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Economic Impact of Local Food Purchasing in the City of Lawrence, KS

Kansas Impact Project – University of Kansas

Final report on a project that collected and analyzed the purchasing of local food in the City of Lawrence, Kansas from 2009-2012.

4/25/2013

TABLE OF CONTENTS

I. Research Proposal	2
Background	2
Problem Definition and Objectives	3
Research Design	3
Sample	4
Data Collection Plan	4
Data Analysis Overview	4
Time Table	5
II. Quantitative Survey Analysis	5
III. Qualitative Survey Analysis	7
What is “Local”?	7
What local Food is desired?	8
Barriers to using additional Local food	9
IV. Moving Forward: Options and Recommendations	10
Collection Strategy and Challenges	11
Survey Changes	12
Confidentiality Agreement	12
Survey Questions	13
Analysis	13
V. Appendix A : Dr. Angela Murray’s Suggestions for the Survey	14

I. RESEARCH PROPOSAL

Background

In the fall of 2012, our group of MBA students from the University of Kansas began working on a Kansas Impact Project (KIP) with Eileen Horn. Horn, the Sustainability Coordinator for the City of Lawrence and Douglas County, proposed a project that was aimed at measuring the economic impact of locally grown food purchases in Lawrence, Kansas. Horn served as our mentor, director, main contact, and overall leader throughout the project. With help from Horn and the Douglas County Food Policy Council, our group of MBA students addressed the issue of collecting purchase figures on locally grown food in Lawrence, Kansas; so we could measure local food's economic impact.

In forming our approach, we sought input from researchers who have tackled similar issues in the past. We received some differing views on how best to approach the issue. We initially corresponded with the University of Northern Iowa Center for Energy and Environmental Education (CEEE). The CEEE had conducted a similar study a few years ago on the economic impact of local food in their area. The CEEE advised us that focusing our measurements on restaurants and retailers would return the most value for our efforts. However, in our correspondence with Ken Meter of the Crossroads Resource Center, he recommended that we work almost exclusively with growers to obtain our measurements. After discussing each approach with Horn, the Food Policy Council, and among ourselves; we concluded that that the CEEE's approach was likely the best, most practical course of action for what we were trying to measure. Ken Meter's approach seemed to be grounded more in ideology than pragmatism.

A second issue that presented a challenge was defining what, exactly, constitutes local food. Unlike terms such as "natural" and "organic," the United States Department of Agriculture

(USDA) has not established a legal definition of “local” food. Additionally, we discovered that there is no single consensus amongst participants in the food industry or the local food economy on what is “local,” and that any geographic measure would be inherently arbitrary according to whom we asked. After getting hung up for a while on this definition issue, we encountered a creative approach from the USDA Economic Research Service (ERS). The ERS cast aside geographic definitions and determined what were local foods based on the channels through which the product was marketed. These channels could either be direct to consumers (farmer’s market and roadside stands) or direct to point-of-retail sale (grocers & restaurants). This definition determined what local food was, not solely by geographic distance, but also by how direct the channel was that the food traveled through to reach consumers. This definition was highly consistent with our overall approach and alleviated the challenges associated with appointing a specific geographic cut-off point.

Problem Definition and Objectives

Local food purchasing behavior in Lawrence is undocumented and the impact of this economic activity cannot be fully analyzed. Our objectives were to *research previous economic impact studies, choose an appropriate research design and instrument, and then collect all the data possible. Finally, we would analyze the data and report back to Horn and the Food Policy Council on our findings.*

Research Design

We developed a research process that was designed to gather historical purchasing figures from local restaurants, grocers, and any establishment within the city of Lawrence that purchases local food. Our strategy was to focus on developing relationships with the local establishments. Relationships would build trust and allow us to get more respondents to a survey

we created. We would distribute the survey by hand, directly to the manager in charge of food purchases at each establishment.

Sample

We aggregated a list of every restaurant, grocer, and establishment in Lawrence that purchased and distributed food; local or non-local. We decided on a census approach to first determine which of these establishments purchased local food. We conducted this census by calling each establishment to ask if they purchased local food. This census allowed us to narrow down our list of establishments to a sample of establishments that purchased local food. Once we narrowed our sample to establishments that purchased local foods, we asked them if they would participate in our survey.

