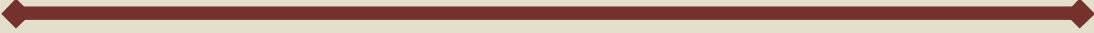




Community Level Impacts of Idaho's Changing Dairy Industry

Priscilla Salant, J.D. Wulfhorst, and Stephanie Kane, with Christine Dearien

October 26, 2009



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Table of Contents

Contributors	ii
Table of Contents	iii
List of Figures	iv
List of Tables	v
Executive Summary	vi
1. Introduction	1
2. Context	3
<i>Growth in Idaho’s dairy Industry</i>	3
<i>Growth in the Hispanic population</i>	3
<i>Idaho is consistent with national trends</i>	5
3. Geographic focus	8
4. Methodology	10
<i>Interviews</i>	10
<i>General Public Survey</i>	11
<i>Secondary data analysis</i>	14
5. The people who work on Idaho’s dairy farms	15
6. Impacts on local economies	21
7. Impacts on crime and the justice system	26
<i>Drug arrests</i>	30
8. Impacts on schools	32
9. Impacts on health care and social services	36
<i>Health insurance coverage</i>	36
<i>Indigent health care costs</i>	39
<i>Social services</i>	42
10. Other related community impacts	44
<i>Culture, values, and identity</i>	44
<i>Language</i>	45
11. Conclusions and recommendations	47
<i>Recommendations</i>	49
12. References	53

List of Figures

Figure 2a. Number of dairy farms in Idaho, by region, 1997 to 2007.....	4
Figure 2b. Number of dairy cows in Idaho, by region, 1997 to 2007	4
Figure 2c. Hispanic population of southern Idaho, 1990-2008.....	5
Figure 2d. Milk cows – change in inventory	6
Figure 3a. Southern Idaho and communities in the dairy belt	9
Figure 5a. Change in number of dairy workers, dairy manufacturing workers, and the Hispanic population, south central Idaho, 1990 to 2008.....	17
Figure 5b. Age distribution by sex, Hispanic population, 2008	19
Figure 5c. Age distribution by ethnicity, South Central Idaho, 2008	20
Figure 6a. Retail businesses in Jerome County, by number of employees, 1998-2007.....	23
Figure 7a. Per capita felony rate in Idaho, by ethnicity and region, 1997-2008.....	27
Figure 7b. Hispanic population growth and per capita felony rate in Idaho, by ethnicity and region, 1997-2008.....	29
Figure 8a. Percent Hispanic, student population and total population, 2000-2006	32
Figure 8b. Percent change in student enrollment in select districts, 2000-01 to 2006-07.....	33
Figure 9a. Percent of population lacking health insurance in Gooding and Jerome Counties, Idaho, and the U.S., 2000-2005	37
Figure 10a. Parish enrollment by language spoken at Mass, south central Idaho County (1999-2007).....	46

List of Tables

Table 4a. Categories, location, and totals for key-informant interviews	10
Table 4b. Stratified sample design with targeted completes and sampling errors by region	12
Table 4c. Disposition and response rate by region.....	13
Table 4d. Sources of secondary data used in the analyses.....	14
Table 6a. Local economies are holding fairly steady. Wages are low but at least through August 2009, the recession has been less severe than elsewhere	21
Table 7a. Differences in number of felonies by ethnicity in south central Idaho that indicate a downward trend for both Hispanics and non-Hispanic Whites since 2006	30
Table 9a. Percent of adult population without health insurance coverage in Idaho	36
Table 9b. Average, minimum, and maximum per capita indigent care expenses for selected counties in Idaho “dairy belt” from 1999-2007	41

Community Level Impacts of Idaho's Changing Dairy Industry

Priscilla Salant^a, J.D. Wulfhorst^b, and Stephanie Kane^c, with Christine Dearien^d

Executive Summary

This report analyzes the community-level impacts of Idaho's changing dairy industry, and specifically, that part of the industry involved in milk production. Using a three-part methodology, we examine how the people who work on dairy farms impact local economies, schools, health care providers, justice systems, and other aspects of communities in southern Idaho.

Two parallel trends shape the context for this analysis. Both are consistent with national trends in farm-dependent areas of the country. First, the structure of Idaho's dairy industry is changing. The trend is towards larger and more geographically concentrated farms with an increasing demand for wage labor. Second, Idaho is becoming more ethnically diverse as the state's Hispanic population grows at a faster rate than the rest of the population.

Key findings

How the dairy industry impacts communities depends in large measure on who works on the farms. Dairy farm workers tend to be young adult men who are Hispanic and foreign-born. Some are single and others have families, but because of immigration raids and tighter border controls in recent years, the trend is towards more single men. As a group, the industry's labor force appears to be driving the growth of the Hispanic population in south central Idaho.

Impact on local economies. The growing dairy sector has contributed to economic growth in south central Idaho, whether measured by job numbers, unemployment rates, per capita income, or other commonly used economic indicators. Especially in Jerome County, employment and population numbers are increasing along with growth in the dairy industry. Nevertheless, some local residents face serious economic hardship. Child poverty rates are higher in the dairy region than the state as a whole. So, too, are the proportions of youngsters eligible for reduced price meals at local schools. Based on interviews with educators, social service providers, and others, many people in the dairy region are "working poor" but we did not find evidence this can be attributed to the changing dairy industry.

Impacts on crime. People we interviewed in the law enforcement and justice systems indicated that dairies do not serve as a catalyst for increasing crime. Instead, the main community-level impacts are related to increases in foreign-born individuals who may need assistance if and when they do enter the law or criminal justice systems. According to a judge we interviewed, there is an increasing "need for public defenders, translators, and Spanish-speaking attorneys which can cause a strain on the justice system." Little or no evidence suggests that growth in southern Idaho's dairy industry has caused an increase in felonies, which are crimes punishable by imprisonment in a state prison or death. Felony rates are higher for Hispanic individuals

than for non-Hispanics in southern Idaho, although over time, the Hispanic felony rate is declining.

Impacts on schools. The changing dairy industry has two main impacts on schools. First, many school districts in south central Idaho are coping with the increased ethnic diversity associated with growth in the dairy industry, as well as with an increase in students from low-income families. Second, the increase in Hispanic students means some districts (including Gooding, Jerome, and Wendell) are growing when they would otherwise be losing students. In other words, the increase in Hispanic students in these districts more than makes up for a loss in non-Hispanic students. Growing diversity brings both challenges and opportunities. The challenges are that districts must now find money and staff to work with growing numbers of English language learners and lower income students. The opportunity is that Hispanic parents, as a rule, value education and want their children to do well. And, children in integrated schools learn how to get along in our increasingly multi-cultural and ethnically mixed society.

Impacts on health care. Interviews with health professionals in southern Idaho did not indicate disproportionate use of health care services by the Hispanic population in general or employees known to work in the dairy industry. We attempted to learn whether dairy workers might be responsible for changes in the indigent health care costs (part of which counties must cover). However, county-level data on indigent health care costs are not complete enough to indicate whether this is true or not. While these costs are increasing on a per capita basis in some southern Idaho counties, neither our interviews nor the county-level data indicate the increase (where it is occurring) can be attributed to dairy workers.

Conclusions and recommendations. Clearly, the dairy industry has had positive economic impacts on local communities in south central Idaho. It has brought jobs and people to towns that otherwise would likely be in decline, as are many farm-dependent communities around the country. However, it also imposes some degree of costs, most notably on schools and less so justice systems. While the private sector has “turned on a dime” to meet the demand of a growing Hispanic population, public systems cannot respond as quickly. Before they can adapt to a changing society, they must first convince voters to pay higher taxes to cover the costs that economic growth brings.

Our first recommendation is that federal and state decision makers work towards an immigration policy that provides stability and predictability for workers and therefore for communities. Communities in which dairy workers live will benefit if those workers are secure enough to participate fully in community life. In turn, dairy farmers will benefit from access to workers who have a stake in their community and are therefore more likely to stay in one place longer. Clearly, achieving such a policy is a long-term objective that has proven tremendously difficult to achieve, but it will have the greatest payoff to all concerned. The dairy industry, along with others that rely on a largely foreign-born workforce or advocate for their fair treatment, should work together to achieve policy reform.

Second, and more appropriately in the purview of the Idaho dairy industry itself (along with our other recommendations), the industry should support a scientific study to learn who their workers are, where they live, and what their needs are. We developed a description of worker characteristics based on qualitative interviews and a variety of secondary data sources. Far more accurate and useful if the industry wants to mitigate problems would be a sample survey of workers conducted by native Spanish speakers in “safe” places, most likely in churches and other places where workers do not feel threatened about potential ramifications.

Third, the dairy industry should advocate for programs and policies that build economic prosperity in their workforce. The lowest hanging fruit is to encourage dairy workers to claim the federal Earned Income Tax Credit (EITC). The EITC encourages work by providing a credit to offset taxes for low-income working families, with the highest benefits going to those with income below the poverty level. In 2008, the federal EITC returned \$3.3 million to tax payers in Jerome County alone. Increased use of the federal EITC, or the implementation of a state EITC, would help reduce child poverty rates in the most dairy dependent counties, where child poverty is higher than in the state as a whole.

Fourth, the dairy industry should sponsor a facilitated public forum series to provide a venue for community-wide discussion about immigration and community-level impacts associated with the dairy industry. These challenging issues cannot be brushed aside or ignored if the industry is to mitigate impacts related to its workforce. By engaging community representatives from different municipal and interest-based organizations, these forums could serve a community development function through education and communication about critical issues at the local and regional levels.

Finally, the dairy industry and the University of Idaho should work as partners to establish and jointly fund a new, full-time position, to be filled by a native Spanish speaker. The role of this person would be to serve as a community and labor outreach liaison, through the implementation of recommendations offered here. She or he would be responsible for building good relationships between the industry and public sector agencies, especially those that come in contact with Hispanic dairy workers and their families. She or he could communicate regularly with school administrators, health care providers, and law enforcement officers, thus bridging the industry and communities in which its workers live. Such an outreach liaison would help the industry be more aware of how it is perceived locally and how it can mitigate problems for which it may be responsible. It would also provide a new opportunity for the University of Idaho to fulfill its land grant mission of helping the state address critical economic and social issues through outreach and engagement.

- **Formatting note:** *In the report, italicized text, in quotation marks, indicates direct quotes from interviewees in order to distinguish participants’ voices from the authors’.*

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Community Level Impacts of Idaho's Changing Dairy Industry

Priscilla Salant, J.D. Wulfhorst, and Stephanie Kane, with Christine Dearien

1. Introduction

In 2008, Idaho's dairy industry generated an estimated \$2.15 billion in cash receipts from milk sales (Eborn *et al*, 2008). Idaho now ranks fourth in milk production, behind only California, Wisconsin, and New York (U.S. Department of Agriculture, 2009a).

Since the mid 1990s, growth in the state's dairy industry has increased rapidly and been concentrated largely in the south central part of Idaho. With growth and geographic concentration have come dramatic changes in communities, as dairy farmers hire more workers to milk and feed cows, maintain equipment, and perform all the other tasks required on the large scale operations that now define Idaho's dairy industry.

This report explores the community-level impacts of Idaho's changing dairy industry. Our analysis is limited to the impacts of milk production, rather than the manufacturing of dairy products such as cheese and dried milk. Using a three-part methodology, we examine how the people who work on dairy farms impact local economies, schools, health care providers, justice systems, and other aspects of communities in southern Idaho.

Our research design mirrors the complexity of the community-level issues we address. We examined and synthesized data from a variety of sources and points of view. The data constitute "objective fact" as well as "subjective perceptions." Although they are sometimes inconsistent with each other, both types of data are valid and have meaning within the context of this type of analysis. When carefully analyzed and synthesized, they enable us to more completely describe and understand community-level impacts by allowing us to identify quantifiable trends alongside public and professional interpretations of how those trends play out at the local level. Thus, while we cannot draw conclusions from any single individual's input by itself, we can identify patterns and draw conclusions based on input from multiple individuals, especially when considered alongside quantitative data from secondary sources.

The result of using this mixed-methods approach is an aggregated analysis that yields the best information available to guide decision-making in and for communities.

In addition to being complex, the issues addressed here are dynamic and evolving quickly. Between April 2008 when we started the study and September 2009 when we completed the analysis, the U.S. and other economies slipped further into a deep recession, milk prices fell by half (Lotterman, 2009), and immigration slowed considerably (Passel and Cohn, 2009a). While these events clearly have short-term impacts, we believe the community-level impacts described here will persist in the long-term due to underlying economic and demographic trends.

Our study was funded by a grant from the Idaho Dairywomen's Association, representing the milk producers who make up this growing and rapidly changing part of southern Idaho's economy. Producers are very aware of public criticisms about the industry. The criticisms relate partly to the public's concerns over environmental impacts (which are not addressed in this report) but also to the industry's use of foreign-born workers and thus, to its economic and social impacts on communities where these workers live. The decision to fund the study, as we understand it, was based on the industry's desire to document and make public the effects it has, in so far as the impacts are positive, and to learn how it can mitigate problems, in so far as the impacts are negative. We discuss that continuum of impacts in this report and conclude with recommendations for future action on the industry's part.

2. Context

Two parallel trends shape the context for this analysis. First, the structure of Idaho's dairy industry is changing. Individual farms are getting bigger and more geographically concentrated in the south central region, and the demand for wage labor is increasing. Second, Idaho is becoming more ethnically diverse as the state's Hispanic population grows at a faster pace than the rest of the population.

Growth in Idaho's dairy industry

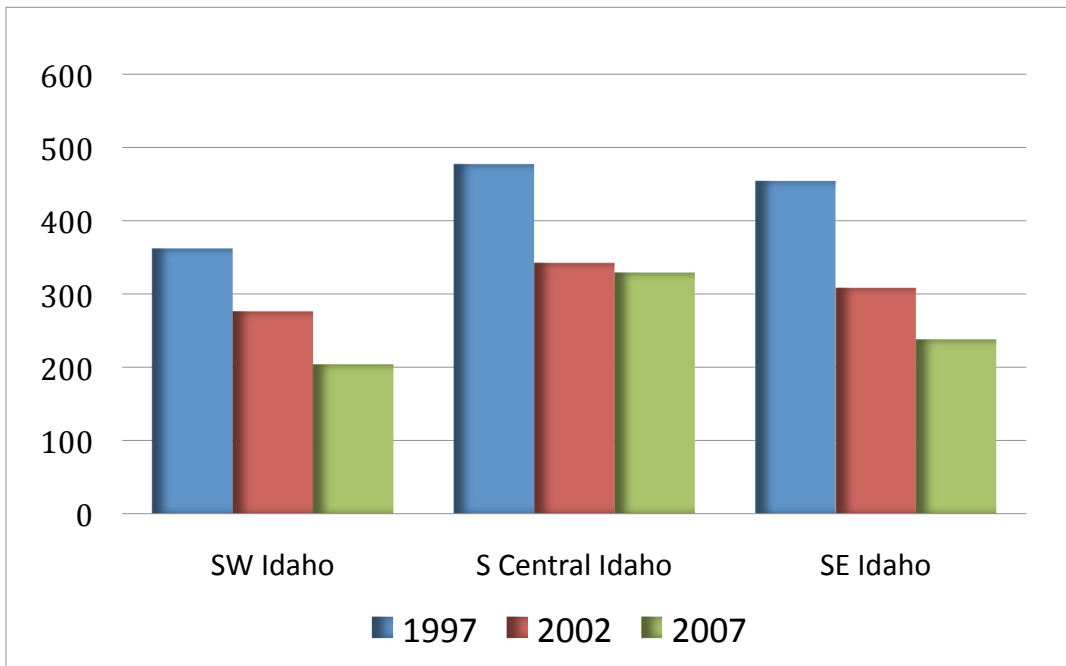
From 1997 to 2007, the number of dairy cows in southern Idaho increased from 264,000 to 534,000 (U.S. Department of Agriculture, 2009b). Between 1997 and 2008, Idaho's cash receipts from milk sales more than tripled, increasing from \$634 million to \$2.15 billion (Eborn *et al*, 2003; 2008). Over this same period, the number of dairy farm employees in southern Idaho, where the dairy industry is concentrated, increased almost as quickly, from 2,100 to 6,100 (Idaho Department of Labor, 2009a).

Along with the increased size and scale of production, Idaho's dairy industry has undergone structural changes. Overall, the number of dairy farms has declined but those that remain are larger (Figures 2a and 2b). In 1997, the average number of cows on an Idaho dairy farm was 189. By 2007, the number more than tripled – to 661. Meanwhile, the number of dairy farms declined from 1,404 to 811 (U.S. Department of Agriculture, 2009b).

Growth in the Hispanic population

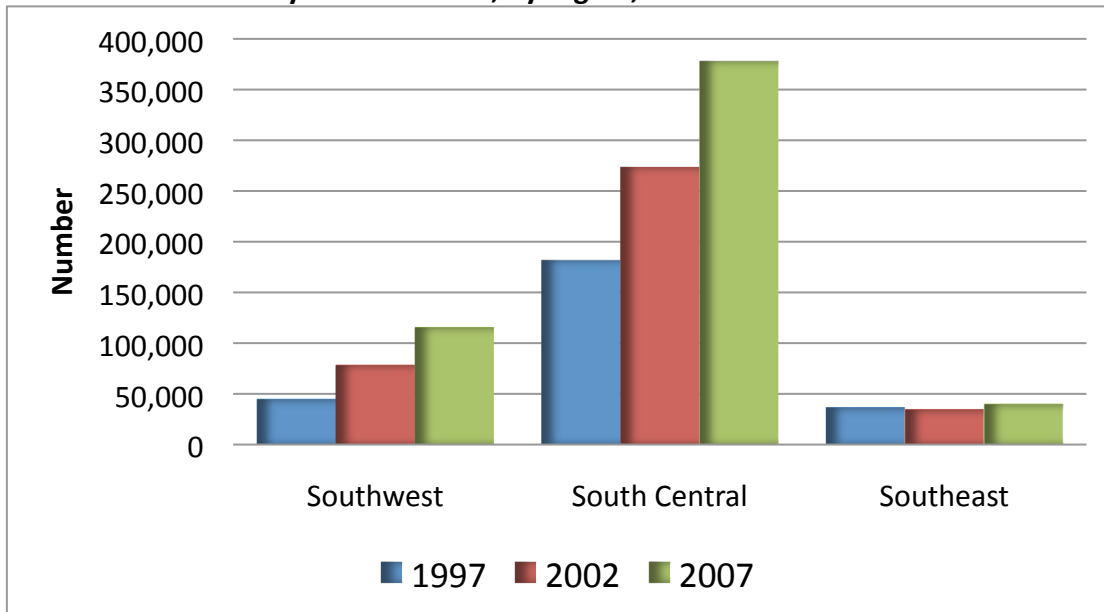
Concurrent with changes in Idaho's dairy industry, the Hispanic population in southern Idaho has increased. The number of Hispanic individuals in southwest, south central, and southeast Idaho combined grew from about 80,000 in 1997 to almost 140,000 in 2008 – up by 85% (Figure 2c), compared to 28% for southern Idaho's population as a whole (U.S. Census Bureau, multiple years and sources). In the south central region, where the dairy industry is concentrated, the rate of Hispanic population growth has outstripped the overall growth at an even faster rate. Between 1997 and 2008, the number of Hispanics increased by 87%, compared to 11% for the

Figure 2a. Number of dairy farms in Idaho, by region, 1997 to 2007.



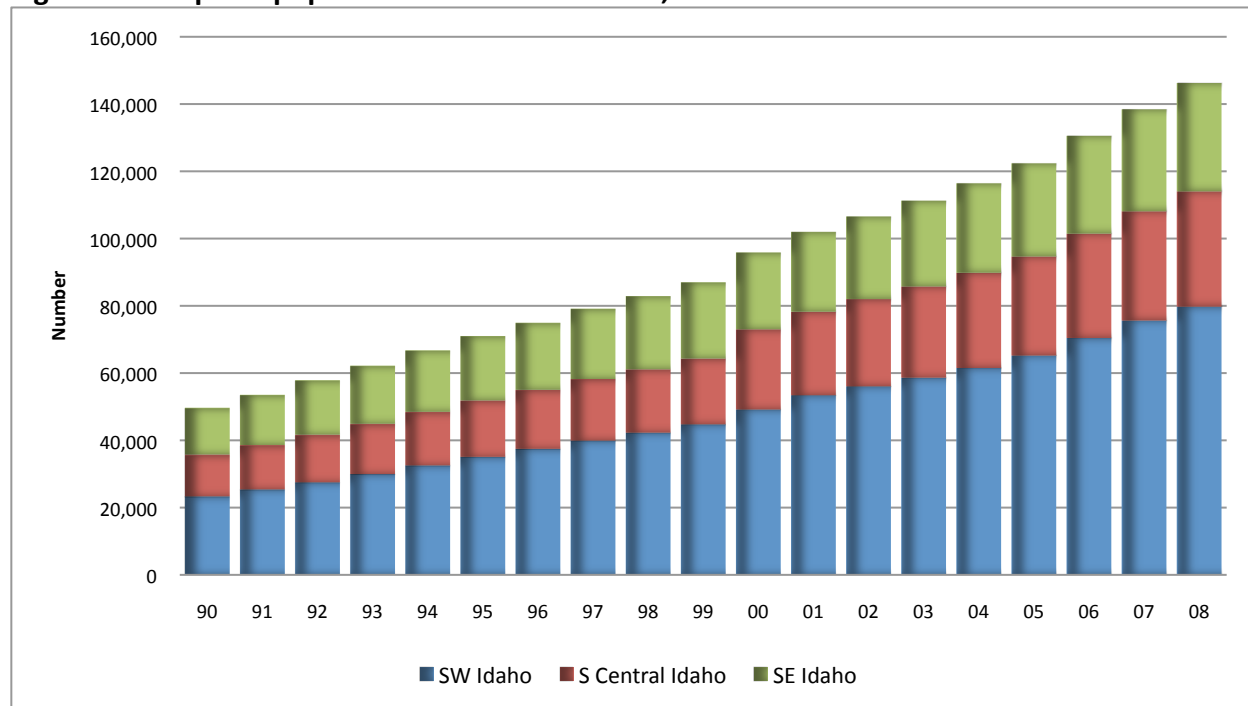
Source: U.S. Department of Agriculture (2009b)

Figure 2b. Number of dairy cows in Idaho, by region, 1997 to 2007.



Source: U.S. Department of Agriculture (2009b)

Figure 2c. Hispanic population in southern Idaho, 1990-2008.



Source: U.S. Census Bureau (multiple years and sources)

region’s population as a whole. In fact, if not for increased numbers of Hispanic individuals, Jerome and Gooding counties would have lost population and likely would have stagnated economically in the last decade.

Idaho is consistent with national trends

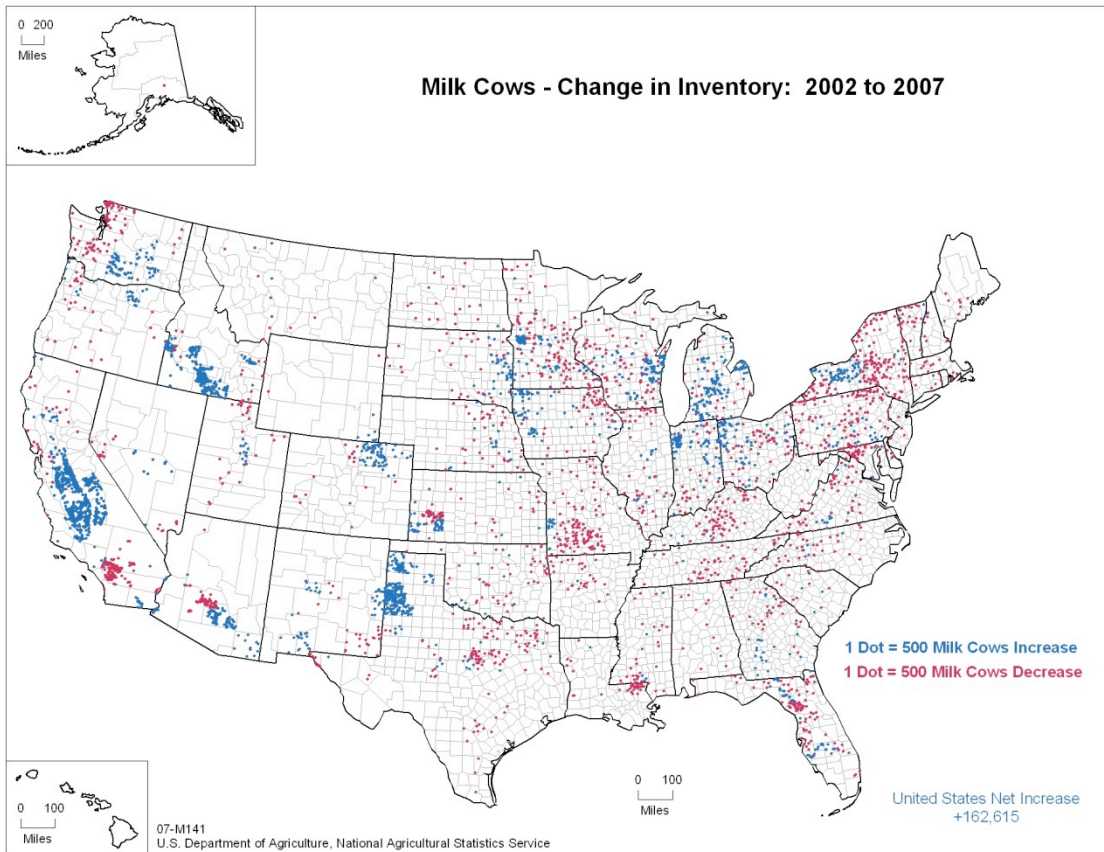
These two trends – concentration in the industry and a growing Hispanic population – are national and not unique to Idaho.

