

ECONOMIC IMPACT AND VALUE OF
THE ROBERT M. KERR FOOD AND
AGRICULTURAL PRODUCTS CENTER

By

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Chapter I

INTRODUCTION

Background

Value-added agriculture allows producers to retain ownership of their commodities and alter or process it into a consumer demanded product. This allows the producer to gain that additional income that is generated by selling a finished product. The state of Oklahoma has historically been a large agricultural commodity producing state, especially in wheat and beef cattle, but most of those commodities are shipped out of state to be processed into a consumer demanded product. Because of this, Governor Henry Bellmon compared the state's agricultural industry to a "third world type agriculture" at the 1987 Conference on Expanding Food Processing in Oklahoma (Dayvault and Tilley, 1987). All of this added value that was done outside of the state meant that those agricultural product processing employment and sales dollars that could have boosted Oklahoma's economy were lost to other states. In 1986 the population of Oklahoma was 1.37% of the national total while the employment in food processing was 0.77% of the national total (Gilliland, 1989). With Oklahoma being a large agricultural production state, this low amount of food processing compared to the rest of the nation was a concern and an area of strong potential for increasing the state's economy. In November of 1989 it was estimated that if the agricultural processing industry in the state

“was increased by 50 percent, 5,400 new jobs would be created in food processing with potential for 19,440 additional jobs in supporting industries” (Gilliland, 1989).

At the 1987 Conference on Expanding Food Processing in Oklahoma, one of the main recommendations of the conference participants was to create a physical facility for research and development, product testing, and pilot plant facilities to support new and existing food processing firms (Dayvault and Tilley, 1987). That year, Senator Robert Kerr wrote a bill to initiate a feasibility study of a food processing center in the state, but it was not until 1990 when the feasibility study was approved and funded by state legislature (Zimmerschied, 2003). The final result of that conference and feasibility study was the Oklahoma Food and Agricultural Products Research and Technology Center, commonly known as the FAPC, which began operations in 1997 to help businesses and entrepreneurs in the state of Oklahoma with developing value-added food and fiber products. In June of 2007 the Oklahoma A&M Colleges Board of Regents approved a name change of the FAPC to the Robert M. Kerr Food and Agricultural Products Center in honor of the late Senator Kerr.

The FAPC was not the first university value-added food processing center ever established. There were many that were started as a result of the “agricultural depression” of the late 1970s and early 1980s to help farmers in creating new forms of income (Foster, 1994). Some of these centers are the Michigan State University Food Industry Institute that started in 1985, the University of Nebraska Food Processing Center that started in 1983, the Kansas State University - Kansas Value Added Center started in 1989, and the Ohio State University Food Industries Center established in 1982 (Foster, 1994). All of these but the Ohio State University Food Industry Center were established

by state legislature, while the Food Industry Center was established by a group of food industry private companies (Foster, 1994). There were also 10 Ag Innovation Centers that were established after the FAPC through the 2002 Farm Bill (Holcomb and Johnson, 2007). To establish one of these centers, it was required that the state's land grant university, agriculture department and producer organizations "provide technical and development assistance for value-added efforts" (Holcomb and Johnson, 2007).

Most value-added centers have similarities such as cooperation between public and private entities and a connection with a land grant university (Foster, 1994; Holcomb and Johnson, 2007). And even though there are centers that focus on certain kinds of businesses, food issues or researching new uses of agricultural products, the mission of many of the centers are like Oklahoma's FAPC which does a wide variety of research, educational and technical assistance for all kinds of businesses within their respective state (Foster, 1994; Holcomb and Johnson, 2007).

Problem Statement

The FAPC was built in the mid-1990s on the Oklahoma State University – Stillwater campus, and started serving the people and businesses of Oklahoma in 1997. The purpose of the FAPC is to help value-added agricultural businesses in the state of Oklahoma by providing them with many services including product development, laboratory services, technical services, and many educational workshops. Construction of the FAPC was funded by state dollars at a cost of more than \$18 million, and the annual operating budget of about \$2.9 million is also publicly funded. Since the FAPC is

publicly funded, it is important to show that it actually has a positive impact on the state's economy.

There have already been some studies evaluating customer satisfaction, and one study completed in 2002 to examine the economic impact on Oklahoma of the businesses assisted by the center. All studies have shown that the FAPC has been successful in providing what its clients need, and the economic impact did show that the businesses helped by the center had a significant impact on the state's economy. However, these studies have not been able to quantify the impact of the FAPC itself on the Oklahoma economy, which is very difficult to do since it is a public entity and does not charge for many of its services and therefore does not generate a profit.

It has been ten years since the FAPC commenced services and five years since the economic impact study, thus an appropriate time to evaluate the impact it has had on the state during this time. Therefore, this research will be to measure the economic impact of the FAPC's services and its clients' businesses on the state of Oklahoma.

Objectives

The specific objectives of this study are to:

1. Determine the economic impact of all the firms assisted by the FAPC.
2. Determine the economic impact of the services provided by the FAPC. The particular services being examined by this study will be:
 - a. Basic Training workshop
 - b. Laboratory services
 - c. Technical services provided at the clients' business

d. Technical services provided at the Center

CHAPTER II

METHODOLOGY

Literature Review

Economic Impact

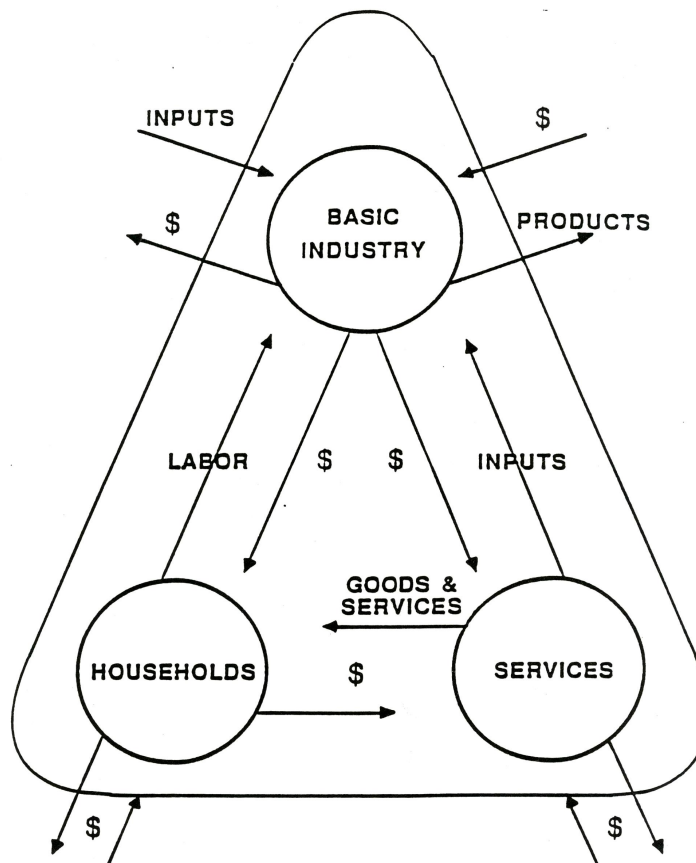
Any time a new firm is created or the revenue or employment of a firm is increased, then a positive impact occurs on the local economy. This effect is calculated by completing an economic impact study. “Economic impact can be defined as the estimated changes in a region’s employment, income, and level business activity that result from a certain program or project that affected the region” (Zimmerschied, 2003).

The total impact a firm creates on a local economy consists of direct, indirect and induced effects. Direct effects are the purchases of resources (labor, goods, and services) that occur from a firm’s normal operations. Indirect impacts are the measure of industry-to-industry purchases, and induced impacts reflect the change in household demand as the employees of both the firms causing the direct effects and the indirect effects (Carroll, 2004). To estimate the amount of increase or decrease caused by a change in an economy, a multiplier is calculated. IMPLAN is a software program that derives these economic multipliers for specified regions using an input-output model. “Input-output models are used to estimate economic impacts on a region’s current output, total amount of value-added through processing, number of jobs, employee compensation and

proprietors' income due to a change in the region's business activity" (Zimmerschied, 2003). A Type I multiplier captures only the direct and indirect effects, a Type II multiplier captures all three effects (direct, indirect and induced), and the Type III and Type SAM (Social Accounting Matrix) multipliers capture all three effects plus account for commuting, social security, income taxes, and household savings (Mulkey and Hodges, 2003).

Direct, indirect and induced effects are components in export base theory. A regional economy's export base is consisted of the industries that sell a large portion of their products outside of the region (Holland, et al., 1997). Doeksen et al. (1997) explains this community economic system in a flow diagram shown below (Figure 1).

Figure 1. Flow Diagram of a Community Economic System



The direct effects are created by the basic industry, which is a business that sells some or all of its goods or services to buyers outside of the local economy, and is therefore the foundation of that local economy. For the basic industry to produce the goods it exports outside the local economy it must purchase input goods, services and labor from both the local community and outside the community. The services that support the basic industry are indirect effects. The flow diagram is completed when the households that supply labor to the basic industry spend their earnings to purchase goods and services from the community's service industries, which are the induced effects (Doeksen, et al., 1997).

In 2002, a five year study of the economic impact of the firms assisted by the FAPC concluded that the direct impact was estimated at 7,883 full-time employees, 937 part-time employees, \$44,457,304 in annual payroll and \$544,915,000 in annual sales (Ulmer, et al., 2005). Using IMPLAN Type III multipliers Ulmer found the total economic impact of these firms. The total direct, indirect and induced effects were 21,960 full-time jobs and \$2,129,654,871 in sales. Currently this is the only known economic impact study of a value-added agriculture research and technology center.

Another study completed in 2000 estimated the economic impact of agriculture on the state of Oklahoma (Piewthongngam, et al., 2000). This study found that all the agricultural processing in the state had a direct economic impact of 39,609 jobs and \$1,721,000,000 in sales. The total economic impact of agricultural processing on the state was estimated at 73,688 jobs and a gross state product of \$3,384,482,000. Therefore, it can be calculated that about 23% of agricultural processing jobs and about 42% of agricultural processing sales can be related to assistance from the FAPC.

Contingent Valuation

Another technique to estimate value is to find how much people value a service or product that is not typically traded in a market, this method is known as contingent valuation. Contingent valuation is a “survey-based methodology for eliciting values people place on goods, services, and amenities” (Champ, et al., 2003). It is important to recognize when asking a person’s willingness to pay that it is impossible to observe revealed willingness to pay since the product is not traded in the real market, instead the data potentially available to the researcher is the individual’s stated willingness to pay (Mitchell and Carson, 1989). However, there are some researchers who have been working to find an elicitation method that will accurately reflect a person’s true willingness to pay such as experimental auctions (Lusk and Hudson, 2004).

There are many different methods to find what a person is willing to pay for a good. These methods include dichotomous choice questions, open-ended questions, payment card questions, choice based conjoint analysis and experimental auctions (Champ, et al., 2003; Lusk and Hudson, 2004).

Dichotomous choice is the most commonly used method of determining willingness-to-pay (Champ, et al., 2003). In dichotomous choice questions, “consumers are typically confronted with the price of a new product and are asked whether they would buy the new product (YES or NO) at the stated price” (Lusk and Hudson, 2004). There are different ways of using this method; you can use single-bounded, double-bounded or multiple-bounded questions. Double-bounded and multiple-bounded questions ask one question and if the individual responds YES to the price, then the

second question will be the same as the first but with a higher price and vice versa for a response of NO to the original question. As can be assumed, the double-bounded asks only two questions and the multiple-bounded asks more follow-up questions to narrow down the respondent's willingness-to-pay. The desirable properties of dichotomous choice is that there is a single bid amount to respond to, and therefore respondents cannot purposely misstate their values by choosing a very high or low dollar value (Champ, et al., 2003). Some potential problems with this method is that a person could yea-say (voting as a good citizen) and also the investigator only knows that the respondents value lies in the interval between the given dollar amount and infinity (Champ, et al., 2003). A multiple-bounded question can reduce this interval between two known prices, but you then have the problem of anchoring which is the tendency of an individual to "anchor" their willingness-to-pay amount near the original price asked (Champ, et al., 2003).

An open-ended contingent valuation question is a way to have the respondent indicate his or her exact value for a good. An open-ended question would ask the respondent to write in the highest dollar amount they would be willing to pay for described good and certain amount of that good (Champ, et al., 2003). This method provides the most efficient estimates because the investigator has exact values and not intervals. However, open-ended questions yield unusually high percentage of \$0 responses because people find it difficult coming up with a specific dollar amount for an unfamiliar good (Champ, et al., 2003).

The payment card method uses a question much like the open-ended method, except for that it asks the respondent to circle the highest amount they would be willing to pay from a list of several different possible payments (Champ, et al., 2003). The

empirical results from the payment card are similar to the multiple-bounded dichotomous choice in that it has a narrow interval (Champ, et al., 2003). Also, “payment cards appear to avoid anchoring because there is no one bid amount to anchor on; respondents see all k bids and must circle just one of these bids” (Champ, et al., 2003).

In a choice-based conjoint analysis, “consumers are typically confronted with a choice between alternative products, defined by several attributes, such as price and quality” (Lusk and Hudson, 2004). An example of this would be if a person was asked to “choose between three orange juice options, where each differs by brand, price, and sweetness” and then each attribute (price and sweetness) is varied at several levels (Lusk and Hudson, 2004). This method allows the question to mimic a consumers’ shopping experience, and it can allow the researcher to investigate the trade-offs between several product attributes (Lusk and Hudson, 2004).

Experimental auctions allow the experiment to be realistic instead of hypothetical. There are several different ways of conducting an experimental auction. One auction method is “consumers can be provided with an endowed good (typically a pre-existing substitute) and then are asked to bid to exchange their endowed good for a novel good” (Lusk and Hudson, 2004). Another method is “consumers can bid directly on several competing goods and a random drawing can be used to determine which good is binding so that demand for a single unit can be elicited” (Lusk and Hudson, 2004).

There have been findings of previous research that the method an investigator uses can significantly influence the estimates of mean and median willingness-to-pay in contingent valuation studies with dichotomous-choice questions often yielding estimates greater than those of open-ended and payment-card questions (Welsh and Poe, 1998).

Champ et al. (2003) mentions that the exact reason for this difference is unknown, but the high proportion of \$0 responses to open-ended questions and anchoring on the bid amounts and yea-saying in dichotomous choice questions are both likely to contribute to this disparity.

There have been two studies completed that used contingent valuation to find the value of extension and research programs of land-grant universities. One study looked at the total willingness-to-pay of the residents of North Carolina on the research and extension programs conducted by North Carolina State University (Whitehead, et al., 2001). This study found that the total annual value of their food production research and extension programs in North Carolina range from \$218 to \$401 million. The other study completed was to value the agricultural economics extension programming in Ohio (Roe, et al., 2004). In this study they realized that asking people who attend extension programs what the maximum they would be willing-to-pay might cause the attendees to become upset that the cost of extension programs was going to vastly increase. Therefore, they did not include extremely high bids in the dichotomous choice question. Their findings showed that the median willingness-to-pay for an agricultural economics extension program was \$77.36.

Survey Design

Rea and Parker explain that it is important for a survey to be made as short as possible, but still cover all the necessary information required to complete the study. “The researcher must be careful to resist the temptation of developing questions that may be interesting but are peripheral or extraneous to the primary focus of the research

project” (Rea and Parker, 2005). Telephone surveys historically have a higher response rate than other elicitation types. Rea and Parker also mention that a telephone survey should be kept under 20 minutes in length, and preferably 10-12 minutes long. Also, in a telephone survey, the number of possible responses for a question should be kept to a maximum of six so that the respondent can remember and choose among the responses as they are read aloud. In creating a survey, it is also very important to test the survey instrument to make sure that the respondents can understand what it is asking for. “Pre-testing is the survey equivalent of the test flight. Just as no plane manufacturer would go into production without rigorously testing its latest design, so no survey writer would assume that a questionnaire on a new topic – especially if the questionnaire is complex – could be sent directly to the field without careful tryouts under field like conditions” (Mitchell and Carson, 1989).

There are some aspects that are unique to contingent valuation surveys. “The principal challenge facing the designer of a contingent valuation study is to make the scenario sufficiently understandable, plausible, and meaningful to respondents so that they can and will give valid and reliable values despite their lack of experience with one or more of the scenario’s dimensions” (Mitchell and Carson, 1989). Also, since a respondent to a contingent valuation survey could easily overvalue, undervalue or state they have no value for a good it is important to have follow-up questions to identify if they truly hold the value that they stated or possibly did not understand the question (Champ, et al., 2003). Mitchell and Carson point out that in typical surveys item non-response rates exceeding five to seven percent is rare, although in a contingent valuation survey item non-response rates of 20 to 30 percent for willingness-to-pay questions is

common. Non-response for willingness-to-pay elicitation questions is more likely when the sample is completely random, the scenario is complex and the object being valued is something people are not accustomed to valuing in dollars. However, it is more favorable for a person to say they do not know how much they would value something than for a person to give an unconsidered guess.

Similar Previous Research

Texas A&M University's Texas Cooperative Extension has been doing a series of economic impact studies on certain programs they have provided (McCorkle, et al., 2006). All of these studies have shown that the extension programs have had large positive effects on the incomes of the residents of the state of Texas and on the gross state product of Texas. An example of one study showed that the extension service helped Angora goat producers find a new production practice because a loss of mohair price support made the Angora goats no longer profitable. The mohair cash receipts decreased by \$27.75 million in ten years and the extension service helped those farmers learn the business of meat goat production which increased the meat goat numbers in Texas by over 500,000 head and produced \$43.95 million in receipts (McCorkle, et al., 2006).

Looking at client satisfaction would also be a valuable tool in the survey, not only for helping the FAPC improve its services but because it is related to the amount a person would value a service. Another study about the FAPC was completed in 1999 to measure customer satisfaction of the clients of the FAPC (Bond, 2001). The amount that the customers are satisfied with the services provided by the FAPC will affect how much

they value those services. The study comes up with six conclusions through the use of 50 client interviews:

- “1. The Center is satisfying the majority of its customers; however, improvement is needed in certain areas of its services before a higher percentage of its customers will be satisfied.
2. Dissatisfaction was a result of the quality of interaction customers’ received; therefore, procedural changes would help to increase satisfaction.
3. The Center is effective in completing customer projects.
4. The Center is meeting its goal in making an impact on the value-added products industry in Oklahoma.
5. There is a direct relationship between the overall effectiveness of the Center and its customer being satisfied.
6. The Center’s services have not been clearly communicated; therefore, Center faculty and Center customers have divergent expectations.” (Bond, 2001)

Summary

The total economic impact of a firm in a local economy can be found by multiplying the firm’s total sales, employment and payroll by an economic multiplier. The total economic impact is measured in terms of direct, indirect and induced effects.

The value a person has for a good or service is measured by estimating their willingness-to-pay. Contingent valuation surveys are used to find this value, and the most commonly used form of contingent valuation questions is the dichotomous choice question.

Telephone surveys are an effective way to gather information to complete a contingent valuation study. It is important to keep the total length of the survey short as possible and make sure that all the questions can be easily understood by the respondent. It is also not uncommon to have item non-response percentages much higher in questions that ask a person to value something that they have never priced before.

Conceptual Framework and Contentions

Export base theory is the foundation of economic impact studies because it “provides a general framework for understanding a local economy and assessing the total impacts of specific local changes in economic activity” (Mulkey and Hodges, 2003). The theory is based on that a region’s economy has two different kinds of industries, basic and non-basic. Basic industries are those that export a large amount of their products outside of the local region while non-basic industries are typically your services that support the basic industries and provide for households (Holland, et al., 1997). The basic industries bring in revenue from sources outside the local region and distribute that money among two local groups: (1) the non-basic industries for supplies and services provided to the basic industry and (2) to the households who provide the labor for the basic industry. The households can then use their income to buy goods and services from other non-basic industries. The more jobs and spending created in a local economy causes a ripple effect that creates more other jobs and spending to be generated in other industries. This cycle of interdependence of industries in an economy is the total economic impact which can be quantified in a multiplier.

To determine the total impact of a change of the businesses in a specified region, three different effects must be calculated. The three effects are direct, indirect and induced. The direct impact is the exact change in activities of the impacting industry (Doeksen, et al., 1997). This direct impact causes the change in purchases from the supporting businesses, which is the indirect impact (Doeksen, et al., 1997). Both of these direct and indirect changes affect the household's revenue from employment of labor. The induced impact is the measure of the change of household consumption due to this change in income (Doeksen, et al., 1997). These three effects are calculated with IMPLAN, and it then generates economic impact multipliers to show the total changes in employment, output and labor income. For example, an employment impact multiplier of 1.5 would mean that for every one new job created in an industry in a specified region will cause fractions of jobs to be created in all the other industries in the region that would add to a combined total of one and a half new direct, indirect and induced jobs.

The above will tell us the total economic impact of the firms that have been clients of the FAPC. But how does one find the economic impact of the FAPC itself since it does not sell its services to its clients and therefore does not have a quantifiable output? Non-market valuation is a technique to find the value that people place on a good or service that is not sold in an open market (Champ, et al., 2003; Lusk and Hudson, 2004). If a business or individual has an amount they would be willing to pay for services provided by the FAPC but did not pay since it was a public good, then that would be an unrealized economic impact.

