

**ECONOMIC  
IMPACT  
ANALYSIS**

**An Extension  
Community  
Economics Program**

**Economic Impact of New  
Residents in Big Stone,  
Chippewa, Lac Qui Parle,  
Swift, and Yellow Medicine  
Counties**

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EXTENSION**

**Economic Impact of New Residents:  
Big Stone, Chippewa, Lac Qui Parle, Swift and Yellow Medicine Counties**

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This report is an outcome of research being conducted into the attraction, retention, and significance of new residents in south and western Minnesota, particularly Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine counties. The following agencies have been involved in this effort:

Benson Rural Development Finance Authority  
City of Madison  
Lac qui Parle Economic Development Authority  
Minnesota Department of Employment and Economic Development  
Minnesota West Community & Technical College  
Ortonville Economic Development Authority  
Southwest Adult Basic Education  
Southwest Initiative Foundation  
Upper Minnesota Valley Regional Development Commission  
University of Minnesota Extension

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## **INTRODUCTION**

The newly released 2010 census data continues to tell a story of population decline in western and southwestern Minnesota. General population trends, however, only provide part of the story. Many researchers have highlighted declines in the number of college-age adults in the region, even nicknaming the phenomenon “brain drain”. Further examination of population trends has uncovered a corresponding “rural rebound” in the same communities. The population of prime working age individuals (ages 35-44) has increased in many rural counties. These individuals are often well-educated, have job skills, and bring their families along on the move. Given these observations, community leaders in Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine counties decided to further explore the drivers of the rural rebound, ways to continue to attract new residents to the region, ways to retain new residents, and the significance of their presence in the community. Working groups, coordinated together in a regional recruitment effort, are examining each of these questions.

This report explores the economic impact of new residents in the five-county region. New residents create economic impact as they bring new dollars into the region through both their household spending and their business activities. This report uses data collected from two surveys of new residents to determine total newcomer expenditures in the region. These expenditures are then entered into an input-output model to determine the total economic impact, or ripple effect, created by the newcomer spending.

This project is being conducted under the University of Minnesota Extension Center for Community Vitality’s Economic Impact Analysis (EIA) program. The EIA program deliverables include: a written report and a presentation and facilitated discussion of the results. This report is one deliverable of the program.

## **Highlights of the Economic Impact of New Residents in Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine Counties**

The following statements summarize the results of a University of Minnesota analysis of the economic impact of surveyed newcomers in the five-county region including Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine counties.

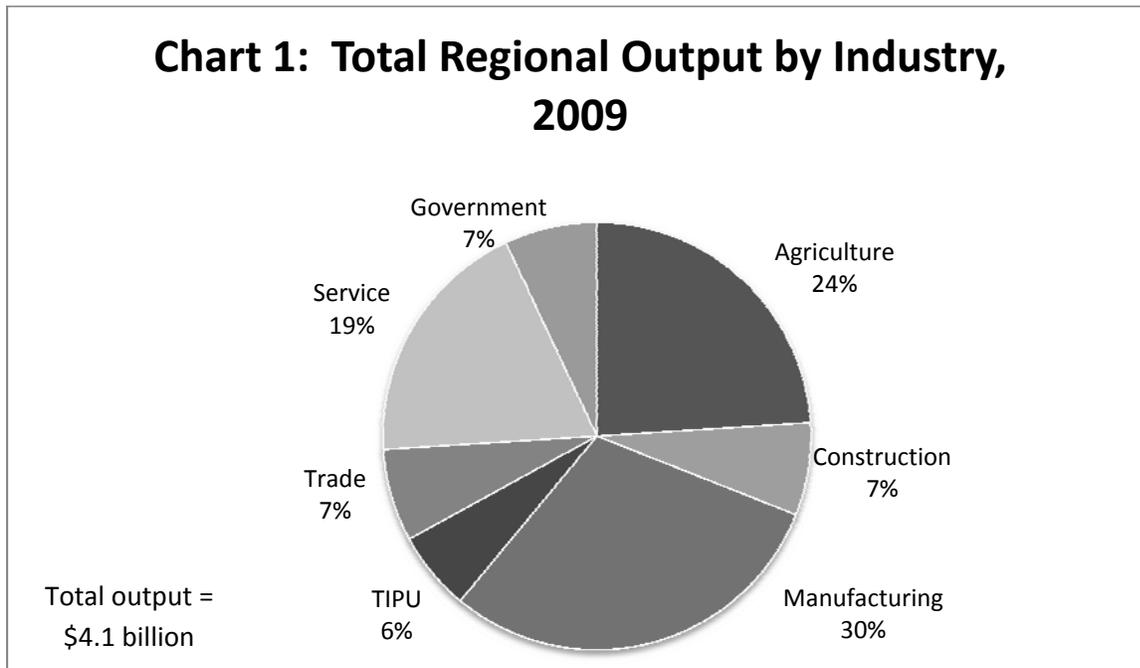
- Prime working-age individuals (ages 35-44) are moving to rural Minnesota. A survey was conducted to measure the economic impact of these newcomers.
- New residents in the five counties completed surveys regarding their household and business expenditures. This analysis is based on 99 completed household surveys. The surveyed households represent 150 working-age adults.
- The surveyed newcomers reported \$6.6 million in household income in 2009/2010. This equates to an average household income of \$66,000.
- New, expanded, or relocated businesses owned by the newcomers spent \$108,000 in the region.
- The total economic impact of the surveyed newcomers' business and household spending is \$9.1 million, including 174 jobs and \$7.2 million in labor income.
- Top industries impacted by newcomers include trade, food and drinking establishments, housing, and health care.
- While the survey was not random, and therefore the results cannot be extrapolated outside the study region, the average newcomer household contributed \$92,000 in economic activity to the region in 2009.