As shown in Figure 2d, the dairy industry is becoming more concentrated in certain regions of the country, specifically, California’s Central Valley, Idaho’s south central region, and the Texas Panhandle. Describing these changes, which were first evident in California, the U.S.

Department of Agriculture (USDA) reports:

Large farms dominate in California, the nation's largest milk-producing state. Farms with at least 500 cows accounted for 88 percent of California's milk production in 2006 ... Other states in the West and Southwest show similar patterns – substantial growth in production and a concentration in large dairy farms (MacDonald *et al*, 2007).

Figure 2d. Milk cows – Change in inventory: 2002 to 2007.



Source: U.S. Department of Agriculture (2009b)

The growth in Idaho's Hispanic population is also consistent with the national trend. A new report on the nation's growing Hispanic population describes the magnitude of the change:

The share of overall U.S. population gain attributable to Hispanics has grown rapidly over the past two decades ... The Hispanic population grew by 60.9 percent during the 1990s, while the overall U.S. population grew by only 13 percent ... Even more remarkable, though Hispanics represented only 12.5

percent of the U.S. population in 2000, they produced one-half of the entire U.S. population increase between 2000 and 2007 (Johnson and Lichter, 2008).

It is logical to think these two parallel trends in southern Idaho – the changing structure of the dairy industry and growing Hispanic population – would have profound impacts on communities. Stores and restaurants are likely to have new customers, schools to have new students, hospitals to have new patients, churches to have new parishioners, courts to see new defendants, and realtors to have new clients. But this long list begs several important questions addressed in this report. Are the impacts at the community level positive, negative or both? Who benefits and who loses? Would communities be better off without the new dairy workers, or do the benefits outweigh the costs?

3. Geographic focus

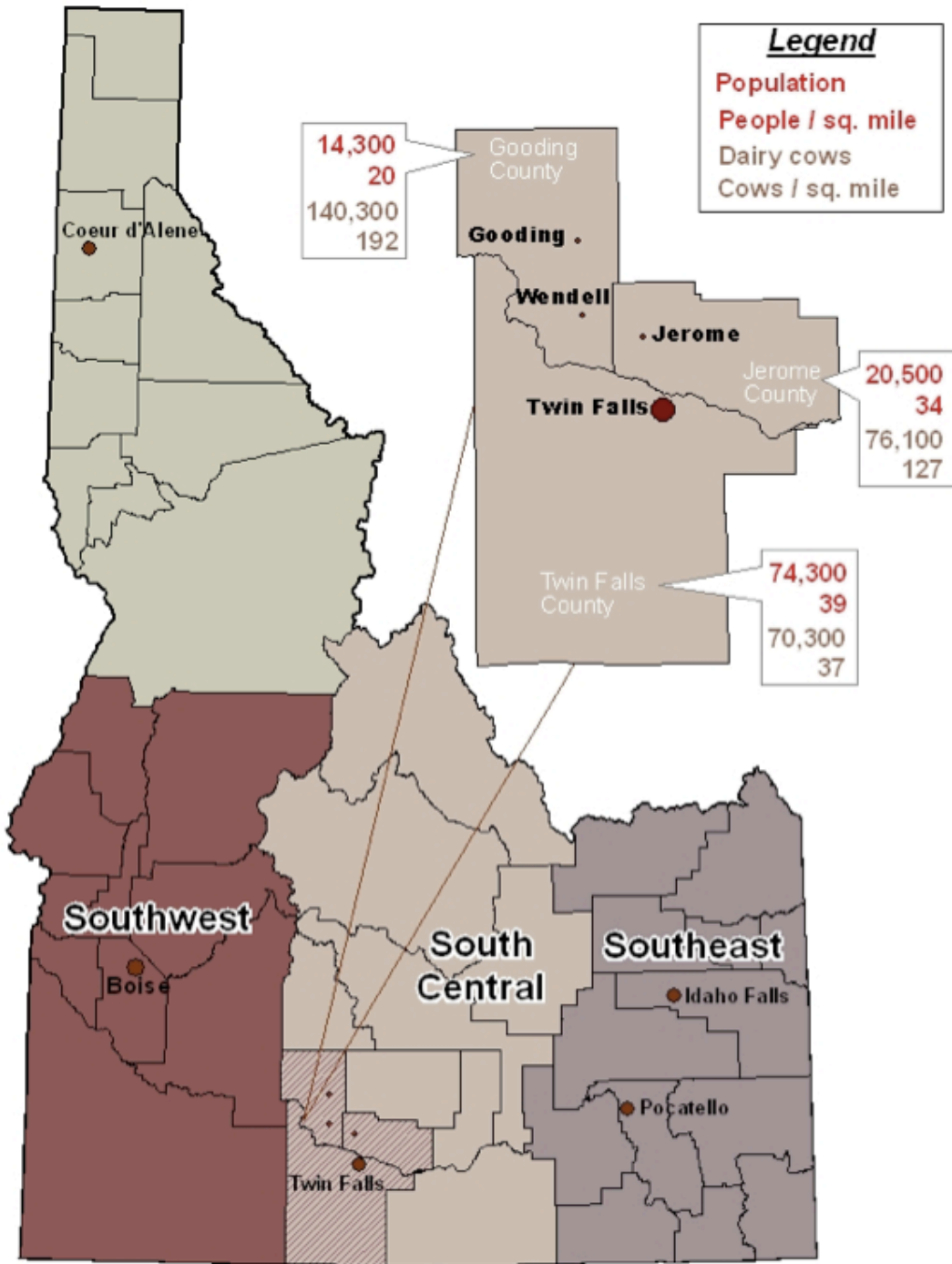
The study area for our report included all counties in southern Idaho, as shown in Figure 3a. Together these counties account for 99% of the state's dairy herd. For the analysis, we divided the counties into three regions: southwest, south central, and southeast.

South central Idaho, referred to by many as the "Magic Valley," is the epicenter of the state's growing dairy industry (Figures 2b and 3a). It accounts for 70% of the state's dairy herd. Within the Valley, the largest concentration of dairy farms is in Gooding, Jerome and Twin Falls counties. In 2007, these three counties alone accounted for almost 290,000 dairy cows or roughly half of the state's total. In Gooding and Jerome counties, there are more dairy cows than people per square mile. In Twin Falls County, the ratios are about equal.

With a population of about 42,000, the city of Twin Falls is the Magic Valley's largest population and commercial center. However, the community-level impacts of the dairy industry are far more visible and concentrated in the small town of Jerome, which has about 9,200 residents. Jerome is only a few miles from the border between Gooding and Jerome counties. With its rapidly growing Catholic Church and a downtown filled with businesses catering to Hispanic consumers, it functions as the economic and social hub for this population.

We also included the southwest and southeast regions of Idaho in the study area. They account for 22% and 7% of the state's dairy herd, respectively. The more urban "Treasure Valley" in southwest Idaho provided a comparison region because of its larger population and the variable size of its dairy operations. The southeast region has a more rural landscape and its dairy farms tend to be much smaller than those to the west. Both regions' proximity to the Magic Valley made it likely or at least possible that their residents would be aware of the dairy industry and its community-level impacts. Despite the presence of dairy farms in both regions, we expected the impacts to be less direct and smaller in magnitude in southwestern and southeastern cities and small communities.

Figure 3a. Southern Idaho and communities in the dairy belt.



Map created by Debbie Gray

4. Methodology

We used a three-part methodology to study the dairy industry’s community-level impacts in southern Idaho.¹ The methodology included personal interviews, a general public survey, and secondary data analysis.

Interviews

As both an initial phase as well as an ongoing component of the study, we conducted semi-structured interviews with key informants (see Appendix B) in face-to-face settings convenient to the interviewees (Miles and Huberman, 1994). Qualitative interviews of this type provide rich, explanatory data to contextualize perceptions that vary across stakeholders, the general public, and other key informants.

We conducted a total of 63 interviews with individuals across a spectrum of professional and thematic areas correlating to the structure of this report. Primary categories for the interviewees are summarized in Table 4a. The balance of interviews roughly matches the geographic distribution of the dairy industry within the state (by number of dairy cows; see

Table 4a. Categories, location, and totals for key-informant interviews.

Impact Category	Region/Level				Total
	South-west	South central	South-east	State-level	
Government	2	3	3	1	9
Business / Economic Vitality	1	2	2	1	6
Education System	3	11	4	0	18
Religious & Community Action	1	5	1	1	8
Public Assistance, Health & Social Services	1	7	4	0	12
Justice System	2	2	1	0	5
Dairy Producers	0	2	3	0	5
Totals	10	32	18	3	63

Source: Authors’ tabulations

¹ The University of Idaho Internal Review Board approved this project for human subjects research (see Appendix A).

Figure 2b), but also reflects an oversampling of interviewees in the southwest and southeast in order to ensure coverage of categories within each region. Members of our research team conducted interviews individually as well as in pairs. This provided a more robust interpretive structure for the data analysis. On average, interviews lasted approximately an hour, but ranged from 20 – 90 minutes each. Notes from each interview were recorded and then assimilated and coded into thematic categories for analysis.

General Public Survey

In the fall of 2008, the University of Idaho's Social Science Research Unit (SSRU) conducted a telephone survey of a random sample of southern Idaho households. The sample list was purchased from Survey Sampling, Inc. It included 3,300 listed telephone numbers of Idaho households. The sample was a stratified random sample of households from each of the three regions in southern Idaho (Figure 3a):

- southwest (Adams, Valley, Washington, Payette, Gem, Boise, Canyon, Ada, Elmore, and Owyhee counties);
- south central (Lemhi, Custer, Camas, Blaine, Butte, Gooding, Lincoln, Jerome, Minidoka, Twin Falls, and Cassia counties); and
- southeast (Clark, Fremont, Jefferson, Madison, Teton, Bonneville, Bingham, Power, Bannock, Caribou, Oneida, Franklin, and Bear Lake counties).

The survey achieved a margin of error of +/- 3% across southern Idaho as a whole and +/-5% or better within each region. Table 4b summarizes the number of completed surveys conservatively required to meet the desired sampling error rates. We targeted 433 completed surveys in the southwest and southeast regions, and 577 surveys in the south central region. (For details on sample size calculations, and other aspects of the design and data analysis, see Appendix C.)

To improve response rates, a postcard was sent to all potential respondents prior to the telephone calls (see Appendix D) in three randomly selected waves, with households from all regions included in each wave. Prepared responses to questions respondents frequently ask

are included in Appendix E. The final survey instrument we administered is included as Appendix F.

Table 4b. Stratified sample design with targeted completes and sampling errors by region.

	Southwest	South central	Southeast	Totals
Population ^[a]	190,334	64,987	100,880	356,201
Percent of total population	54%	18%	28%	100%
Sample	1,000	1,300	1,000	3,300
Percent of total sample	30%	40%	30%	100%
Number of targeted completes	433	577	433	1,443
Margin of error within region	5.0%	4.5%	5.0%	3.0%

Source: University of Idaho Social Science Research Unit

^[a] Population of occupied households in each region. Source: U.S. Census Bureau, 2000 Census (most recent data available on household occupancy rate).

Interviews were completed with 1,340 respondents, including 49 interviews done in Spanish. The final response rate across all three regions combined was 49%. Final response rates were 51% in the southwest, 46% in the south central region, and 53% in the southeast. (See Table 4c for dispositions and response rates by region.)

Because of the stratified sample design, households in the three regions had known but unequal probabilities of being included in the sample. (Within each region, each household had the same probability of being included.) We accounted for the unequal probability of selection in our statistical analysis through weighting. Results presented in this report are percentages based on the weighted frequencies.

To determine how well the sample can be said to represent the population as a whole, we compared the age distribution of the survey respondents (who were all over 18 years of age or older) with the distribution among all individuals 18 years or older in the state of Idaho, as estimated by the U.S. Census Bureau based on its 2005-2007 American Community Survey

Table 4c. Dispositions and response rate by region.

	Southwest	South central	Southeast	Totals
Complete	435	481	424	1,340
Ineligible	63	120	90	273
Disconnect	84	126	104	314
Refusal	227	273	218	718
Non-contact	191	300	164	655
Total	1,000	1,300	1,000	3,300
Adjusted Response Rate ^[a]	51%	46%	53%	49%

Source: University of Idaho Social Science Research Unit

^[a]The American Association for Public Opinion Research (AAPOR). 2006. Standards Definitions: Final Disposition of Case Codes and Outcome Rates for Surveys, 4th Edition. Lenexa, KS: AAPOR. Available at: http://www.aapor.org/pdfs/standarddefs_4.pdf

(U.S. Census Bureau, 2005 – 2007). From this comparison, it was clear that among respondents, people under 34 years old were underrepresented relative to their proportion in the population, and those over 45 were overrepresented.

We also compared respondents' education levels to U.S. Census Bureau estimates. This comparison showed that survey respondents as a group had more formal education than the general population of Idaho residents.

We expect that differences between the sample and general population stem both from coverage error (the frame used to draw the sample was landline telephone numbers) and non-response error (individuals who were in the sample but did not respond or were not able to be contacted for the survey). Recent estimates indicate that 22% of Idaho households are wireless-only (Blumberg et al., 2009). Studies have shown that wireless phone-only households tend to be younger than others (Blumberg and Luke, 2007). In addition, younger individuals tend to be more difficult to reach, due to work and family commitments.

Given these age and education differences between our respondents and the population, we tested whether non-response and coverage error might have impacted or biased our estimates of key survey variables. We used the survey question “does Idaho’s dairy industry bring more net benefits to the state, more net costs, or equal amounts of costs and benefits?” to test whether the non-response and coverage error may have led to bias in the estimates. We found no significant statistical relationship between either the respondent’s age or education and their answer to the impact question. In other words, while the survey has some non-response and / or coverage error, this does not appear to have led to bias in the survey results.

Full survey results are reported in the Appendices, including weighted frequencies of each quantitative variable (Appendix G) as well as cross-tabulations by “region” and between key variables within the survey (Appendix H).

Secondary data analysis

The key informant interviews and general public survey both yielded valuable data on people’s perceptions of and opinions about the dairy industry’s community-level impacts. They provided context and pointed us towards hypotheses that needed to be tested for us to reach conclusions on how community systems are affected by the industry. To further examine these hypotheses, we also analyzed data from a variety of secondary sources (Table 4d). As the findings reported here indicate, sometimes the secondary data supported – and other times they refuted – people’s opinions and perceptions.

Table 4d. Sources of secondary data used in the analyses (referenced in Section 12).	
Catholic Diocese of Boise	Northwest Area Foundation Indicators Website
Idaho Association of Counties	U.S. Bureau of Economic Analysis
Idaho Department of Corrections	U.S. Census Bureau
Idaho Department of Health and Welfare	U.S. Department of Agriculture
Idaho Department of Labor	U.S. Department of Education
Idaho State Board of Education	
Source: Authors’ tabulations	

5. The people who work on Idaho's dairy farms

How the dairy industry impacts communities depends in large measure on who works on the farms. If workers reside in Idaho on a stable basis with their families, the impacts on schools, hospitals, and other parts of communities will be very different than if they are single men moving in and out of the country. And, regardless of whether the workers are single or married with children, if they are afraid of being deported because their documents are questionable, they will not become involved in their community as they would otherwise. They must feel safe if they are to interact with their children's school, get medical care when they are ill, or any of the activities that most of us do not think of as risky behaviors.

We have no way of determining with certainty the household characteristics of dairy workers or whether these workers are residing in Idaho on a long-term basis. While this is a limitation of the study, by combining what we learned from personal interviews with data from the U.S. Census Bureau, we were able to develop a description of characteristics of dairy workers, as explained in this chapter.

Large dairy farms require a workforce made up of "*very strong, agile young men*" who can handle the requirements of the job.² Especially for milkers, who make up about half the workers on a typical large dairy farm, the job is fast-paced and physically demanding.

Schedules and pay rates vary by farm, but our best estimate is that milkers work from 10 to 12 hours a day, four to six days in a row, and are paid about \$12—13 per hour or \$2,000 per month after taxes. Other types of workers, such as laborers, earn less, while feeders, inseminators and herdsman earn significantly more.

Turnover is high – "at least 30% per year" according to the manager of a farm with over 5,000 cows. From another person familiar with the industry we heard: "*The typical worker keeps his job for awhile, then goes back to Mexico when another guy from his network of cousins takes the job while he's away.*" And, "*It's a revolving door – one month here, the next month gone. Friends and relatives fill jobs vacated by each other.*" Not everyone we interviewed agreed that

² Quotations from interviewees in the study appear in *italicized text*, in quotation marks.

turnover is high. One person familiar with the industry said that it takes a long time for farmers to train workers and thus the farmers strive to prevent high turnover. We conclude that there is likely to be significant variation across dairy farms and among workers in terms of length of time on the job. In this context, working on a dairy farm is not the kind of job that many young men aspire to keep for long, or one that a person with other opportunities would chose to do forever. *“The guys might work on dairies for three or four months, and then move on to another, better job.”* As one dairy farmer put it, *“I don’t see a lot of guys laid off from Micron come around here looking for work.”* Another employer explained, *“The whole reason dairy jobs are held by immigrants is because white people won’t take those jobs.”* And yet another said about the immigrants, *“We would have a labor shortage without those folks, so they are providing a service.”*

Indeed, we learned from the interviews, the vast majority of Idaho’s dairy workers are Hispanic and many are foreign-born. It is important to note that employers are required to ask new workers for their name and Social Security number.³ According to the Government Accounting Office:

Under IRS regulations, employers must ask new hires to provide their name and SSN [Social Security Number], but are not required to independently corroborate this information with the SSA [Social Security Administration]. DHS [Department of Homeland Security] requires employers to visually inspect new workers’ identity and work authorization documents, but employers do not have to verify these documents and they can be easily counterfeited (GAO 2005).

While there are sources of data on the proportion of foreign-born workers in the U.S. labor force, there is no single source on the proportion who have legal work documents. Based on multiple interviews, we concluded that whether or not dairy workers have legal documents, the stricter enforcement of immigration laws that has taken place in recent years, especially in 2008, has had profound consequences for workers’ lives. Simply because they are Hispanic,

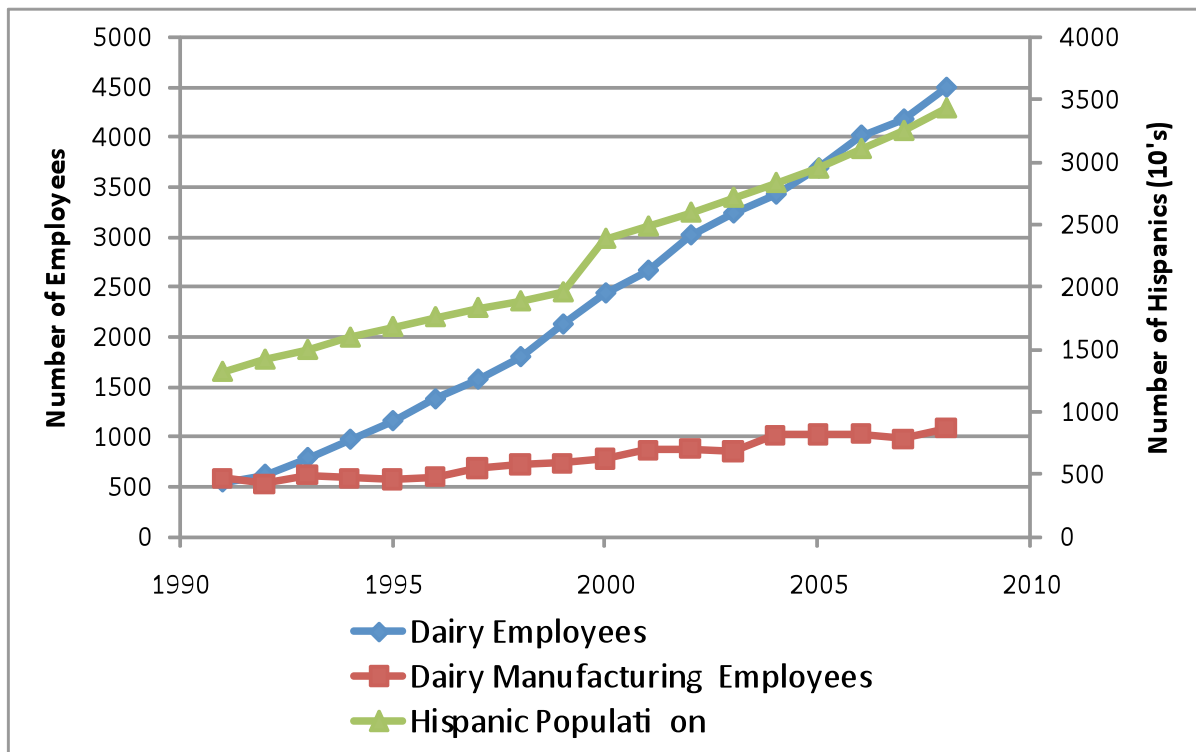
³ In addition to being required to ask for each new worker’s name and Social Security number, employers must then withhold a set percentage of the worker’s salary each pay period for Social Security (retirement), disability insurance, Medicare, and benefits for survivors. We found no evidence that dairy farmers are not adhering to this requirement. Thus, we may assume that dairy workers pay these taxes, whether or not they will be able to collect Social Security or other benefits in the future.

they are at risk. *“Now that pathways to residency are so hard and illegal immigration is so dangerous, Hispanics are coming [across the border] alone.”*

While the young men who work on dairy farms may have families in Mexico, interviewees’ experiences in southern Idaho indicate many immigrants now cross the border by themselves, leaving wives and children behind. And once they get here, many are afraid of being caught by immigration authorities. With the current recession and changing emphases on illegal border crossings, the dynamics of how many workers are coming in and out of the country (and the labor force) are fluid. Nevertheless, our interviews revealed a dominant sense of insecurity among dairy workers. According to a business owner we interviewed in Jerome, workers are *“in lock up; they go to work, come home, go to work, come home.”*

Our secondary data analysis supplements what we learned from the interviews. As noted earlier in the report, south central Idaho’s Hispanic population has grown steadily, at the same

Figure 5a. Change in number of dairy workers, dairy manufacturing workers, and the Hispanic population, south central Idaho, 1990 to 2008.



Sources: Idaho Department of Labor (2009a); U.S. Census Bureau (various years)

time the dairy industry has expanded and increased its demand for labor. These parallel trends are reflected in Figure 5a, which shows the rates of change in both groups on very close trajectories. Even though the correlation between the growth in the dairy industry and the rising Hispanic population suggests a relationship between the two, it cannot be determined as a causal linkage.

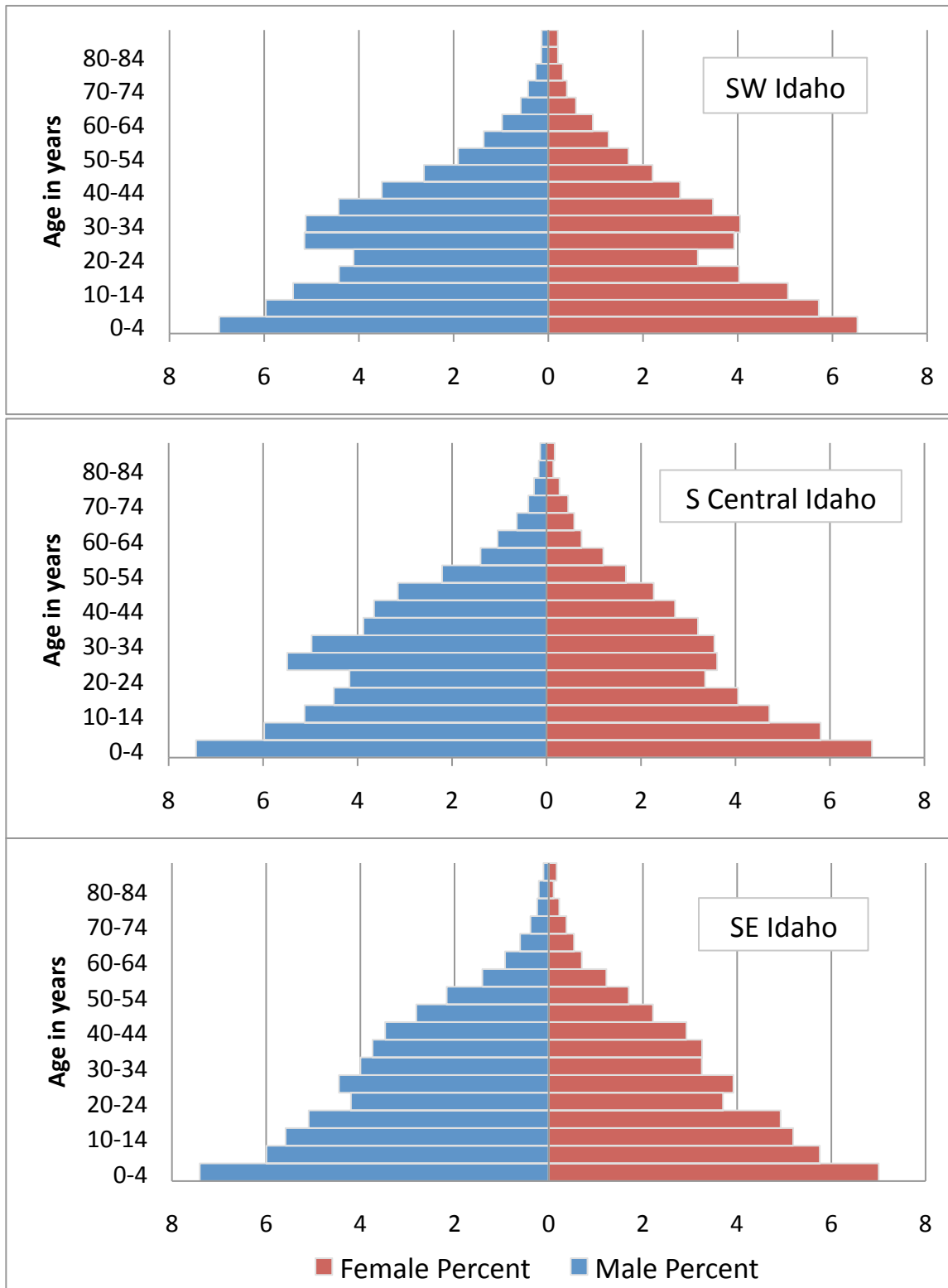
Data on age and gender further support our contention that south central Idaho's Hispanic population is growing in response to the dairy industry's labor demands. As Figure 5b shows, there is a disproportionate number of young, working age Hispanic males in the south central region, but without a corresponding number of young, working age Hispanic females. By contrast, in the southwest, both males and females are disproportionately represented in the young, working age population. This suggests that other sectors of agriculture or other industries altogether may be driving growth in the Hispanic population in the southwest.