Data Collection Plan

First, we decided on a census approach and called each business to first ask if they purchased local food. If they did purchase local food, we asked if they would participate in our survey. We wanted to stress relationship building to establish trust. We reasoned that establishing trust would be a crucial factor in obtaining purchasing data from private businesses. Once we established trust with a local food purchasing establishment, they would agree to participate in our survey. We distributed a hard copy of our survey (Appendix A) to the purchasing managers; then returned at a later time to collect the results.

Data Analysis Overview

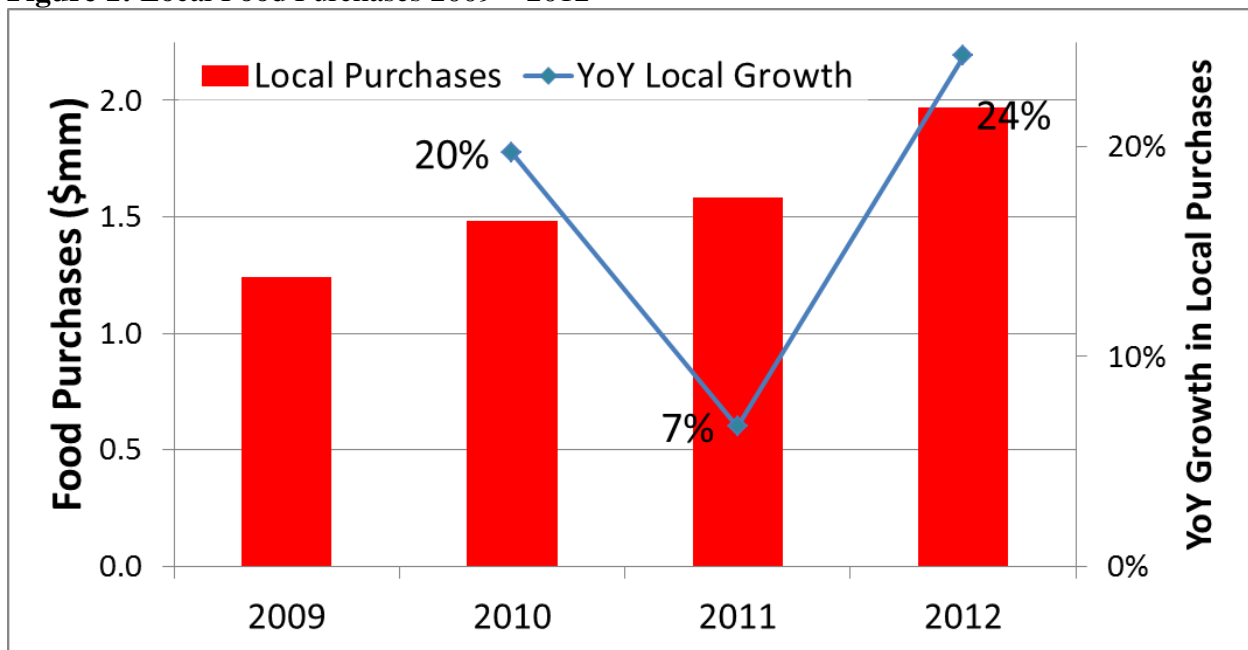
Our plan was to aggregate all the data and find total purchasing figures across all respondents in the city. Then, we wanted to break those sales down to restaurants, grocers, and farmer's markets to try and identify any trends. The survey also asked for historical data so we could build data charts on trends in purchasing behavior.

Time Table

October 28, 2012	Choose methodology and data collection instrument
December 14, 2012	Craft and finalize survey
January 18, 2013	Conduct census to determine which establishments purchase local food
January 18, 2013 – March 31, 2013	Distribute and collect surveys from local food buyers
April 8, 2013	Present findings to Horn and Douglas County Food Policy Council
April 25, 2013	Report findings to University of Kansas MBA administration and deliver final report to Horn

