing to education and wellness missions, and engagement with community members (Becot, Conner, Nelson, Buckwalter, & Erickson, 2014; Conner, Sevoian, Heiss, & Berlin, 2014; Izumi, Betty, Alaimo, & Hamm, 2010;

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Vogt & Kaiser, 2008). Distributors cite ability to meet demand for local foods and creating future customers for healthy foods (Conner et al., 2014; Izumi, Wright, & Hamm, 2010). Farmers cite a host of social and economic motivations, including community connections, pride in providing healthy foods, market diversification, selling large and reliable quantities at lower transaction costs, and creating future customers (Buckley, Conner, Matts, & Hamm, 2013; Conner, King, et al., 2012; Conner et al., 2014; Izumi, B., Wright, et al., 2010). Well-known barriers to increased local food purchase focus around a suite of concerns, including seasonality, availability, reliability, volume, delivery, reliance on pre-cut produce, food safety certification, and price (Becot et al., 2014; Berkenkamp, 2006; Conner, King, Koliba, Kolodinsky, & Trubek, 2011; Izumi, Wright, et al., 2010; Lawless, Stevenson, & Hendrickson, 1999; Strohbehne & Gregoire, 2008).

Many studies discuss the role of strategic partnerships among farmers, processors, distributors, and institutional buyers to help overcome common procurement barriers (Conner et al., 2010; Conner, Izumi, Liquori, & Hamm, 2012; Conner, Nowak, et al., 2011; Feenstra, et al., 2011). In particular, these partnerships can increase the ability to meet the challenge of consistent supply while maintaining the food's unique attributes (such as locally grown). Key elements of these partnerships are communication, collaboration, and co-learning; indicative behaviors include frequent communication, including site visits, to share ideas, and solve problems. These partnerships can create mutual and lasting benefit for all participants including steady supply of whole and processed foods for institutions, and steady markets for surplus products for farmers.

Another common element of successful local food procurement is the presence of a champion who provides leadership, shapes the organization's food culture, and forges community partnerships. These champions can be internal or external to the organization, and come to the table with different histories and motivations, but are seen as critical to successfully sustaining these programs (Bagdonis, Hinrichs, & Schafft, 2009; Barlett, 2011). Local champions can include local nonprofits (Schafft et al., 2010), foodservices directors (Bagdonis, Hinrichs, Schafft, 2008), or school administrators (Barlett, 2011; Feenstra, Gail, & Ohmart, 2012), whose roles may include providing monetary support, prioritizing local food, or instituting wellness committees.

### Hospital Foodservice

Health Care Without Harm is a leading organization which supports hospital foodservice operations' efforts to contribute to food system sustainability. Specifically, they provide advocacy and education to help leverage hospitals' purchasing power to promote healthier purchase options (Health Care Without Harm, 2012). A key component is the Healthier Food Challenge; options in meeting this challenge include to increase local and sustainable purchases by 20% annually over current baseline or achieve 15% of total food purchases being local/sustainable over three years. According to Health Care Without Harm, in 2013 61 operations purchased locally grown foods totaling more than \$4 million (Clinton, Stoddard, Perkins, Peats, & Collins, 2014).

The hospital in our case, UVMMC, formerly known as Fletcher Allen Health Care, in Burlington VT signed the Health Care Without Harm Healthy Food in Health Care pledge in 2006 and has since won Health Care Without Harm awards for sustainable procurement and policy advocacy. Key components of UVMMC's efforts include local food procurement and emphasis on nutritionally dense minimally processed foods, revamping the retail cafeterias, extensive

communication and planning with local suppliers, on-site farmers markets, and vegetable gardens (Buzalka, 2012; University of Vermont Medical Center, 2014). In 2012, the hospital served 1.55 million meals with approximately 15% served to patients and the remainder going to hospital staff and visitors. It had a food budget of \$4.03 million and 44.3% of the food budget was spent on food from Vermont.

This paper addresses four broad research questions

1. What are the direct, indirect, and induced income, and job impacts of UVMMC's local procurement?
2. Who are their customers and how often and why do they choose to eat there?
3. What are the perceived benefits, motivations, and barriers of vendors selling to UVMMC?
4. How does UVMMC interact with vendors and how have these practices overcome barriers to local procurement?

### METHODS

Four methods were used to gather data and analyze, corresponding to each research question above.

1. We obtained local purchase data from UVMMC to customize the Impact Analysis for PLANing (IMPLAN) input-output model for analysis.
2. We conducted a customer survey at UVMMC's retail locations.
3. We interviewed eight current vendors and asked about their own purchasing patterns and the impacts of sales to UVMMC on their businesses.
4. We interviewed UVMMC's Production Specialist.

All of the research protocols were approved by the University of Vermont's Institutional Review Board.

### Research Question 1

Using the food purchase records for 2012, the researchers categorized local purchases based on whether they were purchased from farms, food manufacturers, or wholesalers. For this study, local food is defined as food from Vermont. Conversations with the director of nutrition services aimed to understand whether the local food purchases were an addition to what was currently purchased from out of state or whether these purchases were a substitution. The wholesale purchases were margined to account for the wholesale markup and the producer value. The wholesale markup is charged by the wholesaler to the buyer for the service the wholesaler provides. The producer value is the value of the food sold by the wholesaler and the producer value was reallocated to the farm and food manufacturer sectors using the sales reports from the wholesalers. We used the wholesale margin from the IMPLAN software which is 18.6%.

These data were entered into an input-output model to estimate indirect, induced, and job impacts of these expenditures. The software package and database IMPLAN, was used to conduct the economic impact analysis. The 2011 data package for Vermont was used to conduct the analysis. In IMPLAN, the economy, including transactions between industries, institutions, and households, is represented by 440 sectors that can be linked back to the North American Industry Classification System (NAICS). The 15 sectors representing the agricultural sectors that the hospital bought from were aggregated into one farming sector and the 25 sectors representing the food manufacturing sectors the hospital bought from were aggregated into one food manufacturing sector. The aggregation of these two industries was done as we did not have the level of detail from the purchases to be able to attribute the expenses to their specific farming or food manufacturing sectors. The

aggregation of the agricultural and food manufacturing sectors also simplified the analysis. No other sectors were aggregated.

A multi-industry contribution analysis as well as an economic impact analysis were conducted following the recommendation of IMPLAN which is to run both type of analysis for existing industries and reporting values in a range. This allows us to get lower and upper bound estimates of the economic impact of the hospital local food purchases.

### Research Question 2

We conducted a survey of customers from July 28 – August 2, 2013 at three UVMMC dining locations during nine different time slots. Questions focused on customer affiliation types (e.g., UVMMC employee, patient, and visitor), frequencies of meals eaten, and motivations for eating there, as well as where the respondent would have eaten had he or she not eaten there. An open-ended question on motivations for eating at UVMMC were coded into common responses and tabulated. Descriptive statistics were calculated on each variable and two cross-tabulations were conducted, comparing frequency of meals eaten at UVMMC by location and affiliation, respectively.

### Research Question 3

A total of eight face-to-face or phone interviews were conducted with current suppliers of UVMMC, including farmers, food manufacturers, and a wholesaler. Potential interviewees were identified from the list of current food suppliers, thirteen suppliers were contacted and eight agreed to be interviewed.

The structured interviews were conducted on the phone or in person between December 2013 and January 2014 and averaged one hour; they were audio recorded and notes were taken during the interviews. The goal of the interviews was twofold. First, collect primary data to conduct the economic impact analysis. Second, assess the working relationship between UVMMC and its suppliers and identify areas for improvement. Food purchase reports for 2012, the year of study, were made available by the hospital director of nutrition services.

The constant comparative method was used to analyze the interview notes from the first part of the interview (Strauss & Corbin, 1998). Suppliers were asked questions about the quantity of products they sell to the hospital, how it has changed over time as well as questions about reasons for selling to the hospital, rewarding and frustrating aspects of the relationship, and values offered by the hospital. Several readings of the interviews were conducted and the interviews were coded using the software HyperRESEARCH 3.5.2. The data were then organized in themes to facilitate presentation of the results. In the presentation of the results, we included interview quotations in order to use the interviewee's voices as support for the themes that emerged (Charmaz & Mitchell, 2001).

### Research Question 4

In order to understand how UVMMC overcome common barriers to procurement, we interviewed UVMMC's Production Specialist who is responsible for local procurement activities in the fall of 2014. Questions centered on UVMMC practices, relationships with farmers and other vendors, and ongoing barriers. The interview lasted about one hour was audio recorded and transcribed verbatim. Codes used for the analysis were largely pre-set, given the nature of the questions. Results focus on answers to these questions.

## RESULTS

### Economic Impact of UVMMC Local Food Purchasing

The food suppliers interviewed sold between 0.4% and 33% of their production to UVMMC in 2012, with an average of 9.3% of their production going to UVMMC. The same year, UVMMC spent \$1.784 million on Vermont food, representing 44.3% of UVMMC food purchases, with 16.3% of the local purchases bought directly from farmers, 22.9% bought directly from food manufacturers and 60.8% bought from wholesalers. Additionally, two full-time positions representing \$95,057.58 in labor income were added at UVMMC in nutrition services due to increase in volumes. When adjusting for the margins of the wholesalers (18.6% from IMPLAN software) and what the wholesalers purchased from local food producers and manufacturers, we came up with a more refined breakdown of expenses that we used to calculate the economic impact. With the margining of the wholesale expenses, 40.9% of the expenses are attributed to the local farming sector, 50.3% are attributed to the local food manufacturing sector, and the rest is attributed to the wholesale sector.

The total local expense is slightly lower than the \$1.784 million spent on local food. This is due to the fact that some of the wholesalers the hospital purchased food from are not based in Vermont and the difference represents the margins of these wholesalers that leaked out of the local economy. These are the expense numbers that were used to run the contribution and impact analyses.

As mentioned earlier, with any economic impact study, it is important to quantify the opportunity costs. In this situation, the opportunity cost represents the sales that wholesalers did not make due to the fact that the hospital procured some of the food directly from food producers and manufacturers. The opportunity cost was then calculated as the margin that local wholesalers did not make: \$98,828.23.

In the first scenario we used the multi-industry contribution analysis procedure which represents the lower bound estimate of the hospital's local food purchases impact (Table 1). The direct effect is equal to the total local expenses minus the opportunity cost. In this scenario, the direct impact represents 8.3 jobs spread between the hospital, the farm, the food manufacturing, and the wholesale sectors. Every job added through additional purchase of local food generates 0.72 jobs in the rest of the economy due to backward linkages of the industries. The local food purchases generate

**Table 1. Economic Contribution of the Hospital's Local Food Purchases on the Vermont Economy**

| Impact Type         | Employment | Labor Income | Value Added | Output      |
|---------------------|------------|--------------|-------------|-------------|
| Direct Effect       | 8.3        | 258,671.0    | 408,455.5   | 1,637,839.0 |
| Indirect Effect     | 3.2        | 99,053.5     | 139,191.4   | 324,783.6   |
| Induced Effect      | 2.8        | 100,819.7    | 179,537.9   | 300,317.2   |
| Total Effect        | 14.3       | 458,544.2    | 727,184.8   | 2,262,939.8 |
| Type II Multiplier* | 1.72       | 1.77         | 1.78        | 1.38        |

\* Type II Multiplier = total effect / direct effect



\$258,671.0 in labor income which represent the sum of employee compensation and the proprietor income, and an initial \$1.00 in labor income generates an additional \$0.77 in the Vermont economy. The value added of \$408,455.50 represents the sum of employee compensation, profit, property income of other types, tax on production, and imports. An initial \$1.00 in value added generates another \$0.78 in the economy. Lastly, the \$1,637,839.00 of local food purchases generates an additional \$625,100.80 in the economy representing a multiplier of 1.38.