In southeastern Idaho, young, working age males and females are not present in disproportionate numbers. This is consistent with the absence of a large dairy sector and other industries that depend on a largely foreign born labor force.

Clearly, however, U.S. Census Bureau data show the south central region's Hispanic population is made up of more than young, working age males. Figure 5b also shows high numbers of young children, again indicating a correlation between the dairies and other industries employing Hispanic workers with families and reflecting the longer-term pattern of immigration prior to the very recent shift toward "single-males" described above. This is consistent with findings about increasing numbers of Hispanic students in K-12 schools, which we discuss in Chapter 8.

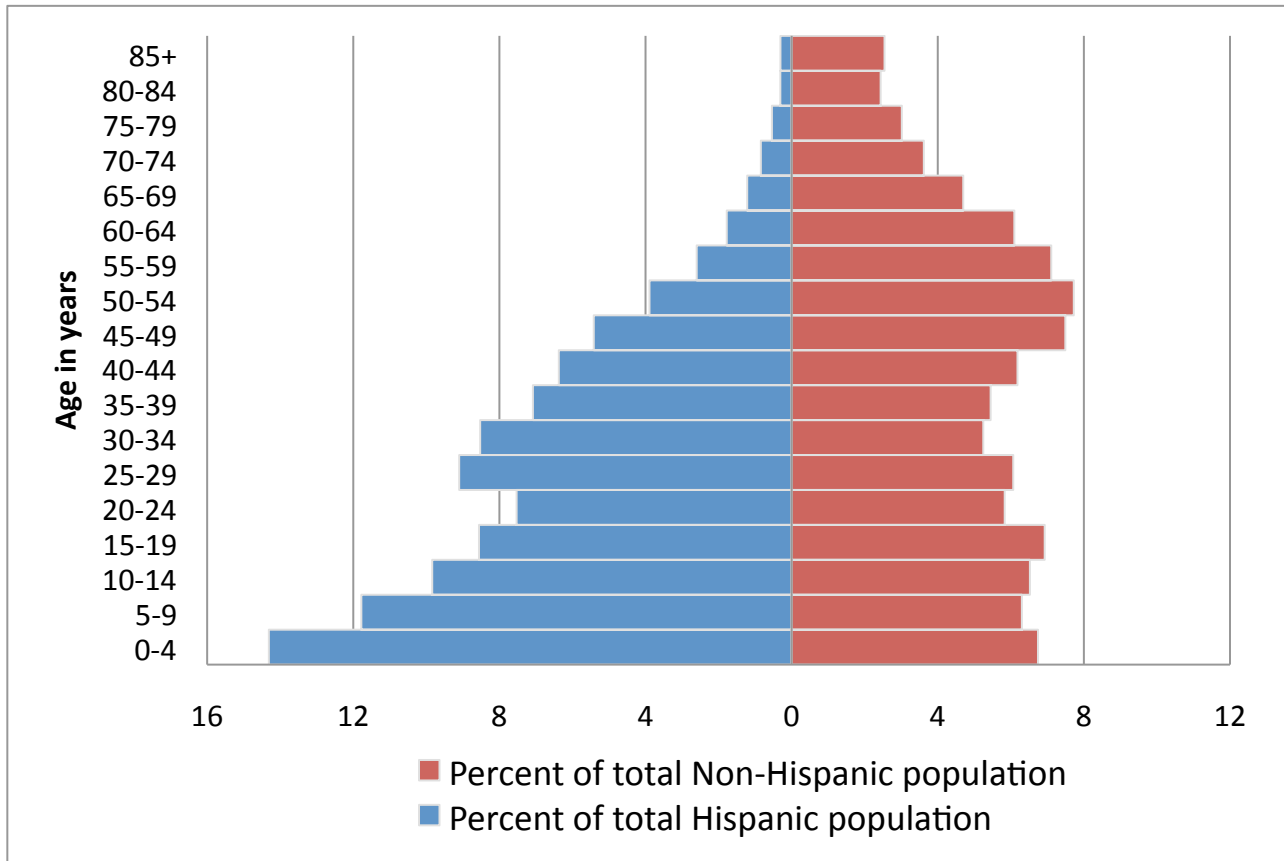
The numbers are even more striking when we compare the age distribution of south central Idaho's Hispanic and non-Hispanic populations. Figure 5c shows that young children and young adults are disproportionately represented in the Hispanic population, while baby boomers (in their 50's and 60's) stand out among non-Hispanics.

Figure 5b. Age distribution by sex, Hispanic population, 2008.



Source: U.S. Census Bureau (2008)

Figure 5c. Age distribution by ethnicity, South Central Idaho, 2008.



Source: U.S. Census Bureau (2008)

In summary, then, data from our key informant interviews and secondary sources indicate that dairy farm workers tend to be young adult men who are Hispanic and foreign-born. Some are single and others have families, but the recent trend is towards more single men. As a group, these workers are driving the growth of the Hispanic population in south central Idaho, but not in the southwest or southeast.

6. Impacts on local economies

Other analysts have documented the dairy industry's aggregate impact on Idaho's economy in terms of employment and total personal income (Holley and Church 2006 and forthcoming in 2009). Using a range of qualitative and quantitative data sources, we seek to complement those analyses by looking at how economic impacts play out locally. Our approach is more descriptive and addresses a much broader range of impacts than previous studies.

The growing dairy sector has clearly contributed to economic growth in south central Idaho, whether measured by job numbers, unemployment rates, per capita income, or other commonly used economic indicators (Table 6a.) Especially in Jerome County, employment and population numbers are growing right alongside the dairies. And even as unemployment rates are increasing in the Magic Valley in the current economic recession, they are consistently below the statewide average.

Table 6a. Local economies are holding fairly steady. Wages are low but at least through August 2009, the recession has been less severe than elsewhere.

	Twin Falls County	Jerome County	Gooding County	Idaho
Unemployment rate				
2008 average (%)	3.8	4.0	3.4	4.9
August 2009 (seasonally adjusted, %)	6.7	7.2	6.4	8.9
Change in number of jobs (2000--2008, %)	17	15	8	20
Average wage per job (2007, \$)	27,368	28,423	28,331	33,217
Per capita income (2007, \$)	28,642	31,440	36,354	31,804
Poverty (2007)				
Overall (%)	13	13	13	12
Under 18 (%)	17	18	20	16
Students eligible for reduced price meal program (2006--07, %)	44 ^a	53 ^a	56 ^a	37 ^a

Sources: U. S. Bureau of Economic Analysis (2009); Northwest Area Foundation Indicators Website (2009); Idaho Department of Labor (2009a)

^a Twin Falls School District, Jerome School District, Wendell School District, and Idaho state total

“The dairies keep us going, no question about it,” according to a business person we interviewed, and a sentiment echoed by others. *“The dairies mean money going into the local economy, including to white-owned businesses.”* Dairy workers also contribute to the local economy through the sales taxes they pay when they spend their money locally. As several people pointed out, however, to the extent that at least some dairy workers are young men who send part of what they earn home to families in Mexico or elsewhere, a smaller share of earnings is spent locally than if workers were here with their families.

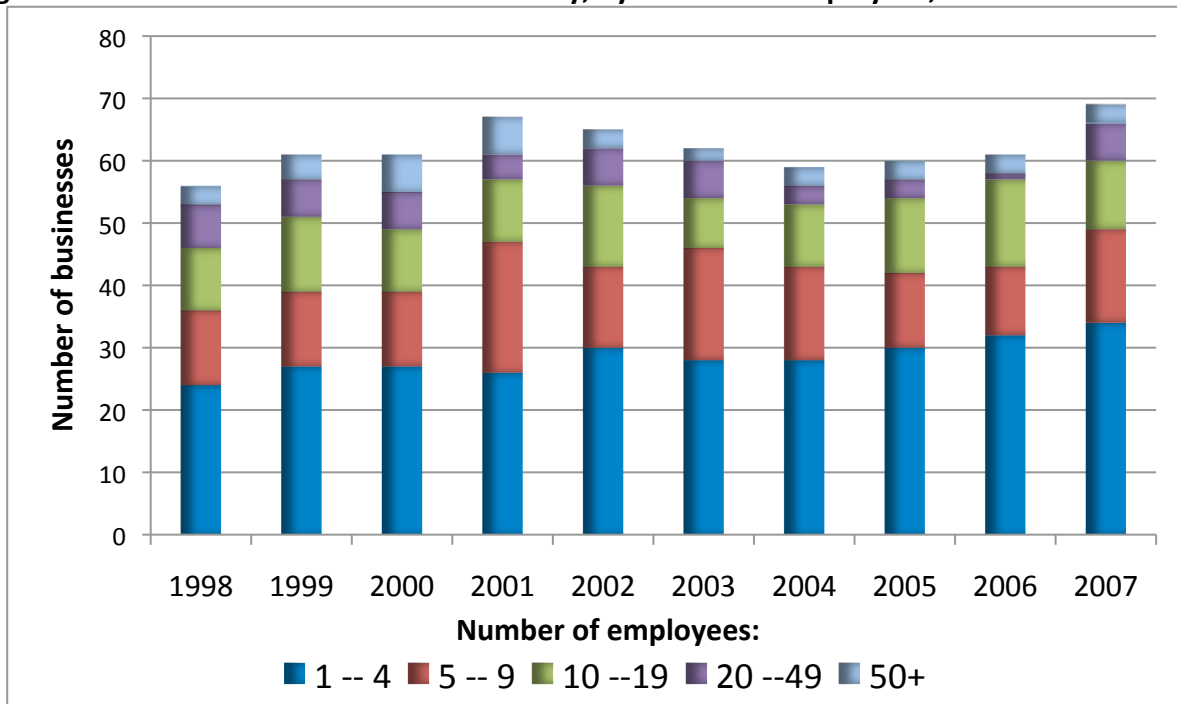
We asked a local elected leader, “What would happen if the dairies went away tomorrow?” His answer captured the essence of the community-level, economic impacts: *“I’d hate to see it. The success of the dairy industry has led to more overall economic activity, which in turn has brought more new residents for jobs not related to agriculture.”* Where dairies employ large numbers of workers and the economy is diverse, we see the most economic vitality. This effect is clearest in Twin Falls, a regional commercial center. It is also true in Jerome County, where job numbers have increased by 15% since 2000 and 4% in the last year alone, despite the recession and hard times in the dairy industry. Why? According to a recent economic report on Jerome County:

The economic outlook remains optimistic with the continued development of the Crossroads Point Business Center, which currently boasts a Wingate Hotel, Fed Ex, Pella Windows, Fastenal, Subway and an office building in the construction stage. Work on a new hospital should start in 2010. The economy of Jerome will remain vibrant due to its superb location on Interstate 84 and cluster industries co-existing and excelling (Idaho Department of Labor, 2009b).

Growth and vitality are also evident downtown in the community of Jerome, population roughly 9,200. One business owner described *“an explosion of small Hispanic businesses, including restaurants, grocery stores and radio stations,”* largely targeted at Latino customers. He continued, *“There has been a huge change in the make-up of small businesses in the last 10 years.”* A city official told us, *“Many vacant buildings in downtown Jerome were purchased or rented by Hispanics in the last 10 years.”*

Data on the number of businesses in Jerome County support people’s impressions of economic vitality, though they do not show that numbers are “exploding.” The number of retail businesses, for example, grew from 56 in 1998 to 69 in 2007, an increase of roughly one-fourth (Figure 6a).

Figure 6a. Retail businesses in Jerome County, by number of employees, 1998-2007.



Source: U.S. Census Bureau (1998-2007)

The number of small retail businesses (with fewer than five employees) grew by almost half over this time period.

The picture is not as rosy in the small towns of Wendell and Gooding in Gooding County. Despite the concentration of dairies and their dramatic growth in earlier parts of the decade, these communities and the local economy are not growing as quickly as their neighbors to the east. The town of Gooding lost 5% of its population since 2000.

Population loss in the town of Gooding and less favorable economic indicators in Gooding County are likely due to its less diversified economy, and to the fact that dairies have all but stopped growing. Local main streets in Gooding County show little of the vibrancy found in

Jerome. When Blaine County's economy was booming, many workers from Gooding traveled there for jobs. Now, however, the impact of the recession is clear. According to the Idaho Department of Labor:

The rapid growth in dairies has slowed in recent years as environmental concerns forced the Gooding County Commission to tighten standards for large livestock operators, slowing expansion. Kiefer-Built Trailers has provided skilled jobs, but it has not proved recession-proof and has fallen to minimal production during the recession. At one time, many residents commuted to Blaine County for the higher paying landscaping and construction jobs. But those jobs have declined in the downturn despite the needs of estates, second homes and hotels in Sun Valley and Ketchum (Idaho Department of Labor 2009c).

Despite its less diversified economy, Gooding County's unemployment rate remains relatively low and its per capita income is higher than the state average. This trend is consistent with characteristics in southern Idaho's farming dependent counties as a whole. Wages in the region are low but the economy is fairly steady, even during the current recession.

It is hard to argue with indicators that show Idaho's dairy region has a growing and relatively resilient economy. Nevertheless, we should be clear about the economic hardship faced by some local residents, despite growth related to the dairy industry. Child poverty rates are higher in this region than the state as a whole. So, too, are the proportions of children eligible for reduced price meals at local schools. Pockets of substandard housing exist on the outskirts of small towns.

Based on interviews with educators, social service providers, and others, many people in the dairy region are "working poor." They work full time but at wages so low their incomes are less than the poverty level, which was \$22,050 for a couple with two children in 2009. The hourly rate at which most dairy workers are paid is high enough to keep them out of poverty if they work full-time.

Our interviews suggested that economic hardship probably exists not because of but despite the dairy industry. One person described a "*huge increase in the number of people coming to soup kitchens. Most are white. We have a growing transient population here.*" A teacher described high school students who are "*job hungry. They go to school and then to work, many*

at the dairies. It's hard to believe." And a judge told us, "There is horrible poverty among Hispanics." With emphasis he added, "No, their needs are not being met, but it is society's problem, not the dairies' problem."

From the southern Idaho general public survey

Would you say the dairy industry's impact on local businesses has been to . . .

	(percent)
Increase the number a lot	10
Increase the number slightly	43
Hasn't had an impact	35
Decreased the number slightly	3
Decreased the number a lot	1
Don't know, no opinion	8

People in south central Idaho are much more likely than those in the west and east to think the industry has increased the number of businesses "somewhat" or "a lot."

7. Impacts on crime and the justice system

Evidence suggests that the general public often believes a causal link exists between immigration and crime (Feldmeyer, 2009). Our report compiles data from various sources to assess the extent to which relationships (whether real or perceived) exist between changes in the region and community impacts related to criminal activities.

Felony rates

Given the significant demographic change in southern Idaho during the past two decades, we examined whether or not felony rates have changed over a similar time span. We used data on felony convictions by county (broken down by year and ethnicity/race) and population estimates to calculate the per capita felony rate for Hispanics and non-Hispanic Whites in each region (Idaho Department of Corrections, 2008; US Census Bureau, 2008). These data include Idaho felony convictions only⁴. Federal crimes (including immigration violations) do not appear in the data set, nor do misdemeanors. In addition, the data reported are felony convictions, and a single individual may be convicted of multiple crimes at one point in time. For the purposes of this analysis, we excluded crime by other races (American Indian, Black, etc.).

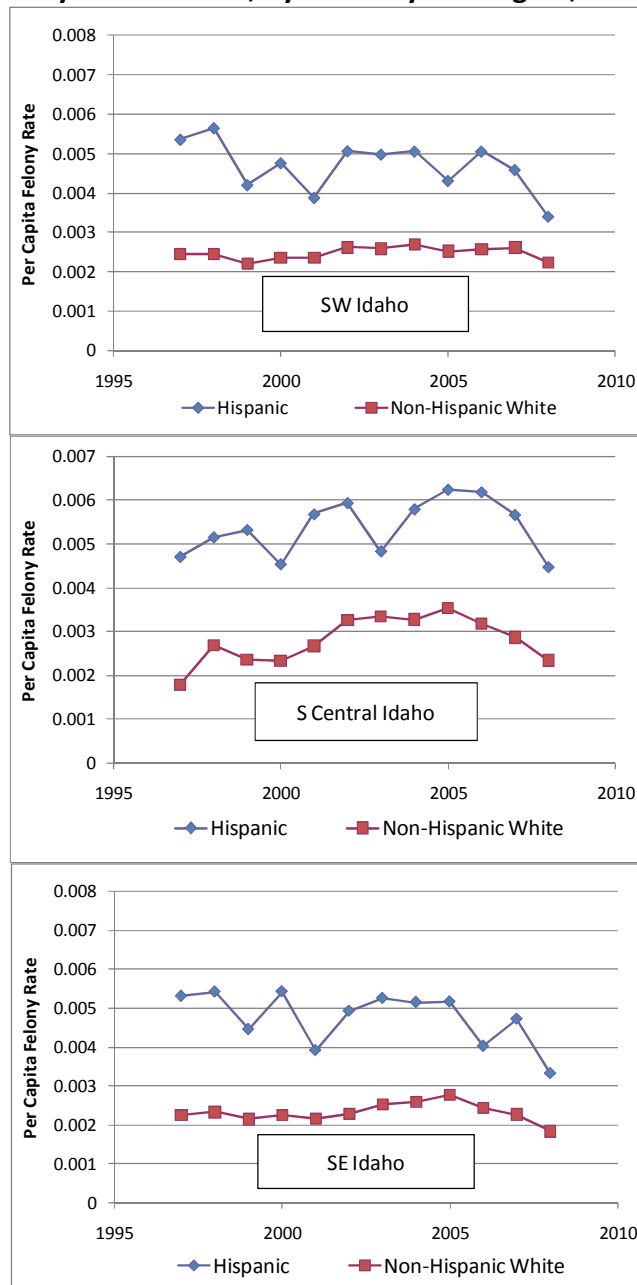
The analysis revealed some statistically significant, regional differences among per capita felony crime rates. In all three of the southern Idaho regions, the per capita felony rate was higher for Hispanics than non-Hispanic Whites (see Figure 7a).

The per capita felony rate of non-Hispanic Whites is steady across years and regions, with the exception of south central Idaho, where the rate exceeds three felonies per 1,000 individuals in some years. The Hispanic per capita felony rate varies more substantially across years than the felony rate for non-Hispanic Whites.

Counter to the felony trend data for Hispanics in southern Idaho, law enforcement officials we interviewed about crime more generally explained they have seen an increase in crime since 2007, but that *“crime is not disproportionately Hispanic and most Hispanic violations are traffic-*

⁴ In Idaho, felonies are defined as “a crime which is punishable with death or by imprisonment in the state prison” (for additional detail, see Idaho State Code, 2009).

Figure 7a. Per capita felony rate in Idaho, by ethnicity and region, 1997-2008.



Source: Idaho Department of Corrections (2008)

related. Even though there is increasing gang activity, most people do not attribute this to the dairy industry”. However, those we interviewed in the criminal justice system did emphasize some of the tangible community-level impacts related to crime. One judge told us there is an “increase in the need for public defenders, translators, and Spanish-speaking attorneys which can cause a strain on the justice system”. And one economic development representative explained the criminal activity as a function of urbanization rather than the dairy industry:

“The situation in Canyon County is much more complex than in Franklin County. Racial tensions are higher in the former due to the level of gang activity. But, people do not seem to attribute the gang activity to the dairy industry”.

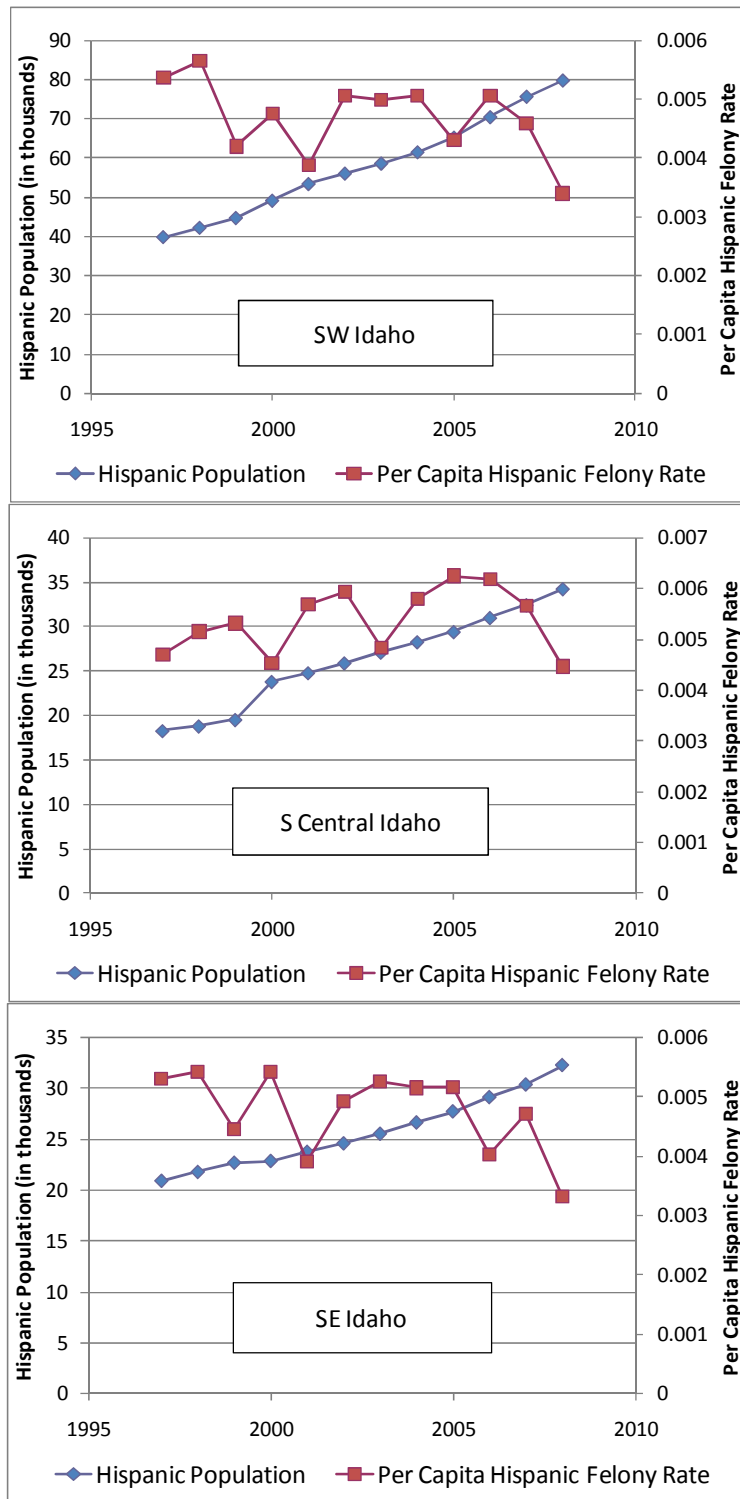
Thus, given the variability of per capita felony rates in Idaho, especially by region and county, coupled with the more detailed data gathered in interviews, we caution against overstating the statistical significance of differences within these findings. For instance, in addition to the data potentially including repeat offenders, these results do not indicate whether Hispanics and non-Hispanic Whites have the same proportion of arrests to convictions.

Two caveats elaborate these points further. First, although the Hispanic population has continued to increase in southern Idaho, the per capita felony rate for Hispanics has not risen, but decreased since 2005 – 2006, depending on the region (see Figure 7b). And, consistent with our findings about per capita felony rates, other researchers have reported similar results that immigration concentration does not affect violent crime rates and may help to reduce crimes like robbery (Feldmeyer 2009; Stowell and Martinez, Jr. 2007).