II. QUANTITATIVE SURVEY ANALYSIS

Figure 1: Local Food Purchases 2009 – 2012

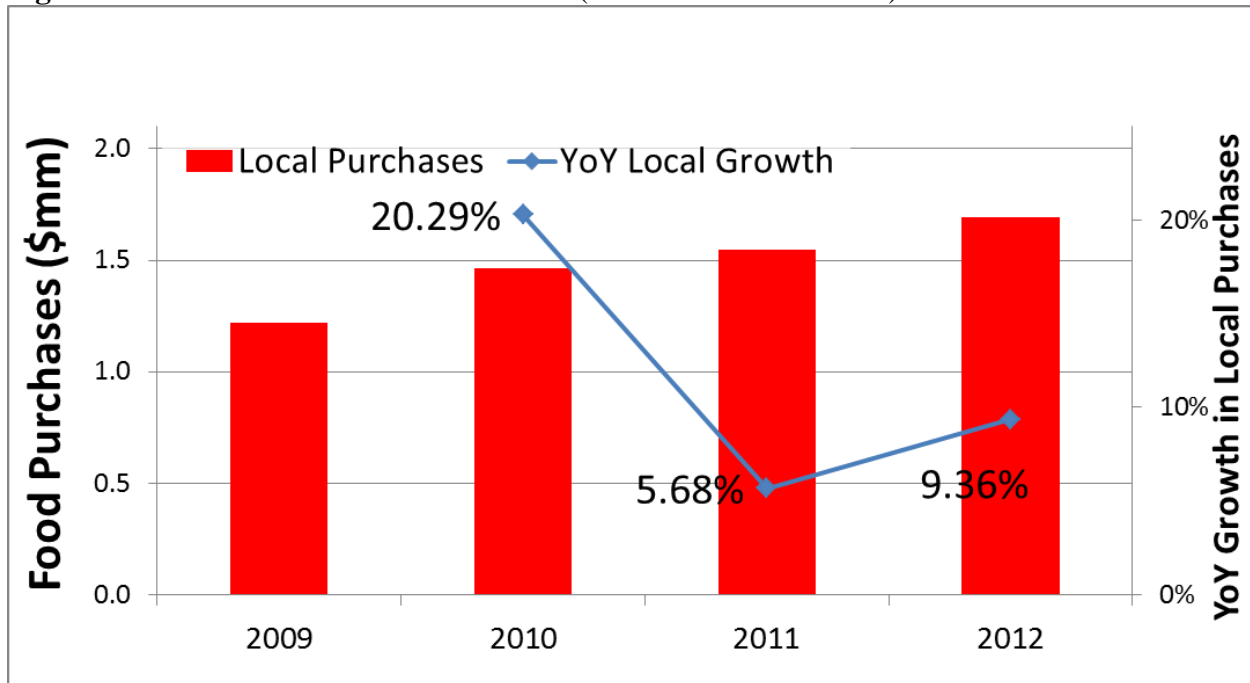


*Source – Kansas Issues Project 2013

Figure 1 shows the aggregated data from survey participants. From this result, it is clear that there is positive growth between 2009 and 2012. In dollar amounts, the purchase dollars

increased from \$1.24 million to \$1.97 million, which is a spectacular \$730,000 growth between 2009 and 2012.

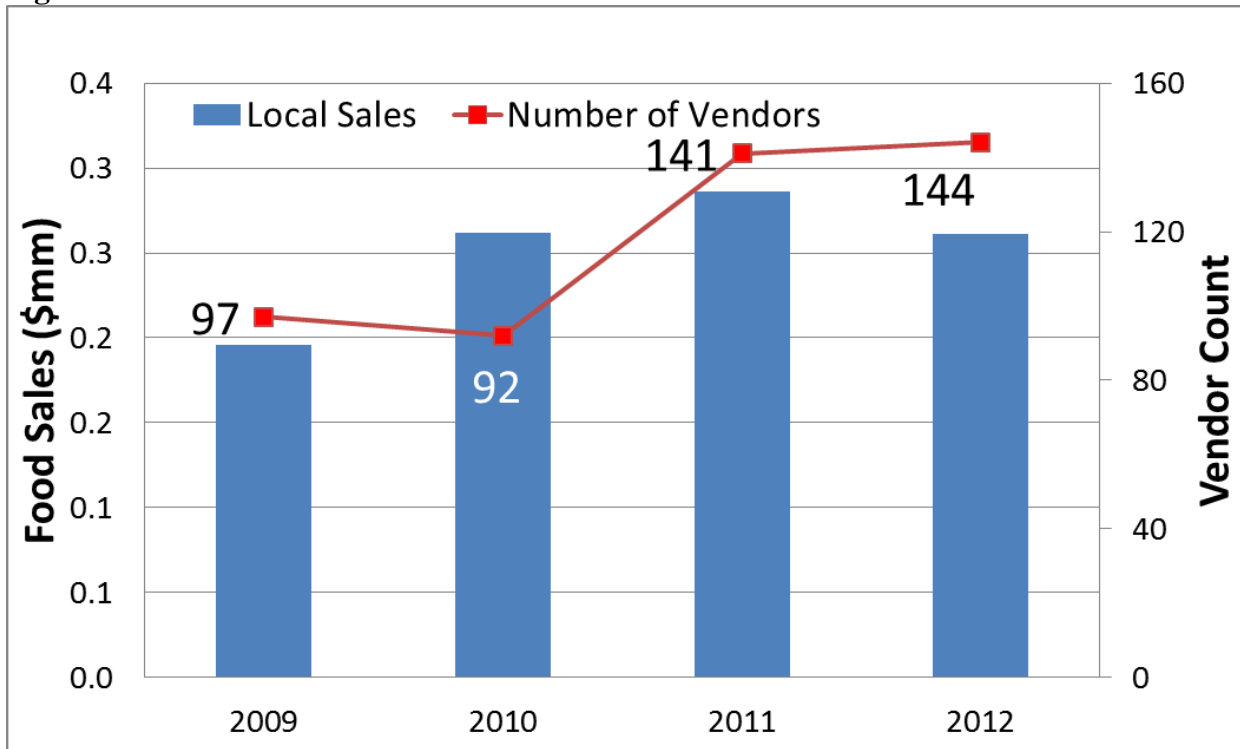
Figure 2: Local Food Purchases 2009-2012 (Restaurant and Grocers)