In the second scenario, we used the impact analysis procedure which represents the higher bound estimate of the hospital’s local food purchase impact (table 2). As expected, the direct effect is similar to the first scenario however, the total effect is slightly higher. In this scenario, the employment multiplier is 2.18 where every job added through additional purchase of local food generates 1.18 jobs in the rest of the economy. Lastly, the \$1,637,839.00 of local food purchases generates an additional \$1,108,654.20 in the economy representing a multiplier of 1.38.

When looking at the industries that are most affected by UVMMC local food purchases, we find farming, food manufacturing, and wholesale are the most affected in terms of output, followed by support activities for agriculture and forestry and private hospitals. Table 3 shows the top 10 most impacted industries by UVMMC local food procurement under the first scenario.

#### Customer Behaviors

The survey of UVMMC customers suggests that most customers are UVMMC employees and that convenience, affordability, food quality, and healthfulness drive their decision to eat there. Half (50%) of the 231 surveys were completed at the Harvest Café, the largest retail facility at UVMMC, while the remainder took place at the Pavilion (32%) and Main Street Café (18%). The largest number were conducted during lunch (42%), with a third (33%) and a quarter (25%) conducted at breakfast and dinner respectively. The majority of patrons were UVMMC employees (66%), followed by hospital visitors (11%), and University of Vermont employees (7%). More than half (56%) eat at UVMMC a few times a week, while 15% reported eating there every shift they work.

The major motivations for eating at UVMMC were convenience and location, although other respondents cited affordability, food quality, and healthfulness as well (9%, 8%, and 5% respectively). The vast majority (79%) said they would have brought a meal from home had they not eaten at UVMMC.

#### Food Suppliers’ Assessments

Overall, the interviewed vendors found sales to UVMMC to be beneficial. Benefits generally fell into three main categories: (i) financial gain from sales, including volume, ease, and dependability; (ii) promotional opportunities opened by UVMMC; (iii) the quality of the relationship with UVMMC. Major difficulties included delivery and volume challenges.

The eight suppliers interviewed have been selling to UVMMC between less than one year to 20 years, averaging 6 years. All of the suppliers reported growth in volume sold over the years and four of the farmers reported that their sales have doubled or tripled. On average, the suppliers sell 9.3% of their production to the hospital (ranging from 0.04 to 33%). Five of the interviewees reported that they have increased production capacity since starting to sell to UVMMC.

One vendor responded that the steady sales to the hospital have helped him purchase equipment. Three respondents remarked on the value of large and consistent orders. For one of the respondents, UVMMC is a big account and for another one UVMMC is a low stress account. Two vendors appreciated the stability in sales throughout the year.

*“It definitely helps make us a healthier company”* Supplier 4.

Sales to UVMMC open up promotional opportunities and ability to improve business efficiency. Some gain perceived prestige from selling to a well-known buyer.

*“We talk about it with many folks, when I am at trade shows and people ask me who we sell to. We sell to a number of college and universities but when they know that we sell to the largest health care provider in Vermont and one of the largest in New England, it’s very rewarding and something that I can brag about it.”* Supplier 7.

For some vendors, sales to UVMMC are a signal to other potential buyers of the vendor’s capacity and professionalism. Four vendors discussed selling to the hospital as a stamp of approval for the vendors’ products and they use the argument that they sell to the hospital with potential clients as a selling point. Similarly, it provides the suppliers with an opportunity to gain experience working with institutions.

One supplier talked about the marketing value of having her products sold in the hospital cafeteria allowing for greater exposure for her product.

*“UVMMC attracts people from all over the state of Vermont. Visitors see the product then they see it in the store and they make a correlation. It really helps our business.”* Supplier 5.

In addition, sales to UVMMC provide credibility of the healthfulness of vendors’ products. Two of the respondents talked about the fact that they want their products to be healthy and that UVMMC buying from them is a validation of those values. Three vendors mentioned UVMMC’s specific endorsement of health attributes of their products, including allergen-free, and their ability to use these testimonials in other promotional activities.

**Table 2. Economic Impact of the Hospital’s Local Food Purchases on the Vermont Economy**

| Impact Type         | Employment | Labor Income | Value Added | Output      |
|---------------------|------------|--------------|-------------|-------------|
| Direct Effect       | 8.3        | 258,671.0    | 408,455.5   | 1,637,839.0 |
| Indirect Effect     | 6.3        | 192,576.1    | 285,482.0   | 711,855.6   |
| Induced Effect      | 3.6        | 132,173.0    | 234,576.1   | 396,798.5   |
| Total Effect        | 18.2       | 583,420.1    | 928,513.6   | 2,746,493.1 |
| Type II Multiplier* | 2.18       | 2.26         | 2.27        | 1.68        |

\* Type II Multiplier = total effect / direct effect

**Table 3. Top 10 Most Impacted Industries Under Scenario 1**

| Description  | Employment | Labor Income | Value Added | Output    |
|--|------------|--------------|-------------|-----------|
| Farming  | 6.4        | \$171,908    | \$269,250   | \$710,890 |
| Food manufacturing   | 1.5        | \$66,230     | \$102,465   | \$874,295 |
| Support activities for agriculture and forestry                      | 1.3        | \$18,670     | (\$7,195)   | \$10,146  |
| Foodservices and drinking places                                     | 0.4        | \$8,917      | \$12,158    | \$23,093  |
| Wholesale trade businesses   | 0.3        | \$20,533     | \$36,740    | \$52,654  |
| Private hospitals  | 0.2        | \$11,722     | \$13,066    | \$23,937  |
| Offices of physicians, dentists, and other health practitioners      | 0.2        | \$11,355     | \$11,692    | \$18,384  |
| Transport by truck   | 0.2        | \$10,651     | \$12,876    | \$27,143  |
| Monetary authorities and depository credit intermediation activities | 0.2        | \$9,868      | \$29,619    | \$49,961  |
| Maintenance and repair construction of nonresidential structures     | 0.2        | \$7,113      | \$6,729     | \$14,183  |

Finally, the quality of relationships between UVMMC and its vendors opens opportunities and creates benefit. One supplier mentioned the rewarding value of working with the hospital as it is willing to be creative with the products that he grows. Another described UVMMC as an anchor to launch new products and gain brand recognition, while one credited UVMMC with assisting them with testing and evaluating new products. Two vendors appreciate UVMMC's valuing of locally grown products. One discussed how the relationship served as an entry point for the vendor to learn how to enter the institutional market, while another values "knowing that they do business with us because we are a local company."

In terms of difficulties related to working with the hospital, three reported having none, two mentioned issues related to delivery, including specific delivery times, the breaking down of the orders ahead of time for the different hospital locations, and the lack of short term parking for quick drop off of orders. One supplier mentioned that a major challenge was the result of the size of his operation and that he was not yet able to fill the size of the orders the hospital required. For another supplier, the relationship with the hospital could have a detrimental impact on his business as the hospital was not ordering the projected quantities.

*"The delivery is a little pesky, they have early delivery hours, I think they stop receiving at 11 in the morning it just means that I have to put them on the beginning of the delivery route and we have to call ahead. These are minor things."* Supplier 9.

*"They have projected a certain volume of produce to move weekly and they are not doing that, they are not meeting their weekly obligations which will be a problem in the spring and summer. So that's a real concern of mine and we will see."* Supplier 8.

#### The Buyer's Perspectives

UVMMC's Production Specialist discussed how his actions can help overcome aforementioned barriers to increase local food purchases, including seasonality, availability, reliability, volume, delivery, and reliance on pre-cut produce.

UVMMC is able to partially overcome seasonality (Vermont's short growing season) by emphasizing foods that have more steady production over the year like meat and dairy, and by forming partnerships with local businesses that provide storage services.

*"We have really stepped up the meat...because we can still get meat in the winter."*

Locally produced Greek yogurt (sold a la carte) is another item that UVMMC has emphasized; consumer response has been strong even though it is priced slightly higher than a well-known national brand. UVMMC partners with an orchard with state of the art storage facility and a local farm that has the ability to freeze and store their products.

*"Over the years we have try to find ways to expand the growing season so to speak by getting into relationships where certain orchards, having a means to utilize the harvest either by freezing it, a farm has frozen vegetables."*

The result is high quality foods available beyond the growing season, and support for local businesses.

*"Some of the farmers in the state are doing amazing things and it is nice to help them out by purchasing their product."*

Similarly, partnerships with local farms and food businesses help to ensure supply of quantities of both whole and pre-processed items.

*"We had a conversation a couple years ago with a farmer and they actually do onions for us based on what our use is. They increased their fields one to three fields just to meet our needs for onions."*

Another company processes rBGH-free cheese, shredding it and packaging in five pound bags, while a local food processor supplies shredded local carrots. A key strategy is to find farms and businesses large enough to be able to reliably supply at price points that work for UVMMC, and for UVMMC's volume to be sufficiently large to make it worthwhile for the vendor.

*"Right now we are trying to use as much organic as we can that meet our price point and to be honest the main thing is volume. Once you tell a farmer the volume some farmers get freaked out because we use so much. We use such a large quantity of items, what I find that works out well is just in a dialog to say we use x number of pounds of potatoes in the course of a week."*

Volume sales to UVMMC have other potential benefits:

*"Sometimes if we buy enough products from them they get enough money to get certified (organic)."*

Good communication between vendor and UVMMC creates opportunities. Two quotations exemplify this:



*“When you communicate to the farmer you can speak to them if you have any issues or they will tell me if they have extras and we’ll see what we can do with that.”*

Another example:

*“The farmers will tell us, I have these nice cherry tomatoes, do you want them for the kitchen and we say sure, then we tell them the number of cases we need per week and we go from there.”*

UVMMC buyers visit farms to check on food safety/sanitation issues:

*“We also do a site visit to the farms especially those who are providing ingredients for the patient population... (to understand” what their practices are like and give them ideas to help them improve or meet our needs as far as sanitation goes.”*

Finally, a critical component of the program’s success is the leadership of the Nutrition Services Director. The Production Specialist discusses the Director’s ‘mission for food.’ As a result:

*“we are not complacent, we keep trying to tweak things and find items that we have not converted yet but that we can.”*

## DISCUSSION

UVMMC’s local procurement program has a beneficial impact on its vendors and on the local economy in general. Its partnerships with local vendors, based on close relationships, allow for steady supply of quality, locally grown foods at affordable prices. These attributes appeal to its customers, especially employees, who choose to eat there rather than bring food from home.

We found that UVMMC local food purchases have an impact on the economy with a total output multiplier ranging from 1.38 to 1.60. Previous studies on the economic impact of local food procurement have found multipliers ranging from 0.65 to 1.82 (Gunter & Thilmany McFadden, 2012; Schmit, Jablonski, & Kay, 2013; Tuck, Haynes, King, & Pesch, 2010). The variation of multipliers can be explained by the strength of linkages within the study area as well as by the size of the study area; as a general rule, the smaller the study area, the lower the multiplier.

Like other successful farm to institution programs (Conner, Izumi, et al., 2012; Conner, Nowak, et al., 2011), UVMMC relies on mutual partnerships and relationships with vendors. UVMMC’s practices, which support these partnerships, include good and timely communication, finding partners with the right scale and product mix, preferentially buying from incumbent vendors so as to reward the vendors’ increased acreage dedicated to UVMMC’s account, and investment in equipment. These practices are in line with results of prior research on successful strategic partnerships among food supply chain actors. UVMMC emphasis on animal products and stored produce are novel and important strategies for overcoming well-known seasonality issues.

Vendors’ motivations for selling to UVMMC reflect a mix of perceived social and economic benefits, including relationships, prestige, and pride in selling to local institutions as well as the value of steady, high volume sales echo previous studies. Lingering barriers around delivery and supply also echo previous research (Becot et al., 2014). Finally, the leadership and vision of UVMMC’s Director of Nutrition Services and the support of the hospital’s hierarchy are crucial to ongoing

success, highlighting the importance of champions found in other studies.