## PROFILE OF THE STUDY AREA ECONOMY

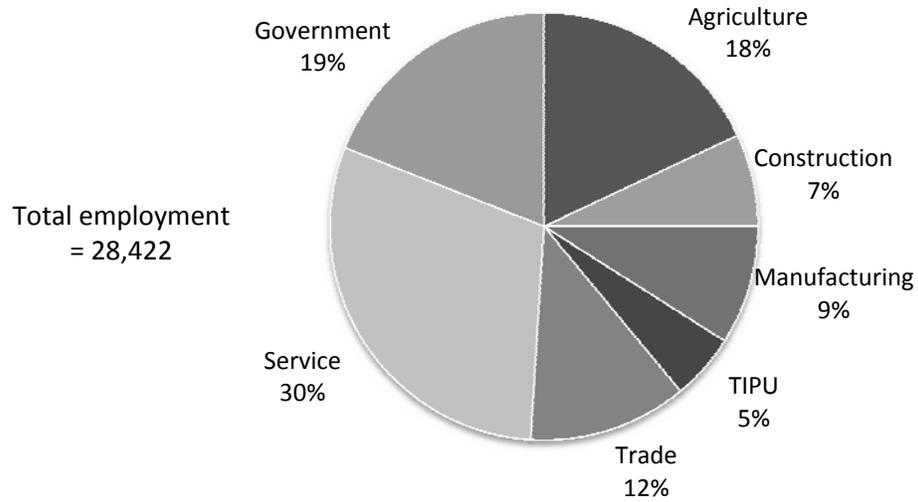
The counties included in this economic impact analysis include Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine. These five counties constitute Minnesota's economic development region 6W. According to IMPLAN statistics, total population in the region in 2009 was 45,900. There were just over 20,000 households in the region with average annual household incomes of \$76,500.

Total regional output in 2009 was \$4.1 billion as illustrated in Chart 1. The manufacturing sector contributed the highest share of output (30 percent), followed by agriculture (24 percent), and services (19 percent).



Regional employment is pictured in Chart 2. Total employment in the region in 2009 was 28,422. The majority of these jobs were in the service (30 percent), government (19 percent), and agricultural (18 percent) sectors. These figures are taken from the IMPLAN model. In the model, a job is a job is a job, regardless if it is part-time, full-time, or seasonal. A prevalence of part-time employment in certain industries can partially explain why the output and employment charts look different. Manufacturing's share of total employment is much lower than its share of output. This may also be partially explained by higher productivity by manufacturing employees.