The concept of using a willingness-to-pay function is based on consumer theory which is the assumption that a person will always want to maximize their utility. Every

person has a number of goods (market or non-market) that they must choose from to maximize their utility, and they value each good differently based on their tastes and preferences. Each person also has a certain amount of income they can spend which is a limiting factor on the level of utility they can attain. Therefore, it is assumed they will always maximize their utility based on their income and their tastes and preferences. For a particular FAPC service, the value placed on the service would be a function of their income effect from their change in revenue associated with the service and other factors that could affect their tastes and preferences, such as: how much they valued the service compared to their personal time and expenses spent on the service, whether they were an existing or start-up business, how long ago they made use of the FAPC's services and whether or not they decided to continue with the business idea.

Two contentions will be tested in this study. The first contention is that the total economic impact of the change the clients attribute to the FAPC's assistance will be higher than the total building and operating costs of the center. The second contention which is being tested by the contingent valuation study is that the mean value of the services provided by the FAPC will be higher than the actual cost that the clients pay for those services.

Methods and Procedures

Telephone Survey

The Bureau for Social Research at Oklahoma State University was hired to conduct a telephone survey, which was completed between January 10 and February 7, 2007. The survey qualifies as non-human subject research under the Oklahoma State

University Institutional Review Board rules since no identifying or personal information is collected from the respondents, and therefore does not require approval by the board. A copy of the Institutional Review Board Clearance can be found in Appendix A and a copy of the survey can be found in Appendix B.

A week prior to starting the survey, a postcard was mailed to all respondents to inform them that they would be contacted to complete the survey. Dillman (1978) recommends that an advance letter be sent to telephone survey respondents so that they can expect a phone call and know that it is a legitimate survey, and therefore helps increase the survey response rate. The survey was presented to a representative group of professionals in the food and fiber processing industries that were attending a meeting at the FAPC to critique the survey and provide feedback prior to commencing the survey.

The study population included all former and current clients of the FAPC for whom valid telephone numbers were known. From this population there are 632 home telephone numbers and 266 business telephone numbers, for a total of 898 possible respondents. The business telephone numbers are more likely to be of large companies and were contacted during normal work hours, while the home telephone numbers were contacted during evening hours.

All phone numbers were called randomly, and if the respondent was not able to be contacted on the first phone call then the number was called again up to fifteen times throughout the four weeks that the survey was conducted until the respondent was contacted. All contacts were assured that their answers would be kept confidential to encourage them to respond to the survey with truthful responses. The data provided to

the researcher from the Bureau for Social Research includes no identifying information so that it is completely confidential.

Economic Impact Analysis

The respondents were classified based on the product with which the FAPC assisted them into the appropriate four digit NAICS industry code. The NAICS codes relevant to the study are numbers 3111 – Animal Food Manufacturing, 3112 – Grain and Oilseed Milling, 3113 – Sugar and Confectionery Product Manufacturing, 3114 – Fruit and Vegetable Preserving and Specialty Food Manufacturing, 3115 – Dairy Product Manufacturing, 3116 – Animal Slaughtering and Processing, 3118 – Bakeries and Tortilla Manufacturing, 3119 – Other Food Manufacturing and 3121 – Beverage Manufacturing. The respondents were asked what their annual sales, full-time employment, part-time employment and payroll were for 2006, and if they were in business prior to receiving help from the FAPC they were asked for the numbers they had for the same categories from before they contacted the FAPC. Then they were also asked to estimate what percentage of their business growth or loss they would associate with the assistance they received from the FAPC. This is so that a businesses growth or loss can be classified as the economic impact caused by the center. For the businesses that were not in operation before coming to the FAPC for assistance, it is assumed that they would not be producing their product without the FAPC's help and therefore 100% of their employment, payroll and sales were attributed to the assistance from the FAPC.

After organizing the responses by industry, an input-output model is used to find the economic impact multipliers to use for each industry. Impact Analysis for Planning

(IMPLAN) is a software program that generates economic impact multipliers for specified regions. To generate an economic impact multiplier, the program uses the equation:

$$\text{Multiplier} = (\text{direct} + \text{indirect} + \text{induced}) / \text{direct}$$

The direct effect is the dollar amount of change of the impacting business helped by the FAPC, indirect effects are the dollar amount of changes in supporting industries caused by the purchases of the impacting industry and the induced effects are the dollar amount of change caused by the households making purchases with the change in income caused by the direct and indirect effects. When calculating an employment multiplier the units of the effects are in number of full-time equivalent jobs and not dollars. For the survey responses that were unable to be categorized into one of the above industries due to bad or refused responses to the product question, the average of all the multipliers of the food and fiber manufacturing industries was used as in the study by Zimmerschied (2003).

The IMPLAN data used for this analysis is the statewide data for Oklahoma of the year 2004, which is the latest data currently available. The IMPLAN industry sectors for food and fiber manufacturing that are relevant to Oklahoma are industry numbers 46 through 88. All of the IMPLAN industries were aggregated in groups to match the four digit NAICS codes that the survey responses were organized into, and then the input-output analysis was conducted to find the economic impact multipliers.

After finding the impact multipliers from the input-output analysis, the multipliers are multiplied to the total direct impacts found from the survey to calculate the total economic impact on the state of Oklahoma of all the firms assisted by the FAPC. Also, the economic impact caused by the FAPC is calculated from the amount of change

attributed to the center multiplied by the multipliers. To account for the businesses that were not able to be contacted, refused to answer or did not know all or part of their employment, payroll and sales data an average (minus the extreme outlying data points) of the responses was used.

Contingent Valuation Analysis

The economic impact study shows the value of the firms assisted by the FAPC, but to determine the economic impact or value of the center itself, a dichotomous choice contingent valuation question was used. Four completely different services provided by the FAPC were chosen to be valued in the survey. These services are the Entrepreneurial Workshop (also known as Basic Training), laboratory services, technical assistance provided at the clients business location (on-site) and technical assistance provided at the FAPC.

To determine if the respondent had used any of the above services, screening questions were used after the particular service was described. If respondents had used the service then they continued with the contingent valuation and other questions related to that service, and if they have not used the service they would skip ahead to the next section of the survey.

As was mentioned by the study done by Roe, et al. (2004), asking people to estimate the maximum they would be willing to pay for a publicly funded service that was previously provided at no cost could cause them to be upset from thinking that they were now going to be charged, and therefore they could either understate or not answer a contingent valuation question. To prevent harming the relationship between the clients

and the FAPC and to prevent nay-saying responses (which would be a no response because they believe the FAPC will start charging for services) to the contingent valuation questions, each time before such a question was asked the respondent was assured that their responses would not affect the cost of the services. Also, as recommended by Champ, et al. (2003), to determine if one was yea-saying (which is the tendency of a respondent to answer yes to any bid presented regardless of their true values) to the dichotomous choice question, an additional question was used to find if the time and expenses they personally invested in the service was valued higher or lower than the value they perceived from the service. An example of such a question is:

“Which of the following would you say best describes the value of the information you learned from the Basic Training workshop compared to the time and expenses you invested in attending the workshop?

1. The information was far more valuable than the time and expenses I invested in the program.
2. The information was slightly more valuable than the time and expenses I invested in the program.
3. The information was about the same value as the time and expenses I invested in the program.
4. The information was less valuable than the time and expenses I invested in the program.
5. The information was not valuable to me.
8. Don't know
9. Prefer not to answer”

In the dichotomous choice question for each service except the basic training workshop, dollar amounts used ranged from \$0 to \$1,500 per day the service was used in increments of \$25 and were randomly chosen. The only difference for the basic training workshop was that the range was lower, from \$0 to \$1,000 for the one day workshop. These dollar ranges were chosen by the professionals who work at the FAPC, have worked closely with the respondents and have an idea of how valuable the services may be. Each respondent was asked only one dichotomous choice question per service being valued.

A logit model is used to determine the value the clients place on the different services. The model can be explained as:

$$pr(wtp = 1) = e^Z / (1 + e^Z)$$

The WTP equals one if the respondent answers yes to the dollar amount given in the willingness to pay question and will equal a zero if they respondent answers no. The variable Z represents the dollar value the respondent is asked to accept or reject and the different attributes that are thought to be related to and affecting the value one would have on the service such as the change in revenue, how much they valued the service compared to the time and expenses spent on the service, how long it has been since they received help from the FAPC and whether they were a start-up business or an existing business.

CHAPTER III

SURVEY RESULTS AND ECONOMIC IMPACTS

Introduction

The findings of this study are divided into two sections. The first section is general statistics from the survey data for specific questions and the second section is the economic impact on the state of Oklahoma of the firms assisted by the FAPC.

General Statistics of Responses

A number of survey questions were used to understand the demographics of the respondents, determine if they should complete a section of a survey, find how satisfied the clients are with different FAPC services and find if there are some things the FAPC staff should change to better serve the people of Oklahoma. In addition, some questions looked into why some value-added firms are not in business which was suggested for further research by Zimmerschied (2003). The findings of these questions are shown in this section. The complete survey can be found in Appendix B.

Response Rate

The Bureau for Social Research was provided with a list of all phone numbers from the FAPC's client database which came to a total of 898 non-duplicate potential

respondents. Only 343 surveys were completed (including partial completions) accounting for 38.20% of the population. A total of 325 telephone numbers were eliminated from the sample as a non-eligible respondent or non-reachable due to an incorrect number, no telephone, no working telephone number, refusal to take the survey or the respondent was deceased. A response rate is calculated using the equation explained by Dillman (1978):

$$\text{Response Rate} = \frac{\text{Number Returned}}{\text{Number in Sample} - (\text{Non-eligible} + \text{Non-reachable})} \times 100$$

Using this equation, the response rate of the survey is 59.86%, which is a decline in the response rate of 80% from the survey completed five years prior by Zimmerschied (2003). That previous survey had a total of 246 completed surveys.

Assistance Received from the FAPC

The first question was to determine if the respondent had received assistance from the FAPC. Since all phone numbers were from the client database, all respondents should have said “yes” to this question. Any “no” responses are probably due to the person forgetting that they have been helped by the center (which would be possible since the assistance could have been received up to ten years ago) or the person who took the phone call was not the person who went to FAPC for assistance. For this question, 285 or 83% said that they did receive assistance from the FAPC, 55 respondents or 16% stated that they did not receive assistance from the FAPC and three respondents did not know (Table 1).

Table 1. Distribution of Contacts Receiving Assistance

Response	Frequency (N=343)	Percentage (%)
Received assistance	285	83.09
Not received assistance	55	16.03
Don't know	3	0.87
No answer	0	0.00
Total	343	100.00

To understand how long ago the respondents had visited the FAPC, they were asked for the time frame in which that they had received assistance from the FAPC.

Table 2 shows that the largest percent of respondents had received assistance one to three years ago, and the second largest group was within the last year. This response is very similar to Zimmerschied's study where most of the responses in that survey were within the last year to two years prior to the survey (2003). Probably the reason for the most current time frames having more responses for both surveys is that those respondents would be more likely to remember and their contact information would be the most up to date and that many of the earlier assisted businesses may not be operating anymore. There were sixteen responses, or 7.17%, that indicated they received assistance five or more years ago. These respondents probably would have been included in the study by Zimmerschied.

Table 2. Distribution of When Received Assistance

Response	Frequency (N=223)	Percentage (%)
Currently	24	10.76
Within the last year	51	22.87
1-3 years ago	86	38.57
3-5 years ago	43	19.28
5+ years ago	16	7.17
Don't know	3	1.35
No answer	0	0.00
Total	223	100

Of the 285 respondents who said they had received assistance from the FAPC, 42.81% are currently operating a business in Oklahoma, as is shown in Table 3. Since this study is to determine the economic impact on the state of Oklahoma, the businesses that are operating outside of the state will not be included in the economic impact part of this research.

Table 3. Distribution of Respondents Operating a Business in Oklahoma

Response	Frequency (N=285)	Percentage (%)
Currently operating a business	122	42.81
Not operating a business	163	57.19
No answer	0	0.00
Total	285	100

Zimmerschied (2003), mentioned that future research on this topic should look into why firms may not be in operation. To accomplish this, the respondents that answered the previous question as not operating a business were asked to identify why they are not in operation. A multiple choice question was used to cover what was thought would be the most common responses, which are shown in Table 4. There were 60, or 36.81% of the responses that did not start the business. Some of the probable

reasons for this response are they decided it required too much time and effort to get into the very difficult food processing industry and competitive food markets, or they may have found that they did not have enough funds to start a business. There were 35 respondents who are still creating their business, 6 who are no longer in operation, and 62 who responded with “other.” If the person responded with “other” they were then asked to explain why, and these responses can be found in Appendix C. The most common answers of the “other” responses were: 22 operating a business outside the state of Oklahoma and 8 were Extension Educators, OSU students and staff who attended a workshop to learn about the FAPC’s services. The rest were mainly those who had only attended a workshop, had sold the business, suffered from a lack of funds or a lack of time, had health issues which kept them from starting the business, retired or had some other reasons.

Table 4. Why Respondents are Not Operating a Business

Response	Frequency (N=163)	Percentage (%)
No longer in operation	6	3.68
Did not start	60	36.81
Still creating the business	35	21.47
Other	62	38.04
Don't know	0	0.00
No answer	0	0.00
Total	163	100

Use of a Co-packer

A co-packer is a manufacturer that produces goods for another business. If a small business does not have the facilities and equipment for large scale production, they can contract with a co-packer to produce the product and place the smaller firms label on

the product. The larger firm can be more efficient in production creating a lower cost of production, saving the smaller firm the time and capital required to establish production facilities and meet state and federal plant regulations. Table 5 shows the distribution of the firms using a co-packer. Only 27 firms, or 22.13% of the firms who answered this question, said they use the services of a co-packer.

Table 5. Distribution of Co-packers Utilized by the Firms

Response	Frequency (N=122)	Percentage (%)
Use a co-packer	27	22.13
Not using a co-packer	95	77.87
Don't know	0	0.00
No answer	0	0.00
Total	122	100

Of the 27 firms who do use a co-packer, the majority (66.67%) uses a co-packer in Oklahoma and therefore would be keeping the economic impact of those processing jobs within the state and providing work for the Oklahoma co-packing businesses (Table 6). Although the number of firms using a co-packer over the past five years has declined, the number using a co-packer in the state of Oklahoma is the same.

Table 6. Location of the Co-packers Utilized by the Firms

Location of Co-packer	Frequency (N=27)	Percentage (%)
In Oklahoma	18	66.67
Outside of Oklahoma	8	29.63
Don't know	1	3.70
No answer	0	0.00
Total	27	100.00

Business Structure

Each respondent was asked to identify how his or her business is structured. An unexpected large percent of the responses were “other” (24.92%), “don’t know” (7.89%) and “no answer” (7.26%). The total number of these responses is 127, and after more investigation it was found that 102 of them were not operating a business. As is shown in Table 7, when ignoring the “other,” “don’t know,” and “no answer” responses the largest percentage of the firms that use the FAPC’s services are sole proprietors, with limited liability companies being the second largest group, corporations being the third largest group, partnerships being fourth and cooperatives was the smallest group with only four responses. This would show that the largest number of respondents were more likely from a small business.

Table 7. Distribution of Business Structures

Response	Frequency (N=317)	Percentage (%)
Sole Proprietor	64	20.19
Partnership	22	6.94
Limited Liability Company	53	16.72
Cooperative	4	1.26
Corporation	47	14.83
Other	79	24.92
Don't know	25	7.89
No answer	23	7.26
Total	317	100.00

Position Title

To better understand the respondents to the survey, they were asked what position they held in their business. The largest number of respondents was owners, with 35.65% of the responses (Table 8). For the “other” category they were asked to specify their title. In the “other” responses, 38 had no title or had not yet formed their business; 16 were

presidents, vice presidents, partner or chief executive officer; 10 were involved in quality assurance, food safety or HACCP; four were involved in marketing or sales; and the remaining responses were various supervisors, coordinators, or managers. The list of “other” responses can be found in Appendix D.

Table 8. Distribution of Respondent’s Position Title

Response	Frequency (N=317)	Percentage (%)
Owner	113	35.65
Manager	26	8.20
Other	100	31.55
Don't know	53	16.72
No answer	25	7.89
Total	317	100.00

Demographics

The gender of the respondents was 159 female respondents and 158 male respondents (Table 9). When asked for age range, it was found that the largest groups of respondents were from the baby boom generation with 35% and 26% of the responses coming from the 50-59 and 40-49 year old groups, respectively (Table 10). Additionally, three of the four respondents who did not answer their age were female. The survey respondents were also well educated with the largest group having a bachelor degree (40.69%), and 91.79% having some education beyond a high school diploma (Table 11).

Table 9. Gender of Respondents

Response	Frequency (N=317)	Percentage (%)
Male	158	49.84
Female	159	50.16
No answer	0	0.00
Total	317	100.00

Table 10. Age Ranges of Respondents

Response (Years)	Frequency (N=317)	Percentage (%)
18-29	26	8.20
30-39	51	16.09
40-49	81	25.55
50-59	110	34.70
60-69	36	11.36
70-79	7	2.21
80+	2	0.63
No answer	4	1.26
Total	317	100.00

Table 11. Education Level of Respondents

Response	Frequency (N=317)	Percentage (%)
Less than high school	0	0
Some high school	3	0.95
High school diploma or GED	23	7.26
Some college or technical school	69	21.77
Associate degree	21	6.62
Bachelor degree	129	40.69
Master degree	58	18.30
Doctorate degree	12	3.79
No answer	2	0.63
Total	317	100.00

Respondent Suggestions for the FAPC

The final question of the survey asked if the respondents had any suggestions for the FAPC that would make the services more helpful for the clients. Most of the respondents did not have any suggestions for the FAPC and thought that it covered their needs. Some of the more common suggestions were to advertise more about the services and workshops provided, and to educate and provide information to the county extension staff for them to help spread the word about the FAPC's services. They also suggested

providing more workshops and having those workshops at different locations throughout the state. A complete list of the responses to this question can be found in Appendix E.

Economic Impact of the Firms

To determine the economic impact of a firm on the state of Oklahoma, each firm must first be identified by its industry segment. An open-ended question was used to ask which product that the FAPC assisted them with that brought the most revenue. The responses to this question can be found in Appendix F. These responses were used to classify each firm into a four digit NAICS code, and the distribution of the industries is shown in Table 12. The “unclassified/other” category consists of firms who do operate a food or fiber business, but their industry is unknown due to their response not being classifiable. The “ineligible” category is respondents who do not operate a food or fiber business and/or do not have any economic impact relevant to this study and therefore were excluded from the study. An example of an irrelevant respondent is the inspector who does not have a food or fiber manufacturing business.

Table 12. Distribution of Firms by Industry

Industry	Frequency (N=223)	Percentage (%)
Animal food manufacturing	1	0.45
Grain and oilseed milling	2	0.90
Sugar and confectionery product manufacturing	3	1.35
Fruit and vegetable preserving and specialty	18	8.07
Dairy product manufacturing	2	0.90
Animal slaughtering and processing	24	10.76
Bakeries and tortilla manufacturing	5	2.24
Other food manufacturing	18	8.07
Beverage manufacturing	6	2.69
Unclassified/other	42	18.83
Ineligible	102	45.74
Total	223	100.00

Employment

The number of current full-time and part-time employees of the firms was obtained from the survey. A full-time employee is a person who works at least 40 hours per week, and a part-time employee is anyone who works less than 40 hours per week. There were three respondents who did not know or refused to answer the number of full-time employees. The figures in Table 13 show that the majority of the firms are small with 75% of the firms having less than 8 employees.

Table 13. Number of Current Full-Time Employees

		Current Full-Time Employees (N=119)
Total		8,702
Mean		73
Median		2
Mode		0
Minimum		0
Maximum		4,000
Quartile Percentages	25	1 or fewer
	50	2 or fewer
	75	7.5 or fewer

There were five firms who did not know or did not respond to the question asking for the number of part-time employees. With the quartile percentages being low and the median and mode being 0, this shows that the majority of the respondents do not hire very many part-time employees if any at all.

Table 14. Number of Current Part-Time Employees

Current Part-Time Employees (N=117)		
Total		325
Mean		3
Median		0
Mode		0
Minimum		0
Maximum		50
Quartile Percentages	25	0
	50	1 or fewer
	75	2 or fewer

Annual Payroll

The survey asked for the firms' total annual payroll for 2006, and the results of this question are listed in Table 15. There were a large number of respondents who did not know their total payroll, but this was very similar to the previous research. The total annual payroll is \$7,591,199 (Table 15). This low total payroll is because respondents of some of the larger firms did not know their company's payroll, including the top two companies with the largest employments of 4,000 and 2,000 full time employees. Together these two companies account for 68.9% of the full time employment in the survey.

Table 15. Total Amount of Annual Payroll to Current Employees

Annual Payroll for 2006 (N=68)		
Total		\$7,591,199.00
Mean		\$111,635.28
Median		\$2,750.00
Mode		\$0
Minimum		\$0
Maximum		\$4,500,000.00
Quartile Percentages	25	\$0
	50	\$2,750.00 or less
	75	\$65,000.00 or less

Annual Sales

The total annual sales figures from all the firms were also collected for 2006, which is shown in Table 16. There were 42 respondents who did not know their sales or did not want to answer the question. The largest reported sales figure was \$750 million, while the lowest and most common response was \$0 in sales.