## CONCLUSIONS AND APPLICATIONS

Our study found that UVMMC’s local food procurement program benefits the local economy, its customers, and its vendors. Implications focus on forming and maintaining relationships with vendors to continue the flow of benefits.

A few key implications for foodservice managers and educators emerge from our findings

- Institutions can contribute positively to vendors and the local economy. Being able to measure and articulate this can lead to community goodwill and broad buy-in including buy-in from the institutions’ leaders. Education could expose students to the linkages between vendors and institutions in local economies and the rippling effects that take place within the economy with an increase in local food procurement.
- Customers will respond to good quality, affordable food. Employees can be the most loyal customers, choosing to eat at the institutional cafeteria rather than bringing food from home if the convenience, quality, and price is right. These customers may serve as the economic backbone of local procurement programs.
- Institutions can provide a host of benefits to vendors beyond sales revenue. In particular, the promotional and educational benefits – increased exposure, prestige, and an entry point to other institutions and market- can be used to recruit vendors. Education should cover the technical assistance that institutions can provide to vendors. This should be considered from a mutually beneficial perspective. As institutions build up the capacity of their vendors they are increasing the supply of food that meets their specifications. Building and maintaining relationships with vendors is critical. It begins with finding vendors whose scale and product mix fit the institution. Continued communication and commitment are needed to find new opportunities and smooth over rough spots. Education should focus on building and maintaining relationships with vendors as well as on understanding the constraints but also opportunities of vendors of various scales.

The strengths of this study are the quality of purchase data and the use of multiple methods with multiple stakeholders to create a rich picture of the local food program’s practices and impacts. Weaknesses include that this is a study of single institution and that the sample of customers and vendors is not representative. Therefore, generalization to other settings and populations is inadvisable.

Future directions of research include surveys using representative sampling of vendors, and economic impact studies of other institutions to permit comparison across cases as well as customization of the IMPLAN model to better reflect the farm and food manufacturing sectors that participate in the local food sector, as suggested by other studies. Given the potential benefit of local food procurement, we hope this study informs efforts of other institutions and contributes to dialogue on effective practices.

A future study could add the economic impact of the increase in meals served at UVMMC. Since starting local purchases in 2006, UVMMC has seen an increase in the number of meals served, while the number of inpatient and outpatient days has remained fairly

constant. In this case, the opportunity costs to consider are the lower sales for supermarket, and Sodexho (foodservice provider at the university located next to the hospital campus), and primary data will be needed for accurate numbers.

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# UNDERSTANDING STAKEHOLDER VIEWPOINTS FOR FOODSERVICE LOCALIZATION: THE POTENTIAL OF THE LEADERSHIP VIEWPOINT

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## ABSTRACT

Localization has been identified as an area to improve foodservice sustainability. We asked the research question “What are the dominant shared stakeholder viewpoints about local food in a college foodservice and how might an understanding of these be used to help management localize the foodservice?”

We used Q methodology to group stakeholders (students, foodservice manager and staff, college staff and food suppliers) into four dominant shared stakeholder viewpoints. “The Leadership Viewpoint” showed the capacity to drive foodservice change. The study explores “The Leadership Viewpoint” of stakeholders in a college foodservice setting, which other dietetic professionals can compare to their own organizations.

**Keywords:** localization, leadership, dominant shared viewpoints, foodservice

## INTRODUCTION

International foodservice companies, as well as university and hospital foodservices, are leaders in implementing sustainability policies and practices. Localization, the purchase of locally grown and produced food (Chamberlain, 2011; Hamilton, 2010), has been identified as an area to develop evidence-based guidelines and practices, and for dietitians, dietitian assistants and foodservice professionals to advocate for sustainability.

Consumption patterns are changing to source more local foods for their beneficial environmental and social impacts (Hamilton, 2010; Park & Reynolds, 2012; Wilhelmina, Joost, George, & Guido, 2010). Research on global and local food has identified the need to consider economic, environmental, and social impacts when weighing global-local food decisions (Wilhelmina et al., 2010). These three impacts are now discussed in turn. Firstly, in terms of economic impacts, local food systems are praised in the literature for increasing employment opportunities and the proportion of profit for producers (Strohben, 2005). Consumers reliably pay more for locally sourced products if they believe these benefits (Chamberlain, 2011), or that local food improves overall food quality (Park & Reynolds, 2012). Local food can enhance a foodservice’s reputation and give a competitive advantage through marketing and corporate responsibility (Payne & Raiborn, 2001). Willingness to pay for local food is crucial as this provides capital for localization (Park & Reynolds, 2012). If consumers are not willing to pay more for local cost offsetting activities such as waste reduction, increased fees or purchasing less kitchen equipment, can make localization cost neutral. A recent report for the United States Department of Agriculture found economic development attributable to local food systems to be small, unmeasured or offset by public investments into their establishment (Martinez, Hand, Pra, et al.

2010). However, many foodservices are large organizations, and any change to their practices will have downstream economic effects on their communities (Weaver-Hightower, 2011). Institutional foodservices provide a new market for small producers to expand. Critics argue local food production is inequitable as it encourages small farms producing for an elite group (Malcolm, 2014). There is a need for supply chain infrastructure for bulk purchasing. In America, intermediated food systems (e.g. through a large foodservice) provide over three times the profit for local producers compared to food marketed through direct-to-consumer food systems (Low & Vogel, 2012).

Secondly, the literature also discusses a number of environmental impacts of foodservice localization. The food sector is affected by climate change and is a large contributor to greenhouse gases (The Culinary Institute of America, 2014). Literature suggests that although local food can reduce greenhouse gas emissions from food miles, it does not necessarily ensure sustainable food systems (Edwards-Jones, 2010). Because the majority of greenhouse gas emissions come from production rather than transport, sustainably produced imported food can have less of an environmental impact than unsustainably produced local food. Therefore, it is important that the carbon footprint of the entire lifecycle of a product is considered. If locality takes priority over the total environment impact at a policy level it leads to unforeseen implications (Edwards-Jones, 2010). Research in university foodservices has found environmental impacts are not a key driver when buying local compared to price and nutrition quality (Masset, Soler, Vieux, & Darmon, 2014).

Thirdly, in terms of the social considerations of foodservice localization, research shows that consumers and producers are looking for a sustainable product in a broader sense than just food miles (Chamberlain, 2011). Customers are now seeking fair trade products for ethical working conditions, humanely raised animals for animal welfare and organic products for ecologically sound food. Consumers see chefs and foodservice staff as experts in food procurement (The Culinary Institute of America, 2014), so they have the responsibility to make good decisions for their consumers. The goals of localization are just as important to focus on as locality itself when understanding attitudes to local food. Universities can be market leaders in developing local, sustainable and social food systems and give suppliers support and credit for doing the same. As part of an educational institution, university foodservices have a responsibility to support and teach sustainability while making their organizational values visible to students (Weaver-Hightower, 2011). Foodservices can be advocates for this as they shape what consumers want by the products or services they make available to them. A Harvard University study illustrated that certain areas of sustainability were not understood by students and endeavored to inform them for stakeholder engagement (Harvard Dining Services, 2008). Fostering student connections with food producers and suppliers has facilitated

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community connectedness for many college foodservices (Chamberlain, 2011; Strohbehn & Gregoire 2005). Foodservice staff gain morale and work satisfaction from relationships with local producers (Buck, 2007) and the creativity that comes with using local seasonal ingredients on a menu (LaBarre, 2014). Ownership of local food gives a taste of the region that is unique and something for the foodservice to be proud of. Foodservice is becoming less about productivity and more about creating a sense of community (LaBarre, 2014).

Food and nutrition managers have an important role in procuring large quantities of food and this puts them in a position to advocate for and be leaders in food system sustainability (American Dietetic Association, 2007; The Culinary Institute of America, 2014). Though leaders are not necessarily managers, it is a shared responsibility (McCollum, 2014) and any stakeholder in an organization can have the vision and innovation required to be a leader and drive change within that organization (Boyce, 2014; Bushe, 2005; Posner, 2002). Civic dietetics highlights the interaction between producer, distributor and consumer to mediate the environmental and social impact of the food system (Wilkins, Lapp, Tagtow, & Roberts, 2010).

Foodservice researchers and dietitians need to identify and work in consultation with those who hold the viewpoints of leaders and are able to achieve the goals of civic dietetics. The purpose of this study was to explore the diversity of stakeholders' dominant shared viewpoints on localization in a college foodservice. This study used a standardized methodology across a spectrum of stakeholders to reveal dominant shared viewpoints and identified "The Leadership Viewpoint".

## METHODS

### Q-Methodology

We used Q methodology, a powerful method for exploring viewpoints as it combines the strengths of qualitative and quantitative paradigms (Brown, 1996; Cross, 2005). This correlational methodology has its origins in psychometrics. The basic method involves collecting data from a group of participants who sort a set of statements about a particular subject, the subsequent inter-correlation of these sorts, and factor analysis (Watts & Stenner, 2014). The comparison of sorts across participants enables the identification of statistically similar participant viewpoints that can then be interpreted using rich qualitative data. For a good overview of this methodology the reader can refer to Watts and Stenner (2014) or Cross (2005). Q methodology contrasts with the more traditional correlational research method used to measure attitudes, R methodology, in both its data collection methods and analyses. The biggest distinction between the Q and R approaches is that in R research, respondents are subjects and questions are variables and in Q research, subjects and variables are inverted so that the subjects of the study are the statements and the variables are the people who do the sorting. Thus in this inverted factor analytic study, the persons working in or eating in the foodservice are the variables that load onto the emergent factors that represent shared views on purchasing local foods and beverages with attention to sustainability.

Q is a powerful method for determining attitudes around controversial topics where it is hard to measure people's opinions and is an effective methodology for informing policymaking and its implementation (Cross, 2005). It has successfully been used for environmental, political, health and sustainability issues. Other applications of Q methodology in dietetics are Oring and Plihal's (1993) study on students' perceptions on dietetic education and Sutnick's (1981) investigation of nutrition attitudes.

Arendt et al detail the use of qualitative research in foodservice organizations and its challenges (2012). The common methodologies used in this context are ethnographic observatory studies, interviews and surveys. We identified that different surveys are often used for suppliers and foodservice managers and as a result, review articles on local food purchasing compare data from various sources. Primary standardized research methodologies are underused in local food research in foodservices. Also, college foodservice studies to date have not included students as the consumer and so have failed to identify the culture of the college foodservice as a complete system of suppliers, producers (foodservice producing the meals in this context) and consumers (Wilkins et al., 2010). To date there is no comprehensive multi-level stakeholder study assessing attitudes to local food in a college foodservice. In Q methodology, a comprehensive set of statements is generated about a topic (a Q set concourse) and participants are asked to sort the statements in the Q sort activity. All stakeholders do the same Q sort activity making it a standardized approach for understanding viewpoints (Watts & Stenner, 2014). As such, Q overcomes limitations of the aforementioned common methodologies that have been used in foodservice research to date.

### Development of Q Set Concourse

First, we identified the concourse around localization. The aim in this step was to produce a list that was sufficiently representative of the "universe of interest" (Brown 1996) about the local food topic. Our aim was to produce a concourse of text that contained all of the possible statements (negative, neutral and positive) that participants might make on that topic. The size of a concourse list varies from one study to the next but often contains over 100 statements. We generated a pool of 163 short stand-alone verbal statements for our concourse. This was done by extracting positive, neutral and negative statements about local food from academic literature and popular media, as is typically done in Q methodology. The academic literature surveyed for ideas was primarily the college foodservice localization literature (e.g. Chamberlain, 2011; Macken, 2012; Park & Reynolds, 2012). A variety of popular media resources which included editorials and commentaries, internet sites and personal web logs was also accessed. Although additional to the usual requirements of Q methodology, we also collected primary data at this stage to generate further statements to those found in the academic and popular press literature. We deemed this additional step necessary to capture the diversity of attitudes amongst the varied college foodservice's stakeholders; consumers, suppliers and producers. We conducted one-on-one semi-structured interviews that elicited opinion statements around local food, with small number of stakeholders with different roles in relation to the college (n=9). Interviews were conducted in a tutorial room adjacent to the college kitchen and dining room. We asked all stakeholders how they define local food, what they perceived as the college's incentives and barriers to buying local food and how receptive they thought the college would be to localization.