**Chart 2: Total Regional Employment by Industry, 2009**



## **ECONOMIC IMPACT**

An economic impact is equal to the summation of direct, indirect, and induced effects. The direct effect is the initial change triggered by an economic event. This could be the opening of a new business, the closing of a plant, or increased spending by local residents. The direct effect triggers additional economic activity to occur, therefore setting off a ripple in the local economy. These ripples fall into two categories, indirect effects (created by business-to-business transactions) and induced effects (created by consumer-to-business transactions). In an economic impact analysis, researchers quantify the direct effects. An input-output model then measures the indirect and induced impacts. In this study, researchers “ground-truthed” the direct effect using primary data collection. The input-output model used was IMPLAN (MIG, Inc).

### **Direct Effects**

In this study, new residents generate the direct effects. The “newcomers” represent new money in the local economy, as had they not moved to the region, their dollars would not have been spent in the region.<sup>1</sup> Newcomers contribute to the economy through their household income spending and through spending by their business activities. Two surveys were used to estimate household and business spending. Seven regional focus groups were held in 2010. The participants of these focus groups completed a 38-question survey to help researchers understand the where, when, and why of the individual’s recent move to the study region. One survey question asked participants to indicate their household income in 2009. This initial survey also revealed that a surprising number of newcomers had purchased or started commercial operations (including agricultural) after moving to the area. Therefore, a second survey was sent to a new pool of newcomers to quantify local spending by their business operation. The second survey also contained a question about household income.

### Household Income

The two surveys provide the data on household income for this analysis. Responses to both the initial survey done with focus group participants and from the follow-up study are combined here to calculate total household income. The first (2010) survey yielded 51 usable household income data points. The second survey (2011) yielded 48 usable household income data points. The following calculations, therefore, are based on 99 newcomer households in the region.

Surveyed newcomers contributed \$6.6 million in household income to the regional economy in 2009. This equates to an average household income of \$66,000. In comparison, the average household income in the study area in 2009 was \$76,500. Table 1 details the breakdown by income category. The survey provided respondents with income ranges. To estimate a total income figure for the respondents, it was assumed these households each made the mid-point (or average) of the range. The number of respondents per income category was then multiplied by the income mid-point to determine total income in 2009.

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<sup>1</sup> Newcomers in this report are defined as those reporting that their previous county of residence was not in the study region.

Income Range	# of Respondents	Income Mid-Point	2009 Total Income
Less than \$10,000	6	\$ 10,000	\$60,000
\$10,000-\$19,999	3	\$ 15,000	\$45,000
\$20,000-\$29,999	8	\$ 25,000	\$225,000
\$30,000-\$39,999	13	\$ 35,000	\$455,000
\$40,000-\$49,999	9	\$ 45,000	\$405,000
\$50,000-\$59,999	9	\$ 55,000	\$550,000
\$60,000-\$74,999	13	\$ 67,500	\$1,012,500
More than \$75,000	38	See Table 2	\$4,014,729
<b>Total</b>	<b>99</b>		<b>\$6,552,229</b>
Estimates by University of Minnesota Extension Center for Community Vitality.			

Since over a third of the participants fell into the open-ended, more than \$75,000 category, further calculations were needed. Based on ratios from the IMPLAN database defaults, 23 of these households were estimated to have incomes of \$75,000 to \$100,000, 11 to have incomes of \$100,001 to \$150,000 and 5 to have incomes in excess of \$150,000. Therefore, the 39 households making more than \$75,000 added \$4.0 million in income to the region in 2009 (see Table 2).

Income Range	Software estimate of number of households	Percent of households	Number of households based on survey	Mid-Point Income	Total Income
\$75,000-\$100,000	1,161	59.8%	23	\$ 87,500	\$1,989,858
\$100,000-\$150,000	539	27.8%	10	\$ 125,000	\$1,319,716
More than \$150,000	240	12.4%	5	\$ 150,000	\$705,155
<b>Total</b>	<b>1,940</b>	<b>100%</b>	<b>38</b>	<b>\$4,120,380</b>	<b>\$4,014,729</b>
Estimates by University of Minnesota Extension Center for Community Vitality.					

## Business Income

During the focus group process, the participating newcomers revealed that business ownership was a major factor in their decision to move to the region. Given this unexpected response, researchers decided to conduct a second round of surveys to learn more about this aspect. A series of questions were asked in the second survey regarding business ownership. See appendix 1.