Second, as noted above, these data report the number of felonies, not the number of felons. Because data are reported on a per capita basis and given the number of Hispanics in the region remains orders of magnitude lower than the number of non-Hispanics Whites, the per capita felony rate of Hispanics has a higher level of statistical sensitivity to small changes in the number of felonies. To illustrate these relative differences, we also report the total number of felonies committed by ethnicity for the south central region of Idaho (see Table 7a).

Consistent with what we heard from others we interviewed, one local business owner noted, *“there are some negative feelings regarding Hispanics, but mostly regarding gang activity”*. Some interviewees, like one mayor we interviewed in south central Idaho, also noted that gang activity in the Treasure and Magic Valleys is both non-Hispanic and Hispanic but that *“the main public perception is that undocumented workers are not the primary cause of social ills and community impacts because they know they need to mind their ‘Ps’ and ‘Qs’ to be secure”*.

Figure 7b. Hispanic population growth and per capita felony rate in Idaho, by ethnicity and region, 1997-2008.



Source: Idaho Department of Corrections (2008)

Table 7a. Differences in number of felonies by ethnicity in south central Idaho that indicate a downward trend for both Hispanics and non-Hispanic Whites since 2006.

Year	Felonies by Hispanics	Population of Hispanics	Felonies by non-Hispanic Whites	Population of non-Hispanic Whites
1997	86	18,303	271	151,169
1998	97	18,832	408	151,187
1999	104	19,552	358	151,868
2000	108	23,840	349	149,861
2001	141	24,820	398	148,836
2002	154	25,931	484	148,744
2003	131	27,126	499	149,066
2004	164	28,310	488	148,955
2005	184	29,449	527	149,247
2006	192	31,029	477	150,041
2007	184	32,472	434	151,265
2008	153	34,281	356	151,855

Source: Idaho Department of Corrections (2008)

Drug arrests

The drug arrest rate in Idaho over the 1983 - 2003 period has increased. Hispanic offenders constituted 11% of the drug arrests in 2003 (S.P. Vazquez, 2004) and 10% of all drug related arrests from 2003-2007, slightly higher than their representation in the population (about 9%) during those years. During that time period, the counties in southern Idaho with the highest proportion of drug violation arrests (between 13% and 22% of total arrests) included Payette, Twin Falls, Clark, Madison, Caribou, and Oneida. In contrast, the counties in southern Idaho with the highest proportion of alcohol related offenses (between 40% and 53% of total arrests) include Lemhi, Butte, Camas, and Lincoln counties (Wing, 2008).⁵

⁵ Our data report felony convictions. Drug and alcohol arrests are the most common offenses in Idaho (for all ethnicities and races), however, not all drug and alcohol arrests are felonies. Generally, in the case of drug arrests, the severity of the crime depends not only on the type of drug involved, but also whether the charge is for possession or trafficking, the amount of drug seized, and the number of, if any, previous convictions the offender has received. Driving under the influence can be a felony charge in many cases as well, but first offenses do not always get classified as such, depending on whether the offender has committed other crime.

From the southern Idaho general public survey

Would you say the dairy industry's impact on crime has been to....

	(percent)
Worsen it a great deal	2
Worsen it a little bit	9
Has had no impact at all	72
Improve it a little bit	8
Improve it a great deal	1
Don't know, no opinion	8

Most people across southern Idaho perceive that the dairy industry has not significantly impacted crime in communities.

In a recent news article describing the growth of the Latino population in southern Idaho, drugs were not noted as a particular problem or community impact (Hunzeker, 2009). In relation to drug-related activity and arrests, law enforcement officers also explained that although *“the drugs are coming in from Mexico, the drug trafficking is not all Hispanic”*. And, a police deputy in south central Idaho elaborated the complexity of the drug problem as it intersects with his community:

“Because some workers in the dairy industry travel back and forth to Mexico, they have the opportunity to traffic drugs. But that is more a function of moving across the border and the need for income – it does not mean they are the root of the problem. Some of them are users and some are just making money”.

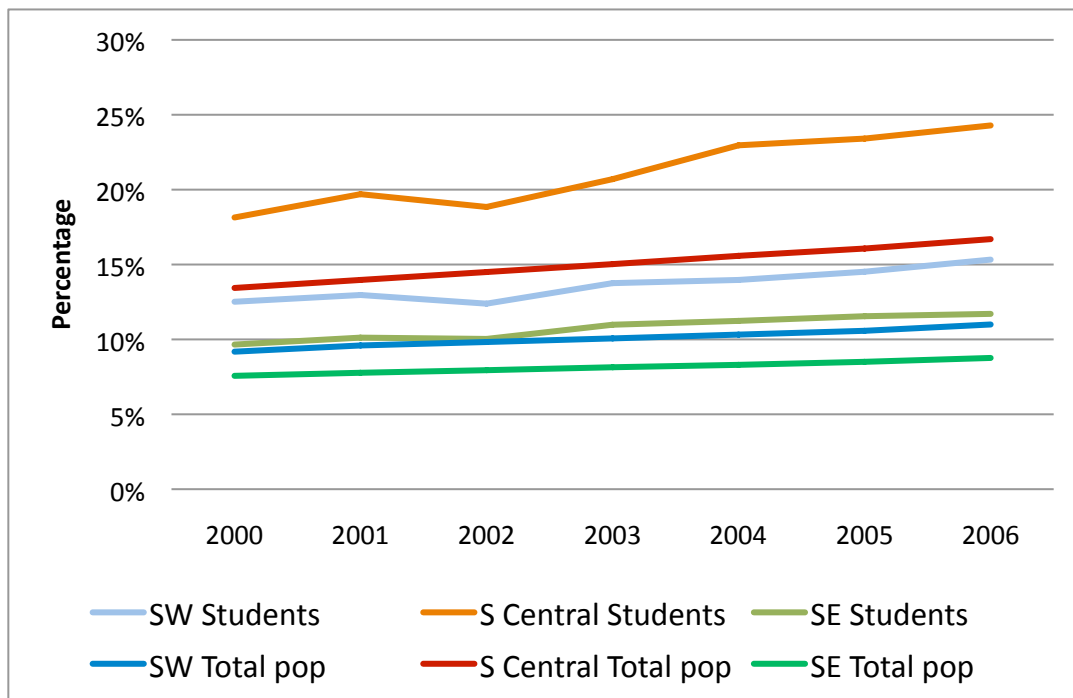
In summary, little evidence exists to suggest the growth in the dairy industry in southern Idaho has negatively affected felony rates in the region. Although felony rates are higher on average for Hispanics, the rates for Hispanics also appear to be decreasing while their proportion of the total population grows. Further, those we interviewed in communities reiterated that the dairies do not serve as a catalyst to increasing crime. The primary community-level impacts occur related to increases of foreign-born immigrants who may need additional assistance if they do enter the law or criminal justice systems.

8. Impacts on schools

As discussed earlier in the report, we did not reach a firm conclusion about the share of dairy workers that are likely to have families with children. However, findings from our economic and demographic data analysis suggest that the industry does impact schools in significant ways. The increase in dairy employment has closely tracked growth in the Hispanic population in south central Idaho, and further, age data indicate that a disproportionate share of young adults and children among the south central Hispanic population. These findings point towards two main impacts on schools.

First, many K-12 schools in the dairy region are experiencing a big change in the ethnicity of their students (U.S. Department of Education, 2000-2001 to 2006-2007).⁶ In south central Idaho, Hispanic student enrollment is increasing as a share of total enrollment (see Figure 8a) –

Figure 8a. Percent Hispanic, student population and total population, 2000-2006.



Sources: U.S. Census Bureau and U.S. Department of Education.⁷

⁶ Unless otherwise indicated, all education data cited in this section are from U.S. Department of Education (2000-01 to 2006-07).

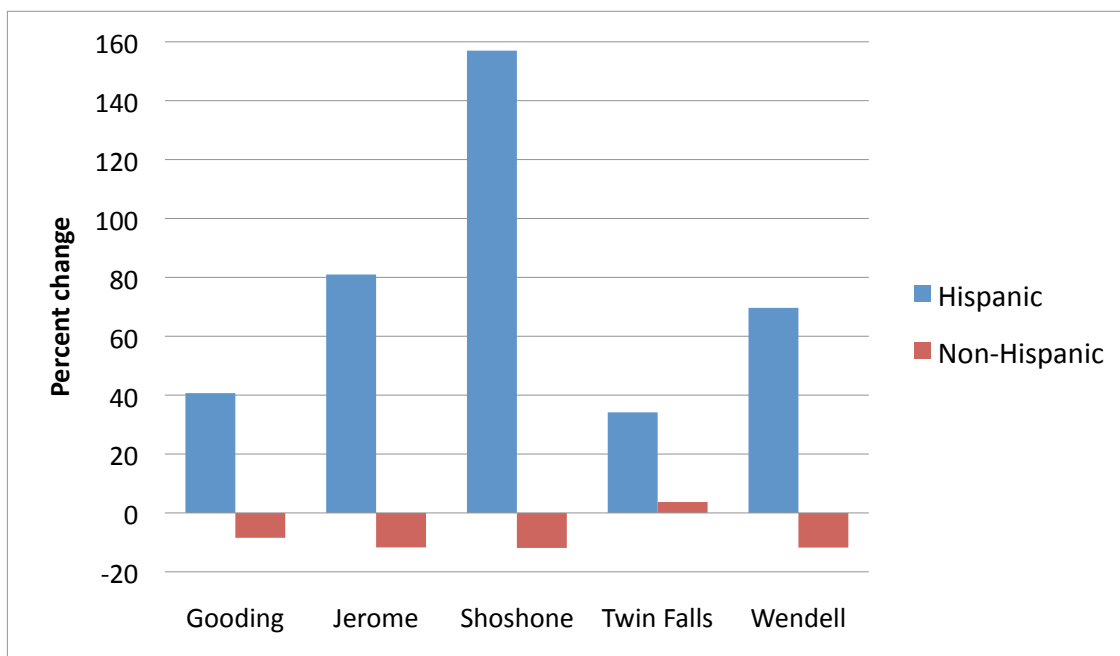
⁷ 2001-2006: U.S. Census Bureau, Population Estimates Program, <http://www.census.gov/popest/counties/>; 2000: U.S. Bureau of the Census, American Factfinder, <http://factfinder.census.gov/>; 2000-2006: U.S. Department of

faster than Hispanic individuals as a whole are increasing as a share of the total population. Hispanic student enrollment in south central Idaho went up 35% over the first six years of this decade. Similar but less dramatic trends exist in the southwest and southeast.

Some districts, especially those in the heart of the dairy region, would be losing students if not for the increase in Hispanics. This is true in the Shoshone, Wendell, Jerome, and Gooding school districts, but not in Twin Falls (Figure 8b).

The second impact on schools is related to the first. The increase in Hispanic students means some districts are growing when they would otherwise be losing students. With a loss in student enrollment comes declining revenue and less ability to educate local youth. With growing diversity come challenges and opportunities, according to teachers and administrators with whom we spoke. The challenges are that districts must now find money and staff to work

Figure 8b. Percent change in student enrollment in select districts, 2000-01 to 2006-07.



Source: U.S. Department of Education (2000-2001 to 2006-2007)

with growing numbers of English language learners, lower income students, and children with parents who are foreign-born. The opportunity is that Hispanic parents, as a rule, value education and want their children to do well. And, children in integrated schools learn how to get along in our increasingly multi-cultural and ethnically mixed society.

In responses to our interview questions, educators went back and forth as they talked about how they cope with – and benefit from – growing numbers of Hispanic students. According to a school administrator,

“Roughly half of our Hispanic students have limited English proficiency. Some have parents who are illiterate in Spanish and don’t want contact with the school because they’re illegal and afraid ... Those parents have a great desire for their kids to improve their status and they know it’s through education. But how can we possibly meet proficiency standards for No Child Left Behind?”

A teacher made the same point.

“Hispanic parents are very supportive of education, more than non-Hispanic parents . . . I truly appreciate this. But schools are penalized [through No Child Left Behind] for educating a population that is here illegally.”

Indeed, in communities where dairy farms are most heavily concentrated, school districts have had trouble meeting the annual yearly progress goals established by No Child Left Behind (Idaho State Board of Education, 2008). Gooding, Wendell, Jerome, Shoshone and Twin Falls districts all failed to meet their goals in the 2007-08 school year. However, the same is true in the other regions as well. Only 33% of districts in southeast Idaho met the targets that year, compared with 44% in south central and 41% in southwest Idaho. Educational achievement gaps exist, but they are not limited to districts with significant numbers of children from the families of dairy workers.

Whether or not students speak English came up frequently in our interviews with educators. A high school teacher told us she has students from second generation Hispanic parents who don’t speak English, right alongside children who have only been in the U.S. for two weeks (and don’t speak English). *“Hispanic students do ok on math tests. It’s the reading scores that get us*

in trouble.” And regardless of their language proficiency, she reminded us, students have to take the Idaho Standard Achievement Tests in English.

We asked educators whether being Hispanic is a good predictor of problems in school. Apart from challenges related to limited English proficiency, everyone with whom we spoke attributed problems to low income more than to ethnicity. *“Poor kids’ parents don’t come into the classroom, higher income parents do.”* Then again, *“When students are absent because they’re in court, it’s more likely because of socio-economic status rather than whether they are Hispanic or Anglo.”* Finally, *“there are lots of problems among the white population – poverty, dysfunctional families, and drugs.”* This is consistent with what we heard (and reported in Chapter 6) about poverty being a problem among both Hispanic and non-Hispanic individuals.

The bottom line is that much of south central Idaho’s school system is coping with changing demographics and students from low-income families. In communities where dairy workers are most likely to live, the industry is in some measure responsible for those changing demographics and some of the problems that come alongside even as it contributes to the tax base that helps support the schools.

From the southern Idaho general public survey

Would you say the dairy industry’s impact on schools has been to . . .

	(percent)
Improve them a great deal	10
Improve them a little bit	33
Have no impact	41
Worsen them a little bit	5
Worsen them a great deal	1
Don’t know	10

Regardless of where people live in southern Idaho, the large majority think the dairy industry has either little impact or a slightly positive impact on schools.

9. Impacts on health care and social services

Our study also documented community-level impacts related to health care and social services across southern Idaho. Some media focus on issues of immigrants as a drain to the health care system (Walsh, 2008). However, at a national level, Hispanics remain underserved by the U.S. health care system via limitations to access to services as well as factors that inhibit Hispanics from seeking preventive care (Balluz *et al.*, 2004). Previous research has documented that nationally, Hispanics receive health care at less than half the rate of non-Hispanics (Mohanty *et al.*, 2005).

In Idaho as in other states, political debate as well as news media focus on perceived impacts on the health services usually because of indigent care services (McGee, 2007). Thus, a relevant question is whether the reliance on a Hispanic labor force in the dairy industry has negative impacts on community health services. In this section, we address several areas related to this theme, including: 1) health insurance coverage; 2) indigent health care costs; and 3) social services related to language and family development.

Health insurance coverage

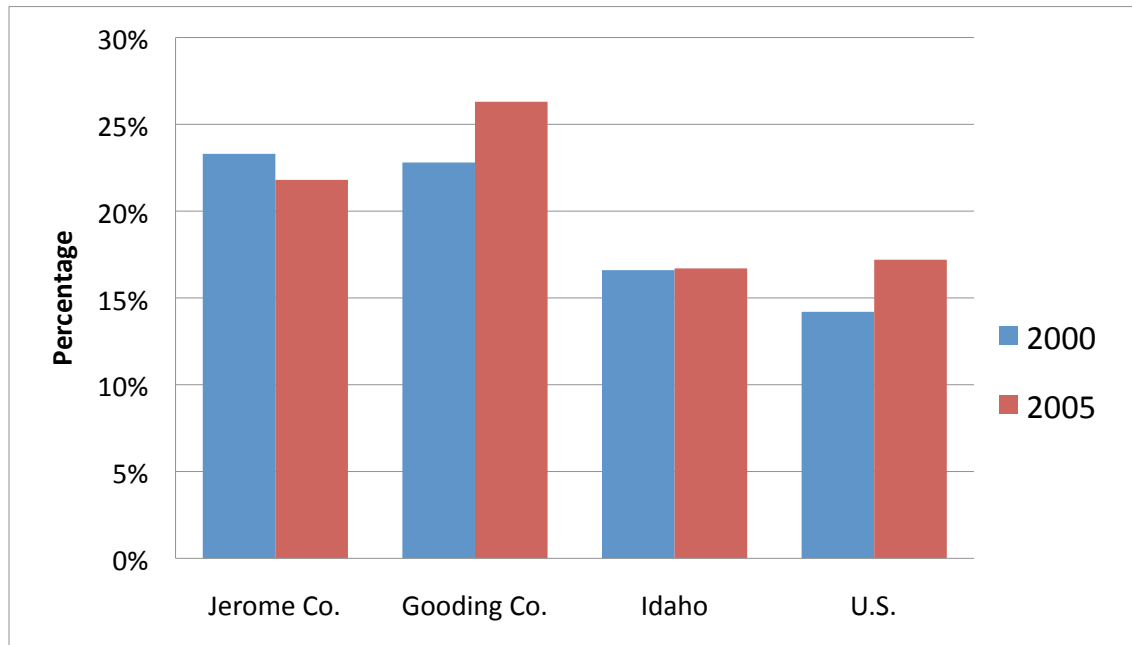
In Idaho, Hispanics lack health insurance coverage at higher rates than non-Hispanics, although the rate is decreasing for Hispanics (see Table 9a). The Idaho Department of Health and Welfare have only recorded these data for Hispanics since 2006. From 2000-2005 in

Table 9a. Percent of adult population without health insurance coverage in Idaho.		
	Hispanics	Non-Hispanics
Adults without health insurance coverage (%)		
2007	52	16
2008	44	17

Source: Idaho Department of Health and Welfare (2008)

Gooding and Jerome counties), Hispanic individuals were less likely to have health insurance than the overall population in Idaho or in the nation as a whole (Figure 9a).

Figure 9a. Percent of population lacking health insurance in Gooding and Jerome Counties, Idaho, and the US, 2000-2005.



Source: U.S. Census Bureau (2008)

For both Hispanic and non-Hispanic individuals, Idaho’s unemployed workers make up the largest percentages of people who lack health insurance. In Idaho, Hispanics (61%) are significantly less likely than non-Hispanics (42%) to have dental insurance, (Idaho Dept. of Health and Welfare, 2008).

Data collected from interviewees and the general public survey within this study reveal general impressions about health services related to the Hispanic population and the dairy workers in Idaho. Overall, most interviewees in health professions indicated that whether individuals work for the dairy industry or not “community services like health care are not overwhelmed by the Hispanic population”.

Given the conditions of the dairy workers’ environment (Clarren, 2009), health care representatives we interviewed noted the labor force could be prone to higher incidence rates

of injuries from strenuous work as well as exposure to certain water-borne bacterial diseases. In addition, one public health worker explained rates of tuberculosis in Mexico remain higher than in the US to note the possible risk of disease transfer from foreign-born workers. Health risk trends and community-level impacts may also relate to demographic shifts civic leaders described about the changing demographic of Hispanic and dairy workers in Idaho (not entirely consistent with secondary data):

“The Hispanic population has changed. 10-12 years ago, it consisted of mainly families who were migrating and then settled out. Now the new Hispanics are single men, often married but with families back home. In the dairies, that’s who you see. There are very few family men”.

However, across the three sub-regions, data from our interviews did not suggest disproportionate use of health care services or significant trends translating to health needs among the Hispanic population in general or related to a sub-population of employees known to work in the dairy industry.

From the southern Idaho general public survey

Would you say the dairy industry’s impact on health services has been to . . .

	<i>(percent)</i>
Improve them a great deal	2
Improve them a little bit	11
Have no impact	71
Worsen them a little bit	5
Worsen them a great deal	1
Don’t know	10

Regardless of where people live in southern Idaho, the large majority think the dairy industry has either had little negative impact or a slightly positive impact on health services.

Health care professionals we interviewed across the three regions of southern Idaho concurred about a major finding for this component of the study, summarized here by an emergency room professional:

“Although the majority of people who visit emergency rooms do not have health insurance, Hispanics as a subpopulation, and therefore the bulk of the dairy workforce, do not disproportionately represent those who visit hospitals and medical centers that offer emergency services”.

Health professionals we interviewed in south central Idaho summarized more specific trends within these overall findings:

- Approximately 50% of cases of young men (15-40 yrs) seeking emergency care are methamphetamine-related, and 80% occur at night;
- Hispanics cases are under-represented in substance abuse, but generally tend to be alcohol-related;
- Hispanics are high-risk for diseases such as adult-onset diabetes and would benefit from health education programs; and
- Hispanics who do come to the emergency room often do so afraid of consequences related to identity and perception of their status. When Hispanics do come to the emergency room, hospitals often try to secure cash payments up front because these individuals may be more difficult to track.
- More than 50% of the bad debt impacting hospitals is for emergency room services.
- In general, Idaho dairy workers do not have employer-sponsored health insurance.

Data from the interviews also revealed regional trends among the uninsured and unemployed that may seek health services. For instance, most individuals who fall into one or both of these categories within the southeastern region come primarily from potato processing or construction industries. Thus, as one health specialist indicated, *“if most Hispanics seeking health care in the south central region are dairy workers, this correlation exists because such a predominant sector of the workforce in that region is employed by the dairy industry.”*

Indigent health care costs

Our study also addressed patterns of health care services related to indigent care costs for southern Idaho communities. An important point of legal context related to this issue is the

1986 Congressional passage of the Emergency Medical Treatment and Labor Act (EMTALA) which ensures public access to *emergency* services at hospitals no matter whether the patient has the ability to pay for the services. While EMTALA is not specific to ethnic groups, perceptions exist that the law enables those without insurance coverage or documentation to free-ride on the health care system. Thus, the common belief that many Hispanic residents remain undocumented also translates to the belief that they disproportionately impact the health care system with the costs borne indirectly by all.

Numbers of indigent health care claims and related costs vary widely across counties in Idaho and have fluctuated in recent years. The costs of providing care to the uninsured are covered via several sources. Portions of property taxes go toward indigent health care budgets at the county level. Counties review all indigent health care claims and make determinations of coverage including assessment of individuals' likely ability to repay the bills within a five-year period. In many cases, claimants make payments on these bills (to reimburse the state), but loans are often forgiven after several years of on-time payments. One state-level official we interviewed explained the detail of how indigent costs are paid:

“For approved indigent care claims, counties are responsible for up to the first \$11,000 of each claim. Statewide, the total number of claims counties usually receive at this level fluctuates but is higher for the category under \$11,000 than for those \$11,000 or greater. The State Catastrophic Health Care Cost Program covers claim expenses over \$11,000, of which there are normally about 1,000 claims/year. The approval rate for all claims is usually around 50%”.

At the federal level, hospitals may also submit claims to the U.S. Department of Health and Welfare for expenses incurred by undocumented individuals receiving care.

In one Magic Valley county, a public employee we interviewed estimated 20% of claims originated from workers who do not have legal documents. She could only estimate this number, because she is not required to check the documents of people who make claims. In this same county, the Social Services Department received 239 claims in the year previous to our interview. That department tracks the amount of the claim and the diagnosis, as well as

each claimant’s age and gender. The interviewee, who noted the dairies do not generally insure their workers, said, “We don’t see a lot of dairy workers. Just a few”.

Tracking indigent health care costs at a county-level in Idaho remains difficult because of gaps in databases submitted by counties to the Idaho Association of Counties, which is our source for these data. Table 9b represents the average per capita indigent care expenses for selected counties from 1999 – 2007.

Table 9b. Average, minimum, and maximum per capita indigent care expenses for selected counties in Idaho "dairy belt" from 1999 – 2007.

County	Mean (\$)	Minimum (\$)	Maximum (\$)
Cassia	17.74	12.54	20.53
Gooding	15.80	11.68	22.20
Jerome	17.77	14.79	22.26
Lincoln	27.35	21.80	35.21
Minidoka	18.47	12.50	23.49
Twin Falls	26.51	20.88	32.21
Other counties for comparison:			
Bear Lake	6.07	1.80	12.21
Jefferson	8.39	5.55	11.65
Valley	23.72	17.94	32.89
Shoshone	31.62	25.79	36.71

Source: Idaho Association of Counties (2008)

Overall, these data indicate that for most counties, per capita medical expenses fluctuate on a year-to-year basis. More significantly, variability from county to county suggests little in the way of a pattern about higher expenses in south central Idaho. According to interviewees, a downturn in indigent care costs in some counties from 2005 – 2007 occurred, in part stemming from lower unemployment translating to more people with health care during that period. More recently, some counties in south central Idaho have also experienced significant spikes in

indigent care costs (Hunzeker, 2009). As summarized by a public employee whom we interviewed, indigent care remains a dynamic and critical issue for many counties in Idaho:

Costs per county seem to be proportional to population size. Rural counties are not a disproportionate share of costs. When it comes to health care, dairy is no worse or better than any other major employer.

With respect to the dairy industry, identifying foreign-born workers' highest priority health needs can be complicated. Remittances to families in their home country, for instance, may compete with workers' interest in paying for health insurance, even if an insurance program were to be made available. Lack of information on this issue underscores the need for the dairy industry to know its workers and their needs.