Table 16. Total Annual Sales

Annual Sales for 2006 (N=80)		
Total		\$1,949,016,382.00
Mean		\$24,362,704.78
Median		\$30,000.00
Mode		\$0
Minimum		\$0
Maximum		\$750,000,000.00
Quartile Percentages	25	\$4,053.25 or less
	50	\$30,000.00 or less
	75	\$350,000.00 or less

Business Operation Prior to FAPC Assistance

A question in the survey asked if their firm was in business prior to receiving assistance from the FAPC. Of the firms that received assistance from the FAPC, 42.15% were already in business prior to contacting the FAPC and 55.61% of the firms were start-up businesses. A start-up business is one that was not in business prior to contacting the FAPC and the center helped in the creation of the business. This question differed some from the study completed by Zimmerschied. She asked if the firm was in operation five years ago, which would have shown which firms were in business prior to getting assistance from the center since at the time the center was only five years old. The reason why the question was changed for this survey is because a business could have started up in the past ten years and not have received assistance from the FAPC prior to the commencement of operations.

Table 17. Distribution of whether Firms were an Existing or Start-up Business

Response	Frequency (N=223)	Percentage (%)
Existing business	94	42.15
Start-up business	124	55.61
Don't know	4	1.79
No answer	1	0.45
Total	223	100

Change in Employment

Of the 94 firms that were in operation prior to receiving assistance from the FAPC, 82 provided full-time employment data for both their current employment and the employment they had prior to receiving assistance from the FAPC. Table 18 shows that

these firms had an increase of 176 full-time employees from prior to FAPC’s assistance to their present employment, which is a 2.1% growth.

Table 18. Change in Full-Time Employment of Pre-Existing Firms

	Full-Time Employees	
	Prior to FAPC Assistance (N=82)	Full-Time Employees Currently (N=82)
Total	8384	8560
Mean	102	104
Median	2	2
Mode	0	2
Minimum	0	0
Maximum	4000	4000
Quartile Percentages	25	0 or fewer
	50	2 or fewer
	75	11.5 or fewer
		1 or fewer
		2 or fewer
		9.75 or fewer

The number of part-time employees also increased from prior to FAPC assistance to their current levels. The 81 firms who provided this data had a total increase of 4 part-time employees, which is a 1.5% increase. The majority of the respondents currently does not and never did have any part-time employees.

Table 19. Change in Part-Time Employment of Pre-Existing Firms

	Part-Time Employees	
	Prior to FAPC Assistance (N=81)	Part-Time Employees Currently (N=81)
Total	259	263
Mean	3	3
Median	0	0
Mode	0	0
Minimum	0	0
Maximum	50	50
Quartile Percentages	25	0
	50	0
	75	2 or fewer
		2 or fewer

Change in Payroll

Only 43 respondents knew their firm's payroll for years prior to FAPC assistance and for the year of 2006. These respondents indicated they had a 4.73% increase in payroll equal to \$328,500, as can be calculated from Table 20. Due to a low number of respondents who know their firm's change in payroll, these figures are probably not a good representation of the entire population of the pre-existing firms.

Table 20. Change in Annual Payroll of Pre-Existing Firms

		Annual Payroll Prior to FAPC Assistance (N=43)	Annual Payroll for 2006 (N=43)
Total		\$6,945,500	\$7,274,000
Mean		\$161,523	\$169,163
Median		\$3,000	\$14,000
Mode		\$0	\$0
Minimum		\$0	\$0
Maximum		\$4,500,000	\$4,500,000
Quartile Percentages	25	\$0	\$0
	50	\$3,000 or less	\$14,000 or less
	75	\$92,500 or less	\$95,000 or less

Change in Sales

There was a 16.95% increase in the total annual sales from prior to receiving assistance from the FAPC to 2006 for the 47 firms who responded to both questions (Table 21). Again, due to a low number of respondents who provided their change in sales, these figures may not be a good representation of the entire population of the pre-existing firms.

Table 21. Change in Annual Sales of Pre-Existing Firms

		Annual Sales Prior to FAPC Assistance (N=47)	Annual Sales for 2006 (N=47)
Total		\$1,280,056,600	\$1,496,997,713
Mean		\$27,235,246	\$31,851,015
Median		\$45,000	\$100,000
Mode		\$0	\$30,000
Minimum		\$0	\$0
Maximum		\$600,000,000	\$750,000,000
Quartile Percentages	25	\$6,000 or less	\$15,000 or less
	50	\$45,000 or less	\$100,000 or less
	75	\$650,000 or less	\$900,000 or less

Employment, Payroll and Sales of Start-Up Firms

There were 33 start-up firms who responded to the survey. A summary of these firms is in Table 22. Not every respondent responded to part-time employment, payroll, and sales, and therefore these figures will low. Start-up firms are typically very small businesses and will not have a large impact on the state until they have had a chance to grow for several years. Also, a start-up firm would be more likely to hire a co-packer to produce their product and therefore would not have many employees directly hired by their business. The averages of these firms are 3 full-time employees, 1 part-time employee, nearly \$13,000 in annual payroll and about \$40,000 in annual sales.

Table 22. Employment, Payroll and Sales of Start-Up Firms

		Full-Time Employment (N=33)	Part-Time Employment (N=32)	2006 Payroll (N=22)	2006 Sales (N=24)
Total		84	41	\$284,700	\$965,470
Mean		3	1	\$12,941	\$40,228
Median		2	0.5	\$0	\$5,250
Mode		0	0	\$0	\$0
Minimum		0	0	\$0	\$0
Maximum		20	6	\$154,000	\$300,000
Quartile Percentages	25	0	0	\$0	\$0
	50	2	0.5	\$0	\$5,250
	75	3	2	\$5,375	\$27,750

IMPLAN Multipliers

The economic impact on the state of Oklahoma by these firms who have been assisted by the FAPC is calculated by using the employment (Tables 13 and 14), payroll (Table 15) and sales (Table 16) listed above and multiplying those figures by economic impact multipliers which are listed in Table 23. The multipliers were generated from IMPLAN, a computer software program. The regional database used in IMPLAN was the entire state of Oklahoma for the year of 2004, which was the latest year of data available for the program. All of the industries in the IMPLAN database were aggregated together by their four digit NAICS code to produce multipliers that match the industries in this study that were combined into their respective four digit NAICS codes. The Type III multipliers for employment, labor income and output used in this study are listed in Table 23. A Type III multiplier is a multiplier that includes all three economic effects: direct, indirect and induced. For the firms that were categorized as “unclassified/other,” an average of all the food and fiber manufacturing multipliers was used, consistent with

Zimmerschied's study (2003). Economic impact multipliers show the total amount of change caused by a change in the local economy, and in this study the local economy is the entire state of Oklahoma. For example, an increase of one employee in the animal food manufacturing industry would cause a total increase of 6.217 other jobs in the state, a one dollar increase of payroll would cause a total increase of \$4.6252 of additional payroll in the state, and a one dollar increase of sales would create a total increase of \$1.7328 of additional sales in the state.

Table 23. Type III Multipliers

Industry Sector	Employment	Labor Income	Output
Animal Food Manufacturing	6.2170	4.6252	1.7328
Grain and Oilseed Milling	7.7241	4.6969	2.0341
Sugar and Confectionery Product Manufacturing	3.7154	7.0556	2.1364
Fruit and Vegetable Preserving and Specialty Dairy Product Manufacturing	2.4510	2.1893	2.0179
Animal Slaughtering and Processing	9.6664	5.5418	3.0470
Bakeries and Tortilla Manufacturing	6.5040	4.7389	3.3357
Other Food Manufacturing	2.6366	2.1223	1.9365
Beverage Manufacturing	4.5246	3.5654	2.0601
Unclassified/other	3.8960	2.8058	1.9305
	5.2595	4.1490	2.2479

These multipliers that were used are more conservative than the original multipliers that were found with IMPLAN. To get lower multipliers, the output numbers in the IMPLAN database were adjusted to data from the latest economic census data. The reason for changing the data to get lower multipliers is to be more conservative in the economic impact estimates and to make the IMPLAN data better match the actual industry numbers for the state of Oklahoma.

Total economic impact is the sum of the direct, indirect and induced effects. Direct effects show the amount of employees, payroll or sales created by the FAPC's clients who responded to the survey. Indirect effects are the change in employment, payroll or sales caused by the FAPC's clients buying goods and services from other firms in the state, and induced effects are the change in employment, payroll or sales caused by the employees of the direct and indirect firms spending their income within the state.

Employment

There were two types of employment collected in the survey, full-time and part-time. To calculate total employment, the part-time employees were considered as half-time and therefore multiplied by 0.5 and then was added to the full-time employment number. The direct employment numbers for each industry and total employment impact is listed in Table 24. The total direct employment is 8,862.5 employees and the total economic impact of employment is 52,489.63 employees.

Table 24. Employment Effects on Oklahoma's Economy in 2006

Industry Sector	Direct Employment	Indirect and Induced Employment	Total Related Employment
Animal Food Manufacturing	60	313.02	373.02
Grain and Oilseed Milling	4	26.90	30.90
Sugar and Confectionery Product Manufacturing	9.5	25.80	35.30
Fruit and Vegetable Preserving and Specialty Dairy Product Manufacturing	109.5	158.89	268.39
Animal Slaughtering and Processing	5.5	47.67	53.17
Bakeries and Tortilla Manufacturing	5,002.5	27,533.59	32,536.09
Other Food Manufacturing	13	21.28	34.28
Beverage Manufacturing	79	278.45	357.45
Unclassified/other	18.5	53.58	72.08
Total	3,561	15,167.95	18,728.95
	8,862.5	43,627.13	52,489.63

Total Annual Payroll

The economic impact of 2006 annual payroll from the survey responses is listed in Table 25. The one firm that is classified as animal food manufacturing did not know their payroll and therefore is listed as "unknown." There were also many other respondents who did not know their annual payroll and would be the cause of the payroll figures to seem low for the number of employees that were listed previously. The total direct annual payroll for 2006 of the firms was \$7.471 million and with economic impact multipliers it was found that the total related payroll was \$31.367 million.

Table 25. Payroll Effects on Oklahoma's Economy in 2006

Industry Sector	Direct Payroll	Indirect and Induced Payroll	Total Related Payroll
Animal Food Manufacturing	Unknown	Unknown	Unknown
Grain and Oilseed Milling	\$65,000.00	\$240,300.65	\$305,300.65
Sugar and Confectionery Product Manufacturing	\$115,000.00	\$696,389.63	\$811,389.63
Fruit and Vegetable Preserving and Specialty Dairy Product Manufacturing	\$88,500.00	\$105,255.97	\$193,755.97
Animal Slaughtering and Processing	\$7,200.00	\$32,701.15	\$39,901.15
Bakeries and Tortilla Manufacturing	\$1,169,000.00	\$4,370,782.28	\$5,539,782.28
Other Food Manufacturing	\$8,000.00	\$8,978.26	\$16,978.26
Beverage Manufacturing	\$375,500.00	\$963,324.22	\$1,338,824.22
Unclassified/other	\$217,000.00	\$391,863.59	\$608,863.59
Total	\$5,425,999.00	\$17,086,664.38	\$22,512,663.38
	\$7,471,199.00	\$23,896,260.14	\$31,367,459.14

Total Annual Sales

The direct economic impact of the sales of the firms assisted by the FAPC totals \$1.949 billion and the total economic impact of sales is \$6.366 billion (Table 26). The Animal Slaughtering and Processing industry sector was by far the largest impacting sector assisted by the FAPC. This is because there are some large meat processing firms in the state and Oklahoma's largest agriculture industry is beef cattle while pork, poultry, and now goats are all large industries as well.

Table 26. Sales Effects on Oklahoma's Economy in 2006

Industry Sector	Direct Sales	Indirect and Induced Sales	Total Related Sales
Animal Food Manufacturing	\$300,000.00	\$219,834.60	\$519,834.60
Grain and Oilseed Milling	\$1,000,000.00	\$1,034,081.00	\$2,034,081.00
Sugar and Confectionery Product Manufacturing	\$840,000.00	\$954,539.88	\$1,794,539.88
Fruit and Vegetable Preserving and Specialty Dairy Product Manufacturing	\$1,141,050.00	\$1,161,447.41	\$2,302,497.41
Animal Slaughtering and Processing	\$38,713.00	\$79,244.66	\$117,957.66
Bakeries and Tortilla Manufacturing	\$1,826,226,000.00	\$4,265,541,635.36	\$6,091,767,635.36
Other Food Manufacturing	\$20,000.00	\$18,729.78	\$38,729.78
Beverage Manufacturing	\$2,859,999.00	\$3,031,810.58	\$5,891,809.58
Unclassified/other	\$415,000.00	\$386,141.73	\$801,141.73
Total	\$116,175,620.00	\$144,971,851.49	\$261,147,471.49
Total	\$1,949,016,382.00	\$4,417,399,316.49	\$6,366,415,698.49

Change Attributed to the FAPC

In this survey, the respondents were asked to estimate the percent of change in employment, payroll and sales the firm experienced that they believe was due to the assistance received from the FAPC. This percentage was multiplied to the amount of change the firm had to determine the amount of change attributed to the FAPC. If the firm was a start-up business, then 100% of their employment, payroll and sales were attributed to the assistance received from the FAPC because it is assumed that without the start-up help from the FAPC they would not be in business. The start-up firms only account for 1% of the amount of attributed sales, and would not affect the total attributed economic impact much in that aspect if a lower percent of their change was used. From

this data, it was found that a total of 157.25 jobs, \$372,050.00 in payroll and \$92,866,841.30 in sales were attributed to the center’s educational and technical services (Table 27).

Table 27. Change in Employment, Payroll and Sales Attributed to the FAPC’s Assistance

Industry Sector	Attributed Total Employment	Attributed Payroll	Attributed Sales
Animal Food Manufacturing	0.00	\$0	\$0
Grain and Oilseed Milling	0.00	\$0	\$0
Sugar and Confectionery Product Manufacturing	1.50	\$0	\$0
Fruit and Vegetable Preserving and Specialty	16.85	\$34,750	\$354,250
Dairy Product Manufacturing	2.95	\$7,200	\$36,071
Animal Slaughtering and Processing	50.50	\$120,000	\$91,793,000
Bakeries and Tortilla Manufacturing	3.95	\$2,400	\$3,900
Other Food Manufacturing	44.30	\$35,700	\$306,500
Beverage Manufacturing	7.30	\$2,000	\$5,500
Unclassified/other	29.90	\$170,000	\$367,620
Total	157.25	\$372,050	\$92,866,841

Economic Impact of the Change Attributed to the FAPC

When these attributed changes are multiplied to the economic impact multipliers, the result is the total economic impact that can be attributed to the effect of FAPC’s educational and technical services on the client firms. The totals of these economic impacts are 800.39 jobs, \$1,527,976.86 in payroll and \$308,495,880.04 in sales (Table 28). Some of the industries have values of 0 jobs, payroll or sales which are caused by a low number of responses in those industries and they either did not provide some of the figures needed to calculate the change they had or they attributed no change to the FAPC.

Table 28. Total Economic Impact of the Change in Employment, Payroll and Sales Attributed to the FAPC's Assistance

Industry Sector	Employment	Payroll	Sales
Animal Food Manufacturing	0.00	\$0	\$0
Grain and Oilseed Milling	0.00	\$0	\$0
Sugar and Confectionery Product Manufacturing	5.57	\$0	\$0
Fruit and Vegetable Preserving and Specialty	41.30	\$76,079.32	\$714,832.57
Dairy Product Manufacturing	28.52	\$39,901.15	\$109,908.46
Animal Slaughtering and Processing	328.45	\$568,668.84	\$306,195,195.20
Bakeries and Tortilla Manufacturing	10.41	\$5,093.48	\$7,552.31
Other Food Manufacturing	200.44	\$127,286.35	\$631,412.68
Beverage Manufacturing	28.44	\$5,611.65	\$10,617.54
Unclassified/other	157.26	\$705,336.06	\$826,361.28
Total	800.39	\$1,527,976.86	\$308,495,880.04

Estimation of All Firms Assisted by the FAPC

As was done by Zimmerschied (2003), the estimate of the direct impact of all the firms assisted by the FAPC was calculated. With the use of a scatter plot, the extreme outlying observations were removed from the calculation of the averages for total employment, payroll and sales. To find the total impact these averages were multiplied by 319 which is the estimated total number of firms that were assisted by the FAPC and are currently in operation. This estimated total number of firms in operation is found by multiplying the number of individual firms in the population (898) by the percent of firms who were assisted by the FAPC (83.09%) and by the percent of those firms who currently were in operation (42.81%). These estimates of employment, payroll and sales of all the firms assisted by the FAPC are listed in Table 29 along with the direct impacts from the firms who responded to the survey.

Table 29. Comparison of Telephone Survey Results, Estimate for All Firms Assisted by the Center

	Survey Direct Impacts	2007 Estimate for All Firms Assisted (Direct Impact)
Employment	8,862.5	13,284 ¹
Payroll	\$7,471,199	\$10,312,038 ²
Sales	\$1,949,016,382	\$2,449,823,408 ³

¹ Average used for calculation excluded the top one firm.

² Average used for calculation excluded the top three firms.

³ Average used for calculation excluded the top two firms.

Summary

This chapter describes the findings from the general survey questions and the economic impact results. These results show that the FAPC has a significant impact on the state of Oklahoma. The nearly \$93 million of direct total sales that is attributed to the center's educational and technical services is well more than the nearly \$47 million of building and operating costs that the center has cost. Also, the over \$308 million in sales of total economic impact attributed to the FAPC indicates that the center is very important to the state's economy, and the more than 52,000 total related employment and over \$6.3 billion in total related sales shows that this the FAPC supports an important industry to the state.

CHAPTER IV

CONTINGENT VALUATION RESULTS

Introduction

This chapter discusses the findings from the valuation sections of the survey. The four services being valued are the entrepreneurial workshop, laboratory services, on-site technical assistance, and regular technical services.

Value of the Entrepreneurial Workshop

The “Basic Training: A Guide to Starting Your Own Food Business” workshop (or Entrepreneurial Workshop) is a one day workshop offered at the FAPC to teach participants the basics of starting their own food business. Participants learn about health regulations, packaging laws, patents and trademarks, different types of business organization, and business planning. They also get to meet with representatives of various state agencies and learn about the “Made In Oklahoma” program. It also serves as an introduction to the services provided by the FAPC. This section describes statistics gained from this part of the survey and the value calculated from the willingness-to-pay question for the workshop.

General Statistics of Entrepreneurial Workshop Attendees

A screener question was used to determine which respondents had attended the entrepreneurial workshop. Those that had attended the workshop would continue with the related questions, and those who had not attended the workshop skipped the related questions and continued with the next screener question. Of the 343 total respondents, 234 said that they had attended the workshop (Table 30).

Table 30. Distribution of Respondents that Attended the Entrepreneurial Workshop

Response	Frequency (N=343)	Percentage (%)
Attended	234	68.22
Did not attend	107	31.20
Don't know	2	0.58
No answer	0	0.00
Total	343	100.00

The respondents were asked when they attended the workshop. Of the responses to this question, the largest group attended the workshop between 1 to 3 years ago. The entire distribution of these responses is shown in Table 31.

Table 31. Distribution of When Respondents Attended the Entrepreneurial Workshop

Response	Frequency (N=234)	Percentage (%)
Within the last year	44	18.80
1-3 years ago	95	40.60
3-5 years ago	56	23.93
More than 5 years ago	37	15.81
Don't know	2	0.85
No answer	0	0.00
Total	234	100

Perception of the Workshop's Value

The respondents were also asked if the workshop provided more value to them than the time and expenses they incurred. The expenses they had were a maximum of a \$100 registration fee and travel costs to Stillwater. Also, the time spent at the workshop would be an opportunity cost for the attendee caused by the loss of a work day. The majority (59.83%) of the respondents said that they perceived the workshop as having far more value than the time and expenses they incurred (Table 32). There were only 1.28% of the respondents who indicated that they perceived the workshop as being less valuable than their time and expenses or not valuable at all. The respondents were asked to explain the reason for their answer to this question, and these responses are shown in Appendix G. Most of the responses were positive and said that the price of the workshop was a great value compared to the amount of information they received. For example, one respondent said “We have used another training and I can tell that that the price of their workshops is not a better value. The Stillwater ones are more frequent and better. I have direct comparison experience. We appreciate that they always have people from industry and government which is rare in the business.”

Table 32. Distribution of How Much More Valuable the Entrepreneurial Workshop was Compared to the Time and Expenses the Respondent Incurred Attending the Workshop

Response	Frequency (N=234)	Percentage (%)
Far more value	140	59.83
Slightly more value	54	23.08
About the same value	37	15.81
Less value	2	0.85
Not valuable	1	0.43
Total	234	100

Respondent's Perception on Location and Format of FAPC Workshops

Currently, all FAPC workshops are held at the center's location in Stillwater, Oklahoma. A few questions were designed to find if the FAPC's clients like having the workshops in Stillwater or if they would be more likely to attend if the workshops were held at various locations throughout the state or through use of the internet. The first of these questions asked if the Stillwater location was a factor in deciding whether or not to attend the workshop. To this question, 47.44% said that it was a factor and the other 52.56% said that it was not a factor (Table 33).