We adapted the concourse matrices by other Q methodologists (Barry & Proops, 1999; Kraak, Swinburn, Lawrence, & Harrison, 2014; Oring & Plihal, 1993; Shepard & Furnari, 2013) to select a final reduced Q set without bias. We sorted the statements into six themes (policy, social responsibility, New Zealand identity, economic, environment, and quality) and then placed each theme in the matrix (Figure 1). The vertical axis sorted statements by sub themes to help remove overlapping statements. The horizontal axis sorted statements that were positive, neutral and negative towards local food, to help achieve a balance of opinions across the final Q set. We chose a final Q set of 42 statements, within the 40-80 statement optimal range for Q methodology studies (Watts & Stenner, 2014), to represent the



| Social Responsibility | +ve  | neutral   | -ve  |
|-----------------------|--|---|--|
| <b>Choice</b>         | The college should buy more local food if it wants to without having to consult students                     | <b>The college should buy more local food if the majority of students agree to this</b> | I don't care if the college buys more local food or not.                                 |
| <b>Ethics</b>         | The college should meet its social responsibility to source local food                                       | The college should not change its purchasing based on ethical values                    | <b>The college should ignore the self-righteous notion that local food is best</b>       |
| <b>Trend setting</b>  | <b>The college should become a market leader and show foodservices can support the 'Local Food Movement'</b> |   | The college does not need to source local food as its competitors are not yet doing this |

**Figure 1.** Excerpt showing statements sorted by concourse theme (e.g. social responsibility). Rows are labeled with a topic title and columns are labeled according to whether the statements are positive, neutral or negative in orientation towards local food. Statements that were selected for the final Q set are in bold.

breadth of perspectives and balance positive, negative and neutral perspectives. We printed these statements onto laminated card. A pilot group (n=10) checked statements for balance and clarity (Watts & Stenner, 2014). We selected pilot participants who were supportive of, against and indifferent to local food. These individuals had no or little relationship to the college and none were included as participants in the research. Pretesting of the statements ensured we provided a balanced Q set so that individuals with a spectrum of clearly different opinions were able to express their viewpoint (Watts & Stenner, 2014).

#### Study Participants

Our participant recruitment was strategic as Q methodology studies aim to engage with all stakeholders who have a viewpoint worth considering. There were 47 participants in our study, which falls within the recommended participant number range for Q method (Watts & Stenner, 2014). We selected suppliers (fruit and vegetable, meat, dairy, dry goods), foodservice and management staff (foodservice manager, financial manager, college manager and cooks), and students (including residential assistants) who live on site at the college as participants. Each group had different relationships to the college foodservice. A list of suppliers was obtained from the foodservice manager. Suppliers were contacted by telephone and asked to participate in the study. All foodservice staff were asked to participate by the Foodservice Manager on the researcher's behalf. The top three members of management were approached in person. Students were recruited via an advertisement that was posted on the college's Facebook page. Participant selection was therefore purposeful, with participants selected to represent diverse perspectives about the study topic. Other selection criteria ensured a diverse participant set. For example, a relatively even proportion of males and females, various ethnic groups, a diverse range of students across humanities, business and science, and staff in a varied range of job positions). All the suppliers who expressed an interest in participating were included.

#### Procedures

Our study was completed in Dunedin, New Zealand, in a residential college of 187 first year university students. The college's in-house foodservice is funded by student fees and operates on a break even budget. We conducted a Q sort activity with participants that consisted of three stages; a pre-sort questionnaire collecting relevant socio-demographic data, the Q sort and a post-sort interview. The pre-sort questionnaire included age, gender, ethnicity, place of birth, study discipline or job at the college, as well as Likert scales that

measured how participants felt they identified with local region and sustainability concepts. We asked participants to sort statements onto the Q sort grid, shown in Figure 2.

After the sorting activity, we then interviewed participants on reasons for their placement of the cards, focusing on salient items at the extremes of the grid, items they expressed interest in or items that seemed out of place. Participants were advised that they could move statements within the grid throughout the post-sorting interview. As a part of the interview we asked participants to give their definition of local food, specifying a geographical area. We recorded the post-sort interviews and later transcribed them in order to start familiarizing ourselves with the data (Braun & Clarke, 2015) and to transform the recordings into written text.

Interviewees were advised that they could access their interview recordings and transcripts at any time for review. Interviews were analyzed on a continuous basis, continuously building on knowledge collected from each interview. The Q sort activity was stopped at 47 participant interviews, as additional sorts were not revealing any new perspectives. We deduced that we had reached data saturation. The Ethics Institutional Review Board approved the study protocol and all participants provided written informed consent.

#### Statistical Analysis

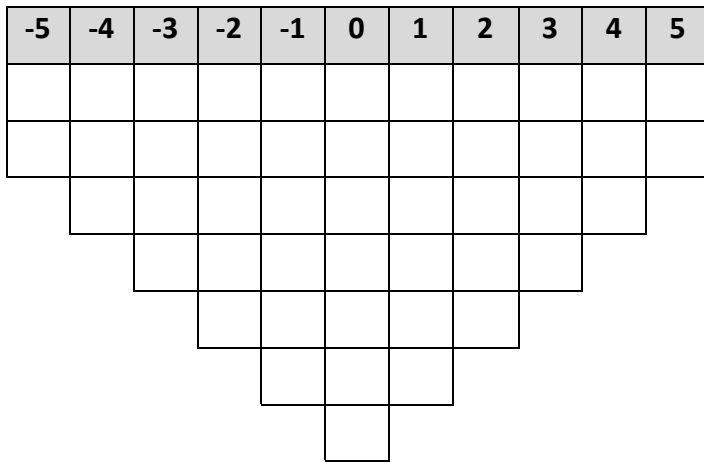
We analyzed Q sorts using free downloaded software called PQMethod, version 2.35 (Page, 2002) designed specifically to analyze Q methodology studies. It is a DOS-based platform to enter data for correlation and factor analysis. The PQMethod online manual was followed to run the data analysis (Schmolck, 2011). The forty-two statements were manually entered into a TextEdit computer program and then uploaded into the software. Each statement was given a numerical value (-5 to +5) for its position on the grid. All stakeholder groups were combined in the same analysis to look at the shared viewpoints between, rather than within, groups. The software was used to then produce a correlation matrix followed by an inverted factor analysis to determine the shared dominant viewpoints. A weighted average was calculated to show the correlation of participant's Q sorts with each factor. Weighted scores were then converted into z-scores for cross factor examination to reveal sorting similarities and differences between the factors.

Initially we extracted seven viewpoints from the correlation matrix, one for every six Q sorts (Watts & Stenner, 2014). We then did a



MOST DISAGREE

MOST AGREE



**Figure 2.** Fixed distribution\* used for the Q study statement sorting score sheet. \*Sorting pattern = 2, 3, 4, 4, 5, 6, 5, 4, 4, 3, 2. Each participant sorted the set of statements from most agree (5) to most disagree (-5) according to the column number given at the top of the figure in grey scale. The Q sorts of participants sharing a viewpoint were merged, using Z-scores (how a viewpoint placed statements compared to other viewpoints<sup>22</sup>) to produce a single Q sort grid representing the best fit of how a viewpoint collectively sorted statements.

manual varimax rotation to choose the best viewpoint solution. Q sorts that were significantly correlated with a viewpoint were flagged, except those that were confounded (loaded onto more than one viewpoint). Significant viewpoints have two or more non-confounded significant loadings. We ran an analysis with a significance level of 0.40 to 2 decimal points. At this significance level we extracted four viewpoints, representing four groups of people who sorted the statements in a similar way (Watts & Stenner, 2014). We decided that any more factors would have been impractical for us to interpret and

describe to readers. We used an Eigenvalue cut-off of 1.5 for this dataset. The literature reports that viewpoints with a value over 1 have a strong explanatory power (Watts & Stenner, 2014).

We used interview transcripts of those participants who loaded onto a given viewpoint to add meaning to the dataset (Cross, 2005; Brown, 1996). All of the researchers as well as an independent analyst individually reviewed the resulting factor summary data and interpretations then came together to discuss naming the factors and the key distinguishing statements that defined the viewpoints. We gave each viewpoint a name based on the most salient parts and idiosyncrasies when compared to the other viewpoints.

**RESULTS AND DISCUSSION**

Table 1 describes the socio-demographic characteristics of the study participants. Forty-seven participants performed the Q sort activity, the population was gender balanced but the majority of participants were students (64%) aged between 18-25 (64%) and New Zealand European (81%). We used strategic recruitment to ensure that staff (19%) and food suppliers (17%) were also included for their unique perspectives of the foodservice compared to the student population.

The purpose was not to have a representative sample and generalize it to other populations (Watts & Stenner, 2014). The focus was on the content and diversity of viewpoints on localization rather than on understanding who held a particular viewpoint. Identifying viewpoints in one organization is enough to reveal new ideas and possibilities and in turn redefine how the organization operates (Watts & Stenner, 2014).

Four distinct viewpoints emerged from the data analysis. Together they accounted for 48% of the variance in the Q sorts. Any value over 40% is considered a sound solution (Watts & Stenner, 2014). The first viewpoint, explained 18% of the variance, and was named “The Leadership Viewpoint” (n=13). Thirteen participants loaded onto “The Leadership Viewpoint”; six were students, four staff and three suppliers (Table 1). Participants holding “The Leadership Viewpoint” sorted statements in a way that showed both the capacity and authority to drive foodservice change and the willingness to

**Table 1: Characteristics of stakeholders (N=47)**

| Characteristics                | Total Participants<br>No. (%) | Participants in “The Leadership Viewpoint”<br>No. (%) |
|--------------------------------|-------------------------------|---|
| <b>Gender</b>                  |                               |   |
| Male                           | 25 (53)                       | 9 (69)  |
| Female                         | 22 (47)                       | 4 (31)  |
| <b>Age, years</b>              |                               |   |
| 18-25                          | 30 (64)                       | 6 (46)  |
| 25-40                          | 4 (9)                         | 3 (23)  |
| 41+                            | 13 (28)                       | 4 (31)  |
| <b>Ethnicity</b>               |                               |   |
| NZ European <sup>a</sup>       | 38 (81)                       | 13 (100)  |
| Other <sup>b</sup>             | 9 (19)                        | 0 (0)   |
| <b>Relationship to College</b> |                               |   |
| Students                       | 30 (64)                       | 6 (46)  |
| Staff <sup>c</sup>             | 9 (19)                        | 4 (31)  |
| Food supplier <sup>d</sup>     | 8(17)                         | 3 (23)  |

<sup>1</sup> New Zealand European

<sup>2</sup> Other: Asia, Samoan, and Maori

<sup>3</sup> Kitchen staff, kitchen management staff and college management staff

<sup>4</sup> Local, regional and national distribution level suppliers.

collaborate with other stakeholders to achieve localization. Since leaders are required for foodservice change this viewpoint is the main focus of this paper.

The subsequent three viewpoints explained 11%, 10% and 9% of the variance. The other viewpoints were: “The Idealist Viewpoint” (n=12), shared by participants who were willing to sacrifice some diet staples for localization as they felt local food was more ethical and socially just; “The Global Viewpoint” (n=14), shared by participants who were open to importing food as they were informed about traceability of the global food system and “The Individual Viewpoint” (n=8), shared by participants who were not willing to take responsibility for localization but supported it as they felt local food ensured the provision of better quality food. Each viewpoint supported different localization initiatives but all stakeholders were willing to collaborate with “The Leadership Viewpoint” on localization.