Social services

Interviews across the three southern Idaho regions also addressed community-level impacts related to social services for the growing Hispanic population and dairy workforce that overlap. Several agencies offer social services, including the Community Council of Idaho (CCI), Migrant and Seasonal Head Start (MSHS) program, and Community Action Partnership (CAP).

CCI/MSHS participants receive assistance with child development, literacy training, mental health & disability services, nutrition education, infant / child health & dental care, family development, and transportation. The eligibility within MSHS requires 51% of family income during the months of service to derive from agricultural employment, however, income from dairy jobs does not count toward the agricultural income quota. Thus, oftentimes dairy workers and families may not be eligible for the MSHS services.

To participate in the MSHS program in Idaho requires families living at or below 100% of the poverty level. In addition, as interviewees pointed out, after 2-3 years working on the dairy some workers receive income at levels that make them ineligible for MSHS even if they are still working poor as noted in Section 6 above.

As an example of the statewide MSHS program, the south central service area serves 571 families constituting 34% of income and age-eligible children. Of these totals, over half of these are two-parent households and approximately 28% of the families are Hispanic. Within two cities of the south central MSHS program, 100% of the participants come from migrant families, and over one-third of the 311 children on the waiting list live in the Magic Valley. Also within the south central MSHS program, 17% of families have “homes provided”, which interviewees explained is can be an indicator of dairy workers given many dairies may rent on-dairy housing for employees. In general, MSHS enrollment has not gone up in recent years because of stagnant funding. Although most MSHS participants are income-eligible and in need of some services, such as child care assistance, very few actually apply (López, 2009).

Using a “holistic” approach to connect families to resources, Community Action Partnerships also assist dairy workers, as interviewees explained. Dairy worker families may be referred from CAPs to CCI for training, depending on their needs, but they can receive CAP emergency assistance for medical care. CAP assistance requires participants’ social security numbers. Interviewees from CAP documented that on occasion they find duplicate numbers and notify the Social Security Administration. Representatives of CAP also emphasized that workers’ wages have not kept pace with the higher cost of living. Thus, more working families— in addition to those who are unemployed – now need assistance. However, of the people who come to CAP for assistance with rent payments, “*not many are dairy workers,*” according to CAP program representatives.

In summary, interviews with health professionals in southern Idaho did not indicate disproportionate use of health care services by the Hispanic population in general or employees known to work in the dairy industry. We attempted to learn whether dairy workers might be responsible for changes in the indigent health care costs (part of which counties must cover). However, county-level data on indigent health care costs are not complete enough to indicate whether this is true or not. While these costs are increasing on a per capita basis in some southern Idaho counties, neither our interviews nor the county-level data indicate the increase (where it is occurring) can be attributed to dairy workers.

10. Other related community impacts

In addition to the core community systems described above – economy, criminal justice, education, and health care – our data also highlighted a miscellaneous set of factors we describe here generically as “other impacts.” In brief, most of the data relate to two recurrent themes – culture and language – often described in our interviews as manifestations of how communities adapt and change. Although somewhat indirect, these impacts also have a relationship to the growth of the southern Idaho dairy industry.

Culture, values, and identity

The intensity and nature of the dairy workers’ schedules often precludes a full integration into local cultural activities, even if the workers are willing to participate. One leader in the Hispanic community explained, *“They come here to work. It leaves them little time to be part of the community or socialize. They work lots of shifts with no days off.”* As a bridge to the lack of community connection for many workers, both the Catholic Church and the The Church of Jesus Christ of Latter-day Saints provide religious support and community engagement opportunities. One church leader told us:

“This area has always had a migrant population. Now the Hispanic community has become more permanent and it has a more lasting and positive effect on the community even though sometimes it’s more subtle to the non-Hispanics. There is lots of worry among the congregation about losing jobs, and the amount of people we’re serving at the soup kitchen has increased tremendously.”

As noted recently in the south central Idaho news (Hunzeker, 2009), our interviewees reported very little racial tension in most of southern Idaho, with the exception of more urban-based conflicts in Treasure Valley. Study participants often referred to the Hispanic community as model community members who aim to contribute to the public good and integrate with the whole rather than maintain themselves in isolation. One exception, however, came from an interviewee that noted some of the longer-term residents have had more trouble adjusting to the contemporary changes:

“It is very contentious here. People say amazing things in open meetings. There is a lot of hostility. Long-time residents feel like Little Tijuana is being forced on them and they have a sense that their hometown is being transformed. Their perception is that the Hispanics are causing the transformation that they don’t like.”

Thus, some southern Idaho communities have experienced impacts – both positive and negative – related to shifting demographics, economics, and cultural facets of life.

Language

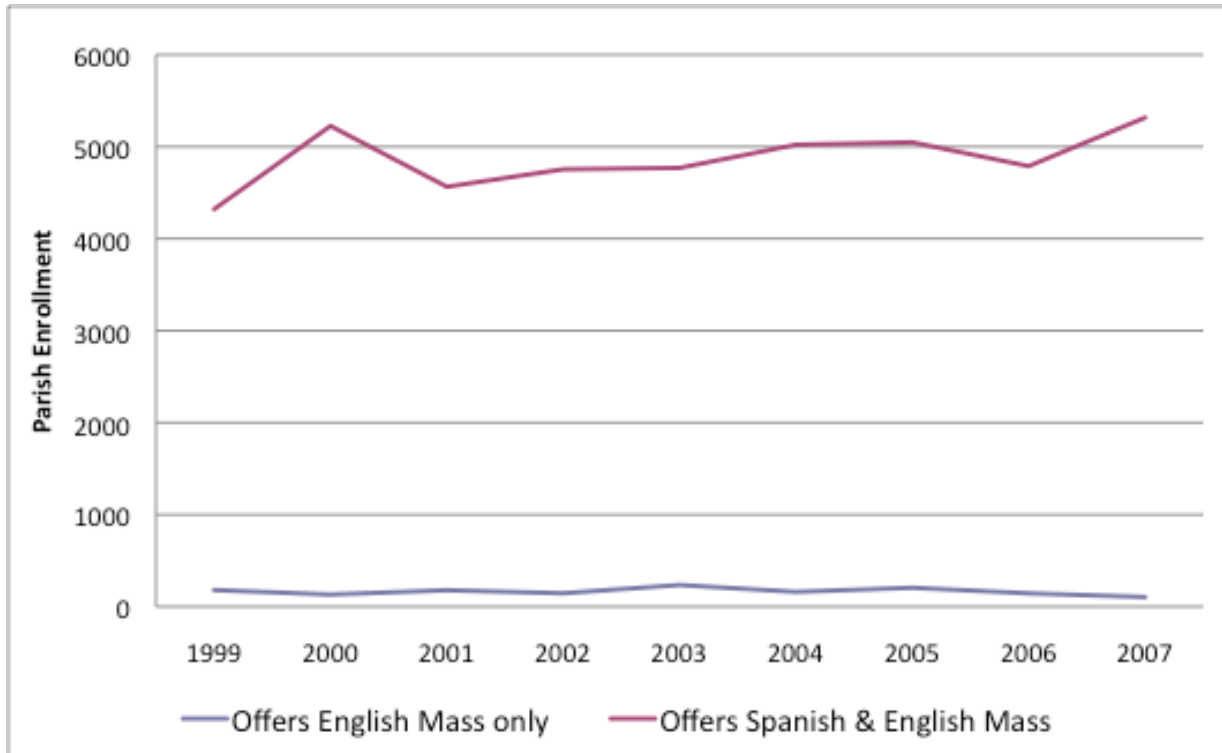
A recent Pew Hispanic Center report (Passel and Cohn, 2009a) notes that although language barriers are becoming less of an issue for the children of immigrants than for their parents, sometimes communications barriers still exist between the sub-groups within the communities. For instance, as noted above, the emerging demographic of many dairy workers as young single men reinforces the cultural isolation that can occur with the effect of missed opportunities and connections. A business owner we interviewed observed, *“If you live here, look around and see who speaks English and who doesn’t. Who learns it and who doesn’t? If you just work in the dairy, you don’t learn English.”*

Related, a significant overlap exists with issues of language and the educational system impacts described above. A school district superintendent we interviewed described how language is embedded in the struggle for many families and public systems in everyday life:

“It is a challenge for us, as the school, to meet our requirements with such a high proportion of non-English speakers. Many parents are illiterate, even in Spanish. Some choose not to have contact with the schools where their children attend because of their immigrant status, but yet they have a strong value placed on learning as a means for their children to do better than themselves.”

As one way to illustrate the intersection of language, culture, and religion in southern Idaho, Figure 10a displays the extent of Catholic Parish enrollment by language spoken at Mass. Clearly, an indicator of the trends above is the reality that an overwhelming majority of Parish enrollments in south central Idaho offer Mass in both English and Spanish.

Figure 10a. Parish enrollment by language spoken at Mass, south central Idaho (1999 – 2007).



Source: Diocese of Boise (2008)

In summary, less direct community-level impacts related to the growth of the dairy industry have also occurred in the areas of culture, language, and identity. As the local communities diversify in population, changes to how local people perceive the community also continue to evolve.

11. Conclusions and recommendations

Idaho's modern, large-scale dairy industry is part of a highly competitive agricultural system that provides affordable food to global markets. Final products travel long distances to consumers who pay low prices. Producers weather – or don't – regular cycles of price fluctuations that are greatly mitigated by the time they show up in grocery stores.

The vast majority of people who buy milk know little or nothing about where it comes from or how its production impacts workers and communities. Even among residents of southern Idaho, our survey results show, almost seven-in-ten people are unaware or only somewhat aware of their state's growing and influential dairy industry.

And, yet, public opinion matters greatly to the dairy farmers. If Idahoans perceive that dairy farmers hire workers who impose large costs on the state's health care or public school system, for example, the industry could face a backlash as voters tell their elected officials to tighten restrictions on hiring foreign born workers or on providing these workers with access to public services.

Our goal in conducting this study was to inform a dimension of the public debate about Idaho's dairy industry, specifically, how the industry impacts local communities. In the course of interviewing school teachers, elected officials, local leaders, health specialists, and others, we realized that these community impacts revolve primarily around the dairy workers. In the end, how and to what extent the industry intersects with community systems manifests through the labor force. The impacts depend on who those workers are, and thus, how much they are paid, where they spend their wages, and how they interact with schools, justice systems, and health care providers.

Our best estimate is that most dairy farm workers are young adult men who are foreign-born. Virtually all are Hispanic. Some are single and others have families, but the trend appears to be in the direction of more single men. Especially with the economic downturn in 2008 - 2009, competition for their jobs has intensified. Even so, the labor force is mobile and some, if not many, workers do not stay in their jobs for long periods of time.

In his new book, *Importing Poverty: Immigration and the Changing Face of Rural America* (2009), economist Philip Martin writes about an “immigration treadmill” in rural America. With a particular focus on seasonal farm work, Martin describes harsh working conditions and low rates of pay that discourage workers from holding on to their jobs for any length of time. As new immigrants with little education eventually manage to move up the occupational ladder and out of agriculture, others come to fill their places.

Though Martin’s book is about seasonal work rather than full-time employment on dairy farms, we found similarities with conditions in southern Idaho. The jobs are demanding, the hours long, and the pay that dairy farmers can afford only approaches the level needed to support the middle class life style to which many immigrants aspire. Couple these conditions with constant fear of deportation, and the result is a labor force made up of people who may feel inhibited to fully and actively participate in what makes up a community. As such, those individuals may feel more excluded than included by the very community systems to which they are trying to contribute. As one farmer put it, *“A lot of progress on community integration will be stopped. We are creating a new population of single, lonely guys who are not part of the community. They will bring problems.”*

So how do we as a society reconcile the balance sheet? Clearly, the dairy industry has positive economic impacts on local communities. It has brought jobs and people to towns that otherwise would likely be in decline, as are many farm-dependent communities around the country. However, in the absence of an immigration policy that guarantees a stable and legal labor force, the industry also imposes some degree of costs, most notably on schools and somewhat less so on health care and justice systems. Moreover, community-level impacts, especially across a vast region like southern Idaho – are not equally distributed. Benefits may accrue disproportionately in some communities, while other communities experience disproportionate costs. We make sense of this by understanding a critical difference between society’s private and public sectors. The community of Jerome is a microcosm of both. The face of Jerome’s downtown changed rapidly in response to a growing Hispanic population, drawn in large part by the dairy industry. Entrepreneurs “turned on a dime” to make a profit.

Car dealers tailored their inventories and finance options; video stores changed what movies they rent; and a downtown store began wiring money home to workers' families in Mexico.

In contrast, public agencies cannot respond as quickly. Before these entities can cope with changing demographics by hiring more bi-lingual teachers and court translators, before they can establish more effective measures to mitigate gang-related activities, they must convince voters to pay higher taxes to cover the costs of economic growth. Benefits accrue to private sector businesses – including to dairy farmers when times are good – but it is the public sector that pays a price. Overall, we found that communities are better off economically because of the dairy industry, but certainly they struggle to adjust to the challenges of a changing and growing population.

Recommendations

Our primary conclusion from the analysis is this: In the absence of an immigration policy ensuring stability and predictability to both the industry and its workers, many workers will remain “under the radar” because they cannot afford to risk the reason they are in the US to begin with — economic opportunity. This insecurity deters many dairy workers from participating fully in their children’s schools and in other aspects of community life. It also deters them from accessing services for which they are eligible and which help integrate newcomers into a community. To the extent that part of the industry’s workforce remains in such a compromised position, the industry will suffer from ongoing societal conflict related to worker status and community impacts, whether real or perceived.

(1) Advocate for a stable and predictable immigration policy. Thus, our first recommendation is that federal and state decision makers should work towards an immigration policy that provides stability and predictability for workers and therefore for communities. Clearly, achieving such a policy is a long-term objective that has proven tremendously difficult to achieve, but it will have the greatest payoff to all concerned. The dairy industry, along with others that rely on a largely foreign born workforce, should build coalitions with immigrant-rights organizations to advocate for such a policy reform. Communities in which dairy workers

live will benefit if those workers are secure enough to participate fully in community life. In turn, dairy farmers will benefit from access to workers who have a stake in their community and are therefore more likely to stay in one place longer.

(2) Learn who the dairy workers are. Second, and more appropriately in the purview of the Idaho dairy industry itself we recommend the industry support a scientific study to learn who their workers are, where they live, and what their needs are. As noted earlier in this report, we developed our description of workers based on qualitative interviews and a variety of secondary data sources. Far more accurate and useful if the industry wants to mitigate problems would be a sample survey of workers conducted by native Spanish speakers in “safe” places, most likely in churches and possibly workplaces. One community leader we interviewed suggested that Latino students from the College of Southern Idaho could conduct interviews, under the auspices of church leaders and, in some cases, employers. A business owner suggested conducting a survey with the help of Spanish language radio stations.

Accurate and detailed information about worker characteristics would inform school administrators, health care providers, and others involved in serving foreign-born workers and their families, not to mention those who employ dairy workers. Such a survey would also inform efforts to locate and count dairy workers in the upcoming 2010 census. An accurate census of all residents in the dairy region will benefit both the public sector (so that it can better serve the population) and the private sector (so it understands its potential market).

(3) Develop programs to support economic prosperity of the workforce. Third, the dairy industry should advocate for programs and policies that build economic prosperity in their workforce. The lowest hanging fruit is to encourage dairy workers to claim the federal Earned Income Tax Credit (EITC). The EITC encourages work by providing a credit to offset taxes for low-income working families, with the highest benefits going to those with income below the poverty level (about \$22,000 for a family of four in 2008). In 2008, the federal EITC returned \$3.3 million to tax payers in Jerome County alone. Increased use of the federal EITC, or the implementation of a state EITC, would help reduce child poverty rates in the most dairy dependent counties, where child poverty is higher than in the state as a whole.

The industry should work with others (such as Community Action Partnership agencies) to increase “take-up” of the federal EITC. Nationwide, some 15-25% of eligible tax payers do not claim the credit. Local campaigns to increase participation in EITC typically take the form of targeted and simple communications from trusted sources in the community, for example, faith-based organizations and schools. They are designed to increase awareness of what the EITC is and make sure people learn whether they qualify or not.

Another possible strategy for building economic prosperity among dairy workers is for the industry to offer health insurance. While we heard multiple times that dairy workers are very unlikely to have insurance, we also heard that given a choice, many would rather have higher wages (to send home to their families) than health insurance. A study such as the one we recommend above about understanding the workforce could address this issue more reliably, so that when markets improve, the industry would have the information it needs to develop an insurance program of value to its workers.

(4) Sponsor a public forum series on community-level impacts. Fourth, sponsor a public forum series that would provide a venue for community wide discussions about immigration issues and community-level impacts. These challenging issues cannot be brushed aside or ignored if the industry is to mitigate impacts related to its workforce. All people have fundamental human rights as community members, yet access to services is not equal or always clear to newcomers. Most important, as any business owner would know and support, workers who enjoy good health and feel accepted and secure are likely to be more productive than those who do not. Public forums can facilitate education and communication to address conflict over community-level impacts associated with the dairy industry.

(5) Hire a community outreach liaison to implement recommendations. Finally, the dairy industry and the University of Idaho should work as partners to establish and jointly fund a new, full-time position, to be filled by a native Spanish speaker. The role of this person would be to serve as a community and labor outreach liaison, through the implementation of recommendations offered here. She or he would be responsible for building good relationships between the industry and public sector agencies, especially those that come in contact with

Hispanic dairy workers and their families. She or he could communicate regularly with school administrators, health care providers, and law enforcement officers, thus bridging the industry and communities in which its workers live. Such an outreach liaison would help the industry be more aware of how it is perceived locally and how it can mitigate problems for which it may be responsible. It would also provide a new opportunity for the University of Idaho to fulfill its land grant mission of helping the state address critical economic and social issues through outreach and engagement.

Like others in the state, Idaho's dairy industry is experiencing a precipitous decline in profits. Low milk prices and high input prices are unlikely to be reversed for at least another year. In this economy, we recognize the industry will be hard pressed to launch new initiatives such as those we recommend here. Nevertheless, if it is serious about mitigating its negative impacts, it must tackle the problems – the local impacts of an insecure labor force, a lack of information about its workers, the consequences of sometimes intermittent work and low wages, and a public sector struggling to cope with rapid change.

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APPENDICES

Community-level Impacts of Idaho's Changing Dairy Industry

Priscilla Salant, J.D. Wulforth, and Stephanie Kane, with Christine Dearien

October 2009

APPENDIX A – Human Assurances Approval Memo

University of Idaho

**University Research Office
Institutional Review Board**

PO Box 443010
Moscow ID 83844-3010

Phone: 208-885-6162

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hac@uidaho.edu

To: Stephanie Kane, Project Manager, SSRU
J.D. Wulfhorst, Associate Professor and Director, SSRU
Department of Agricultural Economics and Rural Sociology
College of Agriculture and Life Sciences
University of Idaho
Moscow, ID 83844-4290

From: Casey Inge
Chair, University of Idaho Human Assurances Committee
University Research Office
Moscow Idaho 83844-3003


IRB No.: IRB00000843

FWA: FWA00005639

Date: September 24, 2008

Project: Community Level Impacts of Southern Idaho's Dairy Industry (Protocol No. 07-192) - Approval
of Survey Instrument (submitted pursuant to conditions for protocol approval)

On behalf of the Human Assurances Committee at the University of Idaho, I am pleased to inform you that the submitted survey for the above-named research project is approved as offering no significant risk to human subjects.



Casey Inge

APPENDIX B – Interview guide for key informants

Questions for Semi-Structured Interviews of Community Stakeholders in Community-level Impacts of the Dairy Industry in Southern Idaho

School administrators and day-care operators will be asked questions such as:

1. How have enrollment numbers changed in the last five years? How much of this change do you attribute to the growth of the dairy industry? Prior to the growth of the dairy industry in your area, what was the general pattern of school enrollment?
2. Have you changed your staffing numbers in the last five years (increased or decreased the number of teachers)? By how much?
3. Have the demographics of the student body changed in the last five years? How so?
4. Are school budgets increasing, decreasing, or remaining the same? What are the primary sources of school funding in your community (bonds, the state, other local taxes, etc.)?
5. What are the needs for schools in your area, as they relate to changes in school enrollment or student body demographics?
6. Do you perceive and other/ additional impacts of the dairy industry on schools in your community?

Social service administrators (including law enforcement officers, judges, and social service providers) and local government officials will be asked questions such as:

1. What changes in population size or demographic characteristics have you witnessed in the last five years? How much of this change do you attribute to the growth of the dairy industry in your area?
2. How have the needs of the community changed in the past five years? Ten years? To what extent do you attribute these changing needs to the growth of the dairy industry in your area? What changes have you had to made in response to these community-level changes you see (e.g., in terms of funding allocation, staffing, or other resources).
3. Has the tax base for your community increased, decreased, or remained the same in the past five years? Have new businesses moved into your community in the past five years? What kinds of businesses? What additional businesses would you like to see?
4. What additional needs or information do you need to help adjust to growth in your community? Which areas (housing, education, public safety, social services, etc.) are currently being met adequately in your community? Which areas are currently under-served? What would help you meet your goals in addressing the needs in your community?

Local elected officials, business leaders, and real estate agents will be asked questions such as:

1. What changes in your customer/client numbers or demographics have you witnessed in the last five years? How much of this change do you attribute to the growth of the dairy industry in your area? Are these changes related to growth in the dairy industry more direct or indirect impacts to the community area?
2. Have new businesses moved into your community in the past five years? What kinds of businesses?
3. How do you feel your business has been affected (either for better or worse) by the growth of the dairy industry in your area? Do you feel that the dairy industry has increased overall economic and commercial growth in your community?
4. What is the average tenure of businesses in your area? Is this increasing, decreasing, or the same over the last five years?

Dairy farmers will be asked questions such as:

1. How long has this dairy been in your family?
2. How many cows do you have on the dairy?
3. Do you think your dairy will grow, get smaller, or stay the same in the future, say, in the next five years or so?
4. Do you have people working for you on your dairy farm? If yes....
 - a. How many?
 - b. How long have they worked for you?
 - c. In the Magic Valley, many who work on dairy farms tend to be Hispanic. Is that the case in this region?
 - d. What are the challenges to finding and keeping good workers on the dairy farm?
5. Do you have any issues with your farm because of where it's located relative to where your neighbors live?
 - a. If yes, what types of challenges do you face? (e.g., complaints about odor, manure on the roads, pressure from residential development)

APPENDIX C – Discussion of survey sampling, design, representativeness, and analysis

We used the following formula to calculate the number of surveys necessary, where n is the total targeted sample size, N_i is the population size of each strata (number of known dairies in each region), w_i is the weighting value for each district (proportional to size), p_i and q_i are equal to 0.5, and B margin of error (0.03), Equation 1.

$$n = \frac{\sum_{i=1}^4 N_i^2 p_i q_i / w_i}{N^2 \frac{B^2}{4} + \sum_{i=1}^4 N_i p_i q_i} \quad (1)$$

To increase the telephone survey response rate, a pre-calling postcard (Appendix D) was sent to all potential respondents prior to the telephone calls. The postcards were sent in three randomly selected waves, with households from all regions included in each wave. The postcard stated the purpose of the survey and let the respondents know we would be calling during the following week. It also provided a toll-free number to call the SSRU if they had any questions concerning the survey, wished to schedule an appointment, or opt out of the study. The first wave of 1,100 postcards was sent on 25 September 2008. The subsequent two waves (each of 1,100 postcards) were sent out on 7 October and 21 October 2008.

Telephone interviews began on 30 September 2008 and continued through 19 December 2008, except during the Thanksgiving holiday (24-28 November 2008). Interviewers made calls each week in the mornings, afternoons, evenings, and on two weekends, in an attempt to reach as many potential respondents for this project as possible. SSRU interviewers all take a four hour training in general telephone survey methods, including the use of the Computer Assisted Telephone Interviewing (CATI) technology. In addition, each interviewer must take a two hour National Institutes of Health web-based training course in confidentiality practices, and a two hour training specific to each survey they work on. The SSRU employed two Spanish language-speaking interviewers.

A total of 1,340 respondents completed the survey, including 49 interviews conducted in Spanish. Of the remainder, 273 were ineligible because they had only recently moved to Idaho or were in the process of moving, had died, were on the IDA Board, were too ill to complete the survey, or did not speak English or Spanish. Three-hundred fourteen (314) numbers were disconnected. Any number that was found to be disconnected was checked on internet directory assistance for new listings, when new listings were found they were called. A total of 655 potential respondents households were not reached after repeated attempts (8 times) within the allotted time frame and 718 households declined to participate in the study. The final response rate for all regions was 49%. In the south central region, the final response rate was 46%. The response rate was 51% and 53% in the southwest and southeast regions, respectively (Table 4c).

Data were analyzed using SPSS¹ and SAS². Because of the stratified sample design, respondents in each of the different geographic regions had known but unequal probabilities of inclusion in the sample (although within a geographic region, every respondent had the same probability of inclusion). We account for the unequal probability of selection in our statistical analysis through weighting. Results presented are percentages based on the weighted frequencies. Weighted frequencies, percents, and 95% confidence intervals are presented for estimates of qualitative variables; frequencies, means, and medians are presented for quantitative variables.