Table 33. Distribution of Respondents Perceiving the Location of Workshops being in Stillwater a Factor in Deciding Whether or Not to Attend

Response	Frequency (N=234)	Percentage (%)
Yes	111	47.44
No	123	52.56
Total	234	100.00

When asked if they would be more willing to attend a workshop if it was at a location closer to their business, like an area cooperative extension service office, 60.26% said the closer location would be better. As shown in Table 34, 27.35% said that Stillwater was a good location and 11.97% had no preference.

Table 34. Distribution of Respondent’s Preferred Workshop Location

Response	Frequency (N=234)	Percentage (%)
Different location would be better	141	60.26
Stillwater is a good location	64	27.35
No preference	28	11.97
Don't know	1	0.43
No answer	0	0.00
Total	234	100

The respondents were also asked if they would be more likely to participate in a workshop if it was conducted through on-line training or a teleconference. The results of this question are found in Table 35. There were 39.32% of the respondents who responded that they would be more likely to participate in a workshop if it was offered on-line or through a teleconference.

Table 35. Distribution of Respondents More Likely to Participate in an On-line or Teleconference Workshop

Response	Frequency (N=234)	Percentage (%)
Yes	92	39.32
No	128	54.70
Don't know	14	5.98
No answer	0	0.00
Total	234	100.00

The 128 respondents who replied that they would not be more likely to participate in an on-line or teleconference workshop were asked why they answered this way. 35.94% said they do not like that kind of training, 18.75% have no experience with it and only 2.34% do not have access to the technology (Table 36). The remaining 42.97%, or 55 respondents, answered “other.” The respondents that answered “other” were asked to specify their response, and 45 of the 55 respondents said they prefer a face-to-face

workshop at a location away from their business because it is hands-on, keeps them away from the normal distractions found at their location and allows more questions/interactions with the workshop presenters and fellow participants. The “other” responses to this question can be found in Appendix H.

Table 36. Distribution of Why Respondents are Less Likely to Participate in On-line Training or Teleconference Workshop

Response	Frequency (N=128)	Percentage (%)
No experience	24	18.75
No access	3	2.34
Do not like	46	35.94
Other	55	42.97
Total	128	100

The last question in this section of the survey asked if they had any topics that they would like to see covered in a workshop. The responses to this question can be found in Appendix I. 189 of the 234 respondents had no suggestions. The more popular responses (being the topics that had 3 or 4 similar responses) asked for workshops in the areas of marketing, meat, packaging, taxes, and product distribution. The workshop topics with 2 responses were financing, kitchen planning, nutritional information and foods, business planning, organics, co-packers, food science, Hazard Analysis Critical Control Points, and dealing with employees and employment laws, payroll, insurance, and workers compensation. The workshop topics with 1 response are the economics of expansion, grapes, product development sensory evaluations, connection to investors, trans fat, Made In Oklahoma program, kitchen incubators, product liability insurance, label design, restaurants, acreage attainability and farm grants, home based business topics, management, whole wheat white flour, and current topics.

Contingent Valuation of the Entrepreneurial Workshop

To calculate the estimated value of the four different services this study is valuating, a single-bounded dichotomous choice contingent valuation question was utilized for each service. An example of the contingent valuation question that was asked in the survey is:

“Assume that you are a business owner or operator who has not attended the FAPC Basic Training Workshop. Also, assume that you know only the general topics to be discussed and not the specific details of this workshop. Would you be willing to pay \$X for the FAPC Basic Training Workshop?”

The \$X represents a randomly chosen dollar figure between \$25 and \$1000 in increments of \$25. The respondents answer “yes” or “no” to the question, and a “yes” response is given the value of 1 and a “no” response is given a value of 0. The data from the survey is then analyzed with a logistic regression model, which is shown below.

$$pr(wtp = 1) = e^Z / (1 + e^Z)$$

The left side of the equation represents that the probability (pr) that a person will say “yes” to the willingness-to-pay question (wtp=1). The variable Z on the right side of the equation represents a vector of the dollar value the respondent is asked to accept or reject and a number of other attributes that are hypothesized to affect the value a person may have for the service. To determine the average price a person is willing to pay for the service, the left side of the equation is set equal to 0.5 and the other attributes are multiplied by their average response then the equation is solved for the price.

The attributes that were thought to affect the value a person may have for the entrepreneurial workshop are total employment, if the business is currently operating, if the business was in operation prior to attending the workshop, if the respondent had a bachelor or higher degree, and if the business structure is a corporation. Total employment was hypothesized to positively impact the chance that a person will say yes to the willingness-to-pay question because a larger employment would indicate a larger business, and a similar correlation is expected to be found if the business was a corporation because it would typically be a larger business. If the business is currently operating, then that is expected to positively impact the chance a person will say yes because they would hopefully have a positive income from the business. A person with a bachelor or higher college degree may have a lower value on the workshop because they may think they have the education to operate a business or know how to research the information provided in the workshop themselves. All these attributes were included in the Z vector of the model along with the price the person was accepting or rejecting, which is shown below.

$$z = \alpha + Price * \beta_1 + Employ * \beta_2 + OperPrior * \beta_3 + CurrentOper * \beta_4 + Bachelor * \beta_5 + Corp * \beta_6$$

The Price parameter is the dollar amount the person was asked to respond to with a “yes” or “no” to indicate if they would pay that price. Total employment (*Employ*) is the total number of full-time employees and the number of part-time employees multiplied by 0.5 as was done in Chapter III for the economic impact study. The remainder of the attributes was designated by dummy variables. For example, if the business was in operation prior (*OperPrior*) to the respondent attending the workshop

they would have a 1 for that parameter and if they were not in operation prior to attending the workshop would be indicated by a 0. The same format is used for the other parameters, if they are currently operating their business (*CurrentOper*), if they have a bachelor or higher college degree (*Bachelor*), or if their business structure is a corporation (*Corp*) then each respective parameter would have a 1. If not, then the respective parameter would have a 0. There were 136 respondents that provided answers to all these parameters for the entrepreneurial workshop.

A number of different models were run using different combinations of the above listed variables to find the best fitting model. The first model included all the above listed variables and each consecutive model removed the worst fitting variable based on its p-value while always leaving in the price variable because removing price would cause it to no longer be a contingent valuation model. After following that method, the rest of the models were just random combinations of the variables. To determine the best fitting model, three tests were used. The Akaike Information Criterion (AIC) and Schwartz Criterion (SC) are used to determine whether the independent variable is significant based on a chi-squared distribution and are adjusted for the number of explanatory variables and the number of observations used in the model (Cody and Smith, 1997). A lower value of the AIC and SC indicates a better fitting model. The third test is the Hosmer and Lemeshow Goodness-of-Fit test, which is a chi-square based goodness of fit test (Cody and Smith, 1997). A higher value in this test means a better fitting model. A list of the models created and their AIC, SC and Hosmer and Lemeshow test statistics are shown in Table 37.

Table 37. Model Fitness Tests for the Entrepreneurial Workshop

	AIC	SC	Hosmer and Lemeshow
Model 1	138.983	159.372	0.6778
Model 2	137.118	154.594	0.6688
Model 3	136.454	151.017	0.6787
Model 4	138.392	155.868	0.8581
Model 5	137.493	149.143	0.1350
Model 6	140.412	149.150	0.6000
Model 7	143.748	149.573	0.0394
Model 8	145.152	153.890	0.1806
Model 9	144.129	152.867	0.1728
Model 10	142.253	150.991	0.1726
Model 11	137.493	149.143	0.1350
Model 12	139.586	151.236	0.6456
Model 13	142.544	154.195	0.0744

Of the above, Model 3 was chosen as the best fitting model because it has the lowest AIC value, one of the lower SC values, and the second highest Hosmer and Lemeshow p-value. This model includes the parameters of price, if their business was in operation prior to attending the workshop (*OperPrior*), if they had a bachelor or higher degree (*Bachelor*), and if their business was a corporation (*Corp*). Table 38 shows the estimates, standard error and p-value of each of these parameters. All of the parameters are statistically significant to a 0.05 level except the Bachelor parameter which is significant at the 0.1 level.

Table 38. Willingness-to-Pay Parameter Estimates of Entrepreneurial Workshop Model

Parameter	Estimate	Standard Error	P-value
Intercept	1.5939	0.5088	0.0017
Price	-0.00462	0.000913	<.0001
OperPrior	1.3568	0.4969	0.0063
Bachelor	-0.7842	0.4539	0.0840
Corp	-1.6757	0.8151	0.0398

Using the above results, it was found that the median willingness-to-pay price the survey respondents have for the entrepreneurial workshop is \$286.97. The Price variable has a negative estimate which is expected because that would mean a higher given price would cause a person to be less likely to answer yes to the willingness-to-pay question. The *OperPrior* parameter has a positive estimate which means that the respondents typically have a higher value for the workshop if they were operating a business prior to attending the workshop which could be because they have more invested in their business than those who were not operating a business. The *Bachelor* and *Corp* parameters both have negative estimates meaning that if a respondent has a bachelor degree or higher college degree or if their business is structured as a corporation then they likely will have a lower value for the workshop. Since the workshop is more designed for small business entrepreneurs then a person working for a corporation may not see it as useful, and those with a college degree may already have the education or know how to research the information provided in the workshop and therefore not value it as much.

A bootstrapping method was used to estimate a 95% confidence interval of the willingness to pay for the entrepreneurial workshop. Hole (2007) mentions that the bootstrap has been used extensively in economics research in recent years and can perform better than other methods for models with small sample sizes. The bootstrap method creates a large number of samples with replacement to derive different willingness-to-pay estimates (Hole, 2007). For example, each time that the regression is run, an observation from the data will be replaced and a new estimate is found for the willingness-to-pay value. A sample of 1,000 different estimates is created using bootstrapping to determine the 95% confidence interval. The lower end of the interval

for the entrepreneurial workshop was \$19.05 and the upper end was \$383.76, showing that we can be 95% confident that the value a person will have for the workshop will be between these values. The participants did pay \$100 to attend the workshop and since the lower end much lower than \$100, that shows that some people were probably not satisfied with the workshop. This is to be expected that some people are not satisfied with it because it is difficult to exceed the expectations of every customer, and this was seen with the three responses that gained less or no value from the workshop than the costs they incurred which was shown in Table 32. Although since the mean price from the model exceeds the price they actually paid, then that shows that the average person's expectations were exceeded.

Table 39. Willingness-to-Pay Bootstrap Results of Entrepreneurial Workshop Model

N	Mean	95% Confidence Interval	
		Lower	Upper
1000	\$267.716	\$19.0517	\$383.7589

Value of the Laboratory Services

The second service provided by the FAPC that was valued is the laboratory services which include proximate analysis, shelf life studies, chemical analysis, nutritional analysis and other studies. This section describes the information learned from this part of the survey and the value the clients have for the laboratory services.

General Statistics of the Laboratory Service Clients

Of the 343 total survey respondents, there were only 74 who mentioned that they had used the laboratory services (Table 40). With this low number of respondents that

have used the laboratory services, the contingent valuation model may not provide a very accurate response.

Table 40. Distribution of Clients Who Used FAPC’s Laboratory Services

Response	Frequency (N=343)	Percentage (%)
Use lab services	74	21.57
Did not use	260	75.80
Don't know	9	2.62
No answer	0	0.00
Total	343	100

When asked what time frame the respondents utilized the laboratory services, the majority of them (71.62%) were within the last three years. As shown in Table 41, only 10.81% of the respondents used the service five or more years ago, which would have been in the time frame of Zimmerschied’s study.

Table 41. Distribution of When Respondents Utilized the Laboratory Services

Response	Frequency (N=74)	Percentage (%)
Within the last year	30	40.54
1-3 years ago	23	31.08
3-5 years ago	11	14.86
More than 5 years ago	8	10.81
Don't know	2	2.70
No answer	0	0.00
Total	74	100

The respondents were asked how valuable the laboratory services are compared to the time and expenses they incurred while using the service. The results to this question are listed in Table 42. There were only 5.40% of the respondents who did not perceive this service as being as valuable as the time and expenses they incurred. Although,

nearly 65% said that it was far more valuable than their time and expenses. When asked if they would explain the reason for their answer, most were positive responses, for example: “OSU is a far more economical resource than others.” However, there were some negative responses that referred to slow response times and “university politics that get in the way of allowing the university to provide the customer what they want.” All of these responses can be found in Appendix J.

Table 42. Distribution of How Much More Valuable the Laboratory Services are Compared to the Time and Expenses the Respondent Incurred Using the Service

Response	Frequency (N=74)	Percentage (%)
Far more value	48	64.86
Slightly more value	17	22.97
About the same value	5	6.76
Less value	3	4.05
Not valuable	1	1.35
Total	74	100

For the contingent valuation question of this service, it was recognized that there could be a large range of values because a client could have only used the service for a small one day project or it could have been a very large project lasting a few months. A person would probably have a much larger value for the larger projects. To lessen this large range, they were asked how many days they used the service before they were asked how much they would be willing to pay for the service. The willingness-to-pay question then asked them to value the service on a per day basis. Table 43 shows that the average number of days a client used the service was 12.7 days. The maximum was 88 days, while most clients only used the service for only one day.

Table 43. Statistics of the Number of Days the Clients Utilized the Laboratory Services

		Number of Days
Total		635
Mean		12.7
Median		2
Mode		1
Minimum		1
Maximum		88
Quartile Percentages	25	2 or fewer
	50	4.5 or fewer
	75	13 or fewer

Contingent Valuation of the Laboratory Services

For the contingent valuation model of the laboratory services there were a total of 63 observations since some respondents did not know or did not answer the question of if they were willing to pay the given amount. Because of the low number of responses, the model chosen included only the price variable. Adding in other variables would reduce the number of observations even more due to replies of “unknown” or “no answer” to other questions. Table 44 shows the parameter estimates, standard error and p-value of the laboratory services model. The willingness-to-pay estimate calculated from the parameter estimates is that on average each client would pay \$582.97 per day that they used the laboratory services.

Table 44. Willingness-to-Pay Parameter Estimates of the Laboratory Services Model

Parameter	Estimate	Standard Error	P-value
Intercept	1.1193	0.5240	0.0327
Price	-0.00192	0.0007	0.0036

As was done with the entrepreneurial workshop, a bootstrap test was done to find the 95% confidence interval of the model. The results of the bootstrap are in Table 45. These results show that with a 95% confidence the respondents would be willing to pay between \$218.88 and \$874.29. The FAPC staff said that the price of one day's work in the laboratory services costs anywhere between \$50 and \$546 depending on the number of laboratory services being completed. This confidence interval shows that the value the respondents place on the laboratory services is higher than the actual costs of the services.

Table 45. Willingness-to-Pay Bootstrap Results of the Laboratory Services Model

N	Mean	95% Confidence Interval	
		Lower	Upper
1000	\$531.923	\$218.8809	\$874.2907

Value of On-Site Technical Assistance

The on-site technical assistance is conducted at the client's business location. Some of services that can be provided through the on-site technical assistance are plant audits, total quality management training, process flow and efficiency evaluations, product development and testing and microbial evaluations. This section describes the information learned from this part of the survey and the value the clients have for the on-site technical assistance.

General Statistics of the On-site Technical Assistance Clients

Only 29, or 8.45%, of the 343 respondents said that they have used the on-site technical assistance. Again, like the laboratory services model there is a low response for

this model and only the one variable of price was used in the logistic regression. The results of this screener question are shown in Table 46.

Table 46. Distribution of Respondents Who Used On-site Technical Assistance

Response	Frequency (N=343)	Percentage (%)
Use on-site technical assistance	29	8.45
Did not use	306	89.21
Don't know	7	2.04
No answer	1	0.29
Total	343	100

When asked the time frame in which the respondents used the on-site services, 86.21% said they used the services within the last 3 years (Table 47). Two respondents did not know when they used the service and only one said they used it more than 5 years ago which would have been before Zimmerschied's study.

Table 47. Distribution of When Respondents Utilized the On-site Technical Assistance

Response	Frequency (N=29)	Percentage (%)
Within the last year	11	37.93
1-3 years ago	14	48.28
3-5 years ago	1	3.45
More than 5 years ago	1	3.45
Don't know	2	6.90
No answer	0	0.00
Total	29	100

In asking the respondents how valuable the on-site technical assistance is compared to the time and expenses incurred using the service, all but two of the respondents said it was far more or slightly more valuable (Table 48). For the other two respondents, one said it was not valuable to them and the other did not know. When

asked why they responded to this question the way they did, basically all the responses were positive. These responses can be found in Appendix K.

Table 48. Distribution of How Much More Valuable the On-site Technical Assistance is Compared to the Time and Expenses the Respondent Incurred Using the Service

Response	Frequency (N=29)	Percentage (%)
Far more value	19	65.52
Slightly more value	8	27.59
About the same value	0	0.00
Less value	0	0.00
Not valuable	1	3.45
Don't know	1	3.45
No answer	0	0.00
	Total	29
		100

Listed in Table 49 is the total number of days that all 29 respondents used the on-site technical assistance. The clients used the service an average of 4.15 days, and the most common length of time was 2 days.

Table 49. Statistics of the Number of Days the Clients Utilized the On-site Technical Services

	Number of Days	
Total		108
Mean		4.15
Median		2
Mode		2
Minimum		1
Maximum		30
Quartile Percentages	25	1.25 or fewer
	50	2 or fewer
	75	3.75 or fewer

Contingent Valuation of the On-site Technical Assistance

Table 50 shows the parameter estimates, standard error and p-value of the on-site technical assistance model. The p-value of the price variable is less than 0.05 meaning that it is statistically significant. Using the parameter estimates, it can be calculated that the median willingness-to-pay of the respondents that use the on-site technical assistance is \$654.34 per day.

Table 50. Willingness-to-Pay Parameter Estimates of the On-site Technical Assistance Model

Parameter	Estimate	Standard Error	P-value
Intercept	1.4461	0.8042	0.0721
Price	-0.00221	0.0010	0.0275

The bootstrap results for the model are listed in Table 51. These results show that with 95% confidence it can be said that the respondents would be willing to pay between \$155.85 and \$1185.76 per day for the service. Since the on-site technical service is a free service to the clients of the FAPC, the mean estimate and confidence interval shows that the respondents high value for this service that is much more than the actual cost of the service.

Table 51. Willingness-to-Pay Bootstrap Results of the On-site Technical Services Model

N	Mean	95% Confidence Interval	
		Lower	Upper
1000	\$653.688	\$155.8544	\$1185.7610

Value of Technical Services

FAPC's technical services include product scale-up, product development, batch processing, and process design and testing. This section discusses the valuation of these services as a whole.

General Statistics of the Technical Services

Table 52 shows that of the 343 total respondents, only 32 have used the technical services. There were also 9 respondents who did not know if they had used the service or did not answer.

Table 52. Distribution of Respondents Who Used the Technical Services

Response	Frequency (N=343)	Percentage (%)
Use technical services	32	9.33
Did not use	302	88.05
Don't know	8	2.33
No answer	1	0.29
Total	343	100

Like the other services being valued, the majority of the respondents who used the technical services did so within the last three years (Table 53). Only 18.76% had used the service more than 3 years ago.

Table 53. Distribution of When Respondents Utilized the Technical Services

Response	Frequency (N=32)	Percentage (%)
Within the last year	14	43.75
1-3 years ago	10	31.25
3-5 years ago	3	9.38
More than 5 years ago	3	9.38
Don't know	2	6.25
No answer	0	0.00
Total	32	100

Again, like the other services being valued, a majority of the respondents (90.63%) perceived the technical services as being far more or slightly more valuable than the time and expenses they incurred from using the service (Table 54). The other 9.38% all answered that they did not know. The list of responses of why they answered this way is in Appendix L. Most of the responses say that the service was very informative and much cheaper than other places.

Table 54. Distribution of How Much More Valuable the Technical Services are Compared to the Time and Expenses the Respondent Incurred Using the Service

Response	Frequency (N=32)	Percentage (%)
Far more value	25	78.13
Slightly more value	2	6.25
About the same value	2	6.25
Less value	0	0.00
Not valuable	0	0.00
Don't know	3	9.38
No answer	0	0.00
Total	32	100

The total number of days the respondents used the technical services was 304 (Table 55). The longest length of time a respondent used the service was 100 days, and the most common response was 1 day.

Table 55. Statistics of the Number of Days the Clients Utilized the Technical Services

		Number of Days
Total		304
Mean		11.69
Median		2
Mode		1
Minimum		0
Maximum		100
Quartile Percentages	25	1.25 or fewer
	50	3.5 or fewer
	75	10 or fewer

Contingent Valuation of the Technical Services

Table 56 shows the parameter estimates of the technical services model. The p-value for price in this model also shows the variable is a good fit. The calculated median estimate that the respondents are willing to pay for the technical services is \$527.31 per day.