*Source – Kansas Issues Project 2013

Figure 2 shows our aggregated data from restaurants and grocers. This graph only measures restaurant and grocery store data, in order to determine if we see the same trend. Again, we see the positive trend. Throughout our study, we learned that these financial figures are private, sensitive information for private grocery establishments. Because of this, they were often reluctant to provide information about their dollar figure. We believe that the actual dollar amount is even greater the numbers shown.

Figure 3: Local Food Sales at Farmers' Market 2009 – 2012



*Source – Kansas Issues Project 2013

Figure 3 shows local foods sales at the Lawrence farmers' market from 2009 – 2012.

Although there is a slight dip in 2012, the positive trend is clear in terms of food sales dollar and vendor count. From comments by Department of Revenue personnel, we learned that only 40% of farmers actually report taxes. Therefore, we anticipate the sales dollar to be much greater. Since the reason for the dip in 2012 is unknown, further research (preferably every year end) is needed.

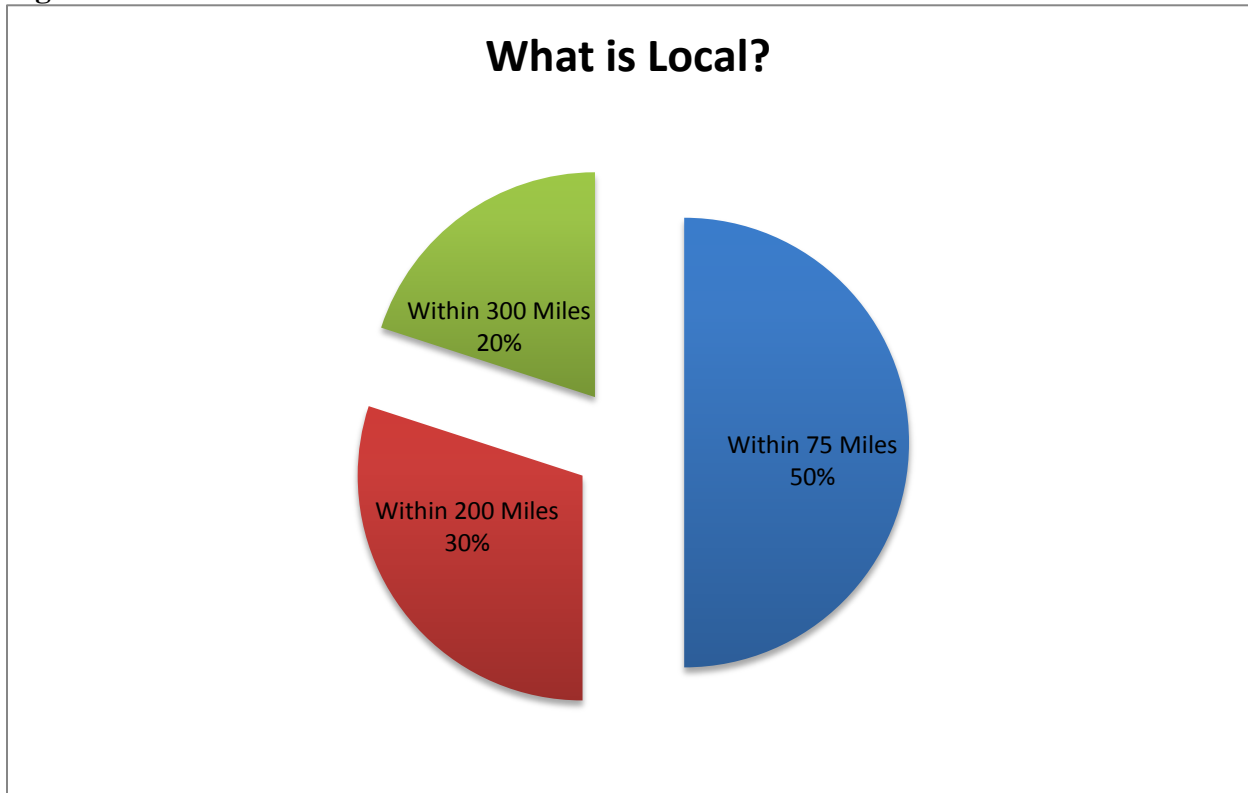
III. QUALITATIVE SURVEY ANALYSIS

What is "Local"?

- We had a range of responses from 'produced within Douglas County' to within 300 miles.
- 80% of the responses were within 200 miles of their location.
- Several responses used The Merc (grocer) as their baseline.

- Most believe local is within the State of Kansas; possibly parts of Southern Nebraska or Western Missouri.

Figure 4: Definition of “Local”

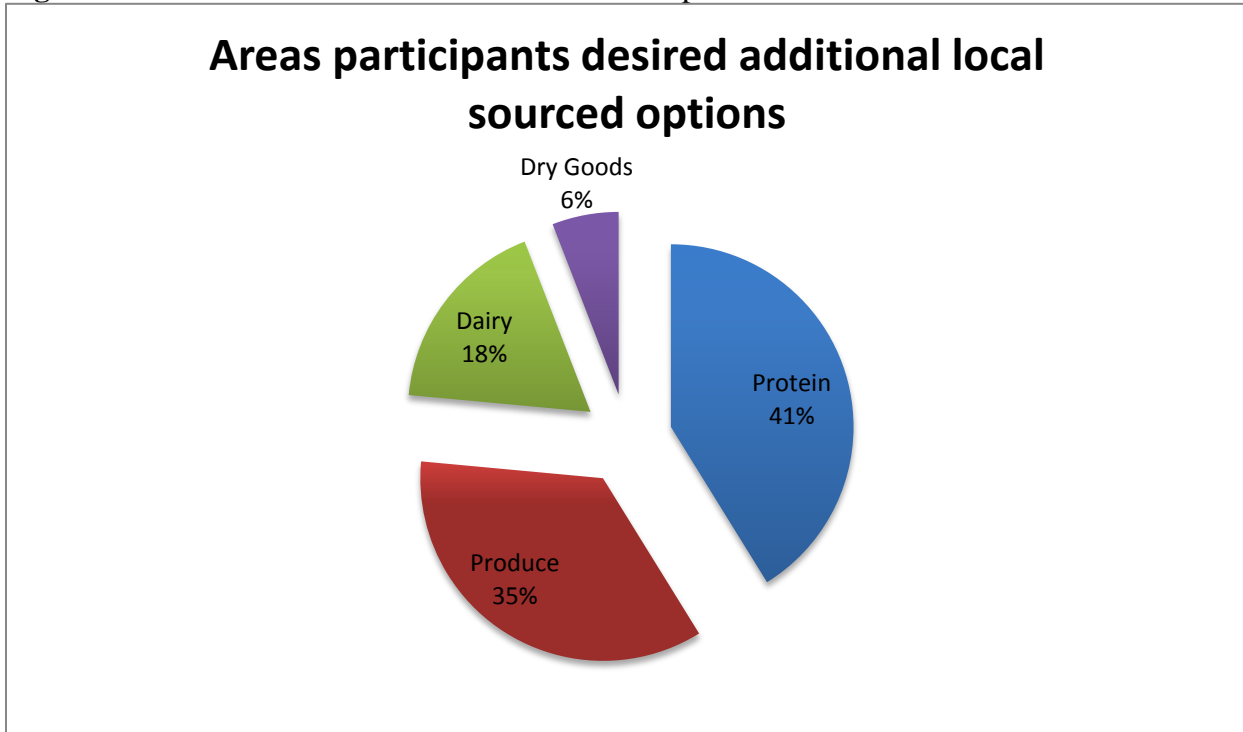


*Source – Kansas Issues Project 2013

What local Food is desired?