Chi-square analyses (cross-tabulations) are used in this report to assess if a relationship exists between two categorical variables. For example, one may want to assess if a relationship exists between level of education and awareness of the dairy industry. If no relationship between the two variables exists (the null hypothesis), one would expect that respondents from all education brackets are equally aware (or unaware) of the dairy industry. If a relationship between the two variables does exist (the alternative hypothesis), then individuals from different educational levels differ in their awareness of the dairy industry. The Pearson Chi-square statistic measures the degree of difference between the frequencies that one would

¹ SPSS, Version 16.0. 2008. SPSS, Inc.

² SAS, Version 9.1. 2006. SAS Institute, Inc. Cary, N.C.

expect under the null hypothesis (no association) versus the frequencies that were actually observed. A probability score (*p*-value) is then used to assess the probability that those observed frequencies could occur by chance if the null hypothesis (no association) was true. Very small probabilities ($p < 0.05$) mean that it is unlikely that the frequencies observed would have occurred by chance, and so it is more likely that a real relationship exists between the two variables. In this example, a *p*-value < 0.05 would indicate that individuals from one or more education brackets are more likely to be aware of the dairy industry than individuals from one or more different education brackets.

Comparison to Census data

To learn how similarly the sample could be said to represent the population as a whole, we compared the age distribution of adults (18 and older) of the survey respondents to that of all individuals ages 18 and older in the state of Idaho, as estimated by the U.S. Census Bureau based on its 2005-2007 American Community Survey (ACS) (Table C-1).³

Table C-1: Comparison of survey respondents to 2005-2007 American Community Survey estimates.

Age Category	Census	Sample	95% Confidence Limits
18 – 24 years old	13.8%	1.6%	1.6% - 2.3%
25 – 34 years old	18.9%	10.0%	8.3% - 11.8%
35 – 44 years old	18.1%	15.9%	13.8% - 18.1%
45 – 54 years old	19.0%	22.2%	19.7% - 24.7%
55 – 64 years old	14.3%	22.6%	20.1% - 25.1%
65 – 74 years old	8.4%	14.8%	12.7% - 17.0%
75 – 84 years old	5.4%	10.0%	8.2% - 11.8%
Over 85 years old	2.2%	2.8%	1.8% - 3.9%

SOURCE: Tabulations by University of Idaho Social Science Research Unit

³ U.S. Census Bureau. (2005-2007). Note, SSRU’s general public survey included only residents of southern Idaho while the Census Bureau estimates for the entire state.

When the Census figures are compared to the 95% confidence intervals of the sample estimates, it is clear that those in the younger age brackets (less than 34 years) were underrepresented relative to their proportion in the population, and those in the older age brackets (over 45) were overrepresented relative to their proportion in the population of Idaho residents.

We also compared the distribution of educational level of the sample to Census Bureau estimates of educational level of Idaho residents⁴ (recent data for residents of southern Idaho only is not currently available) (Table C-2). In this comparison, we only used categories which exactly match Census Bureau categories. This comparison reveals that on average, the survey respondents tend to be more highly educated than the general population of Idaho residents.

We expect that the differences between our sample of respondents and the general population stem both from coverage error (the frame used to draw the sample was landline telephone numbers) and non-response error (individuals who were in the sample but did not respond were not able to be contacted for the survey). Recent estimates put the percentage of wireless-only households

Table C-2: Comparison of educational attainment of survey respondents to 2005-2007 American Community Survey estimates.

Education	Census ^[a]	Sample	95% Confidence Limits
No high school diploma	13.0%	5.3%	4.0% - 6.5%
High school graduate/GED	29.9%	22.1%	19.7% - 24.6%
Bachelor's degree	16.3%	24.5%	21.9% - 27.1%
Graduate or professional degree	7.3%	10.4%	8.5% - 12.2%

SOURCE: Tabulations by University of Idaho Social Science Research Unit
^[a] Refers to the proportion of the population of adults age 25 and older.

⁴ U.S. Census Bureau. (2005-2007)

in Idaho to be 23.2%⁵. Studies have indicated wireless phone only households tend to be younger (18-29)⁶. In addition, younger individuals tend to be more difficult to reach, due to work and family commitments.

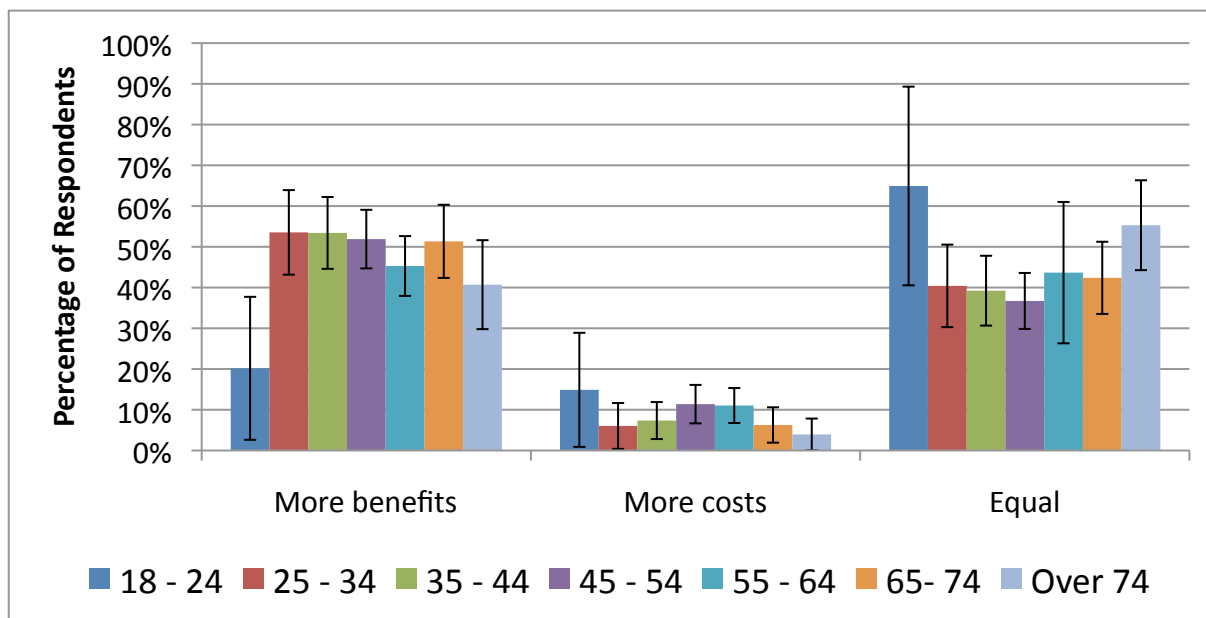
Discussion of potential non-response bias

Because we detected some differences between survey respondents and the general population, we wished to test whether if the non-response may have impacted or biased the survey responses (i.e. non-response bias). To do so, we ran a Chi-square analysis between two demographic variables (age and education) and a key survey question. We tested the hypotheses that respondents of different ages or educational attainment had different opinions about whether or not they perceived that Idaho's dairy industry brings more net benefits to the state, more net costs, or equal amounts of costs and benefits. We found no significant statistical relationship between the age of a survey respondent and their opinion about the relative costs and benefits of Idaho's dairy industry (Chi-square = 32.36, d.f. = 18, $p = 0.0931$; see Figure C-1), nor did we find a significant statistical relationship between the educational attainment of a survey respondent and their opinion on this issue (Chi-square = 17.89, d.f. = 12, $p = 0.2760$; see Figure C-2). Thus, while the survey respondents are not entirely representative of the population, these differences do not appear to significantly impact survey results. In other words, while this survey has some non-response or coverage error, it does not appear to cause bias in the survey results.

⁵ Blumberg *et al.* (2009)/

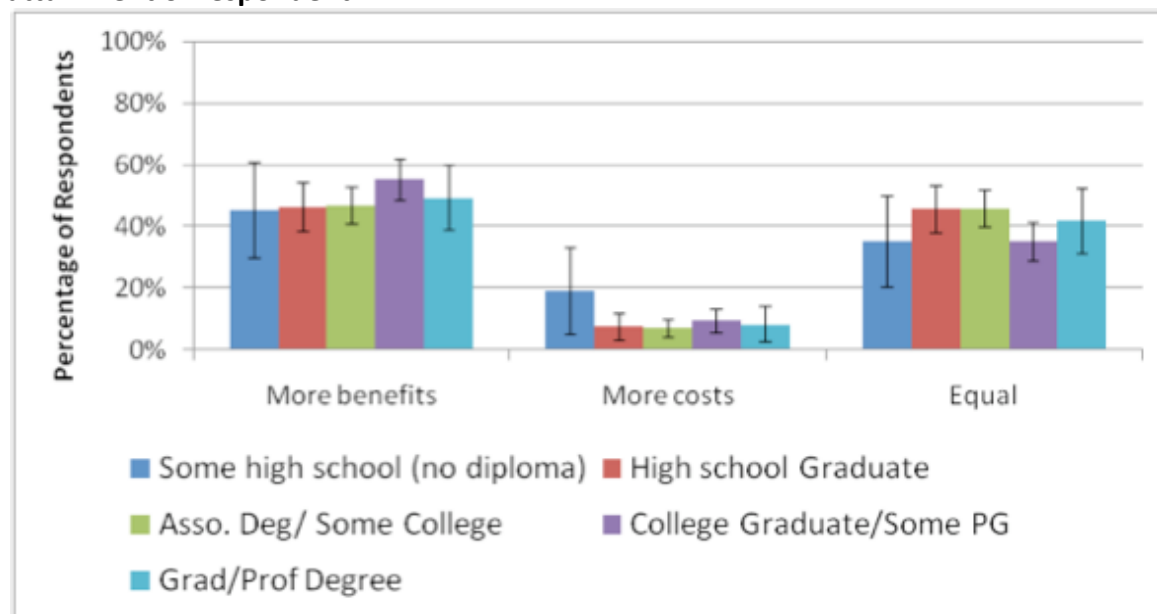
⁶ Blumberg and Luke (2007).

Figure C-1: Perception of the costs and benefits of Idaho’s dairy industry, by age of respondent



Source: University of Idaho Social Science Research Unit survey data.

Figure C-2: Perception of the costs and benefits of Idaho’s dairy industry, by educational attainment of respondent



Source: University of Idaho Social Science Research Unit survey data

APPENDIX D – Survey Pre-postcard

Dairy Industry in Southern Idaho

September 2008

This month the University of Idaho's Social Science Research Unit will be calling you to participate in a telephone survey about community level impacts of the dairy industry in Southern Idaho. We are interested in hearing public perceptions about your community and the dairy industry within your community. The results of this study will be used to help build bridges between communities and the dairy industry.

We are writing in advance of our telephone call to let you know that this study is being done and that you have been randomly selected to be called.

The interview should take about 10 minutes. If we call when you are busy, please tell the interviewer and they will schedule to call back another time.

If you have any questions about the survey please call the Social Science Research Unit (SSRU) at our toll-free number 1-877-542-3019.

Sincerely,

J.D. Wulfhorst
Director, Social Science Research Unit

APPENDIX E

WHAT THE RESPONDENT MIGHT LIKE TO KNOW Dairy Industry in Southern Idaho

Who is sponsoring the survey?

Idaho Dairywomen's Association

What is the purpose of the study?

The purpose of the study is to learn about the impacts of the growth of the dairy industry in Southern Idaho.

Who is the person responsible for the survey?

J.D. Wulforth , Professor at the University of Idaho and Principal Investigator for this project

Who are you / Who is conducting the interview?

I am a (student) Name working part-time for the Social Science Research Unit at the University of Idaho.

How did you get my name?

Your household was randomly selected from among Southern Idaho households in a sample purchased through Survey Sampling Inc. of Connecticut.

How can I be sure this is authentic?

I would be glad to give you the toll free-telephone number of the Social Science Research Unit at the University of Idaho in Moscow. You are welcome to call my supervisor Barbara Foltz at (877) 542-3019. Our office hours are 8:00-5:00 Monday through Friday.

Is this confidential?

Yes, most definitely. The responses are combined on a computer without names, addresses, or any means of identification. All of the information we get from you will be used to learn about the general views of Idaho residents.

Can I get a copy of the results?

The information will be available in a report after all the data analysis had been completed.

How will the results of this survey be used?

The results of this study will be used to help the dairy industry work within local communities to strengthen the positive impacts of the industry, mitigating the negative impacts while building bridges between communities and the dairy industry.

APPENDIX F

**Community Level Impacts of the Dairy Industry in Southern Idaho
Final Survey Instrument**

Hello, is this the _____ household?

My name is _____ and I'm calling from the Social Science Research Unit at the University of Idaho. We are conducting a study on behalf of UI researchers regarding the dairy industry in southern Idaho. The results of this study will be used to help build bridges between the dairy industry and communities in Idaho.

I would like to speak to an adult in the household over 18 years of age who has had the most recent birthday. Would this happen to be you?

We sent you a postcard last week to notify you about the study. Did you receive the postcard?

If yes—

Is this a good time for a survey?

If no—

The postcard contained a brief explanation of the study and let you know we would be calling. Would you like me to read it to you?

If continue—

This interview is voluntary. If I come to any question you would prefer not to answer just let me know and I'll skip over it, or you may discontinue the survey at any point. I'd like to assure you that your responses will be kept confidential and the results will only be reported in aggregate with no identifying information. This survey has been approved by the Human Assurances Committee at the University of Idaho.

I'd like to begin by asking some general questions about your community.

1. Thinking about your overall community and quality of life, would you rate your community satisfaction as ...
 - a. Highly dissatisfied
 - b. Somewhat dissatisfied
 - c. Neither
 - d. Somewhat satisfied
 - e. Highly satisfied
 - f. (Don't know)
 - g. (Refused)

For the next few questions, we're going to ask you to rank the quality of different aspects of your community.

2. Please rank the overall quality of schools in your community. Would you say they are
 - a. Very poor
 - b. Poor
 - c. Average
 - d. Good
 - e. Very good
 - f. (Don't know)
 - g. (Refused)
3. Please rank the overall quality of law enforcement in your community. Would you say it is
 - a. Very poor
 - b. Poor
 - c. Average
 - d. Good
 - e. Very good
 - f. (Don't know)
 - g. (Refused)

4. Please rank the quality of health services in your community. Would you say they are

- a. Very poor
- b. Poor
- c. Average
- d. Good
- e. Very good
- f. (Don't know)
- g. (Refused)

5. How satisfied are you the number of local businesses in your community. Would you say

- a. Very dissatisfied
- b. Dissatisfied
- c. Satisfied
- d. Very satisfied
- e. (Don't know)
- f. (Refused)

For the next few questions, we'll ask you how concerned you are about a variety of issues in your community.

6. How concerned are you about crime? Would you say....

- a. Very concerned
- b. Somewhat concerned
- c. Not at all concerned
- d. (Don't know)
- e. (Refused)

7. How concerned are you about air quality? Would you say....

- a. Very concerned
- b. Somewhat concerned
- c. Unconcerned
- d. Not at all concerned
- e. (Don't know)
- f. (Refused)

8. How concerned are you about water quality? Would you say....
- Very concerned
 - Somewhat concerned
 - Not at all concerned
 - (Don't know)
 - (Refused)
9. How concerned are you about population growth? Would you say....
- Very concerned
 - Somewhat concerned
 - Not at all concerned
 - (Don't know)
 - (Refused)
10. How concerned are you about poverty? Would you say....
- Very concerned
 - Somewhat concerned
 - Not at all concerned
 - (Don't know)
 - (Refused)
11. What would you say is the **biggest** problem in your community? (*Pause, let respondent answer. Do not read options. Mark ONE response*)
- Schools
 - Law enforcement
 - Health services
 - Local businesses
 - Crime
 - Air quality
 - Water quality
 - Population growth
 - Poverty
 - Unemployment
 - Low wages
 - High Taxes
 - Illegal immigration
 - Urban/suburban sprawl
 - Public transportation
 - The economy

- q. Don't know
- r. Other _____
- s.

12. What would you say is the **BEST** thing about your community?

- a. Schools
- b. Law enforcement
- c. Health services
- d. Local businesses
- e. Crime
- f. Air quality
- g. Water quality
- h. Availability of jobs
- i. Low taxes
- j. High wages
- k. Public transportation
- l. People that live in it/my neighbors
- m. Small town feel/living in a small town
- n. Location
- o. Don't know
- p. Other _____

13. How much of a problem is illegal immigration is in your area?

- a. A big problem
- b. A moderate problem
- c. Not a problem
- d. (Don't know)
- e. (Refused)

14. Which of the following statements best describes where you live? Would you say...

- a. I live in a big city
- b. I live in a small town
- c. I live out in the country
- d. (Refused)

General Dairy Industry Questions

15. To what degree are you aware of the dairy industry in southern Idaho, either because you've seen the dairies or heard about the industry in one way or another? Are you...

- a. Very aware
- b. Somewhat aware
- c. Not aware → Skip to Q32
- d. (Don't know) → skip to Q32
- e. (Refused) → Skip to Q32

16. How much of an influence does the dairy industry have in your community?

- a. Very large influence
- b. Moderate influence
- c. Small influence
- d. No influence at all
- e. (Don't know)
- f. (Refused)

17. Do you feel that the number of dairies in your part of the state is...

- a. Too few
- b. Neither too few or too many
- c. Too many
- d. (Don't know)
- e. (Refused)

Please tell me what kind of an impact you think the dairy industry has on each of the following aspects of your community...

18. Would you say the dairy industry's impact on crime has been to....

- a. Make it a lot worse
- b. Make it slightly worse
- c. Improve it slightly
- d. Improve it a lot
- e. It has no impact at all
- f. (Don't know)
- g. (Refused)

19. Would you say that the dairy industry's impact on community stability has been to...

- a. Make it a lot worse
- b. Make it slightly worse
- c. Improve it slightly
- d. Improve it a lot
- e. It has no impact at all
- f. (Don't know)
- g. (Refused)

20. Would you say that the dairy industry's impact on water quality has been to .

- a. Make it a lot worse
- b. Make it slightly worse
- c. Improve it slightly Improve it a lot
- d. It has no impact at all
- e. (Don't know)
- f. (Refused)

21. Would you say that the dairy industry's impact on local businesses has been to .

- a. Decrease the number of businesses a great deal
- b. Decrease them a little bit
- c. Increase them a little bit
- d. Increase them a great deal
- e. Or has had no impact at all
- f. (Don't know)
- g. (Refused)

22. Would you say that the dairy industry's impact on air quality has been to .

- a. Make it a lot worse
- b. Make it slightly worse
- c. Improve it slightly
- d. Improve it a lot
- e. It has no impact at all
- f. (Don't know)
- g. (Refused)

23. Would you say that the dairy industry's impact on health services has been to .

- a. Make it a lot worse
- b. Make it slightly worse
- c. Improve it slightly

- d. Improve it a lot
- e. It has no impact at all
- f. (Don't know)
- g. (Refused)

24. Would you say that the dairy industry's impact on schools has been to .

- a. Make it a lot worse
- b. Make it slightly worse
- c. Improve it slightly
- d. Improve it a lot
- e. It has no impact at all
- f. (Don't know)
- g. (Refused)

25. Where do you get your information about the dairy industry (*please mark all that apply*)

- a. Word of mouth from friends, neighbors, or relatives
- b. Media (newspapers, TV, radio, Internet)
- c. Public meetings (City Council, County Commissioner, public hearings)
- d. I work on a dairy or someone in my immediate family works on a dairy farm
- e. Other _____
- f. (Don't know)
- g. (Refused)

26. Do you feel the news media fairly reports all sides of the issues surrounding the dairy industry?

- a. Yes → Go to Q27
- b. No → Go to Q28
- c. (Don't know) → Go to Q28
- d. (Refused) → Go to Q28

27. Who do you feel is treated unfairly by the media?

- a. The dairy industry
- b. Dairy workers
- c. Local governments
- d. Local citizens
- e. Environmental groups
- f. Other _____
- g. (Don't know)
- h. (Refused)

28. Do you feel the dairy industry's need for laborers leads to illegal immigration?
- a. Not at all
 - b. Somewhat
 - c. A great deal
 - d. (Don't know)
 - e. (Refused)
29. What overall effect does the dairy industry have on the local economy in your area?
Would you say ...
- a. It mostly benefits large-scale industry
 - b. It mostly benefits small-scale businesses
 - c. It provides relatively equal benefits to large and small businesses in the community
 - d. It does not provide any measureable benefits
 - e. (Don't know)
 - f. (Refused)
30. On a scale of 0 to 10, with 0 being very unimportant, and 10 being very important and 5 being neither important nor unimportant, how important are dairies to the agricultural landscape of your community?
- _____
31. Which of the following statements do you agree with most closely? Would you say that overall...
- a. The dairy industry brings more benefits than costs to your community
 - b. The dairy industry brings more costs than benefits to your community
 - c. The dairy industry brings about the same amount of benefits as costs to your community
 - d. (Don't know)
 - e. (Refused)

Demographics

32. What year were you born? _____ [Refused = 9999]
33. What is the highest level of education you have completed?
- a. Some high school or less (no diploma)
 - b. High school graduate
 - c. Vocational school
 - d. Associates' degree or some college

- e. College graduate
- f. Some post graduate education
- g. Graduate or professional degree
- h. (Refused)

34. What county do you live in? _____ [Refused = 99]
35. How long have you lived in Idaho? _____ (Years) [Refused = 9999]
36. How long have you lived in this county? _____ (years) [Refused = 9999]
37. How far away is the nearest dairy? _____ miles [Don't know = 8888, Refused = 9999]
38. How many people live in your household? [Refused = 9999]
39. How many children (under 18) live in your household? [Refused = 9999]
40. Were you raised on a farm? 1= yes, 0 = no [Refused = 9]
41. Do you have close relatives such as parents, siblings, or children involved in farming or agriculture? 1 = yes, 0 = no [Refused = 9]
42. Do you have extended family involved in farming or agriculture (cousins, aunt & uncles, etc.) 1 = yes, 0 = no [Refused = 9]
43. Do you have close friends involved in farming or agriculture? 1 = yes, 0 = no [Refused = 9]
44. Does your household currently obtain all or part of its income from farming or agriculture? 1 = yes, 0 = no [Refused = 9]
45. What is your race or ethnicity?
- a. Non-Hispanic white/Caucasian
 - b. Hispanic/Latino/a (of any race)
 - c. Black
 - d. Asian
 - e. Native American
 - f. Other/Mixed race
 - g. (Refused)
46. Please stop me when I reach the category that best describes your annual household income

- a. Less than \$15,000
- b. More than \$15,000 but less than \$25,000
- c. More than \$25,000 but less than \$35,000
- d. More than \$35,000 but less than \$50,000
- e. More than \$50,000 but less than \$75,000
- f. More than \$75,000 but less than \$100,000
- g. More than \$100,000 but less than \$150,000
- h. Over \$150,000
- i. (Refused)

47. Sex of respondent (don't ask, just fill in)

- a. Male
- b. Female
- c. Unsure

Thank you for participating in this study. Is there anything else you'd like to add?