Table 56. Willingness-to-Pay Parameter Estimates of the Technical Services Model

Parameter	Estimate	Standard Error	P-value
Intercept	1.4132	0.8204	0.0850
Price	-0.00268	0.0012	0.0216

The bootstrap results of the technical services model are listed in Table 57. The results of the bootstrap show that with 95% confidence the respondents would be willing to pay between \$84.46 and \$894.51 per day for the service. The FAPC staff said the average daily cost of the technical services is about \$500, and some of the clients don't pay anything because they received grants to pay for the services. The lower end of the confidence interval being much less than \$500 is a sign that some respondents may have

not been satisfied with the service or did not have to pay for the service. Although considering the mean price is higher than the actual cost, then the average person did have a higher value for it than the costs they incurred.

Table 57. Willingness-to-Pay Bootstrap Results of the Technical Services Model

N	Mean	95% Confidence Interval	
		Lower	Upper
1000	\$511.622	\$84.4561	\$894.5060

Summary

All of the four services offered by the FAPC that were valued in this study were significantly valuable for the respondents. The willingness-to-pay measures of all services show that the respondents on average value the service more than their expenses and time invested in that service.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Summary

This chapter discusses the research conducted, major findings and recommendations for future research. The purpose of this study was to determine the economic impact of clients of the FAPC and the impact of the FAPC itself. To accomplish this there were two different kinds of research completed; the first was an economic impact assessment of the clients including finding the impact that was attributed to the FAPC's assistance and the second was a contingent valuation of four of the FAPC's services.

A telephone survey was conducted by the Bureau for Social Research on the Oklahoma State University campus between January 10 and February 7, 2007. Of the 898 total non-duplicate phone numbers provided by the FAPC's database of project contacts and workshop participants, only 343 responded to the survey. There were 58 respondents that claimed they did not receive assistance or did not know if they had received assistance from the FAPC. Some reasons why a person may have responded that they did not receive assistance is they could have received that assistance up to 10 years ago and have forgotten about it or the person who received assistance may no longer work for that company. Since 72.2% of the respondents received assistance

within the last 3 years, it is very possible that those who claimed they did not receive assistance or were not able to be contacted were those who had been to the FAPC in earlier years.

Of the 285 that responded that they had received assistance from the FAPC, only 122 (42.81%) said that they are currently operating a business. Previous research suggested finding why some businesses were not operating a business. The majority of these responses were that they decided not to start the business for various reasons or just attended a workshop at the FAPC. There were also 35 of the respondents who said they were still creating their business.

The businesses were categorized by the industry that they were in based on the kind of product they said they produced. Many of the responses were not able to be categorized, but the largest industry based on the number of classifiable responses was the animal slaughtering and processing industry. The different industry classifications were defined by which four digit NAICS code the business fit into, which could then be directly linked with the IMPLAN industries.

IMPLAN is a software program that calculates the economic impact multipliers for a given region for all the different industries. These multipliers represent the amount of indirect and induced changes on the local economy caused by a change in one industry's output, employment and payroll. To calculate the total economic impact, the direct impacts to the state's economy caused by the clients of the FAPC are multiplied by these IMPLAN multipliers.

The total full-time employees of the client firms were 8,702 and the total number of part-time employees was 325. When estimating that the average part-time employee

works half the time of a full-time employee then the total direct employment of all the firms responding to the survey is 8,862.5. Using the IMPLAN multipliers for employment it was calculated that the total related employment in the state is 52,489 full-time equivalent jobs. The total annual payroll of the firms was very low due to a low number of respondents knowing their payroll figures. From those responding to this question said their total payroll for 2006 was \$7,591,199 and the calculated total payroll effect on Oklahoma's economy was \$31,367,459. The total annual sales of the responding firms were \$1,949,016,382. When multiplied by the economic impact multipliers the calculated total sales effects on the state's economy was \$6,366,415,698.

There were 55.61% of the firms that were not operating a business prior to receiving assistance from the FAPC and therefore were start-up firms, and 42.15% were existing businesses before receiving assistance from the FAPC. Those pre-existing firms were asked to provide the sales, employment and payroll figures from prior to receiving assistance from the FAPC. These firms showed that they had a 12% growth in full-time employment and a 1.5% increase in part-time employment between the time prior to receiving assistance and when the survey was conducted. They also indicated that they had a 4.73% increase in annual payroll and a 16.95% increase in total annual sales. The start-up firms accounted for 84 full-time jobs, 41 part-time jobs, \$284,700 in annual payroll, and \$965,470 in annual sales.

The amount of these increases in employment, payroll and sales that was attributed to the FAPC's assistance was 157.25 jobs, \$372,050 in annual payroll, and \$92,866,841 in annual sales. Again, the low amount of annual payroll is due to a lack of responses to the payroll questions. The total economic impact of these attributed changes

accounts for about 800 jobs, \$1,527,976 in annual payroll, and \$308,495,880 in annual sales in the state of Oklahoma.

In the survey there were also four services provided by the FAPC that were individually valued through the use of dichotomous choice contingent valuation questions. Using a logistic regression model it was calculated that the entrepreneurial workshop was on average valued at \$286.97, the laboratory services were on average valued at \$582.97 per day the service was used, the on-site technical assistance was valued at \$654.34 per day the service was used, and the technical services were valued at \$527.31 per day they utilized the service.

Recommendations for Future Research

The largest fault of this study was a low response rate which led to lower estimated economic impacts than the actual total economic impact of all the clients of the center. The low response rate also contributed to a very low number of responses to the contingent valuation questions for the laboratory, on-site technical and regular technical services. A mail survey could have been used to gather information from those who were not able to be contacted by telephone. However, if this method was used it would considerably increase the cost and time required for the survey.

The question that asked what kind of products they produced (Question QA5 in Appendix B) must have been a confusing question to some of the respondents because they did not provide a valid answer. Many of these could be because they offer a wide variety of products and/or services. A future study should make this a very simple question and just simply ask what kind of products they make.

Some other ideas a future study could attempt to find is the amount of savings the clients have had from either the improvement of their production efficiency or from the prevention of a business failure or sales loss. It would also be interesting to find if the FAPC has had an influence on businesses deciding to stay in the state of Oklahoma or relocate to Oklahoma.

Conclusions

The FAPC has had a large positive impact on the state of Oklahoma. The total economic impact attributed to the FAPC was over \$308 million in sales for just the year of 2006, which far exceeds the \$18 million building cost and the \$2.9 million annual operating budget totaling \$47 million over the operational life of the FAPC. Also, the respondents value the FAPC's services much more than the actual cost of those services. The entrepreneurial workshop was valued at about \$287 when it only costs them \$100 to attend and the on-site technical assistance was valued at \$654 per day when this service is offered for free. The regular technical services and laboratory services were valued at \$527 per day and \$583 per day respectively and according to the FAPC staff the average cost of these services is about \$500 per day for technical services and anywhere from \$50 for one laboratory service to \$546 for one days work for all the different laboratory services.

This information is important for the state legislature and the entire state of Oklahoma to show that the FAPC has been a good investment for the state and that the state should continue to support it with funding. Other value-added centers and land-

grant university research and extension programs can also use this study as a framework for assessing the impacts of their programs.

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APPENDIXES

APPENDIX A

Institutional Review Board Approval

Oklahoma State University Institutional Review Board

Request for Determination of Non-Human Subject or Non-Research

Federal regulations and OSU policy require IRB review of all research involving human subjects. Some categories of research are difficult to discern as to whether they qualify as human subject research. Therefore, the IRB has established policies and procedures to assist in this determination.

1. Principal Investigator Information

First Name: Rodney	Middle Initial:	Last Name: Holcomb
Department/Division: Agricultural Economics		College: CASNR
Campus Address: 114 FAPC		Zip+4:
Campus Phone: 744-6272	Fax:	Email: rodney.holcomb@okstate.edu
Complete if PI does not have campus address:		
Address:		City:
State:	Zip:	Phone:

2. Faculty Advisor (complete if PI is a student, resident, or fellow) NA

Faculty Advisor's name:	Title:
Department/Division:	College:
Campus Address:	Zip+4:
Campus Phone:	Fax: Email:

3. Study Information:

A. Title
Economic Impact and Contingent Valuation of the Oklahoma Food and Agricultural Products Research and Technology Center

B. Give a brief summary of the project. (See instructions for guidance)
The purpose of this study is to determine the economic impact of the firms that have received assistance from the OK FAPC. Also, the study will find the value that the clients of the FAPC have on its services.

C. Describe the subject population/type of data/specimens to be studied. (See instructions for guidance)

Oklahoma State University Institutional Review Board
Request for Determination of Non-Human Subject or Non-Research

4. Determination of "Research".

45 CFR 46.102(d): *Research* means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. Activities which meet this definition constitute research for purposes of this policy whether or not they are conducted or supported under a program which is considered research for other purposes.

One of the following must be "no" to qualify as "non-research":

- A. Will the data/specimen(s) be obtained in a systematic manner?
 No Yes
- B. Will the intent of the data/specimen collection be for the purpose of contributing to generalizable knowledge (disseminating the knowledge obtained outside of Oklahoma State University, e.g., presentation or publication)?
 No Yes

5. Determination of "Human Subject".

45 CFR 46.102(f): *Human subject* means a living individual about whom an investigator (whether professional or student) conducting research obtains: (1) data through intervention or interaction with the individual or (2) identifiable private information. Intervention includes both physical procedures by which data are gathered (for example venipuncture) and manipulations of the subject or the subject's environment that are performed for research purposes. Interaction includes communication or interpersonal contact between investigator and subject. Private information includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information which has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (i.e., the identity of the subject is or may be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects.

- A. Does the research involve obtaining information about living individuals?
 No Yes
If no, then research does not involve human subjects, no other information is required.
If yes, proceed to the following questions.

All of the following must be "no" to qualify as "non-human subject":

- B. Does the study involve intervention or interaction with a "human subject"?
 No Yes
- C. Does the study involve access to identifiable private information?
 No Yes
- D. Are data/specimens received by the Investigator with identifiable private information?
 No Yes
- E. Are the data/specimen(s) coded such that a link exists that could allow the data/specimen(s) to be re-identified?
 No Yes
If "Yes," is there a written agreement that prohibits the PI and his/her staff access to the link?
 No Yes

Oklahoma State University Institutional Review Board
Request for Determination of Non-Human Subject or Non-Research

6. Signatures

Signature of PI Rodney B. Holcomb Date 12-19-06

Signature of Faculty Advisor _____ Date _____
(If PI is a student)

Based on the information provided, the OSU-Stillwater IRB has determined that this research does not qualify as human subject research as defined in 45 CFR 46.102(d) and (f) and is not subject to oversight by the OSU IRB.

Based on the information provided, the OSU-Stillwater IRB has determined that this research does qualify as human subject research and submission of an application for review by the IRB is required.

Sue C. Jacobs
Dr. Sue C. Jacobs, IRB Chair Date 12/20/06

APPENDIX B

Survey of the Economic Impact of Businesses Assisted by the FAPC

Hello

Hello, my name is _____ and I'm calling from the Bureau for Social Research at Oklahoma State University. May I please speak with _____? The Food and Agricultural Products Center (the FAPC) at OSU has asked us to conduct a telephone interview of their current and former clients. You may have received a postcard alerting you to this call today. The purpose of the interview is to assess the economic impact that the FAPC has had on the state and to assist with the planning of future FAPC programs and services. Before we start, I want to assure you that your answers are strictly confidential and this will only take about 10 minutes of your time. Participation is optional, and you may refuse to answer any question at any time during the interview without penalty. Are you willing to participate in the interview at this time?

(IF NO) Would you be willing to participate in this interview at another time that is more convenient for you?

(IF YES, set callback time during specified interviewing hours).

Hello (restart)

Hello, may I please speak with _____? This is _____ and I'm calling from Oklahoma State University. We called you a few days ago to ask you some questions about the Food and Agricultural Products Center (the FAPC) at OSU. I'm calling now to finish that interview.

Section A—General Assistance from the
FAPC_____

QA1 (screening question)

Our records indicate that you have received assistance from the Oklahoma State University Food and Agricultural Products Center (FAPC) within the last 10 years. Is this information correct?

Yes

No

Don't know

Prefer not to answer

If QA1 <> yes, then skip to section B.

QA2

Are you currently operating a food or fiber business in the state of Oklahoma?

Yes

No

Prefer not to answer

QA2a

If QA2 <> no, then skip.

What is the primary reason that you are not currently operating a food or fiber business in the state of Oklahoma?

The business is no longer in operation

Did not start the business

Still working on creating the business

Other: please specify

Don't know

Prefer not to answer

QA2aOTH

If QA2a <> Other, then skip.

Please specify

<open-ended>

If QA2 = NO, then skip to section B after Q2aOTH.

QA3

When did you or your business receive assistance from the FAPC?

Currently receiving assistance

Within the last year

Between 1-3 years ago

Between 3-5 years ago

More than 5 years ago

Don't know

Prefer not to answer

QA4

Does your business contract with a co-packer to manufacture the products?

Yes

No

Don't know

Prefer not to answer

QA4a

If QA4 <> yes, then skip.

Is the co-packer located in Oklahoma or outside Oklahoma?

In Oklahoma

Outside Oklahoma

Don't know

Prefer not to answer

QA5

Which of the products that the FAPC assisted you with brings the most total revenue?

<open-ended>

QA6

Currently, how many full-time employees work in your business?

[Respondent will provide number. Error alert will beep if answer is outside the Range: 0-100.]

QA7

Currently, how many part-time employees work in your business?

[Respondent will provide number. Error alert will beep if answer is outside the Range: 0-100.]

QA8

What was the total approximate amount of payroll to your employees for 2006?

<open-ended>

QA9

What was the total approximate amount of sales from your business for 2006?

<open-ended>

QA10

Was your business operating prior to receiving assistance from the FAPC?

Yes

No

Don't know

Prefer not to answer

If QA10 = no, then skip to section B.

QA11

Prior to receiving assistance from the FAPC, approximately how many full-time employees worked in your business?

[Respondent will provide number. Error alert will beep if answer is outside the Range: 0-100.]

QA12

Prior to receiving assistance from the FAPC, approximately how many part-time employees worked in your business?

[Respondent will provide number. Error alert will beep if answer is outside the Range: 0-100.]

QA13

Prior to receiving assistance from the FAPC, what was the total approximate amount of annual payroll for your business?

<open-ended>

QA14

Prior to receiving assistance from the FAPC, what was the approximate amount of annual sales for your business?

<open-ended>

QA15

If you compare the income and employment numbers from *prior to* receiving assistance from the FAPC to *after* the assistance, what percentage of this change of income and employment would you credit to the services you received from the FAPC?

0%

1-19%

20-39%

40-59%

60-79%

80-99%

100%

Don't know

Prefer not to answer

Section B—FAPC Basic Training (or Entrepreneurial)
Workshop_____

QB1 (screening question)

The Basic Training Workshop (or Entrepreneurial Workshop) is a one day workshop offered at the FAPC to teach participants the basics of starting their own food business. Participants learn about health regulations, packaging laws, patents and trademarks, different types of business organization, and business planning. They also meet with state government officials and learn about the “Made In Oklahoma” program. It also serves as an introduction to the services provided by the FAPC.

Have you attended an FAPC Basic Training Workshop within the past 10 years?

Yes

No

Don't know

Prefer not to answer

If QB1 <> yes, then skip to section C.

QB2

When did you attend the Basic Training Workshop?

Within the last year

Between 1-3 years ago

Between 3-5 years ago

More than 5 years ago

Don't know

Prefer not to answer

QB3Intro

As I ask the next few questions, please keep in mind that your responses will not affect the cost of services provided by the FAPC in any way. Since the FAPC is a state funded facility, it does not operate to generate a profit. Any costs to the clients are only used to cover some of the expenses of that particular workshop or service. These questions are for the surveyor to learn how much you value the services provided by the FAPC.

QB3

Which of the following would you say best describes the value of the information you learned from the Basic Training workshop compared to the time and expenses you invested in attending the workshop?

The information was far more valuable than the time and expenses I invested in the program.

The information was slightly more valuable than the time and expenses I invested in the program.

The information was about the same value as the time and expenses I invested in the program.

The information was less valuable than the time and expenses I invested in the program.

The information was not valuable to me.

Don't know

Prefer not to answer

QB4

Would you please explain the reason for your answer to the previous question?

<open-ended>

QB5

Assume that you are a business owner or operator who has not attended the FAPC Basic Training Workshop. Also, assume that you know only the general topics to be discussed and not the specific details of this workshop. Would you be willing to pay \$ X for the FAPC Basic Training Workshop?

Yes

No

Don't know

Prefer not to answer

(use random numbers between \$0 and \$1000 for X in \$25 increments)

QB6

Currently all FAPC workshops are located in Stillwater, Oklahoma. Is this location a factor when you are deciding whether or not to attend?

Yes

No

Don't know

Prefer not to answer

QB7

Would you be more willing to participate in the workshops if they were held at a location closer to your place of business, such as an area extension office?

Yes, a different location would be better

No, Stillwater is a good location

No preference

Don't know

Prefer not to answer

QB8

If the workshops were available through distance education such as a teleconference or on-line training, would you be more likely to participate in the workshop?

Yes

No

Don't know

Prefer not to answer

QB8a

If QB8 <> no, then skip.

What would cause you to be less likely to participate in a teleconference or on-line training workshop?

I do not have any experience with teleconferencing or on-line training.

I do not have access to teleconferencing or on-line training technology.

I do not like teleconferences or on-line training.

Other: please specify

Don't know

Prefer not to answer

QB8aOTH

If QB8a <> Other, then skip.

Please specify

<open-ended>

QB9

Are there any workshop topics currently not covered by the FAPC that you would like to see presented?

<open-ended>

Section C—FAPC Laboratory Services_____

QC1 (screening question)

In the past ten years, have you or your business made use of the FAPC laboratory services, such as, proximate analysis, shelf life studies, chemical analysis, or nutritional analysis?

Yes

No

Don't know

Prefer not to answer

If QC1 <> yes, then skip to section D.

QC2

When did you use the FAPC laboratory services?

Within the last year

Between 1-3 years ago

Between 3-5 years ago

More than 5 years ago

Don't know

Prefer not to answer

QC3

Please estimate about how many days you have used the FAPC laboratory services.

[Respondent will provide number. Error alert will beep if answer is outside the Range: 0-100.]

QC4Intro

As I ask the next few questions, please keep in mind that your responses will not affect the cost of services provided by the FAPC in any way. Since the FAPC is a state funded facility, it does not operate to generate a profit. Any costs to the clients are only used to cover some of the expenses of that particular workshop or service. These questions are for the surveyor to learn how much you value the services provided by the FAPC.

QC4

Which of the following would you say best describes the value of the FAPC Laboratory Services compared to the time and expenses you invested in using the services?

The services were far more valuable than the time and expenses I invested in them.

The services were slightly more valuable than the time and expenses I invested in them.

The services were about the same value as the time and expenses I invested in them.

The services were less valuable than the time and expenses I invested in them.

The services were not valuable to me.

Don't know

Prefer not to answer

QC5

Would you please explain the reason for your answer to the previous question?

<open-ended>

QC6

Assume that you are a business owner or operator who has not used the FAPC laboratory services. Would you be willing to pay \$ X each day that you made use of the laboratory services?

Yes

No

Don't know

Prefer not to answer

(use random numbers between \$0 and \$1,500 for X in \$25 increments)

Section D—FAPC On-Site Technical

Assistance_____

QD1 (screening question)

In the past ten years, have you or your company made use of FAPC on-site technical assistance at your business location, such as a plant audit, TQM training, process flow and efficiency evaluations, product development and testing, or microbial evaluations?

Yes

No

Don't know

Prefer not to answer

If QD1 <> yes, then skip to section E.

QD2

When did you use the FAPC on-site technical assistance?

Within the last year

Between 1-3 years ago

Between 3-5 years ago

More than 5 years ago

Don't know

Prefer not to answer

QD3

Please estimate about how many days you have used the FAPC on-site technical assistance services: Range [Respondent will provide number. Error alert will beep if answer is outside the Range: 0-100.]

QD4Intro

As I ask the next few questions, please keep in mind that your responses will not affect the cost of services provided by the FAPC in any way. Since the FAPC is a state funded facility, it does not operate to generate a profit. Any costs to the clients are only used to cover some of the expenses of that particular workshop or service. These questions are for the surveyor to learn how much you value the services provided by the FAPC.

QD4

Which of the following would you say best describes the value of the FAPC on-site technical assistance services compared to the time and expenses you invested in the service?

The assistance was far more valuable than the time and expenses I invested in the service.

The assistance was slightly more valuable than the time and expenses I invested in the service.

The assistance was about the same value as the time and expenses I invested in the service.

The assistance was less valuable than the time and expenses I invested in the service.

The assistance was not valuable to me.

Don't know

Prefer not to answer

QD5

Would you please explain the reason for your answer to the previous question?

<open-ended>

QD6

Assume that you are a business owner or operator who has not used the FAPC on-site technical assistance services. Would you be willing to pay \$X each day that you made use of the on-site technical assistance services?

Yes

No

Don't know

Prefer not to answer

(use random numbers between \$0 and \$1,500 for X in \$25 increments)

Section E—FAPC Technical Services_____

QE1 (screening question)

In the past ten years, have you or your business made use of the FAPC technical services, such as product scale-up, product development, batch processing, or process design and testing?