- Most people listed local food in general, not specifying any particular group.
- Proteins, including chicken and beef, were the top request.
- Produce, including fruits and vegetables, were second largest request.
- Additional dairy was listed, but only one in particular. Iwig’s dairy may be filling that need.

Figure 5: Desired Additional Local Sourced Food Options

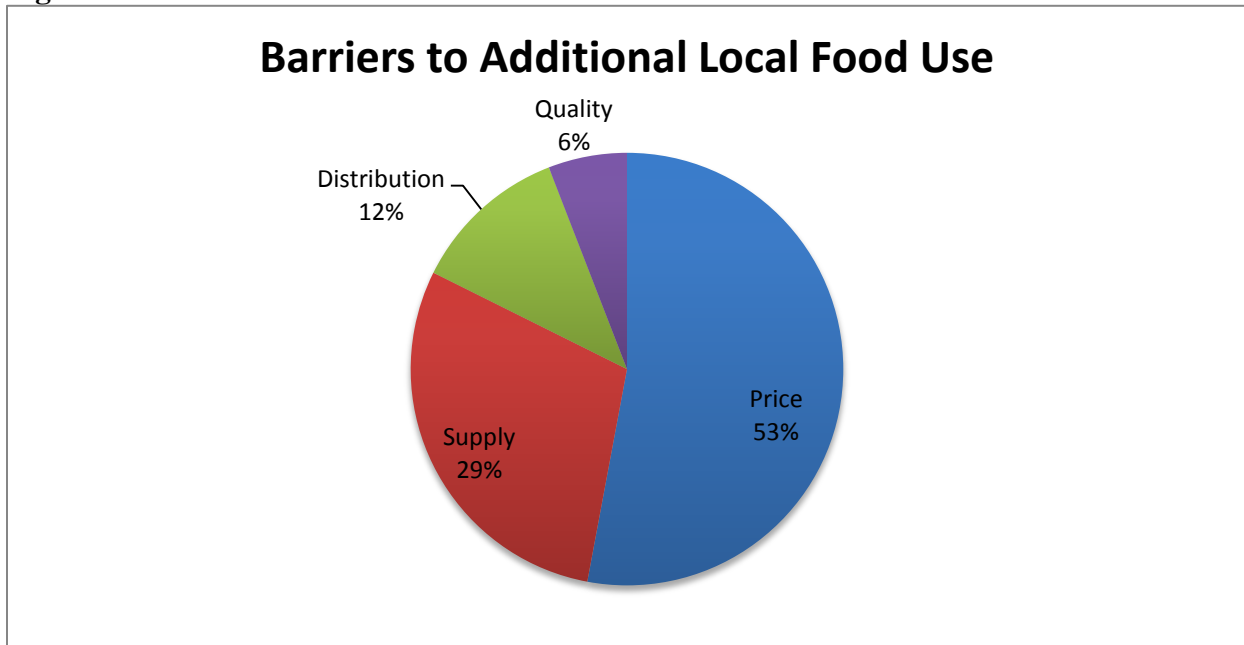


*Source – Kansas Issues Project 2013

Barriers to using additional Local food

- Price is the primary issue. Every respondent listed price. Support from Douglas County and the local communities can lower the price by increasing supply; however, this will likely continue to be the primary issue.
- Supply, or the capacity to fill the potential order and the *time it takes to locate local food suppliers, was the second biggest concern*. This was mentioned in a couple comments about how the inefficient distribution to restaurants inhibited their local food purchases. A solid, centralized distribution system would likely solve this problem.
- Surprisingly, quality does not seem to be an issue. This indicates the quality of local food may be as good, or superior, to non-local food.