APPENDIX G

Weighted Frequencies for Quantitative Questions

Question	Responses	Percent	Standard Error
Q1: Overall satisfaction with community and quality of life	Highly dissatisfied	1.4%	0.3%
	Somewhat dissatisfied	5.4%	0.7%
	Neither satisfied or dissatisfied	4.5%	0.6%
	Somewhat satisfied	39.7%	1.5%
	Highly satisfied	48.8%	1.5%
	Don't know	0.2%	0.1%
Q2: Quality with schools in your community	Very poor	0.9%	0.3%
	Poor	4.4%	0.6%
	Average	25.3%	1.3%
	Good	37.4%	1.5%
	Very good	18.7%	1.2%
	Don't know	13.3%	1.1%
Q3: Quality of law enforcement in your community	Very poor	2.2%	0.4%
	Poor	6.0%	0.7%
	Average	27.5%	1.3%
	Good	43.1%	1.5%
	Very good	19.8%	1.2%
	Don't know	1.4%	0.3%
Q4: Quality of health services in your community	Very poor	2.1%	0.4%
	Poor	6.3%	0.7%
	Average	27.7%	1.3%
	Good	36.2%	1.5%
	Very good	25.2%	1.3%
	Don't know	2.5%	0.5%
Q5: Satisfaction with the number of local businesses in your community	Very dissatisfied	3.6%	0.5%
	Dissatisfied	17.0%	1.1%
	Satisfied	62.3%	1.5%
	Very satisfied	15.7%	1.1%
	Don't know	1.4%	0.4%
Q6: Degree of concern about crime	Very concerned	27.8%	1.4%
	Somewhat concerned	55.6%	1.5%
	Not at all concerned	16.6%	1.1%
	Don't know	0.0%	0.0%

Question	Responses	Percent	Standard Error
Q7: Degree of concern about air quality	Very concerned	26.6%	1.4%
	Somewhat concerned	41.4%	1.5%
	Not at all concerned	31.7%	1.3%
	Don't know	0.3%	0.2%
Q8: Degree of concern about water quality	Very concerned	34.0%	1.4%
	Somewhat concerned	37.2%	1.5%
	Not at all concerned	28.4%	1.4%
	Don't know	0.4%	0.2%
Q9: Degree of concern about population growth	Very concerned	25.7%	1.4%
	Somewhat concerned	40.3%	1.5%
	Not at all concerned	33.5%	1.4%
	Don't know	0.5%	0.2%
Q10: Degree of concern about poverty	Very concerned	31.7%	1.4%
	Somewhat concerned	52.8%	1.5%
	Not at all concerned	14.4%	1.1%
	Don't know	1.1%	0.3%
Q11: Biggest problem in community	Schools	2.3%	0.4%
	Law enforcement	1.2%	0.3%
	Health services	2.0%	0.4%
	Local businesses	2.5%	0.5%
	Crime	10.1%	0.9%
	Air quality	1.1%	0.3%
	Water quality	1.0%	0.4%
	Population growth	8.4%	0.9%
	Poverty	2.6%	0.5%
	Unemployment	9.8%	0.9%
	Low wages	2.1%	0.4%
	High taxes	0.8%	0.3%
	Illegal immigration	1.9%	0.4%
	Urban/suburban sprawl	2.8%	0.5%
	Public transportation	4.7%	0.7%
The economy	5.4%	0.7%	
Don't know	15.1%	1.1%	
Other	26.4%	1.3%	

Question	Responses	Percent	Standard Error
Q12: Best thing about community	Schools	2.9%	0.5%
	Law enforcement	0.5%	0.2%
	Health services	1.0%	0.3%
	Local businesses	2.5%	0.5%
	Crime	2.7%	0.5%
	Air quality	0.6%	0.2%
	Water quality	0.1%	0.1%
	Availability of jobs	0.7%	0.2%
	Low taxes	0.1%	0.1%
	High wages	0.0%	0.1%
	Public transportation	0.3%	0.2%
	People that live in community	36.8%	1.5%
	Small town feeling	15.7%	1.1%
	Location	7.3%	0.8%
Don't know	6.6%	0.7%	
Other	22.2%	1.3%	
Q13: To what degree is illegal immigration a problem	Big problem	22.5%	1.3%
	Moderate problem	42.9%	1.5%
	Not a problem	28.4%	1.4%
	Don't know	6.1%	0.8%
Q14: Description of location where respondent lives	Big city	28.8%	1.4%
	Small town	44.3%	1.5%
	Out in the country	26.9%	1.3%
Q15: Awareness of dairy industry	Very aware	30.9%	1.4%
	Somewhat aware	47.1%	1.5%
	Not at all aware	21.9%	1.3%
	Don't know	0.0%	0.1%
Q16: Degree of influence of dairy industry in your community	Very large influence	22.4%	1.3%
	Moderate influence	37.4%	1.6%
	Small influence	27.8%	1.5%
	No influence at all	8.9%	1.0%
	Don't know	3.6%	0.7%
Q17: Number of dairies in your part of the state	Too few	19.7%	1.4%
	Neither too few nor too many	59.9%	1.7%
	Too many	10.6%	0.8%
	Don't know	9.9%	1.1%

Question	Responses	Percent	Standard Error
Q18: Dairy industry's impact on crime	Make it a lot worse	1.9%	0.4%
	Make it slightly worse	9.1%	0.8%
	Improve it slightly	8.0%	0.9%
	Improve it a lot	1.5%	0.4%
	Has had no impact at all	71.6%	1.5%
	Don't know	7.9%	0.9%
Q19: Dairy industry's impact on community stability	Make it a lot worse	1.0%	0.3%
	Make it slightly worse	4.6%	0.7%
	Improve it slightly	43.6%	1.7%
	Improve it a lot	15.3%	1.3%
	Has had no impact at all	28.9%	1.6%
	Don't know	6.6%	0.9%
Q20: Dairy industry's impact on water quality	Make it a lot worse	7.4%	0.8%
	Make it slightly worse	33.7%	1.6%
	Improve it slightly	6.7%	0.9%
	Improve it a lot	0.9%	0.3%
	Has had no impact at all	38.8%	1.7%
	Don't know	12.4%	1.2%
Q21: Dairy industry's impact on local businesses	Decrease # of businesses a lot	1.2%	0.4%
	Decrease number slightly	2.7%	0.5%
	Increase number slightly	42.8%	1.7%
	Increase number a lot	9.8%	0.9%
	No impact at all	35.6%	1.6%
	Don't know	7.9%	1.0%
Q22: Dairy industry's impact on air quality	Make it a lot worse	7.9%	0.8%
	Make it slightly worse	40.1%	1.7%
	Improve it slightly	3.5%	0.7%
	Improve it a lot	0.4%	0.2%
	Has had no impact at all	43.6%	1.7%
	Don't know	4.5%	0.7%
Q23: Dairy industry's impact on health services	Make it a lot worse	0.8%	0.3%
	Make it slightly worse	5.0%	0.7%
	Improve it slightly	10.9%	1.1%
	Improve it a lot	2.2%	0.5%
	Has had no impact at all	70.9%	1.5%
	Don't know	10.3%	1.0%

Question	Responses	Percent	Standard Error
Q24: Dairy industry's impact on schools	Make it a lot worse	1.0%	0.3%
	Make it slightly worse	5.4%	0.7%
	Improve it slightly	32.8%	1.6%
	Improve it a lot	9.9%	1.0%
	Has had no impact at all	41.3%	1.7%
	Don't know	9.6%	1.0%
Q25: Where do you get your information about the dairy industry	Word of mouth	42.9%	1.5%
	Media	47.8%	1.5%
	Public meetings	6.4%	0.7%
	I/family member works on a dairy	12.6%	1.0%
	Don't know	1.3%	0.4%
	Other	12.9%	1.0%
Q26: Media fairly reports the issues regarding the dairy industry	No	57.3%	1.7%
	Yes	29.2%	1.5%
	Don't know	13.6%	1.2%
Q27: Who is unfairly treated by the media	Dairy industry	43.6%	2.3%
	Dairy workers	6.8%	1.2%
	Local government	1.9%	0.6%
	Local citizens	11.4%	1.4%
	Environmental groups	8.9%	1.3%
	Other	16.5%	1.8%
	Don't know	10.9%	1.4%
Q28: Dairy industry's need for labor leads to illegal immigration	Not at all	18.8%	1.4%
	Somewhat	55.2%	1.7%
	A great deal	17.1%	1.2%
	Don't know	8.9%	1.0%
Q29: Effect of dairy industry on local economy	Mostly benefits large-scale industry	5.7%	0.8%
	Mostly benefits small-scale business	17.6%	1.3%
	Relatively equal benefits to large and small business	53.8%	1.7%
	Does not provide any measureable benefits	14.3%	1.2%
	Don't know	8.6%	1.0%

Question	Responses	Percent	Standard Error
Q30: Importance of dairies to agriculture landscape	Very Unimportant	3.5%	0.6%
	1	0.9%	0.4%
	2	2.3%	0.5%
	3	2.8%	0.5%
	4	3.8%	0.6%
	Neither important nor unimportant	13.7%	1.2%
	6	12.4%	1.2%
	7	18.2%	1.3%
	8	18.8%	1.3%
	9	5.8%	0.8%
	Very Important	15.4%	1.2%
Don't know	2.5%	0.6%	
<hr/>			
Q31: Feels that the dairy industry...	Brings more benefits than costs	45.1%	1.7%
	Brings most costs than benefits	8.0%	0.9%
	Bring same amount of costs & benefits	39.0%	1.7%
	Don't know	7.9%	1.0%
<hr/>			
Q33: Highest level of education	Some high school or less	5.3%	0.6%
	High school graduate	22.1%	1.3%
	Vocational school	2.3%	0.5%
	Associate degree or some college	31.5%	1.4%
	College graduate	24.5%	1.3%
	Some post graduate education	3.9%	0.6%
	Graduate or profession degree	10.4%	0.9%

Question	Responses	Percent	Standard Error
Q34: County ⁷	Ada	31.2%	1.3%
	Adams	0.5%	0.3%
	Bannock	5.6%	0.6%
	Bear Lake	0.5%	0.2%
	Benewah	0.2%	0.1%
	Bingham	4.0%	0.5%
	Blaine	1.8%	0.3%
	Boise	1.0%	0.4%
	Bonner	0.1%	0.1%
	Bonneville	8.1%	0.6%
	Butte	0.5%	0.1%
	Camas	0.1%	0.1%
	Canyon	12.2%	1.1%
	Caribou	0.6%	0.2%
	Cassia	1.8%	0.3%
	Clark	0.1%	0.1%
	Custer	0.5%	0.1%
	Elmore	2.1%	0.5%
	Franklin	1.0%	0.3%
	Fremont	1.3%	0.3%
	Gem	1.2%	0.4%
	Gooding	1.5%	0.2%
	Idaho	0.5%	0.2%
	Jefferson	2.0%	0.4%
	Jerome	1.9%	0.3%
	Kootenai	0.0%	0.4%
	Latah	0.2%	0.1%
	Lemhi	0.7%	0.2%
	Lincoln	0.5%	0.1%
	Madison	2.0%	0.4%
	Minidoka	2.2%	0.3%
	Oneida	0.7%	0.2%
	Owyhee	0.9%	0.3%
	Payette	2.2%	0.5%
	Power	0.8%	0.2%
	Shoshone	0.3%	0.1%
	Teton	1.0%	0.2%
	Twin Falls	6.5%	0.5%
	Valley	0.9%	0.3%
	Washington	1.0%	0.6%

⁷ Several respondents reported their primary residence in a county outside our study area; in at least a few of those cases, respondents indicated they had a secondary residence in Southern Idaho.

Question	Responses	Percent	Standard Error
Q38: Number of people in household	1	18.8%	1.2%
	2	38.5%	1.5%
	3	13.7%	1.1%
	4	14.0%	1.1%
	5	7.7%	0.8%
	6	4.6%	0.6%
	7	1.8%	0.4%
	8	0.6%	0.2%
	9	0.3%	0.2%
	10	0.07%	0.1%
Q39: Number of children under 18 in household	0	63.3%	1.5%
	1	11.9%	1.0%
	2	12.7%	1.0%
	3	6.2%	0.7%
	4	4.0%	0.5%
	5	1.5%	0.3%
	6	0.2%	0.1%
	7	0.3%	0.2%
Q40: Raised on a farm	No	62.3%	1.5%
	Yes	37.7%	1.5%
Q41: Immediate family involved in farming	No	69.9%	1.3%
	Yes	30.1%	1.3%
Q42: Extended family involved in farming	No	51.2%	1.5%
	Yes	48.8%	1.5%
Q43: Close friends involved in farming	No	38.7%	1.5%
	Yes	61.3%	1.5%
Q44: Household income derived from farming	No	82.9%	1.1%
	Yes	17.1%	1.1%
Q45: Race or ethnicity	Caucasian, white, non-Hispanic	92.9%	0.8%
	Hispanic, Latino/a	4.9%	0.6%
	African-American, Black	0.0%	0.1%
	Asian, Pacific Islander	1.0%	0.3%
	Native American	1.0%	0.3%
	Other/Mixed Race	0.5%	0.2%

Question	Responses	Percent	Standard Error
Q46: Annual household income	Less than \$15,000	5.4%	0.7%
	More than \$15,000 but less than \$25,000	11.5%	1.0%
	More than \$25,000 but less than \$35,000	13.0%	1.1%
	More than \$35,000 but less than \$50,000	20.1%	1.3%
	More than \$50,000 but less than \$75,000	24.3%	1.4%
	More than \$75,000 but less than \$100,000	13.0%	1.1%
	More than \$100,000 but less than \$150,000	8.3%	0.9%
	More than \$150,000	4.5%	0.7%
Q47: Sex	Female	55.8%	1.5%
	Male	44.2%	1.5%

APPENDIX H
Responses to Selected General Public Survey Questions, by Region

Figure H1. Region by Q15, Awareness of the dairy industry

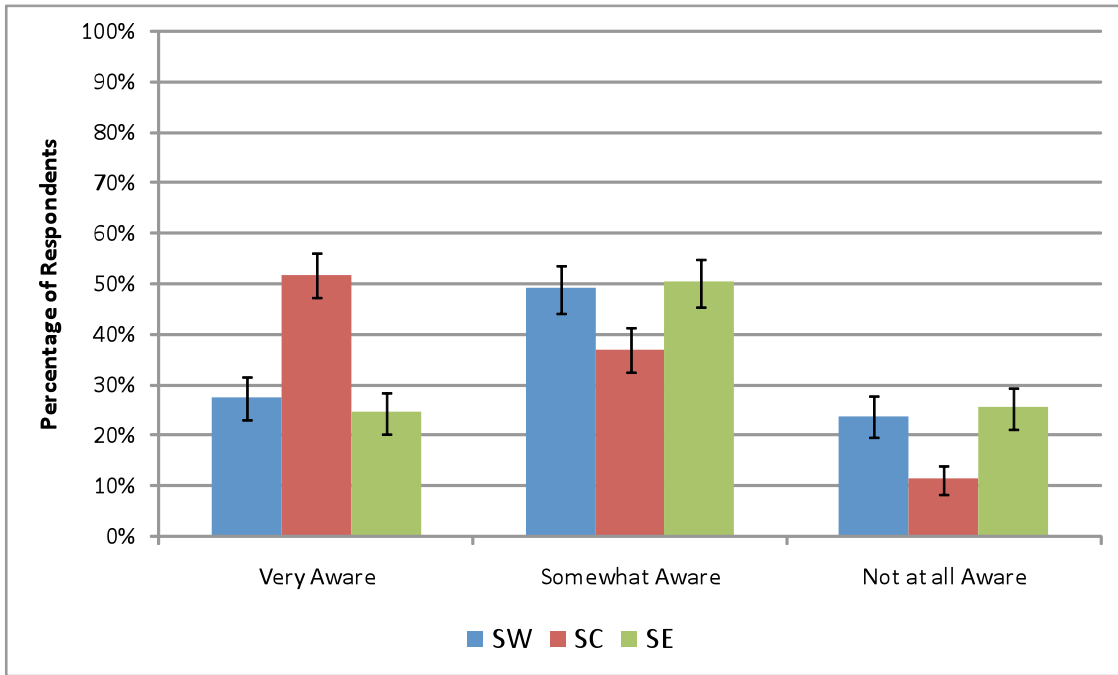


Figure H2. Region by Q16, Influence of the dairy industry

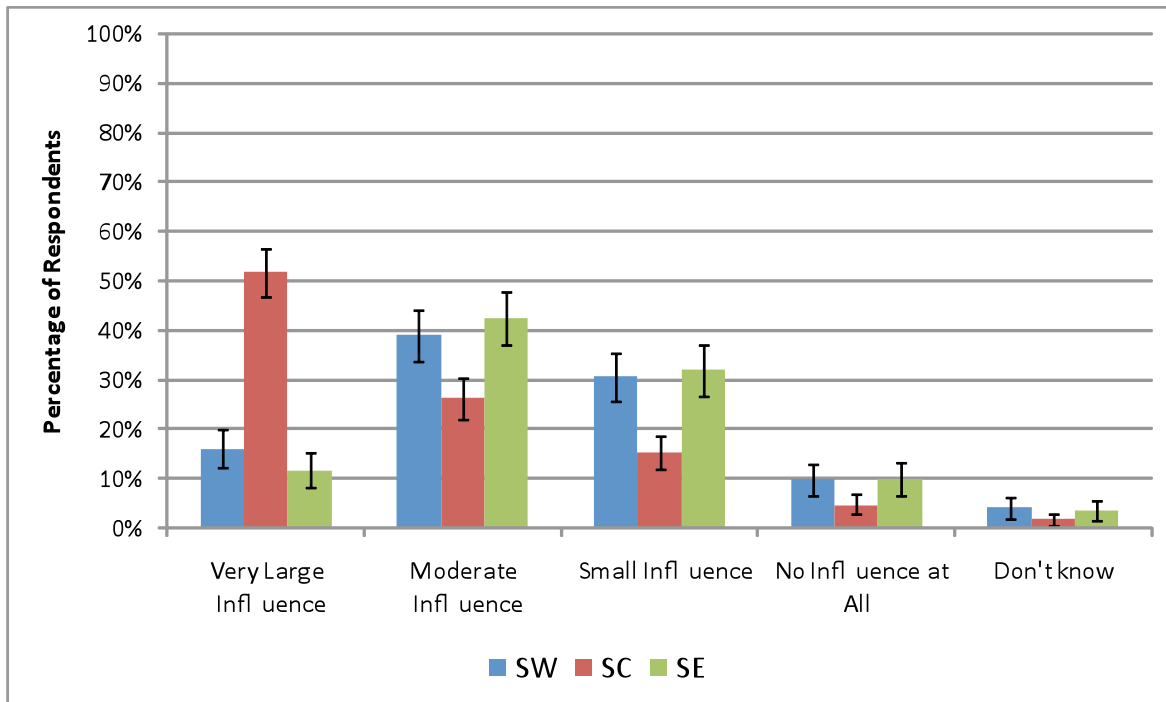


Figure H3. Region by Q17, Number of dairies.

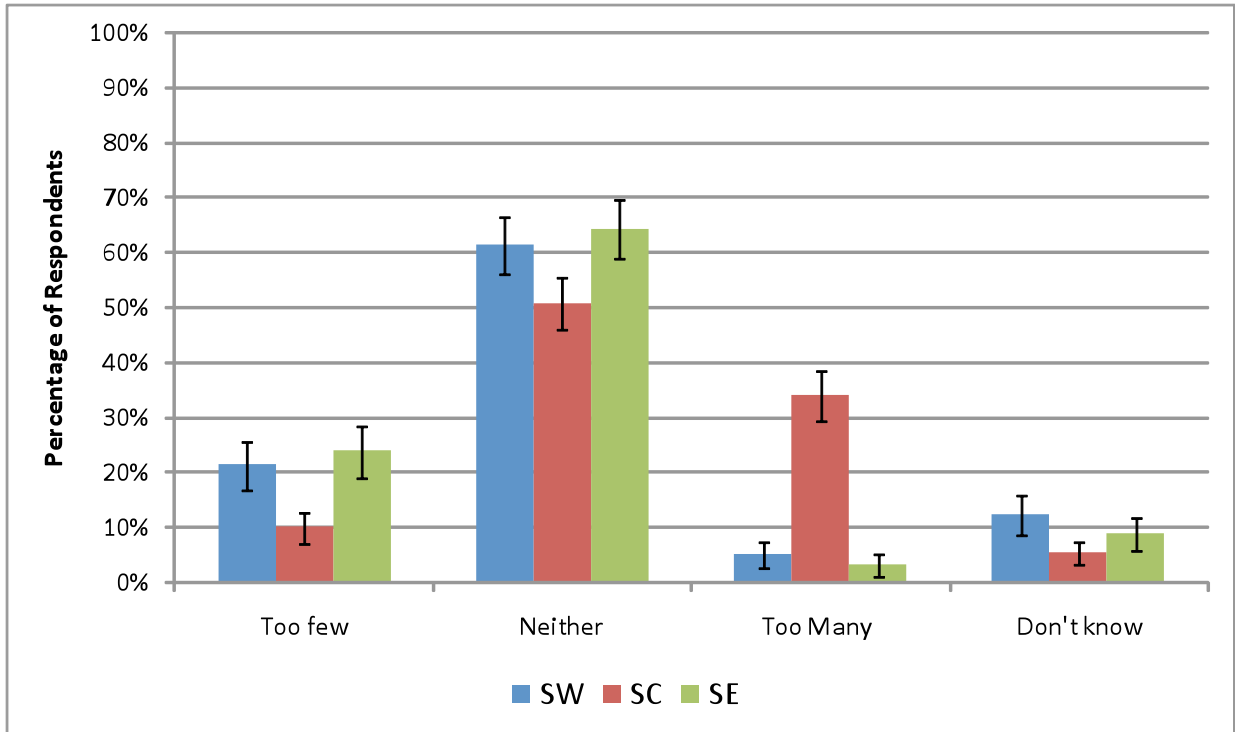


Figure H4. Region by Q18, Impact on crime.