Fifty-six new residents completed the second survey. Fourteen (twenty-five percent) of the survey respondents indicated they had purchased a local business, started a new business, or moved an existing business as part of their relocation. Economic impact analysis theory dictates that only businesses that would not have existed *but for* the newcomer can be measured as creating an economic impact in the region. A question was asked to measure the likelihood of the business existing in absence of the newcomer. Of the 14 businesses, 7 were deemed likely to not exist without the newcomer or to have changed significantly with new ownership. The remaining 7 businesses were categorized as likely to have existed even if the newcomer had not arrived.

Of the 7 businesses that indicated they would not have existed without the newcomer and/or underwent significant business plan changes due to the newcomer, 3 provided data on their local expenditures, which is needed to perform the economic impact calculations. Those three responses are shown in Table 3. Respondents included two farming operations and one retail establishment. In total, those four businesses made \$108,000 of expenditures in 2009.<sup>2</sup>

Industry Category	Total 2009 Local Expenditures
Grain farming	\$40,000
Retail	\$43,000
Cattle Ranching/Farming	\$25,000
Total	\$108,000

Estimates by University of Minnesota Extension Center for Community Vitality.

Of the 7 businesses that would likely have existed without the newcomer, 4 provided data on their annual local expenditures for 2009. These businesses included on farm operation, a retail establishment, and two insurance carriers. In total, these businesses spent \$215,000 in the region in 2009. Because they would have existed without the newcomers, these businesses do not technically create an economic impact, as they do not represent “new” money in the economy. However, the results of the survey are shown here for illustration.

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<sup>2</sup> There was one additional business that reported local expenditures. However, the response was deemed to be an outlier.

Industry Category	Total 2009 Local Expenditures
Animal Production, except cattle, poultry and eggs	\$5,000
Insurance Carriers (2)	\$205,000
Retail	\$5,000
Total	\$215,000
Estimates by University of Minnesota Extension Center for Community Vitality.	

### Total Direct Effects

Given the above calculations, the surveyed new residents spent \$6.7 million locally on household and business expenses (see Table 5). The expenses are the direct effects of newcomers and can be entered into an input-output model to calculate the ripple effects of this spending. It is important that only local expenditures be entered into the model. While the model itself distributes household income spending into local and non-local sources (for instance, federal tax payments are deducted within the model), to be conservative, only eighty percent (or \$5.2 million) of household income was entered into the model as local spending.

Household Income Expenditures	\$6,552,229
Business Expenditures	\$108,000
Total Direct Expenditures	\$6,660,229
Estimates by University of Minnesota Extension Center for Community Vitality.	

### **Indirect and Induced Effects**

Now that the direct impacts are quantified, the data can be entered into an input-output model. Input-output models trace the flow of dollars throughout a local economy and can capture the indirect and induced, or ripple effects, of an economic activity. The input-output modeling software and data from IMPLAN (MIG, Inc) was used in this report.

Indirect effects are those associated with a change in economic activity due to spending for goods and services. In this case, these are the changes in the local economy occurring because businesses need to purchase goods and services from each other. These are business-to-business impacts.

Induced effects are those associated with a change in economic activity due to spending by the employees of businesses (labor) and by households. These are business-to-consumer impacts.

### **Total Impacts**

The total economic impact of the surveyed newcomers is shown in Table 6. Directly, newcomer expenditures totaled \$6.7 million in the region. This included \$6.6 million in labor income. The direct spending by newcomers is also associated with 151 jobs, 150 of them being the new residents represented in the survey. As a result of these direct expenditures, additional spending, employment,

and labor income is generated in the five-county region. Thus, the total economic impact of the surveyed newcomers is \$9.1 million in output, including \$7.2 million in labor income, and 174 jobs.

<b>Table 6: Total Economic Impact of Newcomers in Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine Counties</b>				
	Direct	Indirect	Induced	Total
Output	\$6,660,229	\$19,180	\$2,398,942	\$9,078,351
Employment	151	0	23	174
Labor Income	\$6,574,460	\$3,874	\$628,690	\$7,207,500
Estimates by University of Minnesota Extension Center for Community Vitality.				

While the survey was not random, and therefore the results cannot be extrapolated outside the study region, the average newcomer household contributed \$92,000 in economic activity to the region in 2009.

The top five industries affected by the newcomers are shown in Tables 7 and 8. Table 7 shows the top five industries sorted by employment. The jobs of the newcomers themselves (accounting for 150 of the 160 direct jobs) are not included in this chart.