Yes

No

Don't know

Prefer not to answer

If QE1 <> yes, then skip to section F.

QE2

When did you use the FAPC technical services?

Within the last year

Between 1-3 years ago

Between 3-5 years ago

More than 5 years ago

Don't know

Prefer not to answer

QE3

Please estimate about how many days you have used the FAPC technical services.

[Respondent will provide number. Error alert will beep if answer is outside the Range: 0-100.]

QE4Intro

As I ask the next few questions, please keep in mind that your responses will not affect the cost of services provided by the FAPC in any way. Since the FAPC is a state funded facility, it does not operate to generate a profit. Any costs to the clients are only used to cover some of the expenses of that particular workshop or service. These questions are for the surveyor to learn how much you value the services provided by the FAPC.

[Programmer: Consider a skip pattern that will not repeat this statement 3 times—from sections C, D, & E]

QE4

Which of the following would you say best describes the value of the FAPC technical services compared to the time and expenses you invested in using the services?

The services were far more valuable than the time and expenses I invested in them.

The services were slightly more valuable than the time and expenses I invested in them.

The services were about the same value as the time and expenses I invested in them.

The services were less valuable than the time and expenses I invested in them.

The services were not valuable to me.

Don't know

Prefer not to answer

QE5

Would you please explain the reason for your answer to the previous question?

<open-ended>

QE6

Assume that you are a business owner or operator who has not used the FAPC technical assistance services. Would you be willing to pay \$ X each day that you made use of the technical assistance services?

Yes

No

Don't know

Prefer not to answer

(use random numbers between \$0 and \$1,500 for X in \$25 increments)

Section F— Demographics and Overall FAPC

Suggestions_____

[Note: Skip Section F if responses to all screening questions in Sections A – E are negative.]

QF1

What is your gender? [IWER: Record without asking unless uncertain of gender.]

Male

Female
Prefer not to answer

QF2
What is the range of your age?
18-29
30-39
40-49
50-59
60-69
70-79
80 +
Prefer not to answer

QF3
What is your highest level of education?
Less than high school
Some high school
High School Diploma or GED
Some College or Technical School
Associate Degree
Bachelor Degree
Master Degree
Doctorate Degree
Prefer not to answer

QF4
How is your business structured?
Sole Proprietorship
Partnership
Limited Liability Company
Cooperative
Corporation
Other (not specified)
Don't know
Prefer not to answer

QF5
What is your position title?
Owner
Manager
Other: please specify
Don't know
Prefer not to answer

QF5OTH

If QF5 <> Other, then skip.
Please specify
<open-ended>

QF6

One last question: Thinking about your overall experience with the FAPC, do you have any suggestions for us that would make our services even more helpful for you and your business?
<open-ended>

Qthank

Thank you for your time and consideration. The information gathered in this study will help improve services offered to clients and enhance the quality of the Oklahoma Food and Agricultural Products Center.

APPENDIX C

“Other” Reasons Why Not Operating a Business in Oklahoma

Don't have the money to do it

I never started a business. I was just interested in what was available.

It didn't produce enough profit so it was sold.

I teach full time so it's tough to get started.

Retired

I no longer own the business.

Our family is having health problems and we could no keep it going

It was intended for my mother. Who owns a workshop

I am a post doctorate student

I am too old and it would cost too much money to start and now health reasons

I just bought my land.

I help others create businesses and came to see what you all were doing.

I don't have my green card yet.

I work for the cooperative extension service.

I made another career choice

Don't live in Oklahoma, but that was where the technology was for what I needed.

I was just taking the workshop for information

The inability to produce it in bulk and not able to find a kitchen that is approved for inspection. I could not do it unless I give up my life. I do holiday candies and you can only do that certain times of the year.

I just went to get educated about the program to promote it.

I am an extension educator and it would help me to learn more about the program for the county.

I attended the class to replicate the class for a center in Washington State.

It was just an idea and it has not taken off yet

It was a money issue , and the research I did really let me

It was too expensive to operate

I just was interested in the workshop, not starting a business.

Because I'm a banker

We are in Kansas.

I work at the company, I am not operating it.

I don't live in Oklahoma anymore

I am in Kansas.

I work with the State Department of Agriculture

I live in Arkansas

I am an extension educator with OSU

Retired

I work in Arkansas.

I operate a service business.

I am in Kansas

We are in Texas.

We are in Arkansas

We are in Kansas

I went to see what kind of accounting issues were available

We operate outside of the state of Oklahoma

It was a temporary fundraiser.

I never wanted to start a business

We are located in Kansas and we are a manufacturing facility here in Kansas. We went to the barbeque training for contests. FAPC referred us to Kansas State for labeling since it was closer.

We do not have any facilities in Oklahoma.

I refer people to the ag center.

I work for a company in Texas

I work at Tyson foods

I have a storage company.

Operate in Arkansas

I work in Missouri.

I live out of state.

We are in Arkansas.

I am friends of a guy who is.

I just sold it to my son.

Because I am not the operator.

Facility is in Kansas

Own land in Texas

I just went to workshop for fun

I just went to a workshop.

I am from out of state.

APPENDIX D

“Other” Respondent Titles

Never started the business
No business
None
Records
Women’s Coordinator.
I never started the business.
Part owner; 50/50 ownership
There is no business.
Daughter of owner
None
There is no business.
Vice President
None
Vice President
Secretary/Treasurer
Operations Supervisor
We have not opened our business yet.
CEO
Partner
Vice President
None
None
None
None
None
None
I have not started the business yet.
None
None
Vice President
President
None
None
President
None
I closed the business.
Secretary/Treasurer
Kitchen Supervisor.
No business
None

None
Mainly, the marketing manager. But I do a little bit of everything.
President
I do not have a business right now.
Sales Director
None
None
business not started
None
None
business never started
Consultant
None
None
President
Corporate Dietitian
Warehouse and Production Supervisor.
Supervisor
ASA coordinator.
Sales.
Instructor.
Internal auditor.
Vice President.
Technical Services Manager.
HACCP assistant
International Marketing
Microbiologist
Vice President of assessments and product safety systems
Family and Consumer Educator with OSU Extension
National Sales Manager
Food Scientist.
Food inspector.
Product coordinator.
QA Manager
QA Manager
Food Safety Coach.
President
Director of Production
Food Safety
Food Safety Manager
I don't have a business.
Supervisor over custom meat processing
executive chef
Small Business Coordinator for a non-profit
QA supervisor
Production Coordinator

Vice President of Operations and Product Development
Quality Facilitator.
Quality Assurance.
Was the owner until I sold it.
Secretary/Treasurer
I don't own a business.
Technical specialist
I don't own a business.
Production Manager
Graduate Student
Quality Tech
Corporate QA
President
Office Manager and HACCP coordinator

APPENDIX E

Recommendations for Improving FAPC's Services

More detailed information on how to do what one goes over to begin. Being more specific
more user friendly, more step by step guidance. Make sure local offices that direct me to them are well informed and don't give out incorrect information about requirements for starting a business.

I can't think of anything.

Two-day training program so that the speakers have more time to discuss their thoughts.

No.

An advanced level for those who have gone past the thought process. A site map on their website as to who to talk to for what.

No suggestions

provide more insight on how to get sponsors, backing, investors or provide connections

None

Offering more workshops during the year.

Nothing right now.

No.

I just really don't know. Every time I have come or called, they have been very helpful. I would really have to sit down and think about it. But off the top of my head I cannot think of any.

No.

I can't think of any because I have always learned something.

No it was very well covered, they covered everything that you need to know. It answers question that general public don't really know.

No.

Branching out to other places so that more people can get the help they need.

No.

I do not

no I think they do a great job

they need to make available more workshops.

None.

Make it free.

Not at the moment

From what I remember, the initial seminar was very informative. It showed some weaknesses that I needed to address even though I was just there to see what was available.

I would like for them to gather a group people that are in the same process that I am in. So that I can get some input from them.

Have more locations and a workshop that is more specific. Like one for beef.
More advertisement for FAPC and more locations.
They are doing a really good job, help little and big business.
Everything is pretty plain.

No suggestions. They were very nice and helpful. We were very pleased with FAPC.
It's too expensive, I can't afford it, I'm retired.
Not at this time.
No, I was pleased with the class I took. I found it helpful.

Spreading out the locations of the FAPC all over Oklahoma, maybe once every month or every other month. They ought to make a service available in Northeast Oklahoma it would make it so much easier. I think OSU needs more outreach services like that. It would help the communities as well as provide the students opportunities.
I can't think of any. We enjoy working with them. He helps us.
No, they are doing great at what they do.
Probably to give me a call or let me know of the specialized services that you do after the fact, because as a startup business you are kind of overwhelmed right at the beginning
not at this time, I think they do a very good job at what they do

not really because everybody that I talked to looked as if they had hands on experience and looked like they knew what they were doing and knew what was going on none I could think of off hand, I was very happy with it
Just be closer to Tulsa.
No, it was an excellent thorough class. For a one day class, it covered a vast amount of useful information.
No.

they were very helpful and I could always talk to anyone if I needed someone to talk to
No I don't have anything

Not at this time. I thought the initial workshop was good. A workshop in another location periodically would have been more convenient for me.
No.
I can't think of any. It was very good.
No I do not.

I can't think of any, I feel really blessed to have had the opportunity to come and go. I don't think there are a lot of people that realize it is there and it is kind of a hidden service and I don't think people realize the availability of the service
No.

Next time when FAPC does a survey send it in the mail because I would rather phone.
Make it clearer what services they provide.
I wouldn't even know, they were wonderful and did a great job

It was a good experience. Just the follow-up. When they did the workshop they were really excited and upbeat and then they said they offered some things and they were vague. They need to do what they say after the workshop. I wasn't able to email the gentlemen I was in contact with because it was too full. I do appreciate the time and materials they gave to me.

They were wonderful for us it was easy to take the class and it was a great experience that I value. Very informative speakers.

No I thought they were great

No.

Increasing online services.

I don't know enough to answer that question. They can help you all the way with what they have.

No.

None it's great.

No I don't think of any.

No.

No not really

Not for me specifically. Side-note: Although, it seems to be a service for start up businesses I think it should be made more widely known, maybe corporate clients. A family member, who graduated from OSU, was not even aware of FAPC. It should be made more known to a broader range of people, including corporate clients. I am very impressed with FAPC and think it has a great economic impact on the state.

Come to different counties to do programs.

More advertising, many people just don't know about it.

They did a really good job. One thing, when you send out fliers, maybe give a little more detailed information in these fliers.

If they offered those workshops that I had listed earlier.

Can't really help

No.

I can't think of anything else – it is a wonderful program

No.

location could be better.

No I do not.

Provide opportunities closer to my home for workshops

No.

Maybe have workshops and other things more often. Especially the copyrighting and labeling. How to choose names and things.

Closer location to home

I can't think of anything, I think it is a great resource to have

I didn't get any follow up and that would have been nice.

No.

No, not really. It is just not a real, I don't know, we live in a rural county, and it is just getting people to think to do something like this. People are most likely going to be working for someone else, Younger people are more apt to starting out on their own. To have someone to have the means to go to college and then start their own business is rare around here. It is hard to get information to people.

No, not right now.

Not really, I thought the selection of the speakers were appropriate. They knew what they were talking about.

No, not actually.

No.

If they could talk more. Possibly a two day workshop.

No, I don't have any at the moment.

No I thought they were fine.

No, I don't think so

No I thought they covered all of my questions.

Can't think of any.

It would be nice if it were geared for the little bitty guy.

I can't really think of any.

Nope.

Having it closer to my business.

It was a very informative workshop and I really thought it was wonderful

No.

Make it a little more affordable for those who are just trying to start a business and don't have the money for the workshop.

Not that I can think of. I was overwhelmed with all the information in one day but was able to take some additional reading material home and read on more information.

No.

Nothing I can think of.

No.

The only suggestion would be to offer the same class at the extension offices.

No.

I thought it was an excellent workshops, but need topics like attaining funds, getting on your feet, and mortgages without going too much in the red.

A little follow up would be helpful every 90 days.

Not at the time.

They need more help because when I am dealing with them, they take too long to get back with me. If they would have a chef who can help when we call if we have a problem with a recipe to improve.

No.

Um, I can't really think of anything.

No, just more marketing and more advertising. More people need to know about them. There are a lot of people who don't know about them.
I think that it would be good to have a workshop in Tulsa so I don't have to travel to Stillwater.

I think the only thing is maybe some more information on grant money and funds available in Oklahoma, grant opportunities in Oklahoma

I think it is really excellent. They are really friendly and helpful. It is nice to know that they are there and do things that you need and look after us. They expose us to things in the seminar that we had no idea about before.
Not really.

I don't think that we have gotten enough basic information in the area of supplies. When we call to ask how to find the right supplies I feel that they do not know a lot about that. I feel that supplies is a weakness.

They need to publicize more, I don't think people don't know what's out there and they need to pat themselves on the back a little more. Maybe break down the classes more to where they only focus on certain topics, almost like a shopping cart type of thing. Maybe someone wants to only learn two of the three or three of the four topics out there.

No can't think of anything and I would highly recommend it to anyone wanting to start a business in food products.
I can't think of anything.

Make it affordable to new business prospects. Help the small guy make the business grow. Don't overburden him with excessive fees that he probably can't pay anyway.
No.
Just advertise it more.

You could lobby with the state legislature to help change some of the laws to make more sense for OK businesses, EPA regulations, state adopts federal regulations, such as testing for herbicides, which I know I don't have. It cost me \$7,000. Lobby with the state to help businesses ,in general, rather than hurt it.

I can't think of any.
Not really.

I got a business card from the general person but I would have appreciated a list of names for a particular area of interest.
Maybe some workshops on how a test kitchen operates or how to put together a pilot program and more specifics on this.
Find a way to help people with the politics of the food business, so that they will be able to enter the market more readily.

No I thought it was really good and they gave us good resources.
Not at this time.

Other than going to an extension office, everything is fine.
No, it was a very good seminar

I think we need a spokesperson for the microbusiness in food production because the state and county regulations are prohibitive for the smaller businesses. We need a voice to bring this up to the state, for example Texas allows businesses to have a commercial kitchen in their home. Oklahoma does not allow this.

No.

No.

Well, not really. We were impressed with the program. They were professional and helpful.

No. A lot of people still do not know about the FAPC. A lot of people have a problem with coming there a full day and with the cost when they are just starting a business. They have to have the money to write it off. You should consider having scholarships and things for people who need it.

No, not other than maybe having it online or other locations.

I really do not have any, I have been impressed with the FAPC.

No.

No. We learned how to package and things and this is good.

The only thing I would suggest is to try to have more locations where people can go to get that information

I thought the workshop was very good but that it needed more advertising because I heard it through word of mouth from a friend that is in the food business

I don't really know if they do or don't have what I am thinking. If I had more information on it or what was available, I would be able to say what maybe would improve the services but from when I went it was very thorough. Like I said before, the services from when the product is ready to getting it to market. Possibly have the Basic training have two parts.

Nothing I can think of.

None that I can think. We had a salsa and we did not know that there were a gagillion other salsas out there.

I think, cost analysis might be beneficial. I was interested in attending the workshop Managing your Business Financially. But it was cancelled.

I don't think they can get any better. It is just incredible how much they help you.

The category you don't cover is that FAPC serves as a great networking tool ; it is an incredible resource for networking and you do a great job

I can't think of anything ; they answered every question I asked and helped me in every way they could; they did an excellent job

No.

I think they went to the limit and really worked with me and got me going, found me a co-packer, and helped me start out

just wish they were closer because I live in Louisiana

Not right now.

No.

no not really, I really enjoyed it and there was a lot of valuable information
Be so kindly to participate in helping me market my product since it is a Made in
Oklahoma product.

It was a lot of information for one day, I think if it was broken into two days or a
shorter class would be better. I felt overloaded about 2 pm.

I would say, in Oklahoma City there is a market, a produce market at their campus, and
in there they all of the Made in Oklahoma products. If they had a representative there
on Saturday, it would be really helpful to have someone there with information on the
workshops. I know there are a lot of people that go to that market. Maybe someone
from the extension office and bring brochures and answer questions for them.

No.

I think you all have done a good job.

I can't think of anything.

No.

No.

No.

Not really

I would recommend that the participants tour the facilities. It is educational and
beneficial.

I think if it was in closer proximity and more advertising on what was offered would
increase attendance.

No they were helpful for what I used them for.

If they would do a follow up call and see how you were doing. It seemed as if it was
more male oriented because friends that went with me seemed to have received more
attention and help.

No. The course was very good.

No.

No, I can't think of anything.

No I don't think so.

Some kind of interactive website

Not really, they did a good job.

The experience I had was positive. If I had begun my business I would have used the
services that were just asked about.

If they are going to do any mail outs, they should be more specific. And I would not
pay 250 for the services.

Just location that was the only thing.

Not that I can think of, we thought it was a very good conference

No, I think it was all great. I also tell people about your workshops and recommend
them to people.

Not anything that comes to mind right now.

No.

I can't think of anything right now

The availability of extension offices.

Not at this time, no
not at the time

no, they really provided everything I needed except money, they were very helpful
I think there are some small food business that need workshops that are more
affordable.

No, but it was an awful small room and it was overly packed, but the education side
was very good.

No, I was very impressed.

No. I talk to Chuck every year and I do the Tulsa fair and he brings me paperwork to
hand out there. They are great.

No, not really.

No, everything was wonderful.

I don't think so.

No the knowledge was great I just haven't had time to start my business right now
No, not really.

I think a being a little more sensitive and appealing to older people that are getting
ready to retire that don't have the funds to jump out there and take a chance, but have
an idea that might work.

Not right now. Just keep up the good work.

I would like the classes to maybe be in Oklahoma City. Something outside of normal
work hours, maybe in the evening or on weekends.

No, not right now

no I thought it was first class.

Make themselves more known. I struggled for a few months because I did not know
where to go.

If they were more frequent.

No not really.

The material they had was good. It was a positive experience as I remember, but the
thing that would make it more attractive now would be if they offered other locations in
the southern part of the state.

Just food science and other aspects of that.

No, not really. I went to the seminar and my mind hasn't gone back that direction.

The person in charge of getting the results back should do so far quicker.

I can't think of any.

Advertise so people know that you're there and available for them because we heard
about it by word of mouth.

Not specifically.

I don't have any.

I can't think of any.

None that I think of.

No, I guess I don't.

Not at this time.

I can't think of anything, you put out a very good newsletter. And since Roy has taken

over it has been even better. It is a great resource to Oklahoma.
No, I really enjoyed them.
No.
No, I was pleased and no not really. I was told about the services by someone else. I haven't used enough of what was available. I am not real internet efficient.
Not that I can think of.
Just the online education.
No. It was a great seminar.
Not at this time.
I can't think of any.
Some of the web pages are still 2006 dates. They need to be more up to date.
No.
No.
No, I have never had any problems with FAPC.
No I don't have any
Not at this time, I think everything is wonderful.
No.
I could not think of any. They help me a lot. If anything they should give them a raise. They are great.
I think there needs to be more training offerings. Such as, rigorty compliance option, and technical issues, food and safety systems.
I was unaware of the individual services that you mentioned being available to us. A reminder of the services that are available would be good for me.
No, not at this time.
One thing that would help would be if they offered a symposium or programs for extension educators so we can share what FAPC has to offer to our community in more detail.
They are doing a fine job.
No. They are great.
No.
No.
For me I think it was the class that I was in, if they could help us formulate a HACCP program for us.
No.
No.
No.
No.
Trying to find an advantage point with an ingredient that I thought could possibly prolong shelf life, lower listeria, and increase overall product yield and flavor. I attempted to use FAPC services, a preliminary study was done for my product, but was never completed. I also offered funding for the services to be completed, but was never contacted. Would be interested in an entrepreneurial workshop.
None.
Get more funding for you guys.
No.
I wish we could get more help with Health Department issues. They keep changing

regulations.

No.

No.

No, you did a very good job. I have heard about your program, it was very well carried out.

I would like to see different types of workshops for the food industry (elementary and advanced). Including certification courses such as, HACCP, Food Security, Allergen.

No, I don't.

No. They are doing great, I have never had any problems.

They could be cheaper. I don't know, it would help with other programs and workshops. More topics in food safety, not just product development.

No, it was very helpful when I used it.

No nothing I can think of.

None

They have been extremely conscious about informing me of what they have available. They're really on top of their customer service. I enjoyed the workshop I came to and enjoyed working with them.

I think better follow through on projects to make sure they are completed.

I was very pleased.

No, I think you all do a great job

A list of the services that you offer would be helpful.

No I have enjoyed them so far

Not really.

No I have always been impressed. The curriculum is great. I really appreciate the services.

What the small producers in OK need is distribution and you need to be a big company to get into the warehouses. We need this badly. If we had a state-wide distributor, our business would grow greatly.

Just getting the information out to the public.

No.

Nothing right now.

Make it more readily available by having workshops and online education.

Not at this time.

No.

No I thought it was great.

No.

No.

No, it was a great course.

Do more for us. We send some people over there and we like you a lot.

No, you are doing a great job. I was a speaker at one of the events and I enjoyed it.