Figure 6: Stated Barriers to Additional Local Food Purchases



*Source – Kansas Issues Project 2013

IV. MOVING FORWARD: OPTIONS AND RECOMMENDATIONS

Our study shows how much of an economic impact local food has on the Lawrence community and the even greater impact it will have in the future. This study has laid the groundwork for even greater discoveries on the impact and potential impact of local food in Lawrence. Looking ahead, there are several options for expanding on this study.

One option is continued involvement by the KU MBA program in the project. The study could be reestablished and expanded on as another Kansas Impact Project within the MBA program next fall. The course is being restructured and improved, so it will conduct semester-long projects, as opposed to the year-long projects conducted during the 2012-2013 school year. The projects will also be incorporated into the classrooms of their respective areas. This project could easily be taken on as a market research project or analyzed within a statistics course.

A second option for the university is to propose the project to perspective doctoral

students in economics, statistics, or marketing fields; dependent on how the project changes and the project's needs.

The final option we considered was to continue the project as primarily a City of Lawrence project. We believe this option is the best option. The city could take our study and use it to continue and expand on the project. There is a clear incentive for the city to take interest in this project, considering our study has demonstrated the positive economic impact local food can have on the Lawrence. This option could include possible collaboration between the city and KU. Given the city's resources and the interest the university would have in a positive, impactful community project; this collaboration could potentially be the most productive option. Schools other than the School of Business could also be interested in the collaborating with the city on this project. Regardless of the option pursued, this project should be continued into the future. Below we have included recommendations for future data collection designs and instruments.

Collection Strategy and Challenges

There were some challenges that arose with our data collection. Our initial plan, to secure data through relationship building, was not as successful as we hoped. One challenge was managers did not have the time to fill out our detailed survey and did not trust us with their private financial data. The confidentiality agreement and KU endorsement did not facilitate the trust process, either. These private businesses were often reluctant to reveal their private financial data, even with our confidentiality agreement and KU endorsement. To address this issue of trust, one of our members had success representing herself as “working with the City of Lawrence with Eileen Horn” and it expedited information much more quickly than the KU endorsement. We also aimed avoid any tactics of “cold calling” businesses to obtain sales data;

however, one member of the group actually found this tactic highly successful. This tactic has worked especially well on the restaurant level.

Another challenge was that most of the restaurants surveyed did not keep precise book keeping. They could sometimes “ball park” the figure of their annual purchases, but specifics were hard to come by. We found the phone call survey method proved to be the best way to obtain purchase data efficiently from restaurants. This method cannot work with the larger grocers and other establishments since they have policies restricting the release of certain information, but they also keep much more detailed financial records. These larger grocers and establishments have the book keeping records to supply valuable, line-by-line data. To obtain this data, these establishments need extra time with the process. They need to establish an “O.K.” through their bureaucratic hierarchy and require extra time to delve into their financial statements to obtain the historical data. The difficulty of this data gathering process should be expected to decrease substantially in the future since the survey will only be asking for data from the previous year.

Survey Changes

Throughout the collection process, many problems with the survey became apparent. From order, prevalence of bias, and leading questions; we constructed a very flawed survey. If we did not notice the problems during collection, they came to light because of our continued studies in market research.

Confidentiality Agreement

The confidentiality agreement itself became an obstacle for data gathering. We needed to re-communicate many times the confidentiality to ensure that it was their *purchase amount* and

not their sales amount we were looking for. The “purchasing amount” could be changed to a simple statement of “how much local food your business buys.” “Sourcing local food” might be standard terminology and jargon, but it could confuse perspective survey takers.

Another mistake made (as Dr. Murray points out – See Appendix A) was asking for contact information immediately after explaining to the respondent that the information would be confidential. It could be viewed as contradictory and create a feeling of unease about the survey. It could also be viewed as a ploy to gain that contact information for marketing/advertising purposes.

Survey Questions

For recommendations, we consulted Dr. Angela Murray, a professor in marketing research at KU, about our survey. She looked over the survey and made considerable recommendations to improve the survey. Appendix A details our survey and contains the comments by Dr. Murray in footnotes.

Analysis

Using *Qualtrics* or other survey platforms could prove more efficient in the future. Time spent with data entry and analysis could be cut dramatically using one of these programs. The respondents can fill out the survey quickly via a simple on-line link and once the results are obtained, these programs can analyze and give back a report almost instantaneous. If continued efforts for this data collection are constrained by limited resources, these programs could prove to be extremely valuable.