As aforementioned, “The Leadership Viewpoint” is the focus of this paper as leaders are required for foodservice change. Table 2 shows statements that distinguished this viewpoint from other viewpoints and Figure 3 shows the key quotes representative of this viewpoint. When referring to a particular statement in the text the statement number (detailed in Table 2) is given in brackets.

### Credibility (Figure 3, theme 3.1)

Participants with “The Leadership Viewpoint” in this foodservice identified local food as a critical sustainability issue (21), as well as identifying the need to include it in a wider sustainability strategy (7). Those participants holding “The Leadership Viewpoint” were more supportive of developing local food clauses (4) in contracts with suppliers. While there is significant public interest in sustainability amongst young people (Pelletier, Laska, Neumark-Sztainer, & Story, 2013) not all stakeholders holding “The Leadership Viewpoint” prioritized localization before other sustainability initiatives (21).

**Table 2: Distinguishing statements<sup>a</sup> for the thirteen participants in “The Leadership Viewpoint”**

| Q Sample Statement (Statement Number)  | Viewpoints Rank Order Value |          |           |               |
|--|-----------------------------|----------|-----------|---------------|
|  | Leadership                  | Idealist | Globalist | Individualist |
| The college should buy as much local food as it can within its current budget (27)   | 5                           | 0        | 1         | 3             |
| The college’s students and staff should run a vegetable garden to have some fresh herbs, spinach and rhubarb on hand (36)                        | 4                           | 4        | 2         | -4            |
| <b>The college should feature a completely local meal at least one night a month (8)<sup>b</sup></b>   | 4                           | 1        | -1        | 1             |
| <b>The college should tell suppliers to inform them when there is excess local produce going to waste (33)<sup>b</sup></b>                       | 4                           | 3        | 3         | 1             |
| The college should buy more local food if the majority of students agree to this (9)   | 3                           | 1        | 2         | 2             |
| The college should become a market leader and show that New Zealand foodservices can support the ‘Local Food Movement’ (11)                      | 3                           | 2        | 0         | -1            |
| <b>The college should introduce the idea of eating local to its students, before they go flatting (independent living) (13)<sup>b</sup></b>      | 3                           | 1        | 0         | -3            |
| <b>The college should buy local food to be fair to businesses in its community (16)<sup>b</sup></b>  | 3                           | 2        | 1         | 0             |
| <b>The college should label local menu items with an ‘L’ on the menu (19)<sup>b</sup></b>  | 1                           | 0        | 0         | -1            |
| <b>The college should buy non-local vegetables over winter months when cabbages, carrots, spinach and swedes get repetitive (28)<sup>b</sup></b> | 0                           | -2       | 3         | 3             |
| <b>The college should buy dietary staples like bananas without concern for food miles (29)<sup>b</sup></b>                                       | -1                          | -3       | 3         | 3             |
| <b>The college should make sure suppliers can tell them where every food item is from (3)<sup>b</sup></b>  | 1                           | 3        | 4         | 3             |
| The college should concentrate on other sustainability initiatives before local food (21)  | -1                          | 2        | 2         | 0             |
| The college should make it its policy to spend 70% of its food budget on local food (2)  | -1                          | -1       | -2        | 0             |
| <b>The college should avoid imported food to ensure ethical working conditions are met (42)<sup>b</sup></b>                                      | -2                          | 4        | -3        | 2             |
| <b>The college should buy food based on how it is grown not where it is grown (31)<sup>b</sup></b>   | -2                          | 0        | 4         | 4             |
| The college should not have a local food clause in its contracts with suppliers (4)  | -2                          | -1       | -1        | -1            |
| <b>The college should avoid imported food, as it may not be to New Zealand food safety regulations (41)<sup>b</sup></b>                          | -3                          | -1       | -4        | 2             |
| The college should not include local food as a part of a campus sustainability strategy (7)  | -4                          | -3       | -4        | -2            |

<sup>a</sup>A distinguishing statement is when a particular statement is placed in column number (+5 to -5) that is different to where other viewpoints placed that statement. Statements with extreme scores are those ranked - 4 or 5 “strongly disagree” and + 4 or 5 “strongly agree”. A rank order value of 0 represents the midpoint so represents a neutral reaction to the statement (‘neither disagree nor agree’).

<sup>b</sup>Significant distinguishing statements are in bold P<0.05.

| Theme                             | Representative Quotes  | Source                  |
|-----------------------------------|--|-------------------------|
| <b>3.1 Credibility</b>            |  |                         |
|                                   | "Students don't need to give consent for something that is a positive."  | Male Teaching Student   |
|                                   | "A strategy would be a good thing to make sure it happened."   | Female Law Student      |
|                                   | "The foodservice could do it without my consent [localization]."   | Male Law Student        |
| <b>3.2 Stakeholder led change</b> |  |                         |
|                                   | "When New Zealand is such a small country local can be just over on the other island."   | Female Chef             |
|                                   | "Things get too expensive if you try buying everything here. Some things you just have to accept that you won't be able to buy local."     | Female Business Student |
|                                   | "Everyone loves bananas; they are a really good staple."   | Female Chef             |
|                                   | "It's all going to vary based on the product bought. You could allocate certain percentages to different categories, meat, veg and grain." | Male Kitchen Store-man  |
| <b>3.3 Collaboration</b>          |  |                         |
|                                   | "The hall should support its own community because it is better for the hall if it is thriving."   | Female Business Student |
|                                   | "It is something we could do in conjunction, depending on where the hall is going we would have to follow."                                | Meat Supplier           |
|                                   | "We participate in the quote for the business. I know they have to feed people on \$7 a day. They have to produce food at a price."        | Dry Goods Supplier      |

**Figure 3.** Representative key quotes from the post-sort interviews with the participants holding "The Leadership Viewpoint" (n=13), grouped by themes (credibility, stakeholder led change, and collaboration).

Their viewpoint indicated that they have the credibility of leaders, such as identifying critical issues (Posner, 2002).

"The Leadership Viewpoint" also had the credibility to undertake the required change for localization. Local food was consistently identified as better quality by all viewpoints but holders of this viewpoint showed critical thinking when weighing up local-global purchasing decisions (Wilhelmina, et al., 2010). Harmon et al (2011) identified this skill is developed in individuals exposed to problem-based learning. They were informed about traceability of the food system and so, unlike other viewpoints did not fall into the "Local Food Trap", where one assumes that local food has inherently better ethical working conditions (41) or food safety (42) than non-local food. The four college staff who loaded onto "The Leadership Viewpoint" considered students in their procurement decisions and in turn was trusted to make decisions on students' behalf (9). This builds on the aforementioned hospitality literature that shows consumers see chefs and foodservice staff as experts in food procurement (The Culinary Institute of America, 2014) and the literature on choice that discusses how those considered experts are held responsible for making good decisions on the behalf of others (Salecl, 2009; Uzzell et al., 2006).

This study identified that students, staff and suppliers could all be credible leaders. Students often take the lead on campus sustainability projects but research shows that staff involvement is essential for compliance to goals and strategies (Barlett, 2011). Previous researchers have agreed that managers are not necessarily the best leaders (Posner, 2002; Boyce, 2014) and that leaders can be found at any stakeholder level (Bushe, 2005). Furthermore, it is the interaction between distributor, producer and consumer that determines the impact of the foodservice (Wilkins et al., 2010).

#### **Stakeholder-led change (Figure 3, theme 3.2)**

Participants with "The Leadership Viewpoint" showed sympathy for the ideals of localization and they selected feasible initiatives to drive that vision. They wanted to expose students to local food through a student and staff-run vegetable garden (36) and a local meal once a

month (8). They preferred these initiatives to labeling local food on the menu (19) as they were seen as more time efficient for staff and more noticeable to students. They chose interventions that worked within the college's food culture and made local food visible, both of which are required for successful implementation of any sustainability initiatives or policies (Di Pietro, Cao, & Partlow, 2012; Buck, 2007). This also adds to existing dietetic literature that identifies leaders as practical and forward thinking individuals most capable of finding sound solutions to the challenges of the profession (Bushe, 2005).

Participants with "The Leadership Viewpoint" felt where food was produced was just as important as how food is produced (31). However, suppliers, staff and students with "The Leadership Viewpoint" all acknowledged the challenge of localization within the foodservice's current budget (27). They identified the need to import dietary staples like bananas and non-local vegetables (28, 29) when they were competitive in price or stakeholders saw them as needed to maintain the quality of students' diet. They considered all three dimensions of sustainable foods detailed by Masset et al: the environment, nutritional quality and price (Masset, Soler, Vieux, & Darmon, 2014).

Those with "The Leadership Viewpoint" in this foodservice defined local more broadly than those with other viewpoints, reflecting the informed, realistic nature of the viewpoint. As was found in a Yale University study, a need to adopt product-dependent definitions of local food was voiced (Barlett, 2011). Participants with "The Leadership Viewpoint" felt that local could be anywhere in New Zealand for some products. They felt that this would be less restrictive to stakeholders and would allow the foodservice to keep food staples and contracts with national suppliers whilst increasing pressure on stakeholders to pursue local alternatives where they exist. They did not want to make a general policy to spend a minimum amount on local food (2) in case the quality or amount of food was sacrificed. They wanted to set effective long-term goals and strategies: a strong characteristic of successful leaders (Barlett, 2011).

### Collaboration (Figure 3, theme 3.3)

Holders of “The Leadership Viewpoint” knew college foodservices are a major source of supplier income and so were willing to collaborate to be fair to local businesses (16). This ‘fairness to local businesses’ is identified repetitively in studies of foodservice staff (American Dietetic Association, 2007) and builds on foodservice literature that highlights social responsibility as a strong characteristic of leaders (Chamberlain, 2011). Those with “The Leadership Viewpoint” wanted to minimize financial constraints on the foodservice and administrative constraints on the suppliers. They believed it would be an unrealistic demand to expect suppliers to tell them where every food item was from (3). In return, suppliers empathized with the college’s need to meet their budget (27). Suppliers and staff with “The Leadership Viewpoint” were willing to take food at a reduced price (33) to help suppliers prevent waste and to help the college get more affordable food showing how collaboration between distributor, producer and consumer can achieve the goals of civic dietetics (Wilkins, et al., 2010). There was a relationship of mutual trust; suppliers will collaborate with the college if staff make their purchasing demands known. This reinforces the comment in the literature review by LaBarre (2014) that foodservice is becoming less about productivity and more about creating a sense of community.

In this study, those holding “The Leadership Viewpoint” felt the college could become a market leader for localization (11) as they considered themselves able to educate and empower stakeholders in their foodservice and other organizations. Informing all stakeholders is seen as best practice in studies on local food in university foodservices (Macken, 2012; Park & Reynolds, 2012). “The Leadership Viewpoint” holders wanted to introduce the idea of eating local food to students before they move to independent living (13) as they felt the foodservice had a moral obligation to inform consumers about local food. The Academy of Nutrition and Dietetics defines leaders as those with “the ability to inspire and guide others toward building and achieving a shared vision” (Boyce, 2014). As part of educational institutions, college foodservices have a responsibility to support and teach sustainability (Weaver-Hightower, 2011). Those with “The Leadership Viewpoint” allowed for a shared vision with other stakeholders, across all other viewpoints, because they consider and support them. This is in line with Rossner’s statement that understanding each other’s viewpoints is the first step to mutual trust and working towards shared goals (Kraak, et al., 2014). Through stakeholder engagement leaders enable others to join them in sustainability (Harvard Dining Services, 2008; Arendt & Gregoire, 2014). Foodservices leaders can shape what their community wants by the products or services they make available (Payne & Raiborn, 2001).