None that I can think of

Not that I can think of.

Need to be extremely responsive to the business environment and they do.

No.

I don't know how you could be any better

Not off the top of my head.

Develop a formalized pilot plant program so that businesses can come into your facilities and run test products to justify capital investment for a larger process; they have done a great job in helping smaller businesses, but they should transition into being able to help larger, grander companies more, they have made progress though. More specialized equipment into facilities.

No, they pretty much do things the way they need to and gave us a good break during the workshop.

No.

No.

They might start offering more things on the winery side of it. It is a booming area in Oklahoma and if they did that then they might get a lot of business from that area. I took a winery sanitation workshop there years ago and that is all.

No, they do a good job in the classes that they have.

No. My experience with them was great.

I don't think so they've been pretty helpful for us.

Have a set of questions that deal with people that use them for training services.

More explanation of the services provided.

No.

No.

No.

No, not really.

Not that you can think of.

No.

Not really, it was helpful what you did for us. I didn't have any problems.

No I was satisfied by the workshop that I attended.

No, I thought they were great

No, I am still learning about it and there is more out there then I can get to

No not really

No. You are doing a great job.

No. I got a lot out of the program.

APPENDIX F

Product Responses

No product business has been started yet.
Business never started
None
I went to a seminar that helps with how to get a product to market
Never started a business
No business yet
Barbecue Sauce
Milk
I don't know because they helped better all of our products.
Salsa
We have only received help for one product
None of them.
Business never started
No business
Business not running yet.
The business has not started yet.
They helped with marketing.
None
Goat meat
Pecans
Beef jerky , canned salsa
Beef
None
Barbeque sauce
Beef
Grape juice
Peanuts
No Answer
Water
No business started
We aren't involved in processing anything at this particular time
Candy
Salsa
None
Smoothie mixes
None
I didn't start it.
None
Pickles
None

Wine
No products
Barbeque sauce
No products

We have a catering and concession, the concession does the best.
Still in the process of developing products
None
Homemade sauces
None
None
Deer meat
Pecans
dairy manufacturing
Peanut butter pancake syrup
Beef Jerky
Mustard
No business
None
None
Wheat
None
custom fed beef cattle
Our salsa.

None of those – I just got ideas to grow my stuff at the workshops and things. I do, I haven't got anything packaging things, I do it by hand.

None.
The business never started
I only got assisted with one product
The business never started
None
The business never started
Hot Sauce
Strawberry jam
There was only one product I received assistance from
None
Doughnuts
Beef
None
Dry seasoning mix
The business never started
I don't have anything that I am selling yet.
I have not started the business

We have not sold anything yet, we are still in the process in creating the business.
Pound cake

I have not had a chance to sell yet
I didn't get help with the product, but more with designing and with the rules and regulations
None, they did not really help in that aspect.
None.
Ribs
I don't have a business.
I haven't started the business yet.
None
I don't know
Preservative free food for elderly
The business never started
Pasta sauce
The business never started
None
Bottled water
None
None
The business never started
None
Landrun Seasoning, smoky pepper and original
The business has not started
Not had a chance to put it in market yet
Salsa
didn't assist with any products
Prepared frozen foods
The business has not started
The business has not started
I do not have a business yet.
I took a class or seminar there – I don't remember much about it. I decided not to do the business.
Our barbeque sauce.
No products
Meat.
None
None
No products
Bread mix
Spices
lamb sales – frozen by the cut
I have no real revenue coming in
dips and chips
No business
None
didn't help with a product, I just attended the workshop
Cheesecake

Candy
The business never started
I don't know
The business never started
Pecans
The business never started
White wheat
None
Never put it in the market
The business never started
No business
I have only been assisted with one product
We attended a seminar.
Salsas
None

I haven't used any information that they gave me for any financial gain.

Business never started
None
None
FAPC has not assisted with any products specifically
Never started a business
didn't get any assistance on a product
No products were brought
Barbeque sauce
Pecans
Barbeque sauce
didn't help with a product
Beef jerky.
None
Soup mixes
None
None
None
I can't say that one in particular is different than the other.
None
Gumballs
The business has not started
Beef Jerky
None
No products
No products
I just went to a barbeque judging course.
I don't know.
Our concentrate.
Coke Extract

My first assistance that brings me the most was with my fruit fillings and that is my most

revenue.
I am not sure.
Nothing has been finalized on that.
Meat products.
Meat.
Um, well they assisted with fat content of a cooked food using our machines.
None.
I don't have a business.
Grocery store
Did not start business
Meat.
Wine.
None. Not yet.
They helped me with the labels and the UPC. We do barbeque.
Probably chopped and formed meats.
Beef.
I guess the corn nibblers.
Beef jerky.
None.
I do not have a business.
None.
I am in the inspector business and it does not really apply. I just inspect other businesses and I went to a round table.
Wine.
Restructured meat items.
Just our slaughter.
Bottled juice
I do not know
Refused
sausage rolls
Poultry
I have no idea.
McDonald's hamburger patties
Basically they helped us with labels.
None.
I have no idea.
I don't know
The business never started
I am a farmer and FAPC did not assist me with that.
Meat.
Our Woody's Chewy Pralines with Pecans and Walnuts.
Pig ears
all of them – FAPC helps us with quality attributes that affect all of our products
Pies.
Beef jerky
some chutney.

Salsa

I didn't receive assistance on a certain product

No product, I just went to a HACCP workshop and an allergen labeling workshop.

Frozen dough products

Chicken

I grow grapes but haven't started a business yet, it's for retirement

APPENDIX G

Reasons for Why Respondents Did or Did Not Receive Value from the Entrepreneurial Workshop

Because I didn't leave knowing how to produce my food.

I think that when I went in there I expected more guidance in the processes, I got more out of the question and answer portion.

I thought the class was well organized but I thought that it should be a two day class so that the speakers can expand on their thoughts.

They gave me more information than the time I put into the workshop.

I had already reached a level that they taught.

I learned so many things about business that I didn't know before.

Well they gave us so much information.

One thing that delayed us in starting our business, was what we could and couldn't do as far as health regulations. It was in a canning seminar, that I received some confusing information about regulations that prevented us from starting our business. It was a State Health Inspector that talked. We don't use fresh ingredients and I thought we were going to have to go through more training in order to start up.

It gave me information that I didn't have.

My husband and I have lots of experiences so we did not get a lot out of the beginner workshop.

Because they explained so much that I was not aware of
Refused

They explain to us what you need to do in order to market a product, they tell you how to label , it was very, very informative.

Because I needed to know how to run a business and they told me.

I felt that there was a lot of information for one day. The classes should have been longer. I could have gotten more out of it.

They answered all my questions and gave a lot of new information.

They helped us in so many aspects from the initial workshop, called them up later and they helped with everything, put us in contact, they were a great asset to draw from. A lot of information that was provided, it would have taken a long time to research and was very valuable.

They really showed us about things that we really didn't know and networking.

My degree was in business so what I learned was not tremendously helpful.

It gave me a wealth of information about the obstacles and the rewards you receive with starting a business

Helped to learn the in's and out's of the beef organization. Showed other outlets that I could venture into and also gave information on regulations and where to find the information.

The research would have taken a lot longer to find all the information.

I would have had to research everything that I needed to know if I would not have done the basic training.

Well, I wasn't aware of a lot of the information that they offered.

Very informative about all aspects of owning a business dealing with food in Oklahoma.

I don't know.

Because I learned something.

They gave me a lot of good information, I just did not do anything with my product.

I think that it was very valuable. That's something that interests me and at least I know where all the resources are.

Well I am answering from a different perspective. I am not starting my own business.

Well, it was so inspiring to be around other people who want to improve Oklahoma. I went to Oklahoma City for more seminars. Now kids have a place to go out and learn things now at the facilities and go out as a class. They can grow things for their parents. The high school and junior high all come down.

I had to spend a day to come over to the workshop, and they did help me and contribute to the knowledge that I had before the workshop

You always have an idea of what you are going to do, and once you get into the details of what you want to do sometimes you find out that it would not pay out and make any money. It showed me that my idea was not profitable at this time.

There is just a lot of information that people do not know about.

The amount of money I put, given the ratio of students to instructors was good.

I already have the knowledge

For someone like me who didn't really know a whole lot about food manufacturing, I learned a lot from the workshop since I had no real experience

They gave good information on the topics that presented.

I felt like it gave me an overall viewpoint on what it was going to take to start up. They offered something no one else did. It would have been priceless if I would have developed it.

The cost was very low and I thought there were a lot of people that seemed like they really wanted to help out.

I think it was very informative. There were people there that already own a business that gave information. The instructors were very informative, and the packets were also. If you can learn one thing in a seminar regardless of cost then, in my opinion, it is paid for.

They provided a lot of information , pointed you in good directions and resources.

The interaction with all of the people necessary to start the business was very useful, all of the information in the books and packets about how to get started. It was all in one day, and it was a really valuable day

They gave enough information for some basic questions. Enough to know where to go to start a business.

We went to two workshops, they both were very helpful

I felt like it was too expensive.

They helped directed us how to get trademarks and patents for our products and it had good hands on experience

The information that I received was information I did not know. It was very helpful for you learning state and federal regulations. It helped put me in the right direction.

We came up there to learn how to take our sauce that we had been producing in our restaurants and distribute it legally into stores, and it was extremely educational and was great at giving step by step instructions

They covered all the topics that I was interested in knowing about, how to market.

They explained everything to branding.

It helped me make up my mind about starting it.

I did not have to pay for it and it gave good information

If you go outside to independent agencies it's going to cost you a lot more for the information that you get. It's beneficial to the school and the students. They have everything needed to help a person who is strapped financially and starting a small business. It's all available in one place.

They told us about the business end and where to go for information.

It really did not hit the questions I had because it was more geared for food.

It was really informative.

I feel like it saved a lot of time in how to go about packaging and marketing the spice.

There was more to starting and getting involved in the food business and the 100 dollars spent for the class was worth learning the info they taught me how to produce, market and network.

They did give lots of information, everything else that they could do cost more money. It kind of seemed to me that they were just in it for the money. It was interesting, people were very nice.

We were already in business, we had all our stuff already made, I didn't gain much cause most of the people there were trying to learn how to start their product and stuff and I already had mine.

It opens my eyes to what we could possibly do with our business. I think they can help move the company forward in the future.

I think because they were able to give a good overall view of owning a business. Give you a reality check of whether this is something you want to continue to pursue when you are thinking about starting a business.

All of the information that they gave me was pretty much right on and helped me save time and money. All in that one day and they helped me find the most cost effective way

Just being able to get all the information in one spot.

Because of their knowledge in the field and the help they gave me.

With someone who didn't have any understanding or information it helped me out a lot and helped me start out and I am currently waiting on the right timing. The information was well worth it. Informative on labeling, FDA requirements, etc..

Don't know

We had a lot of questions about licensing and things like that so we were able to talk to people who knew the answers and people who were in the same stages of business that I was. It really helped.

I felt like I got a lot out of the class – it was better than I expected and for the time that it took to go through it I think it was worth the money it took. The people seem very knowledgeable.

There were particular questions I had that were supposed to be answered but the speaker did not show up that I specifically showed up for

You get a lot of information about everything and new concepts.

I have not proceeded to go into the food business.

Some of the local bankers and ranchers around here, Oklahoma has more livestock than people, they are so bleak about making a living on livestock. Most of the land is owned by family after family and to go someone who wants to talk about it is great.

The banker is just, like to try to make something work is just impossible. The level of what you learn is great. You get hands on training which is invaluable.

There was just a lot of things that I did not know and they would respond to my questions later.

Um, it, um, I would say they did have good ideas about how to avoid pitfalls and information to try out things. That they could help with samples.

We learned a lot to make a decision about whether to go on with it or not.

Because it was very well organized. IT covered all the bases for a first time business person.

I got a lot of information. I got more detailed information.

I thought what I received was a fair price. I would not have paid more for it.

The cost was high

I gained information about marketing that was valuable.

It was like \$35 and it taught a lot of things that you wouldn't know about.

It kept me in business

They told us about all the regulations we did not know about and preparing outside of our kitchens and number of other co-packers and taxes.

It felt as if they took their time to explain everything. Took the time to go on a one on one

it was what I expected it to be.

Never been in business so put us at ease know someone could answer our questions.

Also just learning what we did.

Some of the information I had already collected from other places.

It gave a direction and gives information that you would have a hard time getting from another place.

I think it really opened our eyes to things that we did not know about. A lot of information that informs. We did not know that the FDA was the only one involved it was just helpful information.

I learned a lot that I would not know otherwise

there was just a lot of information that they gave us.

It saved me a lot of time, money, and effort

there was a lot of helpful information about connections and resources.

I have not been able to take advantage of the information, I would need money to start. Until that seminar I had no idea about what a co-packer was and they just gave me a lot bunch of ideas.

I got a lot of information that I could use, plus it would take more time to look for the information on my own.

They gave a lot of really good information in a short amount of time. I was made aware of a lot more options.

I didn't think that the workshop was expensive and they gave me critical information. Highly informative and worth the money.

It was just reasonably priced with a lot of information.

Just based on other seminars, it was not too much or too little. You could probably charge more.

I got great information and they were so prepared for the workshops.

Low cost with a huge amount of information, very economical, worth way more than 100 dollars

It was very informative. We got a great diversity of information.

I learned a lot and it was very informative and extremely helpful. The notebooks they gave were full of information and able to be used today.

My business was already up and running. I felt that we were beyond what the workshop taught.

It was valuable, and the professors were helpful.

Dealing with professionals that have exhausted all aspects of the food industry and can answer all your questions.

We came into the workshop knowing nothing. It was very helpful.

Anyone that is thinking of going into a business should take this class. It makes them aware of the regulations and a small portion of what is expected of them. This workshop was invaluable. It opens the attendees eyes as to what is required by state and federal government regulations.

This is a new business and I needed to learn the difficulties that new business have being funded.

It just answered the questions I had

It was good seminar for the price. Overall it was a good presentation. Opened my eyes to some things I didn't know about.

I got a lot of information I had no idea in before and to see what else was involved

It was so thorough, backed the information up with a hard copy of everything. I was very impressed with this seminar. I appreciated the price, it made it to where I could attend. The willingness of the people who put on the seminar to answer all of the questions we had. It seemed important to them and they were very passionate about what they did.

They gave me all the basic information in one folder. I go back to that folder all of the time.

They introduced me to some things I did not know about at all, such as, co-packers, where to go get raw materials, networking opportunities.

They had people there that were real knowledgeable and that were successful in food business and their comments still pop into my head.

It did give us the basics. But we would need additional information.

The one I went to basically explained all the legalities and I already knew it, so I learned about 35% of the things taught

All the information was condensed as opposed to learning for a long time

They came up with a lot of good ideas and showed me how much money was needed for my business.

We paid 200.00 for two people to attend and we got printed materials and a good introduction for many topics. The availability of people to answer my questions over the phone is great and invaluable to me.

I learned a lot about mass marketing

It really helped me because I gained information

If I went to some independent person it would cost me ten times the amount and I got a lot of great information.

It gave the clients a resource of who to contact for guidelines and things.

It just seemed like it was a lot of good information.

I felt it was a well put together presentation and there were things we learned to do differently and the speakers were great and we were given great material to take home. The take home stuff was very valuable.

It was reasonable.

I learned more at the program.

It gave me the information that I needed if I would have been able to get my business off the ground. The price of going to the class was very reasonable
I felt like the workshop provided so much valuable information that anyone should attend if they are thinking of starting a food business. Also they set up times for future assistance.

From the resources available I was able to gain a better understanding. They were very helpful and made themselves available to help. And also from what is available.

A lot of the information was remedial that I already learned going through business classes in school, but I did learn a few new things and it was worth it.

It was good information and felt like it was worth what we spent

Back then, the LLC was just coming into existence. They explained to us the difference from a sole proprietorship and an LLC and a corporation. They also gave us packets of the forms we needed to file and tax information.

I've been in different business but this class was valuable in ways of showing you different avenues that would normally cost more money outside of FAPC and they helped to speed the process of getting a food product out there. The workshop is invaluable, it is incredible.

It was very comprehensive; it had materials that I could take with me and reference back to; and it saved me a lot of time tracking down the information by myself; it paid for itself

The advice that I received from the members of FAPC was great, I could just pick up the phone and call them and they could point me in the right direction; saved me a lot of time and money

We have been in business prior to workshop. I knew a lot of the information, but it did give me motivation to do more in my business.

I learned a lot from the people there

Because I didn't know anything about the industry and it was a total introduction to the industry and how it works.

It was a lot of information crammed into a short period of time. Some information was helpful, but some was too far over the top to get a business started. There was not enough time spent on how to actually get a business started.

It was very informative and very interesting.

A lot of the information was stuff I knew because I run a business already.

Because of the workshop I learned how to find a co-packer or a distributor, it would cost more money and time to get started without the workshop
A lot of information about first time business and the book they gave us was also very valuable, definitely worth our time
It was extremely valuable and well worth the money.
The information that was provided was very valuable in making a decision on the business

The information that I learned affirmed for me that I did not need to start a business

It seemed like a lot of the information given did not pertain to our business.
I thought it was very informative and helpful.
It was information that we did not know where to start. It wasn't information that was available on the internet.
I thought it was good information

It gave a wealth of information to start the business as well as contacts.
Since I was an educator, it was not of expense to me but it gave a lot of information for people who did not know much about it.
It gave me a lot of information to base my class on. And I could see what I would do differently in Washington.
It cut through all the research and the information was current. It saved me a lot of time and gave a lot of information.
I got my money's worth.

You can't quantify a value when you didn't do it. The information was valuable and I maintained and kept the information. But I haven't started the business yet. But certainly there was valuable information.

Because if I had not gone through the class I would not have never known about it and I would have been scammed. I understood more about the business.

We had already launched the program and knew some of it and thus if we had not began before then it would have been more valuable because it would all be new information. But I was impressed with the information available.

The knowledge I got within the day is knowledge that I don't know if I would have been able to obtain in years. The information was priceless, saved me a lot of mistakes
It just gave a lot of detailed information you wouldn't think of before starting the business
Some of the information I already knew and there were others that I did not. And it was presented well and good information
I couldn't do what I wanted to do until they gave me the information and the help I received.
I just thought it was a very excellent program. And the knowledge and education I got from that was very good.

I learned a lot about all aspects of starting a food business from the co-packer to the product development process

I just thought I got so much valuable information and I only paid about \$25 or \$50. I really thought that was a good price.

Some of information I received, I already knew. Also, so many topics were covered, not all pertain to me.

I do a lot of volunteer work for the OSU extension office so the workshop was paid for me. It was fun for me.

I came away from the class knowing a lot more than I knew before, It taught me a lot, and it was a really really good source of knowledge ; and I enjoyed working with Cory Stone, he was really really helpful

Learned more than I expected.

The legal aspects like regulations and loopholes and such were extremely valuable. I still use a lot of the information they gave me today. I learned a lot about a business plan which I never obtained from four years of school at OSU with an economic degree I don't know.

I had ran a business prior to attending the workshop so I knew some of the things. I felt like I got a lot out of it.

It went through all the process of owning and running a business as well as the government regulations. It gave me a whole picture of what is involved.

It opened my eyes to a lot of things and helped me with research.

Well, they had some other workshops that were a little cheaper that told about the same thing.

We kind of knew what we were doing a little, but FAPC really cleared everything up for us.

The knowledge I got about starting and running a business was very educational.

I always wanted to know the in's and out's of the process of starting of food business, it gave me that information.

It makes a person look forward to their future and help them figure out what they're going to do.

It was just at that point that they informed us a lot of features of a business that we needed to brush up on.

It just told me what I didn't know. It was a lot of information consolidated in one place, which it probably would have taken me a lot more to get that type of information from somewhere else.

More valuable then what I paid for it and there was a lot of great information.

Even though some of the stuff was not pertinent it was still just so well put together. I felt like we were treated like royalty all day long. I appreciate the information and the way it was presented.

I didn't know anything about starting a small business, especially the beef side of it and I learned a lot

It didn't cost me much except for the registration fee.

I go up to Stillwater from the City. What they were teaching and talking about that day didn't pertain to what I wanted to do.

It was a little bit better than I expected.

It was valuable, I really wanted more information on food science. I will look into another branch. Things to do with food chemistry.

I had no idea what to expect, it was just that I really didn't luck out much. It just wasn't designed for me.

The training we had was mandatory to run the plant. It was about a two day training.

Um, the workshop I went to was more valuable than just average.

I think that many times people think about getting into a food business without information. These seminars provide information for new food business owners.

I just thought they gave us a lot of information for the money.

I felt like for the amount of time and expense, I got a lot of great information. It was well prepared and thought out.

Um, the workshop I went to had a lot of material that I was not familiar with. It was just kind of over my head.

We have used another training and I can tell that that the price of their workshops is not a better value. The Stillwater ones are more frequent and better. I have direct comparison experience. We appreciate that they always have people from industry and government which is rare in the business.

It didn't go into as much detail as I had hoped.

I picked up a lot of good information at this workshop.

Compared to the price (other places are far more expensive) and I learned a lot

I don't know.

We had no idea about this and we got a lot of information.