<b>Table 7: Top Industries Impacted in Terms of Employment (excluding newcomer households)</b>	
Industry	Employment
Food services and drinking places	3
Retail – general merchandise	2
Retail – food and beverages	2
Nursing homes and residential care	2
Offices of physicians, dentists, and other health care professionals	1
Estimates by University of Minnesota Extension Center for Community Vitality.	

Table 8 shows the top five industries sorted by output. Newcomers create significant impact in the imputed rental activity for owner-occupied dwellings industry and the wholesale trade industry. Imputed rental activity for owner-occupied dwellings is a proxy for the housing market.

<b>Table 8: Top Industries Impacted in Terms of Output</b>	
Industry	Output
Imputed rental activity for owner-occupied dwellings	\$608,401
Wholesale trade	\$179,110
Offices of physicians, dentists, and other health care professionals	\$117,506
Private hospitals	\$115,163
Monetary authorities and depository credit institutions	\$114,040
Estimates by University of Minnesota Extension Center for Community Vitality.	

**A Note on the Analysis**

This analysis is based on two surveys of newcomers to the five-county region. The results should be interpreted with caution. Care should be taken not to extrapolate these results to other newcomers in the region (who may have very different demographic characteristics) or to other regions in Minnesota.

## METHODOLOGY

Special models, called input-output models, exist to conduct economic impact analysis. There are several input-output models available. IMPLAN (IMpact Analysis for PLANning, Minnesota IMPLAN Group)<sup>3</sup> is one such model. Many economists use IMPLAN for economic contribution analysis because it can measure output and employment impacts, is available on a county-by-county basis, and is flexible for the user. IMPLAN has some limitations and qualifications, but it is one of the best tools available to economists for input-output modeling. Understanding the IMPLAN tool, its capabilities, and its limitations will help ensure the best results from the model.

One of the most critical aspects of understanding economic impact analysis is the distinction between the “local” and “non-local” economy. The local economy is identified as part of the model-building process. Either the group requesting the study or the analyst defines the local area. Typically, the study area is a county or a group of counties that share economic linkages.

A few definitions are essential in order to properly read the results of an IMPLAN analysis. The terms and their definitions are provided below.

### Output

Output is measured in dollars and is equivalent to total sales. The output measure can include significant “double counting.” Think of corn, for example. The value of the corn is counted when it is sold to the mill, again when it is sold to the dairy farmer, again as part of the price of fluid milk, and yet again when it is sold as cheese. The value of the corn is built into the price of each of these items and then the sales of each of these items are added up to get total sales (or output).

### Employment

Employment includes full- and part-time workers and is measured in annual average jobs, not full-time equivalents (FTE’s). IMPLAN includes total wage and salaried employees, as well as the self-employed, in employment estimates. Because employment is measured in jobs and not in dollar values, it tends to be a very stable metric.

### Labor Income

Labor income measures the value added to the product by the labor component. So, in the corn example when the corn is sold to the mill, a certain percentage of the sale goes to the farmer for his/her labor. Then when the mill sells the corn as feed to the dairy farmer, it includes some markup for its labor costs in the price. When the dairy farmer sells the milk to the cheese manufacturer, he/she includes a value for his/her labor. These individual value increments for labor can be measured, which amounts to labor income. Labor income does *not* include double counting.

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<sup>3</sup> IMPLAN Version 3.0 was used in this analysis. The trade flows model with SAM multipliers was implemented.

### Direct Impact

Direct impact is equivalent to the initial activity in the economy. In this study, it is spending by newcomer households and their businesses.

### Indirect Impact

The indirect impact is the summation of changes in the local economy that occur due to **spending for inputs** (goods and services) by the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, this implies a corresponding increase in output by the plant. As the plant increases output, it must also purchase more inputs, such as electricity, steel, and equipment. As the plant increases purchases of these items, its suppliers must also increase production, and so forth. As these ripples move through the economy, they can be captured and measured. Ripples related to the purchase of goods and services are indirect impacts.

### Induced Impact

The induced impact is the summation of changes in the local economy that occur due to **spending by labor**, that is spending by employees in the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, the new employees will have more money to spend to purchase housing, buy groceries, and go out to dinner. As they spend their new income, more activity occurs in the local economy. This can be quantified and is called the induced impact.