V. APPENDIX A : DR. ANGELA MURRAY'S SUGGESTIONS FOR THE SURVEY



Dear Survey Participants,

Thank you for choosing to participate in this survey. The goal of this survey is to measure the economic impact of local food in Douglas County. We hope to provide statistical metrics that will assist in the future of local food purchasing in the county.

The University of Kansas school of Business and the Douglas County Food Policy Council are surveying purchasers of local food to assess the impact of local food purchases on our local economy.

The survey will ask about the dollars your business or organization spent on **direct-from-farmer**¹ local food purchases in recent years (2009-2012). We understand that some businesses or organizations track this by category and some as total purchases, therefore the survey provides both options for data reporting.

Your input will be very valuable to our research and to Douglas County. We understand that your time is very valuable, so the survey short and concise. *Any information you will provide to us will be strictly confidential and **will not be used for any other purpose***² other than for this research. All you provide will be aggregated with the other survey participants' numbers. We are happy to provide you a confidentiality agreement upon request.

Again, thank you so much for your time and input. If you have any concerns or questions during the survey, please contact John Hecker via email at jhecker2@gmail.com.³

¹ Comment 1: Do you know that everyone in your sample purchases local food direct from farmers? If not, you might want to soften this so that people who don't won't just decide the survey isn't relevant for them and refuse to participate.

² Comment 2: Then why are you asking for contact information up front? That suggests future marketing efforts.

³ Comment 3: Using someone's KU email address would look more legitimate.

Please complete the survey below⁴

Name of Business/Organization:⁵

Address:

Primary Contact Information:

Name:

Email:

Phone number:

1. Option #1:⁶ Local food purchases⁷ by category:

Annual Purchases in Dollars⁸

	2009	2010	2011	2012
Beef	_____	_____	_____	_____
Pork	_____	_____	_____	_____
Poultry	_____	_____	_____	_____
Eggs	_____	_____	_____	_____
Dairy	_____	_____	_____	_____
Produce	_____	_____	_____	_____
Dry Goods	_____	_____	_____	_____
Fish	_____	_____	_____	_____
Other Proteins (tofu, tempeh)	_____	_____	_____	_____
Baked Goods	_____	_____	_____	_____

--OR--

⁴ Comment 4: I'm assuming this is a paper survey? Why not do it online?

⁵ Comment 5: I do not recommend asking for this information at all or at least not up front because it makes your claim of confidentiality and non-marketing use seem suspect.

⁶ Comment 6: I would introduce this with actually asking a question in sentence form, being clear what you are asking for.

⁷ Comment 7: Define

⁸ Comment 8: This seems like it would be difficult to answer going back as far as 2009. Do restaurants typically keep track of this stuff and retain it for so long?

Option #2:⁹ Total local food purchases (in all categories¹⁰)

Purchases	2009	2010	2011	2012
	_____	_____	_____	_____

2. How do you define “local” in the purchasing numbers you provided above? (i.e. is it a particular mileage radius? A number of surrounding counties or states?¹¹)

3. Do you wish¹² you could source¹³ more food locally? If so,¹⁴ which foods do you wish¹⁵ you could purchase locally?

4. What are some barriers that keep you from sourcing more from local producers?¹⁶

⁹ Comment 9: I see why you did this, but I’ve found it difficult to use data across questions asked so differently. With the categories, my sense is that people’s total will come up to a larger amount than if they only list the total. Maybe you should ask it in aggregate of everyone first to make sure all are comparable then follow up with a second question asking for a breakdown if it’s possible.

¹⁰ Comment 10: Isn’t this also in dollars?

¹¹ Comment 11: You need to define “local” operationally before gathering the data. Otherwise, you won’t know if all of your respondents are using the same frame of reference when they are reporting their purchases. So, if you need to know this, ask it first. Then define it in your terms prior to the purchase reporting question.

¹² Comment 12: This is a bit leading. Perhaps: How satisfied are you with the amount of food you purchase locally? Or: Would you prefer to purchase more food locally, less food locally, or about the same amount of food locally?

¹³ Comment 13: Is this a common term in the industry? Only use well-understood terms.

¹⁴ Comment 14: Separate question

¹⁵ Comment 15: Somehow “would prefer” sounds more professional than “wish.”

¹⁶ Comment 16: Maybe ask for benefits of purchasing food locally followed by another question about the drawbacks. It seems less judgmental.