Some of the topics are invaluable to me and some are topics that I already know about. I have always had an interest in food allergen and learned a lot about them through the workshop

I did not know anything about labels and they helped me a lot.

The government made me do it and go.

They just have been a huge help, I don't know that we could have done it without them.

Since we are regulators it gives us a forum that we can share ideas.

I got to learn a lot.

The cost is low and we really use the services.

It was really good and gave me good resources.

It just was

I used the services for a fundraiser and we were not too successful.

I learned a lot and used it later on.

I gained a lot of insight and knowledge. I learned a lot about safety regulations
We came and took the course because we were looking at starting a business and they helped a lot.

They do have a good course there for people that want to start their own businesses; I already knew a little bit about it, but for a person who was just starting out it would be better

For the industry, knowing all of the regulations and making plans.

This business has become more of a hobby and it was more of the insides of it that led me to sell the business.

It's been so long ago since I went but I'm sure it helped me start out and get the business going.

Because that information was very great.

They just helped.

Because I learned a lot.

Learned a lot of things from the workshop

The information is vital for the future of starting my business when I retire.

For one the cost for attending the workshop was a hundred dollars and we don't operate a food business, but they helped a lot.

APPENDIX H

“Other” Responses to Why Respondents are Less Likely to Participate in On-line or Teleconference Training

I would rather be in person
I like to meet people face to face.

It would be easier to communicate this information on a one on one basis.
I would not do online, I would rather do face to face.

I have dial-up, and it creates a lot of problems with high-speed information transfer.
Not as interactive.
I like face to face better.
I like to be able to ask questions and have the personal touch.
I don't know, I'm through participating.
I would want to interact with people in person.
I would rather have it on a face to face
It's not as effective.
I like the one on one and hands on information
time issue

I prefer warm bodies and to be there with the people. I prefer hands-on. There are some things that can be done online, but not all of them.
I just need to interact and get a hands on experience

I would not have time to do it if I were at home. It would be hard to concentrate
I would rather have that personal experience

I would rather do the hands-on because we also got a tour of the facilities available
Finances would not permit ability to attend

If the students are paying for it, they can fund for the professors to come and teach.

Prefer to have face to face interaction and see the facility that I am dealing with.
I like the one on one teaching environment. The ideas from other classmates were valuable
I would want to listen to the feedback of the other attendees who are wanting to start their own business because they would have other questions that I might not know to ask or even think of.
I can't think of any
I just prefer face to face.
I have done some web workshop and seminars and I think that in-person is more effective. The online seminars formats were distracting, I would have rather had just the printed material.
I like the one on one experience.

I work out of my home and out of my home I am cut off to all distractions.
I would not be more likely to participate in the workshop if it were online, but it wouldn't affect it.

It's probably just about as time consuming as showing up

I prefer face to face interaction

prefer hands-on, face to face interaction

I do not think that online training would work for the general public

I think having a teacher face to face is important for that class.

Personal interaction would be beneficial

It would take away from the experience, it is more of a partnership

Because I'm here in Stillwater.

I am more hands on

I would like more of a hands-on experience

It would be hard for me to stay focused with other things happening around me. I'm afraid I'd get up and walk away and come back and miss something.

I don't have any experience and I also live very close to OSU. I also like the physical contact.

Too many distractions, when I went to Stillwater I was able to turn off my cell phone and kind of get away and I was able to focus more. Plus, I was able to take a tour, which I couldn't do from over teleconferencing or online.

I like hands on training.

It is better in person

I like hands on better.

It is more beneficial to be in person to person.

You can't replace a hands-on situation.

I like the face to face and you get to interact with other people attending the workshop.

Prefer face to face, classroom better

I'd be missing the interaction of the class.

I like the personal and to physically be eye to eye if I can.

I just like hands-on, but it is hard to take 1/5 of your work force and leave work.

We give lower priority to teleconference. The participation isn't as active.

For training it is better for me to get out of my business, to avoid phones and things, and be able to concentrate on the content of the program.

APPENDIX I

Workshop Topics Respondents Would Like to See Presented

I don't know. It's been too long for me to remember

No.

I don't think so

No.

See the trans fat come around again. And the next level for the people who have gone past the basics and need consultance.

Nothing else

connection to investors

I would like to see more direct help in procuring vendors. It's been very hard to find vendors that will provide supplies (ingredients). It would be helpful to have a workshop that allows us to meet vendors.

I don't know

I would like to see them break out into individual topics instead of one broad session.

No.

No.

It's been so long. So no.

No.

I can't think of any

No.

Not that I can think of.

No, not that I know of.

I like face to face and hands on better.

Not that I can think of off hand

A general gathering for those that have Made in Oklahoma products

Not that I know of. Maybe have more specific workshops that pertain to certain business. Like a workshop just for beef.

Can't think of any

Workshops in the area of ..payroll accounting and health insurance, workers compensation .

If they would be more specific on marketing on how to get started i.e. from the house to the market.

Not that I am aware of off hand

I don't know

Not off the top of my head.

No.

There was something, but I can't remember what it was right at the moment.

I think they do well.

No they are all great.

I think they did a good job

not for me, no

No.

No, there is pretty good coverage of all the information

No.

I'm sure there is some room for some different seminars when it comes to food – HACCP, Kitchen Incubators, etc. They seem to be more about mass production

No.

No.

No.

Not that I am aware of.

No.

I'm not sure if they have stuff about product liability type insurance, but that would be nice

No.

At this time no

I don't know

None that I can think of

I would like for them to have more information available about the co-packing end of it with more options to help. Co-packer information would have been helpful. Mine would have been a dry product and there are many wet packers and not as many dry packers available. I need to start on a smaller scale to get started and find someone to do that.

I'm really not sure , I really haven't explored all of the classes and topics they offer, but I definitely believe they have a good thing going

I don't really know

No.

Not that I know of.

Not that I know of. HACCP is touched on for what the state requires, but if I hadn't already been educated in it, the person could feel overwhelmed.

Book work and how to keep track of everything for your business.

Not that I am aware of

No.

I wouldn't know

Setting up a commercial kitchen

No.

not any I can think of.

Thing I would like to know the most about is label design and sources for containers.

Not really.

I like personal interaction.

I think they covered just about everything

Not that I can think of.

No.

It's been a while since I have attended so I am not sure as of what they have to offer
Not that I can think of.

I haven't really thought about it. I enjoy getting the newsletter though.

I'm not really sure what is covered and what is not. I would like to see some
specifically designed for restaurant catering, financing and bookkeeping
Not that I know of.

No.

I can't say that there are.

No, everything seems to you know, it covers a lot of stuff from raising the animals to
get them to the consumer by retail large chains or small chains. They give you a lot of
ideas.

No, they have a good range of areas.

I wouldn't remember, it has been a while.

No.

No.

More on co-packers and what to look for. How to look for co-packers as a small
business

No.

I don't think so

No.

Get information on businesses that are established and can help with bottling or
packaging product.

I would like to see a class on farm canning.

I can't think of any

Not that I know of.

No.

I'm not sure on all the topics but maybe some talk of taxes or a class on taxes

No.

I don't know.

I don't know what else would be available.

No.

No.

No.

I would like to see more organic workshops

No.

Grants available to farmers, acreage attainability.

I would like for the tax seminar to be included in the basic training workshop and the
mechanics of actually getting the product on the market and the financial end of it.

No.

I can't really think of any

Not that I can think of.

Not really.

I don't know

No.

not at this time, you offer such a wide variety of stuff

No, all of them are good. I get the newsletter in the mail. I went to one about taxes. A lot of business owners don't get the information ahead of time.

I don't know

No.

I would like home based topics discussed. To do at home, and a good list of URLs and places to go.

Not sure

nothing right now

None that I am aware, but I am sure there probably are.

No.

No.

I don't know

I can't think of any

I would like to see a business tax workshop. Would like to see a seminar that is specific on the tax part of a business.

I don't think so

How to formulate products or recipes.

No, not really

I don't know

I don't know

Not that I can think of.

No.

I don't know, I am too new to give any input on that.

No.

No.

No. It covered a lot of generalities and they were good about going into different areas. No, because you are speaking to a big group of people. I have had a lot of problems with facility layout.

No.

Not that I can think of.

I don't know

No.

not that I'm aware of – but I haven't checked into it in quite a while

No.

Perhaps on how we can go from where we are to where we can go. How we can go from the product is ready to the producers. How to get it to the market.

Not off hand, I haven't really researched it that much

I haven't really given it a whole lot of thought. We were just wanting to see what was involved.

Possibly new nutritional information and products, like maybe how we could use whole wheat white flour. More information on organic ingredients.
Not that I can think of.

FAPC's emphasis is really heavy on adding value to agricultural products through food manufacturing ; I would like to see FAPC do more towards livestock producers, alternative means of processing, selling, and distributing meat products, etc.; less refined value added

I can't think of anything right off the top of my head

I can't think of anything.

None that I can think of

No.

I am not sure.

Not at this time

More things like what your rights are as an owner handling employees. More things on what a owner needs to know about things that deal with employee's and the laws dealing with them

No, not at this time

I don't remember because of the time that has passed

Nothing that comes to mind, they had great speakers. Maybe have an actual practitioner.

No.

A class for people that want to do meat based businesses where the USDA would have to be involved. A session where they discussed everything that is in a business plan. Show and help people put a food business together.

No.

No.

No.

Not really.

No.

None that I can think of

No.

I would like to see them address healthy snacks high in nutritional value and low caloric intake and the marketing to go with it.

No.

I can't answer that. I haven't really kept up with it.

Maybe more on marketing but I don't know what all they offer.

Just keep on with the current topics

Not to my knowledge

None that I can think of right now

No.

I would to see like how to plan out a kitchen and make it more flowy and productive

Not that I'm aware of.

No.

No, I think there is a great variety of workshops.

Nothing comes to mind.

I don't know

I can't really say because all of the information was there

No.

I don't currently know all of the topics that are covered

I can't think of any

I would like to see packaging

Not that I can think of.

No

No.

No, they did a really excellent job.

I don't know

not off hand

No.

Management for your business should probably be first, you have to go through steps.

I am having a hard time trying to figure out how to manage things.

No, as of right now.

How to get financing and how to make a business plan and stuff like that.

None that I can think of, a lot of information in a short amount of time.

No.

I think maybe they could do more on marketing.

I have not kept up with it so I wouldn't know what is being offered

No.

No, because I'm not in that business anymore.

Food science.

I couldn't answer that.

No.

No.

I can't think of any

No, I don't think so. Starting a small business is more popular.

Not that I can think of.

Um, not that I know of.

We would send more people if we could do it online. It is not the location, just the time to get away from work. They do a great job and cover all of the subjects.

Allergen labeling is great. They are always ahead of the industry.

No.

No, they are pretty well covered.

No.

No.

No.

No. If they are not covered I call them.

No.

None that I know of.

I wish they would continue on the HACCP program.

No.

No, they do a good job.

Yeah something like product development sensory evaluations.

No.

They cover most things in the area of allergens and things that I am working in.

I can't think of any

No. It covered what I needed.

More on grapes growing and production.

No.

Not that I can think of.

Not that I know of

No.

Yes, economics of expansion for microbusinesses.

No.

No.

No.

No.

I don't know

Not that I can think of off hand

No, not that I know of. I haven't stayed real current.

APPENDIX J

Reasons for Why Respondents Did or Did Not Receive More Value from the Laboratory Services than the Time and Expenses they Incurred

The facility itself showed us equipment that would be of value to a person looking to start a food business and who were looking to buy new equipment.

I do not have very much start up money so it is hard to justify spending that money. because they knowledgeable
If I searched on my own, I would end up paying a lot of different people, plus the expertise available

It's because the forced up regulations from the government since the government pays the state half and the state pays half, I think it should be a freebie.

Provided services that are easily accessible and don't know if they are available anywhere else. Also the people are timely and do a good job.
They were very acceptable to what I needed to do. They helped me 100 percent of the way.

The ability to do so without help from the FAPC would be incredibly hard.

I would have had to research everything that I needed to know if not for this.
I couldn't have done it without them
Some of the services are not available anywhere else.

Their response told us what was wrong with the product and we were able to correct the problem. If we had not had it tested then we would have had to guess.

everything that we got from them was really professional - I know it took a while for them to analyze everything but the information they gave us was always really honest and forthright. I felt like we were getting really good service
it was really informative about shelf life and calories of your products ... it makes it easier for newcomers
I don't know exactly what we ended up paying but it was something we really needed to keep this thing moving

I made one email and they gave me all the information I needed. The class was very informative and in one day I got information that would have taken a lot longer if I had to go through all different services.

I couldn't have spent the time and effort to do all the research that they did. having that nutritional analysis was awesome.

I wouldn't be where I am if it weren't for their workshops and assistance

same answer

services are less than what they normally cost

It was difficult to find it anywhere else.

There is no way I could have done that ourselves and completely broke down our salsa and helped a lot.

We were not sure if we were proportionally correct for the FDA

I don't know how else I would have gotten that done.

When we had our product analyzed we were able to see if we were meeting our goals.

cause because all we had to do was send it off, we didn't have to go down there.

Because if I had to send it off, it would cost more money and more time.

They figured out my food ingredients for a small amount of price and went into great detail

I think it is a wonderful service for my business

The FAPC expertise. The test kitchen facilities are not much different than other places, but it is the knowledge of the people.

I had another consultant do the same thing and I don't think he put the time and effort that OSU put in and he was almost double in price.

A lot of it is hard to explain. I had already learned most of it but the time was made easier. It was condensed

Simply because I wouldn't even know where to go outside of FAPC.

you guys have a great service and it provides us with all of the information that we need ; everyone I talked to was very helpful and informative

I was able to put on my literature that my nutritional value was analyzed by OSU, I have a lot of omega-3 fatty acids and other health benefits and I was able to say that it was analyzed by someone in an accredited position.

those tests would cost so much more if I went to a different place to get them analyzed, and I brought it to OSU they just asked me for my ingredients

they were wonderful. David was wonderful ; he put us in lab coats and worked right along with us

Type of information and got it in a timely and professional manner which helped me to get my business started in a timely manner.

I had never done a shelf life study, but I needed to check on the stability of my product. I paid \$300 for 21 days, but it was something I needed done.

I felt like I got my money's worth but that was it.

I didn't have the time or money to try to go and find another lab, and other labs are expensive

They took the time to come out here and it did not really cost us any money at all.

It was a good service, and I tell everybody with a new food product to talk to OSU.

Well, because we don't have the capability of what FAPC is doing for us. I did not know where else to go like any private labs and I heard good things about the school.

It was very difficult to get results back.

I have confidence in their lab and there is three people that I can call and they will help with all my problems and get immediate service. If I know about a food safety handling problem.

Well this is in regard to the analysis that they have done on our product and to help us get state funding.

Because we could not have obtained that type of information for the same cost anywhere else.

I have previously worked in the FDA and I know the process control. OSU is a far more economical resource than others.

I worked for a laboratory and the turnaround time is pretty slow and a lot of times you cannot get a hold of anybody

It was government regulations and we did not know how to do it so OSU helped us and put us on the right track.

They really go all out for us.

The workshops are reasonably priced.

It does not cost me anything.

They are so informative and so helpful.

They are very valuable.

Just because it is easy, convenient and low cost.

Again I do not have those facilities in my lab and they help a lot.

Accomplished a lot in a reasonably short time.

We have done small projects and it is convenient to go to one place.

It is very much worth the time and expenses.

The cost and the availability of it locally.

I am not sure.

The product that we put out we need to know about shelf life and nutritional

we're not done using the services but I would think they are going to be more valuable results at times, university politics that get in the way of allowing the university to provide the customer what they want make it underneath far more valuable; because it

is a learning university and academia, it sometimes gets in the way of quick responses from the university, business decisions are getting in the way of fast results

Just the return on investment.

It was free.

From a monetary stand point and time.

I don't know what the costs were. It was a validation test for us. We had already done the tests, we just wanted our results confirmed.

Because everything they did compared to the price seemed right.

Slightly because I haven't seen the results yet but am hoping it pays off.

APPENDIX K

Reasons for Why Respondents Did or Did Not Receive More Value from the On-site Technical Assistance than the Time and Expenses they Incurred

it was informative
we were dealing with a specific problem and they solved it.

There again it is just touching base with people that actually have the experience. I really like my vet here, but getting those guys free is really great. It is hard to get the local people to return your calls. Cell phones don't really work well out here.

They came to help figure out the plans and we waited for two months. He did not pay attention to our view, or how we used our bakery. And we had to wait a few more months for the plans to come up. And when the plans came, they were so unrealistic. I got the information that I needed.

Basically, if we had not used the services you offered, we would not have been able to get where we are.

We needed some assistance to start running the plant. We would have to comply to the USDA. It was very useful to have the service. Now, we're running smoothly thanks to them.

I am not sure.

Well we weren't charged for the service.

I don't know.

Every time I ask for assistance they jump through hoops to help me. We couldn't have a better relationship.

Knowledge gained versus cost of the training, compared to training I have taken outside of the state of Oklahoma.

The assistance I had were by far more in depth from a practical stand point than I had the capability to do myself.

I don't remember the cost or value.

They are free.

They are so informative and helpful.

It is the, the information is up to date, the pros and cons and in the discussion and the free flow of information.

The people know what they are talking about and they help with so many things. Because you were able to talk about ideas and solve them or get an idea on how to solve them.

The expertise that FAPC offers is very good. We had trouble implementing.

The services exceeds the cost and other private companies charge much more.

Yes, the engineers came and helped me to design floor plans and product flows.

Uh, no reason.

It is important to keep on top of the e-coli and other diseases

I don't know how much it costs to get HACCP qualified anywhere else but it is worth the money just to get HACCP qualified

Time; the tech services folks are doing something that we don't have the time to do; it's like we are hiring them to do the work for us and it fills the need that we have

It was free.

I just got a lot of knowledge from it on these dehydrators and what we were trying to accomplish with time and temperatures. Wet bulb temperatures was what he was teaching us and humidity levels.

The guy came in and in two days he identified a problem in our process and he told us just how to fix it and it really helped.

APPENDIX L

Reasons for Why Respondents Did or Did Not Receive More Value from the Technical Services than the Time and Expenses they Incurred

They were extremely timely in getting the information back to me to meet some deadlines.

Increase the profit and sales from learning things from FAPC.

Wasn't something we wanted to do it was something we had to do.

I would have had to research everything that I needed to know if not for this.

It is only available there.

It was informative

Again the time and effort put forth would be too much for me and they can do it for me.

I wouldn't have been able to get my recipes like I have them

I didn't know where else to go.

The person we were working with was very willing to help us.

they did all the work, so that was nice.

It is the knowledge and expertise of the staff of the FAPC.

The people know what they are doing and can commute the information to us and we have no doubt that we are doing it right, now.

There is nothing like it out there and again the information and help was invaluable. cheaper than other places

Again, it was current research based information and state of the art. The men that were there knew so much on what they were doing. And the manuals given contained a plethora of information

They were just really good - and they did their best to try to help me

Because, I didn't get the total information I needed to know at that time. It was given to me in bits and pieces. Nobody gave me the numbers I needed up front. It seemed as if they were saying, keep going to these classes and then we'll give you the numbers you need.

It's because they are always so willing to help.

Because they looked at the label and gave suggestions but didn't charge me for looking at them

Our profit margin on those products is tremendous compared to similar products.

Health conscious people purchase it.

I am not sure.

Basically the same reason as before.

I don't know you can't get better than one day. We were already doing a business scale-up so we were already working for a business start-up.

No.

I wasn't involved in paying for them.

They help a lot.

We got a lot of service for our money. A lot of highly educated people were helping us. I think product development and quality and availability of the equipment gained from the services.

Through the product development we can find out the best product for the market

It is important for us to have on going research

We are not through

VITA

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Southern Agricultural Economics Association, Food Distribution
Research Society, Oklahoma Farm Bureau

Name: Justin B. McConaghy

Date of Degree: December, 2007

Institution: Oklahoma State University

Location: Stillwater, Oklahoma

Title of Study: ECONOMIC IMPACT AND VALUE OF THE ROBERT M. KERR
FOOD AND AGRICULTURAL PRODUCTS CENTER

Pages in Study: 147

Candidate for the Degree of Master of Science

Major Field: Agricultural Economics

Scope and Method of Study: To determine the total economic impact created in the state of Oklahoma by the clients of the Robert M. Kerr Food and Agricultural Products Center and to determine how much of that impact is attributed to the center through the use of a survey and IMPLAN multipliers. Also, this study determines the willingness-to-pay value of four different services provided by the center through the use of a contingent valuation survey.

Findings and Conclusions: The clients of the Robert M. Kerr Food and Agricultural Products Center employ over 8,800 employees and have about \$1.9 billion in annual sales for the year of 2006. The total economic impact of these firms have on the state of Oklahoma are over 52,000 employees and over \$6.3 billion in annual sales for the year of 2006. Using a logistic regression model it was calculated that the entrepreneurial workshop was on average valued at \$286.97, the laboratory services were on average valued at \$582.97 per day the service was used, the on-site technical assistance was valued at \$654.34 per day the service was used, and the technical services were valued at \$527.31 per day they utilized the service.

ADVISER'S APPROVAL: Dr. Rodney Holcomb