### CONCLUSION AND APPLICATIONS

In the case of localization, “The Leadership Viewpoint” was identified across students, staff and supplier stakeholder groups. This viewpoint prioritized local food as a critical area for sustainability. The group holding “The Leadership Viewpoint” showed a commitment to the environmental and social impacts of food procurement suggesting both feasible short-term initiatives and long-term policy changes for localization. They had the capacity to lead foodservice change and other stakeholders trusted in their authority to enact change. They were considerate of other stakeholders needs and saw room to educate and empower others to join them in their sustainability goals. Holders of the Leadership Viewpoint wanted to extend existing stakeholder relationships to share their vision and collaborate on sustainability goals.

Q methodology was a powerful methodology for exploring stakeholder viewpoints and was able to identify four dominant shared viewpoints including a group of stakeholders that share viewpoints indicative of leadership. It used one standardized methodology across a comprehensive range of stakeholders placing the same importance on each stakeholder level. By identifying shared viewpoints and focusing on all stakeholders in the college food system rather than single stakeholders, the researchers were able to gain a deep understanding of the foodservice culture. The use of this method in future foodservice research concerned with understanding multiple stakeholder viewpoints is warranted. Q methodology is especially suited to studies that seek to explore the potential for collaboration between diverse foodservice stakeholder groups.

The Q set defined the scope of the study; although it was selected to be unbiased it is important to be aware of the limitations of the Q set provided. We pre-tested the statements to ensure that we could provide the best set of statements possible and that participants with a wide range of viewpoints felt they could express them. However, some participants may still have found it difficult. Measurement in Q methodology is focused on the context of the Q set and does not aim to generalize outside of this which means that the ability to make generalizations of the identified stakeholders’ viewpoints beyond the college foodservice setting is limited.

This study also provides a foundation for future research on stakeholder viewpoints about local food. Given that the study focused exclusively on one setting, conducting a representative survey in other college foodservices, based on “The Leadership Viewpoint”, would be an interesting research focus. It would allow us to generalize the prevalence of “The Leadership Viewpoint” and to understand the socio-demographic characteristics of leaders on localization (Danielson, 2009). Finally, given the complexity of local food considerations in terms of economic, environmental and social impacts, future research might well investigate how existing leadership analysis tools such as the multi-criteria decision analysis tool, developed to help structure such complex decision-making in foodservice (Ruddick & Davison, 2013), might be used by foodservice management to incorporate local food considerations into their decision making. The challenges that dietetic and foodservice professionals face in sustainability will benefit from more research on stakeholder viewpoints and leadership.

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## RESTAURANT EMPLOYEE ATTITUDE AND BEHAVIOR TOWARDS SUSTAINABILITY PRACTICES

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### ABSTRACT

Environmental sustainability initiatives are a necessity for restaurants today in order to lessen the negative impacts inflicted by restaurants on the environment. Success of environmental initiatives is contingent upon the buy-in and commitment of restaurant employees. This study investigated restaurant employees' reactions to restaurant environmental sustainability initiatives. Qualitative analysis consisted of document review, on-site observation, and semi-structured interviews with 29 restaurant employees from two restaurants located in the Midwestern United States. Findings revealed that the employees in this study were environmentally aware, and possessed job satisfaction, pride, and loyalty.

**Keywords:** sustainability, green restaurants, employee attitude, employee behavior, qualitative

### INTRODUCTION

The environment is under attack and unfortunately, restaurants are responsible for much of the demise to the environment (Choi & Parsa, 2007). Restaurants generate a large amount of waste, use a great deal of energy, and deplete natural resources in order to operate (Barclay, 2012; United States [U.S.] Environmental Protection Agency, 2010). It has been estimated that the food waste in all full-service and fast food restaurants in America is over 60,000 tons per day (Jones, Dahlen, Cisco, Bockhorst, & McKee, 2003). In addition, these restaurants use three times more energy than other commercial buildings (U.S. Energy Information Administration, 2013). To reduce their impact on the environment, restaurants are now promoting and implementing sustainability initiatives (Choi & Parsa, 2007).

The restaurant industry currently contains approximately 990,000 locations with only approximately 560 restaurants certified "green" in accordance to the Green Restaurant Association's certification standards (Green Restaurant Association, 2013; National Restaurant Association, 2014). Restaurants have introduced several environmentally friendly initiatives; however, employers have expressed difficulty with buy-in and participation because employee support is integral to success (Checkley-Layton, 1997; Sirota, Mischkind, & Meltzer, 2005).

Therefore, the purpose of this study is to explore the reaction of restaurant employees to the restaurant's sustainability initiatives. The collective case study focuses on two groups of employees at restaurants with multiple sustainability initiatives in practice in the Midwestern United States. Data was collected through multiple methods including on-site observations, semi-structured on-site interviews with restaurant employees and management, and documents acquired from the restaurants relating to environmentalism. This in turn resulted in a qualitative investigation into the attitude and behavior of current restaurant employees regarding sustainability initiatives.

### LITERATURE REVIEW

#### Current State of Environmental Research

Environmentalism is not new to Americans (Easterling, Kenworthy, Nemzoff, & College, 1996). In the 1960s and 1970s, several environmental protection laws went into effect because of Americans' recognition of the need for environmentalism spawning into research areas covering environmentalism and sustainability (U. S. Environmental Protection Agency, 2013). A renewed interest sparked the resurgence of environmental research in the 1990s, with investigations on the costs associated with environmentalism (Barbier, Markandya, & Pearce, 1990) more defined constructs of environmental sustainability and the relationships with social sustainability and economic sustainability (Goodland, 1996), and the operational impacts relating environmentalism to institutional theory (Hoffman, 1999). Hospitality scholars took notice in the late 1990s and early 2000s and industry centric studies emerged.

#### Environmentalism Research in the Hospitality Industry

Environmental sustainability research in the hospitality industry focused strongly on sustainable tourism, especially in the accommodation sector (Liu, 2003). Kasim (2006) furthered this notion and targeted the hotel sector stating that small and medium hotels want to appear politically correct, but do not have a thorough understanding of environmental management. Kirk (1995) investigated hotels in the United Kingdom and found that less than 20 percent of surveyed hotels had written environmental management policy statements and that most of the environmental improvement had financial gains for the hotels. Consumers' attitude and behavior towards green practices were studied in the Indian lodging industry finding that consumers were not willing to pay extra for green practices, but will choose green hotels if the price is right (Manaktola & Jauhari, 2007). At this time, there is a lack of published research concerning environmental sustainability in restaurants and the perspectives of restaurant employees, even though employees are essential to sustainability (Choi & Parsa, 2007). Koys (2001) states that restaurant employees' attitude and behavior influence the success of the business.

#### Employees' Attitude and Impact

Sharma (2000) states managers' interpretations of environmental issues influence environmental strategy and success of the environmental sustainability initiatives. Since employees and management have an impact on the success of an environmental sustainability initiative, it is important to explore the attitude and behavior of the employees relating to the initiative (del Brio, Fernandez, & Junquera, 2007). Employees with high job satisfaction exhibit pride in their organization which encourages positive employee behavior consequently making the sustainability initiatives more successful (Arnett, Laverie, & McLane, 2002; Checkley-Layton, 1997). According to Sirota, Mischkind, and Meltzer, (2005) and Katzenbach (2003) employees find pride when companies display excellent moral character including environmental sustainability initiatives. Sustainability initiatives can act as a workplace attractor.

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Workplace attractors can influence an employees' decision to join and remain committed to an organization. As a dimension of person-organization fit, workplace attractors serve an important role in employee organizational selection and employee success (Amundson, 2007; Kristof, 1996).

In order to assist in filling one of the gaps in restaurant sustainability research, specifically, restaurant employees' reaction towards environmental sustainability initiatives, the following questions were proposed for this study: 1) What are current green restaurant employee attitudes towards sustainability initiatives? 2) What are current green restaurant employee behaviors in sustainability initiatives?

## METHODS

### Design

This descriptive design uses a case study approach (Yin, 2003) to illustrate the impact of the sustainability initiatives on employees' attitude and behavior working in green restaurants. A collective case study allows the researchers to examine two cases to understand the similarities of attitude and behavior in two groups of employees in green restaurant environments (Stake, 1995). The scope of the environmental sustainability research includes: initiatives involving energy efficiency, water efficiency, waste management and reduction, recycled and biodegradable disposables, chemical and pollution reduction, sustainable foods, and sustainable furnishings as established by the Green Restaurant Association (2013). Investigating employee attitude and behavior, job attitude toward the initiative, job satisfaction, and the level of pride in the organization are explored.

### Sample

The cases in this study were the groups of employees in two restaurant environments consisting of differing sustainable practice contexts in the Midwestern United States. For the restaurants to be considered "green" in the study, they had to satisfy the following requirements: 1) use local sourcing with humane practices, 2) utilize composting programs, 3) use biodegradable containers, 4) utilize recycling programs, 5) reduce and eliminate chemicals used in the restaurant, and 6) conserve energy and water. Specific sustainable practices of each restaurant are listed in Table 1. The restaurant environments in this study are recognized publicly as businesses dedicated to environmental sustainability. The restaurants selected for this study were derived from a collection of restaurants that were awarded and/or recognized for environmentalism. In total, five

restaurants within travel distance of the investigators met the inclusion criteria of the study, but only two restaurants granted permission to conduct the study. The primary investigator set up a schedule with both of the restaurants' managers to visit the restaurants for observation, document collection, and interviews with all employees (back of house, front of house, and management). The Oklahoma State University Institutional Review Board gave approval for all research protocols and materials related to this study prior to data collection.

### Method of Inquiry and Instrumentation

The semi-structured interview in this study collected participant information in three areas: attitude, behavior, and demographic data. The interviews were conducted to gather information from employees concerning their attitude towards their job and restaurant, as well as their attitude towards the sustainability initiatives. The interviews collected perceptions on the employees' level of pride toward the organization and the sustainability initiatives along with their current thoughts about their job satisfaction and their feelings toward the sustainability initiatives. The interview included questions such as: 1) Can you tell me about the green practices in your restaurant? 2) Tell me about what practices you find most effective? 3) How do you feel about these practices? and 4) Specifically, how do you contribute to the green practices? Demographics included the employees' age, gender, job position, length of service with the restaurant and tenure in the restaurant industry. The interviews were audio recorded and transcribed by a professional, independent, transcription company.

### Data Collection and Procedure

Following Yin's (2003) case study design, the rationale for using multiple sources of evidence in this study is to receive a wider array of attitudinal, behavioral, and historical issues (Yin, 2003). Semi-structured interviews with open-ended questions about the attitude and behavior on certain environmental initiatives and demographics were conducted with participants including front of house (FOH), back of house (BOH), and management, on-site in the restaurants over several days, at several times during the day, dependent upon the restaurants' operating schedule and convenience of employees and management. The documents collected from the restaurants were concerned with environmentalism, such as local sourcing purchasing lists, biodegradable and recyclable content for products, inventory sheets, and employee handbooks. The document review was intended as an additional source of data triangulation. In this study,

**Table 1: Sustainable Practices Used in Restaurants in Sample**

| Restaurant A                                 | Restaurant B  |
|--|---|
| Local Sourcing                               | Local Sourcing  |
| Biodegradable To-Go Products                 | Biodegradable To-Go Products                              |
| Use of Recycled Paper                        | Use of Recycled Paper                                     |
| Energy Efficient Equipment                   | Energy Efficient Equipment                                |
| Energy Efficient Lighting                    | Energy Efficient Lighting                                 |
| Water Efficient Faucets, Toilets, & Sprayers | Water Efficient Faucets, Toilets, Sprayers, & Dishwashers |
| Recycling Program                            | Recycling Program   |
| Composting Program                           | Composting Program  |
| Recycled Furnishings                         | Recycled Furnishings                                      |
|  | Using Suppliers with Humane Practices                     |
|  | Sustainable HVAC Unit                                     |
|  | Rain Water Collection Program                             |
|  | On-site Garden  |
|  | Chemical Reduction through Sustainable Cleaning Processes |
|  | Eco-Friendly Building Materials                           |
|  | Natural Pest Control (No Pesticides)                      |
|  | Building Design to Reduce Energy Usage                    |

the document review identifies and confirms green practices in the restaurant which are a reflection of upper management and owners' attitude toward sustainability efforts. The primary investigator conducted on-site observations in the restaurants over the course of several days during several shift times recording the duties, operations, attitudes, and behavior of the management, FOH, and BOH employees. In this sense, the primary investigator collected multiple sources of evidence, created a case study database, while maintaining a chain of evidence to enhance reliability and validity (Yin, 2003). All employees interviewed were also observed throughout the data collection. Consent was given by employees verbally on audio recording at the beginning of the interview.