### Total Impact

The total impact is the summation of the direct, indirect, and induced impacts.

## **CONCLUSIONS**

Many rural counties in Minnesota are experiencing a “rural rebound”. Prime working age (35-44) individuals are returning to rural Minnesota, seeking quality of life and opportunity for themselves and their families. In order to learn more about these “newcomers”, community leaders in Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine counties decided to further explore the drivers of the rural rebound, ways to continue to attract new residents to the region, ways to retain new residents, and the significance of their presence in the community. Working groups, coordinated together in a regional recruitment effort, are examining each of these questions.

This study addresses the economic significance of newcomers in the five-county region. The results are based on 99 completed surveys which asked questions about household income and business expenses. These 99 household surveys represented 150 adult newcomers. The surveyed households reported \$6.6 million in income. They also indicated business expenses of \$108,000. As a result of business and household spending, the surveyed newcomers created a total economic impact of \$9.1 million, including \$7.2 million in labor income and 174 jobs in the study region. The industries most impacted by newcomers in the region included trade, food and drinking establishments, housing, and health care.

While these results are unique to the newcomers who completed the survey and should be interpreted with caution, they do illustrate how newcomers contribute to the economic engine of rural Minnesota. While the survey was not random, and therefore the results cannot be extrapolated outside the study region, the average newcomer household contributed \$92,000 in economic activity to the region in 2009.

## **IMPLICATIONS FOR FUTURE RESEARCH AND IMPLEMENTATION**

This economic impact analysis study helps to address one question of the regional recruitment working committee. The results, however, raise a set of additional questions that could be addressed. Further, the results illustrate where the potential exists for community leaders to assist newcomers in successfully becoming business owners.

Future research on this topic could focus on collecting more business data. It is human nature to be less forthcoming about expenditures. Therefore, it is not surprising that less than half of the responding business-owning newcomers provided their expenditure information. More business expenditure data could provide more detail and could potentially be more powerful in decision-making. Total local expenditures by newcomer businesses are likely much higher than reported.

The business owner responses were also interesting in terms of the types of businesses newcomers engaged in. Comparing the profile of newcomer businesses to the general mix of current businesses would be interesting. Are newcomer businesses generally following the same business mix pattern? Or are newcomer business owners more likely to start unique businesses? If they purchase an existing business, what changes do they make to the product line? What does this mean for the community? What are the best ways to support this business development?

Finally, this research raises the question “how do communities support newcomers in their business endeavors?” Given the desire of newcomers to pursue business endeavors, should the community provide business succession planning? Entrepreneurship development? Business retention and expansion programming?

**APPENDIX 1: BUSINESS SURVEY QUESTIONS**

**If you own a business, please complete the following section.**  
**If not, please go on to the next page.**

**B1. What year did you start or purchase the business?** \_\_\_\_\_

- Started new business       Purchased existing business

**B2. Was it a business or farming operation?**

1. Business
2. Farming. If farming operation, please proceed to question B5.

**B3. If you purchased or started a business or multiple businesses please list what type and the number of business(es):**

- \_\_\_\_\_ Agriculture
- \_\_\_\_\_ Mining (gravel, stone, and other)
- \_\_\_\_\_ Construction and all trades
- \_\_\_\_\_ Manufacturing
- \_\_\_\_\_ Transportation and Public Utilities
- \_\_\_\_\_ Finance, Information, Real Estate
- \_\_\_\_\_ Retail or Wholesale Trade including home-based businesses
- \_\_\_\_\_ Services including home-based services
- \_\_\_\_\_ Other (specify) \_\_\_\_\_

**B4. How likely is it the business(es) would have existed in the area without your presence?**

- 5= Very Likely, 4 = Somewhat Likely, 3=Maybe, 2=Somewhat Unlikely, 1=Unlikely

**B5. If you purchased an existing business or farming operation, did you change the business plan and/or product line after purchasing the business or farming operation?**

- Yes. Please describe: \_\_\_\_\_
- No

**B6. Please estimate your business' or farm's total LOCAL expenditures. in 2010. \$ \_\_\_\_\_**

(LOCAL means all local purchases such as labor/employee wages, electricity, building, and operating expenses made in your home and adjacent counties)