#### Data Analysis

Data analysis included examining, coding, and categorizing the qualitative evidence from the case study (Yin, 2003). To examine and categorize the evidence, the data analysis process included categorizing information into different groups, making a matrix of categories, and creating data displays with tabulation of the frequency of events (Miles & Huberman, 1994). To further the creditability and validity of the study, data analysis involved investigator triangulation by including multiple investigators to oversee the data analysis process including, the primary investigator, an investigator specializing in restaurants, and an investigator with sustainability research experience (Hussein, 2009). Three investigators independently used these techniques to create categories for the data. Through a meeting of the three investigators, the member-checking process occurred by assessing the categories that were common within all three thematic analyses. Overarching themes and categories were developed during the member-checking meeting to further group the data and ensure validity. An external auditor trained in research was recruited for this study and assessed the validity and accuracy of the themes and categories after the member-checking meeting.

### RESULTS

#### Descriptive Statistics

Semi-structured interviews were conducted with 29 employees in two separate restaurants in the Midwestern United States. The participants were employees in management, FOH, and BOH positions. Participants largely were male, 69.0%; in the age group of 26-30 years old, 38.0%; worked in FOH positions, 65.5%; worked in the restaurant for four or more years, 27.6%; and worked in the restaurant industry for 10 or more years, 48.2%. Neither restaurant has been in operation for more than five years. Therefore, no participants worked at the restaurant over five years. Workplace attractors such as sustainability initiatives, contribution to the green practices, and the interpersonal relationships among employees were similar for all employees (FOH, BOH, and management) thus contributing to the decision to group all of the responses regardless of position or title (Amundson, 2007). Attitudes and behaviors of

frontline employees did not differ from those of the management team.

#### Employee Reactions to Restaurant Sustainability Initiatives

The study was performed to answer questions of what are current green restaurant employee attitudes and behaviors relating to sustainability initiatives. The findings suggested two overarching themes, sustainability and satisfaction. Within the theme of sustainability, the following categories surfaced: practices, benefits, and education, (see Table 2). The categories suggested that sub-categories also exist. For example, within the practices category, participants commented on sourcing, chemical reduction, conservation, and waste management. The benefits category included the sub-categories of environmental benefits and business benefits. The sub-categories in the education category include promoting green and following practices. Under satisfaction, the following categories surfaced: employee satisfaction and customer satisfaction as shown in Table 3. The sub-categories in the employee satisfaction category include job characteristics theory and organizational commitment. The sub-categories in the customer satisfaction category include existing customers and new customers.

#### Sustainability Efforts in Restaurants

Participants exhibit high awareness of environmental practices throughout the interviews. Respondents identified several sustainability practices followed in their respective restaurants including local sourcing, conservation efforts, chemical and pollution reduction, and waste diversion. One manager stated, "we pride ourselves on sustainability" (FOH Manager, male, 26-30 years old). Local sourcing and other procurement procedures were the best practices in the restaurant that were most mentioned. The employees explained the benefits of local sourcing for the environment and the local economy. The restaurants purchase products from local farmers, ranchers, and anglers. One employee explained, "we are a local business supporting other local businesses" (Server, female, 18-21 years old). The employees are able to visit the farms, pick crops, observe the animals in their healthy, humane environment, and attend farmers' markets. The ability of the employees to all these activities allows them to support the promise of being humane and environmentally friendly to their customers. One employee expressed:

Everything is free-range and humanely raised. We call them micro-local restaurants because of the fact that all of our farmers are no more than 2 hours away. So, that allows us to go to the farm and pop in whenever we want and make sure our farmers are doing what we practice here. We can go to farm and see the cows being grass-fed, and walking around being treated well, probably better than most humans (Chef, male, 31-35 years old).

**Table 2: Taxonomy of Sustainability Theme Categories and Sub-Categories**

| Practices | Sourcing               | Chemical Reduction             | Conservation                  | Waste Management        |
|-----------|------------------------|--------------------------------|-------------------------------|-------------------------|
|           | Procurement            | Organics                       | Water Efficiency              | Recycling               |
|           | Benefits               | Eliminating Pesticides         | Energy Efficiency             | Composting              |
|           |                        | Eliminating Cleaning Chemicals |                               | Upcycling/ Dual Purpose |
| Benefits  | Environmental Benefits |                                | Business Benefits             |                         |
|           | Saving the Environment |                                | Profit                        |                         |
|           | Giving Back            |                                | Marketing                     |                         |
|           |                        |                                | Retention                     |                         |
| Education | Promoting Green        |                                | Following Practices           |                         |
|           | Boosterism             |                                | Understanding                 |                         |
|           | Innovation             |                                | Level of Perceived Difficulty |                         |

**Table 3: Taxonomy of Satisfaction Theme Categories and Sub-Categories**

| <b>Employee Satisfaction</b> | <b>Job Characteristics Theory</b> | <b>Organizational Commitment</b>    |
|------------------------------|-----------------------------------|-------------------------------------|
|                              | Motivation                        | Organizational Citizenship Behavior |
|                              | Performance                       | Workplace Attractors                |
|                              | Satisfaction                      | Pride                               |
|                              | Absenteeism                       |                                     |
|                              | Turnover                          |                                     |
| <b>Customer Satisfaction</b> | <b>Existing Customers</b>         | <b>New Customers</b>                |
|                              | Customer Reaction                 | Introducing Green Practices         |
|                              | Customer Appreciation             | Selling Point                       |

Conservation efforts in the restaurants are observable through energy and water saving initiatives. The restaurants conserve energy through replacing old incandescent light bulbs with more energy efficient light bulbs, using programmable thermostats, and energy conserving air conditioning units. The equipment throughout the restaurants was either pre-existing, used, or energy efficient models. The restaurants conserve water through using low-flow toilets and faucets, irrigation systems, and rain collectors. The employees frequently mentioned the conservation efforts as interesting. For example, one employee stated, “I think the most unique practices that we have are the AC system and that’s what we get most comments on” (Manager, female, 26-30 years old). Another employee expressed, “what I find interesting is the water system we have. They told me it collects rainwater from the top of the facility and then we actually reuse that” (Server, male, 18-21 years old).

Chemical reduction practices in the restaurants include eliminating pesticide use in the on-site garden, reducing the use of harsh cleaning chemicals while cleaning, and purchasing organic and biodegradable products that are environmentally friendly. The waste management practices were the most identified initiatives in the restaurants. Recycling and composting were the most identified waste management practices. One employee shared:

Being able to compost and send back out to the farms is a fantastic feeling instead of just throwing something away, we are able to help and make something grow. . . restaurants are inherently something that just produces a lot of waste so, being able to take steps to prevent that, being able to recycle every single bit of glass that comes through, every single can that comes through the building it’s a great feeling. It makes you feel like for every one person that’s not recycling and throwing away their stuff at home, we are actually making a difference in our area (Manager, male, 26-30 years old).

Upcycling items or finding a dual purpose for items were mentioned by the employees as rewarding by finding innovative ways to repurpose items. An employee supports this notion by stating, “being able to upcycle things that would have otherwise been trash, being able to take it and turn it into something as beautiful as it is” (Manager, male, 26-30 years old). Another employee states that, “everything has more than one purpose, everything is repurposed” (Server, male, 31-35 years old).

Participants frequently revealed that they enjoyed the benefits of the sustainable initiatives. Saving the environment is important to the employees. For example, an employee expresses “I think it’s very beneficial for the community and for the environment, because I know conservation is very important with the limited resources. So it makes me proud to be able to do that” (Cook, male, 31-35 years old). Employees describe that giving back to the community is another benefit that improved their satisfaction. An employee states “I’ve worked different companies down here and just seeing the massive

difference that it makes around you; the way that it brings people together towards one overall thought of doing something positive for your community” (Manager, male, 26-30 years old).

The benefits the business receives include higher profits, free marketing, and lower turnover of staff. The higher profits are possible through lower energy costs and an increased customer base. An employee supports this concept by stating “we use low-flow toilets that have a dual flush so it basically paid itself off within the first 3 months of us using it here at the restaurant” (Manager, male, 26-30 years old). Free marketing occurs through the publication of awards, newscasts of the store and its environmental achievements, and word of mouth recognition from the employees and customers. Many employees are loyal to the restaurant, which lowers the turnover rates in the restaurants. One employee supports this concept by declaring, “I choose to work here for one of those reasons... it’s nice” (Bartender, male, 26-30 years old).

Learning the benefits of the practices, innovative ways to be green, and the ease of implementing green practices in the restaurants enlightened several participants to promote environmental sustainability initiatives. The promotion of environmentalism occurred through the employees taking their knowledge of green practices and carrying that over into their personal lives. Many employees state green practices have enriched their personal lives as well as their work lives by making them happier and healthier people. One employee supports this concept by stating:

I have definitely become a healthier person by working here. I ride my bicycle to work. I think that it has encouraged me to not go eat fast foods and things like that and in the end of that it’s helped me be a healthier person and a happier person . . . like its encouraged myself to become a better person as well (Manager, male, 31-35 years old).

Another employee states “It definitely makes me more motivated to do it outside of work because I see how easy it is to do here, with the volume and the number of people that we are serving” (Manager, female, 26-30 years old).

Boosterism is the active promotion of a program, practice, policy, organization, or region (McCann, 2013). The employees exhibit boosterism by telling all their friends about green practices and promoting the restaurant while not working. The employees reveal that they wish more restaurants would include these types of practices in their operation. Many employees found it rewarding to challenge themselves to create dual purposes for items and innovate new ways to upcycle products. For example, one employee declared “I have been working so long at a green restaurant; I have a mentality that I don’t want to waste anything. I want to see how I can repurpose something and actually stretch that, its utility” (Server, male, 31-35 years old).



Explaining the process of green practices and training the employees are key elements to the success of green practices in restaurants. After the employees begin following green practices in their day-to-day work, it becomes second nature to them. For example, when an employee was asked if green practices were difficult to follow, an employee states:

In the long run, no, it's not, we don't even notice it. . . but it's a little bit more work and maybe we don't notice it, that it's taking a little more time, but to me, it's still just as efficient as any corporate restaurant that I have ever worked at for sure (Manager, male, 26-30 years old).

The employees viewed green practices as easy to abide by, especially after they learned the process. An employee states, "once you get to know what they want out of their green practices and you know what they are recycling for and what we will be doing, then yeah, you could easily learn from that" (Server, male, 18-21 years old).

### Satisfaction in Green Restaurants

The respondents describe psychological states and work outcomes throughout the interviews. For instance, one employee gives an example of the feedback from the management team by stating "it's more of a personal base, when I can actually interact with them and feel appreciated for the work that I have done with them" (Server, male, 18-21 years old). An employee explains that green practices in his work are recognized by stating, "what we do- I think that the customer can really see that. We really do care, it's not just a gimmick, we actually care" (Manager, male, 26-30 years old). The respondents frequently mention internal motivation, high job satisfaction, and a high quality of work.

The respondents exhibit high organizational commitment in their responses. The level of pride felt for the restaurant is generally high in the employees. For example, when asked if the employee felt a higher level of pride because of green practices, one employee answered, "I do, and everyone here is. I mean for the most part, that's why people work here. They like the practices; they are on board with the green movement" (Server, male, 26-30 years old). Another employee expresses their commitment by stating, "this is by far one of the best restaurants I have ever worked with, if not the best. Actually, I can tell you, it's the best restaurant I have ever worked for" (Server, male, 26-30 years old). Most respondents mentioned that they perceive the restaurant as unique compared to other restaurants. One employee explains, "I find it neat that I work at a place that does all this, goes through all this just to help the environment in some way. I don't know a lot of other restaurants like this" (Manager, female, 26-30 years old). Another employee stated, "it set us apart away from, apart from other restaurants. And it gives us a sense of pride actually, that we do things differently to sustain what we have, rather than wasting what we don't need to waste" (Server, male, 31-35 years old).

The participants indicate they have observed the existing customer base's reactions at the restaurants; these reactions include joy, understanding, and pride. One employee states, "I enjoy talking to the customers too and explaining to them, stuff that [the owner] has done to the restaurant. It's just cool to see their reactions" (Server, male, 18-21 years old). A large amount of the existing customer base chooses to patronize the restaurant because of green practices performed. Customers seem to appreciate the sustainability initiatives in the restaurants because it helps the environment, gives back to the community, and supports the local economy. One employee mentions, "we have a lot of regulars who come in, who

know what we do for the environment and how we run our company and they really appreciate that" (Server, male, 22-25 years old).

The employees are pleased to introduce sustainability initiatives in the restaurants to new customers. It creates an opportunity for the employees to brag about the ways that the restaurants are saving the environment and giving back to their community. For example, one employee mentions:

It's cool to be able to tell people about it and you kind of brag like this, you know we stand out having that. And then it's really nice to back it up with good quality food, you know it's one thing to just be an environmental restaurant and that's all fine and dandy, but you want to be able to have a good product that you are putting out. So, it's nice on both levels to be like yes, we are successful with the environmental part, but we are also very successful with the food and there is a reason we are doing it, it's not just to do it (Bartender, female, 26-30 years old).

The employees use green practices as a selling point to customers. Customers' reactions and appreciation of green practices usually entice the customers to return to the restaurants.

### DISCUSSION

Attitudes and behaviors have a major difference between them, attitude is positioned around thoughts and inward feelings, whereas behavior is positioned around action and external ways the employee responds to their personal attitude (LaPiere, 1934). The results of this study indicate three attitudes: job satisfaction, organizational commitment, and self-efficacy and three behaviors: role performance, boosterism, and commitment to customer service.

#### Green Practices Impact on Attitude of Restaurant Employees

Job satisfaction, the first attitude, refers "to the expression of gratification and positive feelings about one's job" (Judge & Kammeyer-Mueller, 2012, p. 343). The second attitude is organizational commitment defined as the psychological state binding an employee to an organization (Allen & Meyer, 1990). The third attitude is self-efficacy, which is an individual's perception of his or her capabilities to control or succeed in events in life (Wood & Bandura, 1989). The employees in this study exhibit high job satisfaction, organizational commitment, and self-efficacy.

Under the Employee Satisfaction category, the Job Characteristics Theory sub-category emerged because the employees noted green practices contributing to different aspects of job satisfaction, internal work motivation, and quality of work. The restaurants' green practices were making employees happy and excited about their jobs. Many employees viewed green practices as interesting, unique, and cool which motivates the employees to learn more about environmentalism and ways to help the environment. It was mentioned that green practices were revered because they bring people together under a common good. The Benefits category was created because the employees explain their attitude of satisfaction and pride about the benefits of saving the environment and giving back to their community. This sample of employees chose to work in the restaurant because of the commitment to green practices and felt proud that they are trying to preserve the environment. These results indicate that these employees have a high level of job satisfaction, internal work motivation, and a perceived quality of work which predict behavior such as enhanced job performance, job engagement, and organizational citizenship.



Under the Employee Satisfaction category, the Organizational Commitment sub-category was created because the employees expressed a high level of affective commitment for green practices and the restaurants. Prior studies suggest that employee turnover has a negative impact on the profitability of organizations; therefore, organizational commitment is a vital asset to the success of a business (Koys, 2001). The employees in this study discussed their pride in the following areas: the green practices, the restaurant, and the practices they participate in to preserve the environment. The employees perceived the restaurant as unique because of the dedication to green practices which differentiate the restaurant from other restaurants. The results indicate that these employees do possess organizational commitment and exhibit commitment with regard to the mission of the restaurant. In particular, these employees expressed notions of affective commitment, which is a more emotional attachment to the restaurant. The emotional bonds that the employees have are likely because of the green practices which tie into the employees' personal values. This in turn lowers job turnover for these restaurants and enhances job performance. Organizational commitment can predict behavior such as enhanced job performance, job engagement, and organizational citizenship (Koys, 2001; Sirota, Mischkind, & Meltzer, 2005; Wood & Bandura, 1989).

In the Education category, the sub-category Following Practices was developed because employees explained their reactions to following green practices. Several employees stated that green practices did not hinder their job performance in any way. Some employees mentioned that once they understood the procedures for green practices, following the initiatives became second nature. These results indicate that the employees' self-efficacy in the restaurants, may be enhanced due to the participation in the green practices the environment. Self-efficacy in these restaurant employees indicates that they perceive the challenge of participating in green practices as something that can be mastered. Judge and Bono (2001) assert that self-efficacy is a good predictor of job satisfaction; the results in this study indicate that the employees of these green restaurants do possess self-efficacy; it is also likely that these employees satisfied in their jobs as well. The high self-efficacy in these employees in the restaurants indicates that they perceive the challenge of saving the environment as something that can be mastered.

#### **Green Practices Impact on Behavior of Restaurant Employees**

Role performance, the first behavior, is defined as meeting or surpassing the measurable and qualitative criteria of performance (Katz & Kahn, 1978). The second behavior is boosterism, referring to the act of promoting the mission, ideals, and the organization (McCann, 2013). The third behavior is commitment to customer service referring to the engagement of the employee to the customer experience. The employees demonstrate enhanced role performance, exhibit high levels of boosterism, and display high levels of commitment to customer service.

The Practices category was developed because the restaurant employees exhibited high awareness of the environmentalism practiced in the restaurants. The majority of employees mention local sourcing as the best green practice in the restaurant. Employees reveal that repurposing items or upcycling items is very rewarding because they are able to turn something that was going to be trash into something beautiful. These results indicate high role performance of these select employees through contribution to initiatives and innovation. The employees are willing to try new things, follow the policies and programs, and do whatever is needed to uphold the mission of the restaurant. These engaged employees are generally more enthusiastic, more involved, and will uphold the

interests of the organization. The positive attitude felt towards green practices predict the behavior of high engagement and job performance of the employees.

Under the Education category, the Promoting Green sub-category was created because the employees explained how they perform green practices in the restaurants as well as outside the restaurants in their personal lives. Seeing the environmental sustainability initiatives successfully in practice on a large scale in the restaurants motivated many employees to carry their knowledge of green practices into their home lives. The employees mention recycling at home, riding their bikes to work, reducing energy and water use, and upcycling items that would have once been trash. Some employees state these green actions, which are the result of green practices in the restaurant, are making them happier, healthier, and better people. The employees also promote green practices and the restaurant outside of work by encouraging their friends and family to be more conscious of the environment. These results indicate these employees exhibit high boosterism of the restaurant. By allowing green practices to carry over into their personal lives and encouraging others to save the environment, these select restaurants gain motivated, highly committed employees. The employees are providing free word-of-mouth for the restaurant as well as upholding the mission of the restaurant.

The Customer Satisfaction category was developed because the employees mentioned with great frequency that they enjoyed explaining and telling the existing, as well as new customers about green practices in the restaurants. The employees are able to talk about the environmentalism shown in the restaurants and use the green practices as a selling point to the existing customer base and entice new or potential customers. These results indicate that because of green practices, the employees in these restaurants were able to connect easily with customers and create a relationship between customers and restaurant employees. Strong relationships between customers and employees are beneficial for the restaurants because it creates more satisfied and loyal customers who are more willing to spend more money in restaurants, tip the employees more, increase their positive word-of-mouth, and increase the frequency of their visits (Gremler & Gwinner, 2000). Connecting with customers indicates that these employees have a high commitment to customer service and aim to increase customer satisfaction in the restaurants. The positive attitude felt for green practices by these employees influence the behavior of commitment to customer service.

#### **Significance of Findings**

The current findings add to a growing body of literature on environmentalism and restaurant employees. The study adds to understanding the role of attitude and behavior on job satisfaction, loyalty, and pride of restaurant employees. These findings enhance our understanding of green restaurants' impact on their employees and identify potential practices that all restaurants could implement. This research also contributes additional evidence supporting that positive attitudes influence positive behaviors. The findings of this study have a number of important implications for the restaurants. First, there are restaurants implementing green practices in their operations that help the environment despite cost, time, and the requirement of motivated, dedicated employees. Second, environmental sustainability initiatives in these restaurants are affecting employees and customers in a positive way. Third, the positive impact green practices have on this select group of employees is beneficial for these restaurants. However, not every restaurant will have motivated, dedicated employees who will teach and promote environmentalism making the implementation

successful. Not all restaurants will see the sustainability efforts as necessary or achievable. However, many restaurants can utilize the findings in this study to recognize the positive effects of sustainability efforts.

## CONCLUSION

Restaurants in the United States generate waste, deplete natural resources, and use large amounts of energy through operations (Barclay, 2012; U.S. Environmental Protection Agency, 2010). Restaurants are attempting to do their part in saving the environment by implementing environmental sustainability initiatives, but these initiatives are only successful if the restaurant employees are supportive (Sirota, Mischkind, & Meltzer, 2005). This study set out to explore the reaction of restaurant employees to the restaurant's sustainability initiative including green practices' impact on employee attitude and employee behavior.

The results of this research support the idea that environmental sustainability initiatives have a positive impact on these restaurant employees. Taken together, these results suggest that the impact of green practices on this select group of restaurant employees' attitude include employees who possess job satisfaction, organizational commitment, and self-efficacy. These results suggest that the impact of green practices on this select group of restaurant employees' behavior include employees who engage in job involvement, boosterism, and a commitment to customer service. The following conclusions can be drawn from the present study: 1) it is possible for restaurants to implement environmentally sustainable initiatives, 2) green practices in these restaurants influence employee attitude and behavior positively, and 3) the environment and many restaurants can benefit from the implementation of green practices.

## Limitations

Generalization may be viewed as the largest limitation to this study however; the goal of this study is not to generalize the results to larger populations. The goal of the case study approach is to generalize and expand theories through analytic generalizations (Yin, 2003). It is reasonable to expect that the results of this study might be applicable to other similar environmentally friendly restaurants in the United States.

The findings in this report are subject to at least three types of bias; researcher bias, sampling bias, and measurement bias. The primary investigator was the principal collector of data and therefore, the researcher's own subjective feelings may influence the case study. To reduce researcher bias, this study utilized investigator triangulation and external audits to validate the data analysis process. The restaurants in this study were chosen because of the convenience of travel distance and therefore, selection bias is possible. The employees may have provided socially desirable responses, because they might want to be perceived as an environmentalist and give answers that reflect that perception.

## Future Research

The case study method allows the generalization and explanation of theories that provide insight for further research. Replication of the study would assist in further validating the results of this study. It would be interesting to compare experiences of employees in green restaurants and employees in non-green restaurants. A more in-depth study is necessary to examine job satisfaction in environmentally friendly restaurants. Another possible area of research would be to develop a quantitative instrument to measure the constructs explored in this study.

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