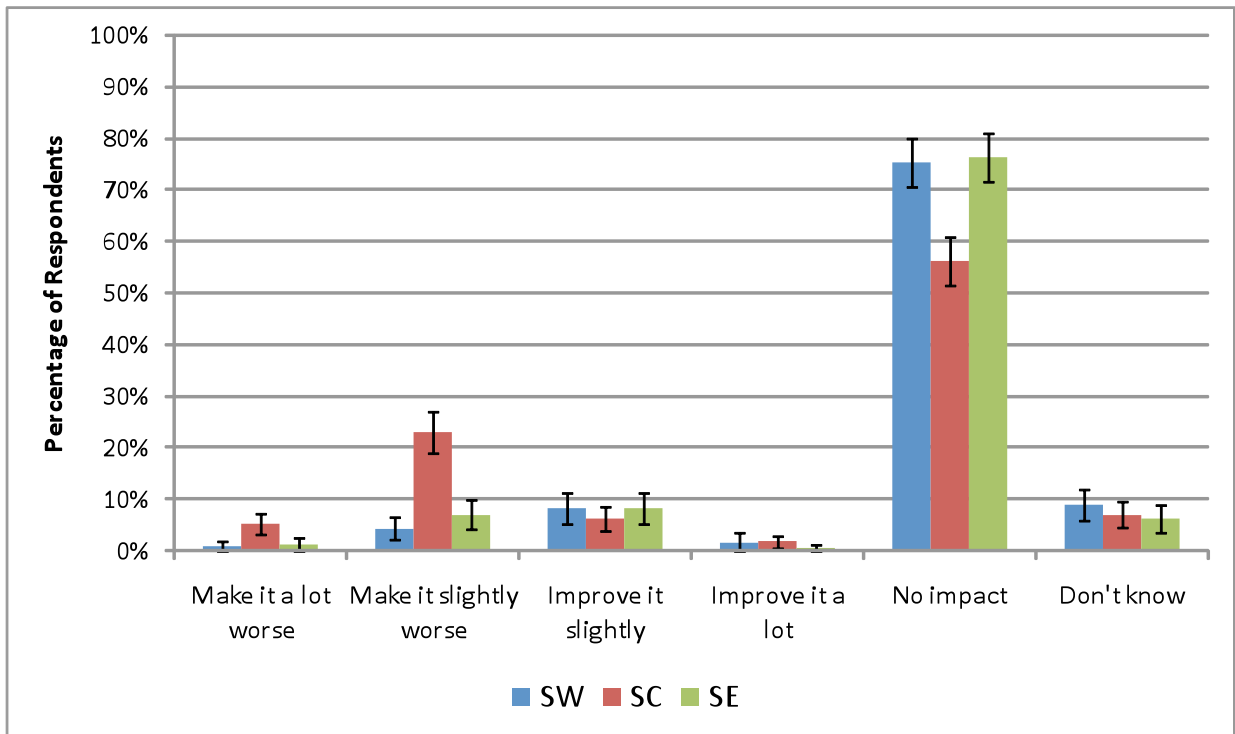


Figure H5. Region by Q19, Impact on community stability

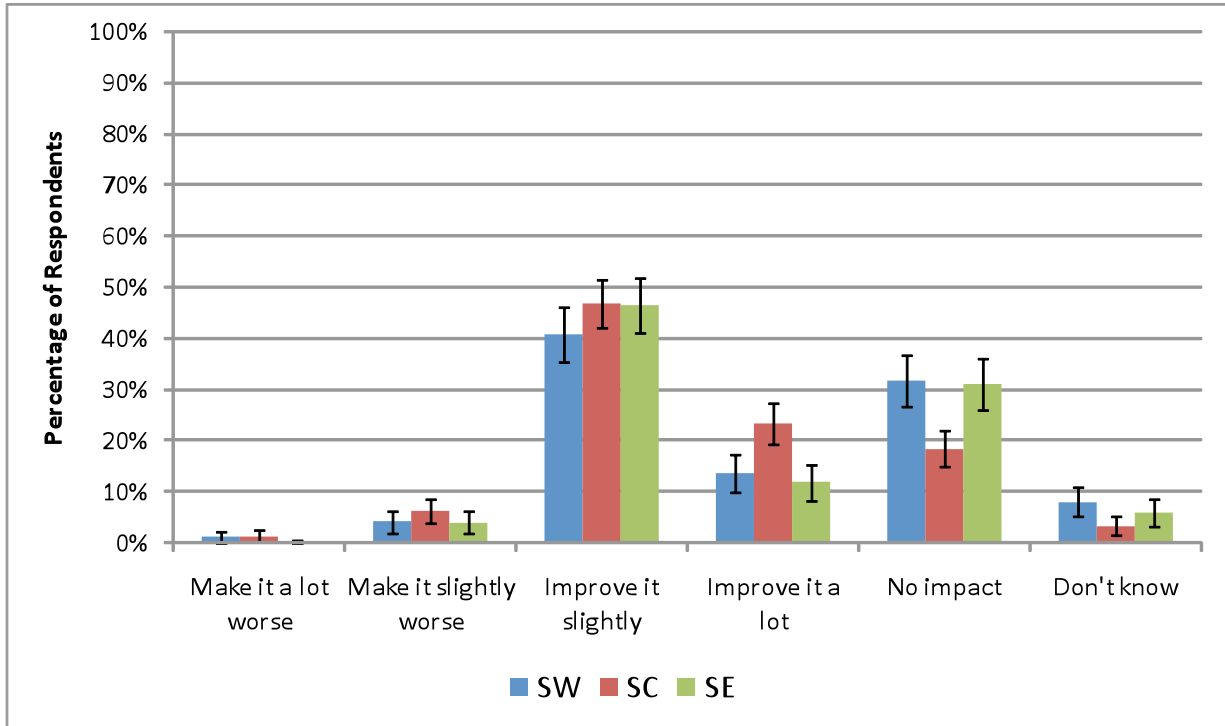


Figure H6. Region by Q20, Impact on water quality

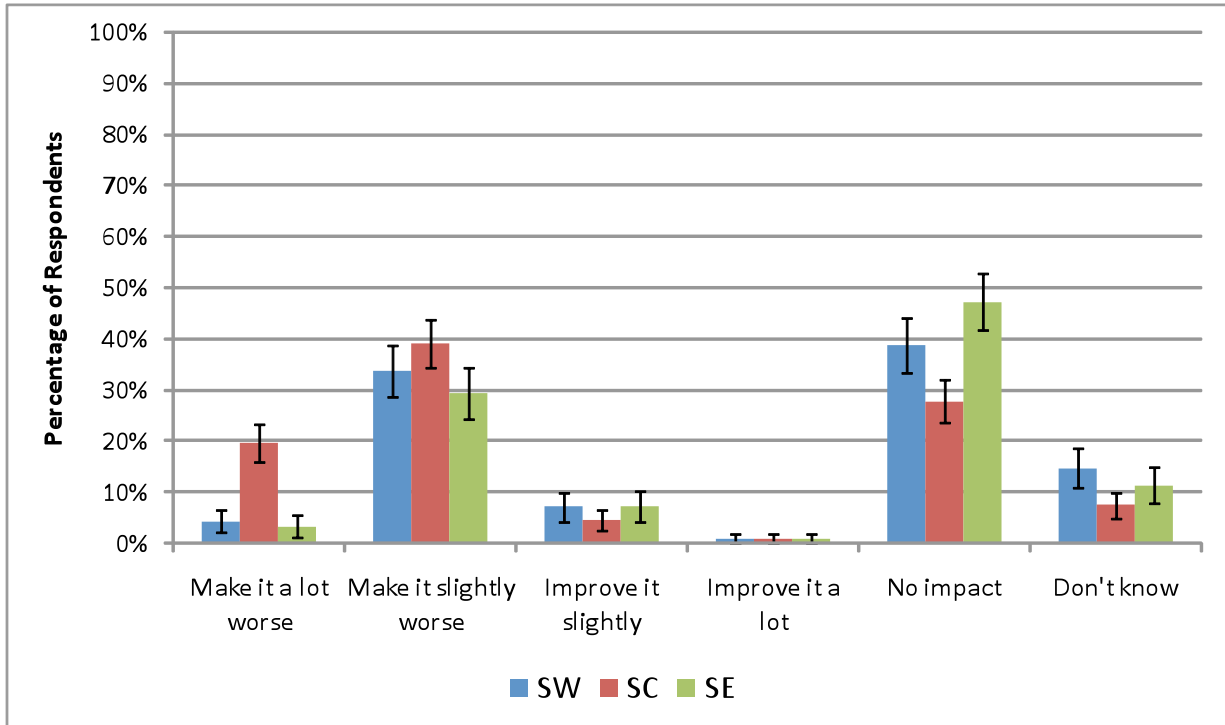


Figure H7. Region by Q21, Impact on the number of businesses

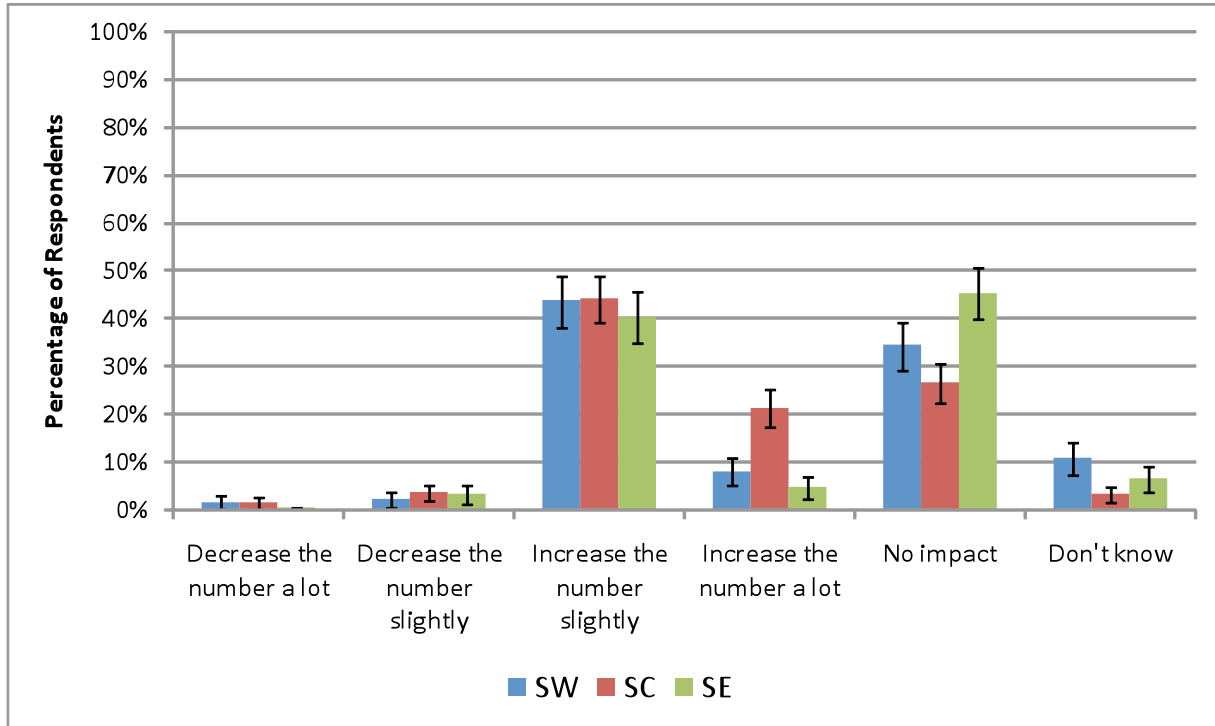


Figure H8. Region by Q22, Impact on air quality.

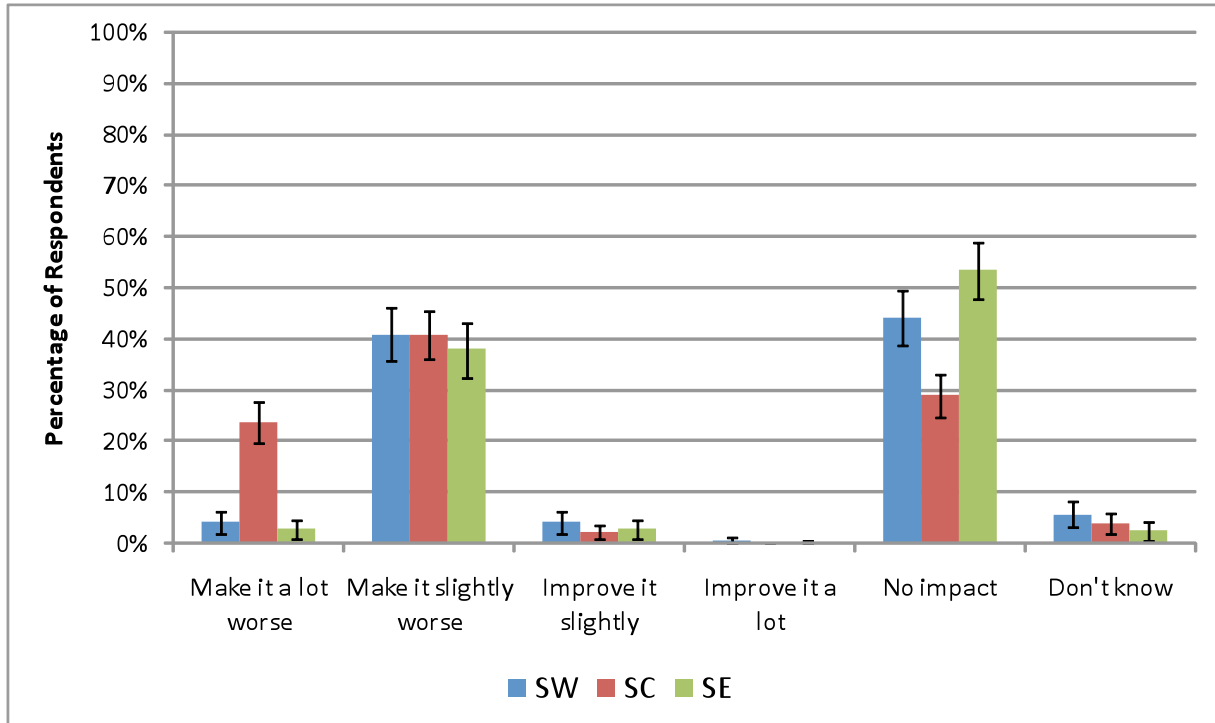


Figure H9. Region by Q23, Impact on health services

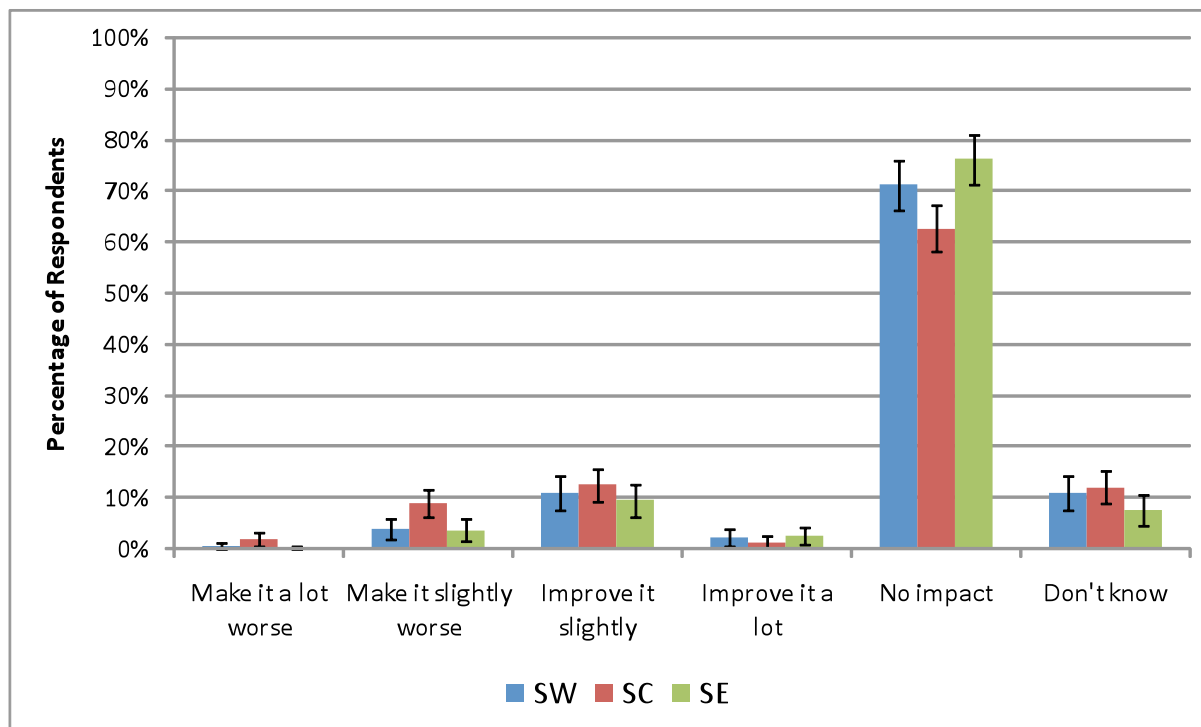


Figure H10. Region by Q24, Impact on schools

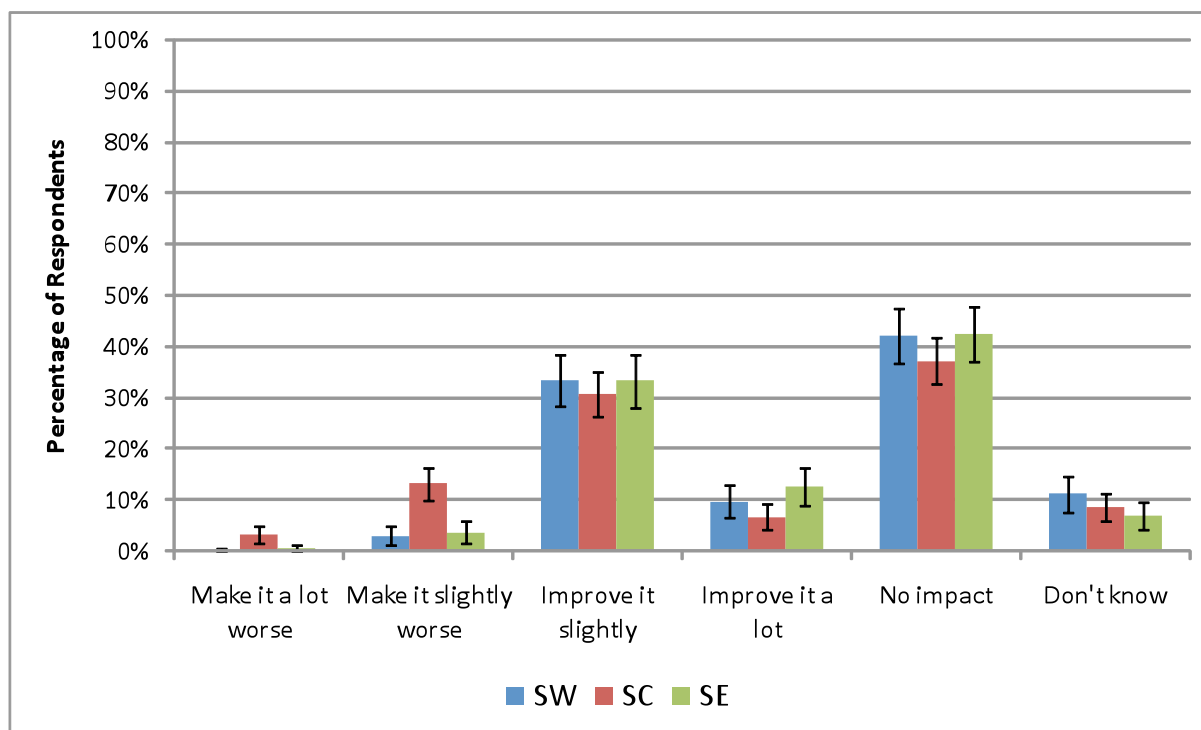


Figure H11. Region by Q26, Does the media report all sides of the dairy industry fairly?

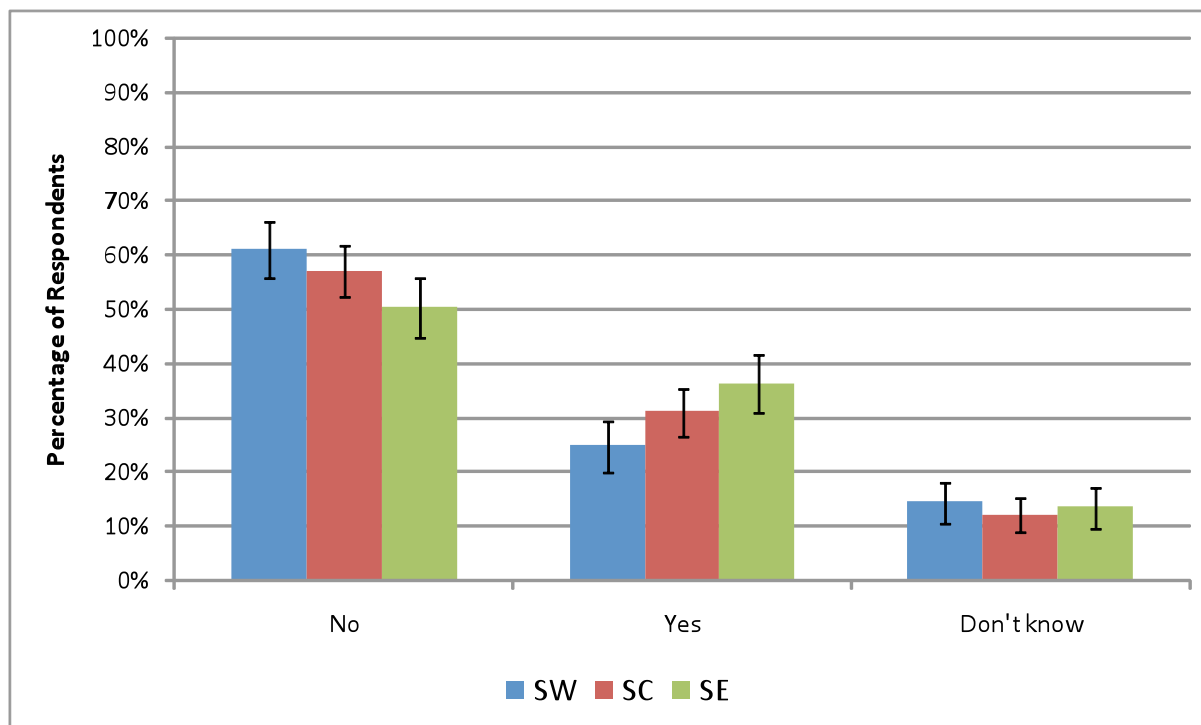


Figure H12. Region by Q27, Who is treated unfairly by the media?

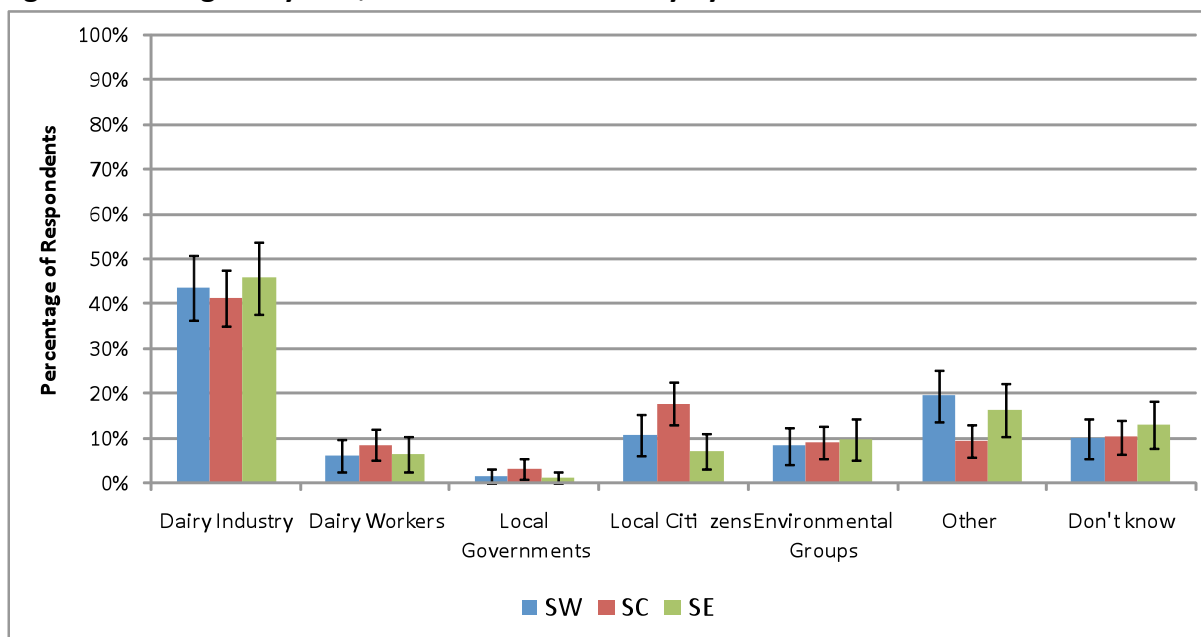


Figure H13. Region by Q28, Does the dairy industry's need for workers lead to illegal immigration

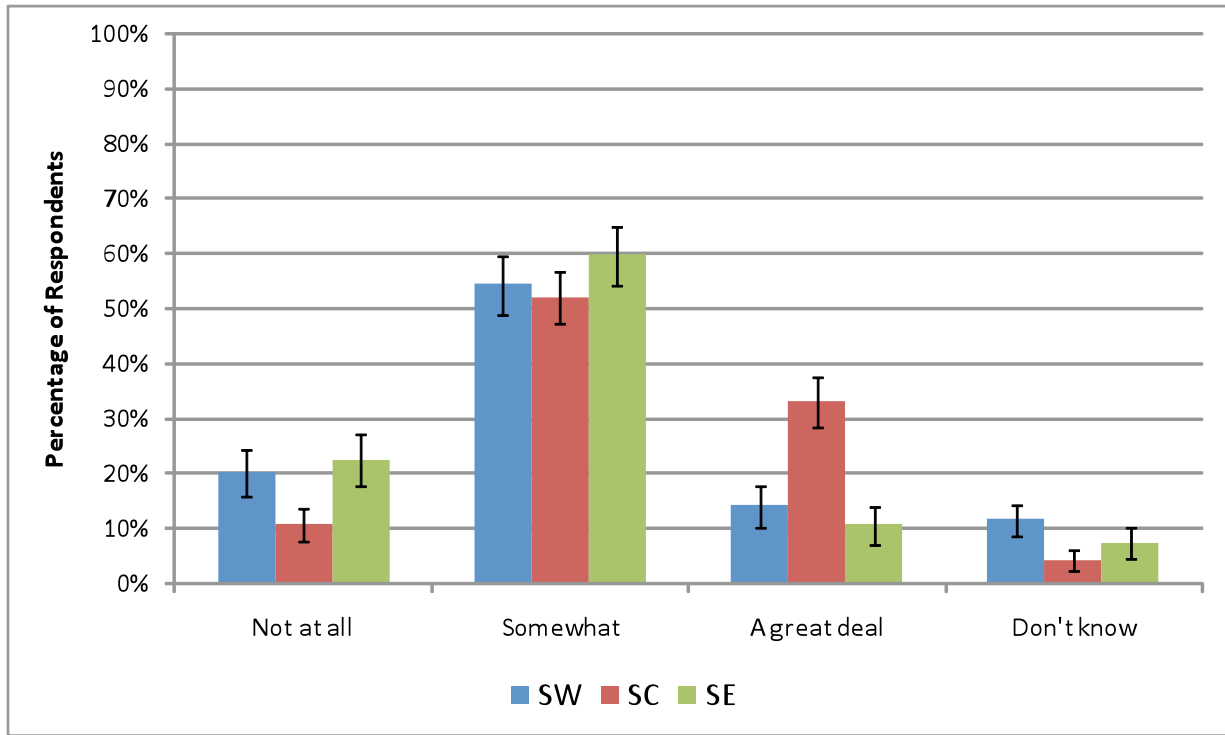


Figure H14. Region by Q29. Does the dairy industry primarily benefit small scale business or large scale industry

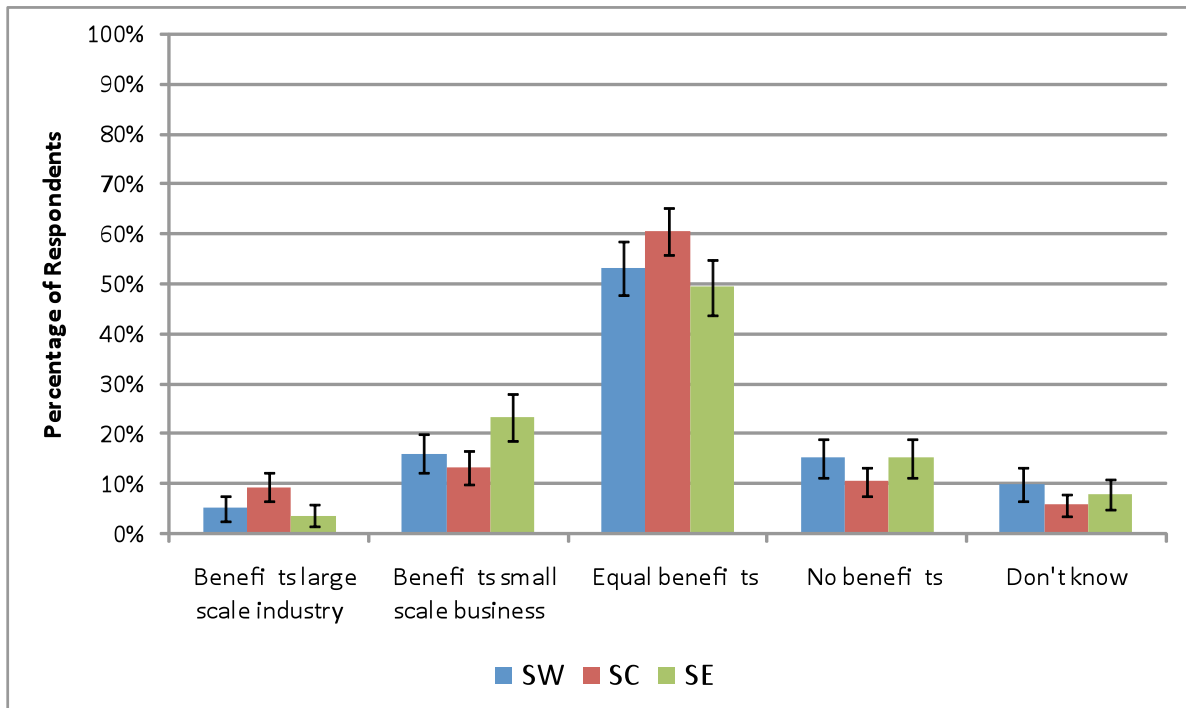


Figure H15. Region by Q31, Does the dairy industry primarily bring more costs or more benefits

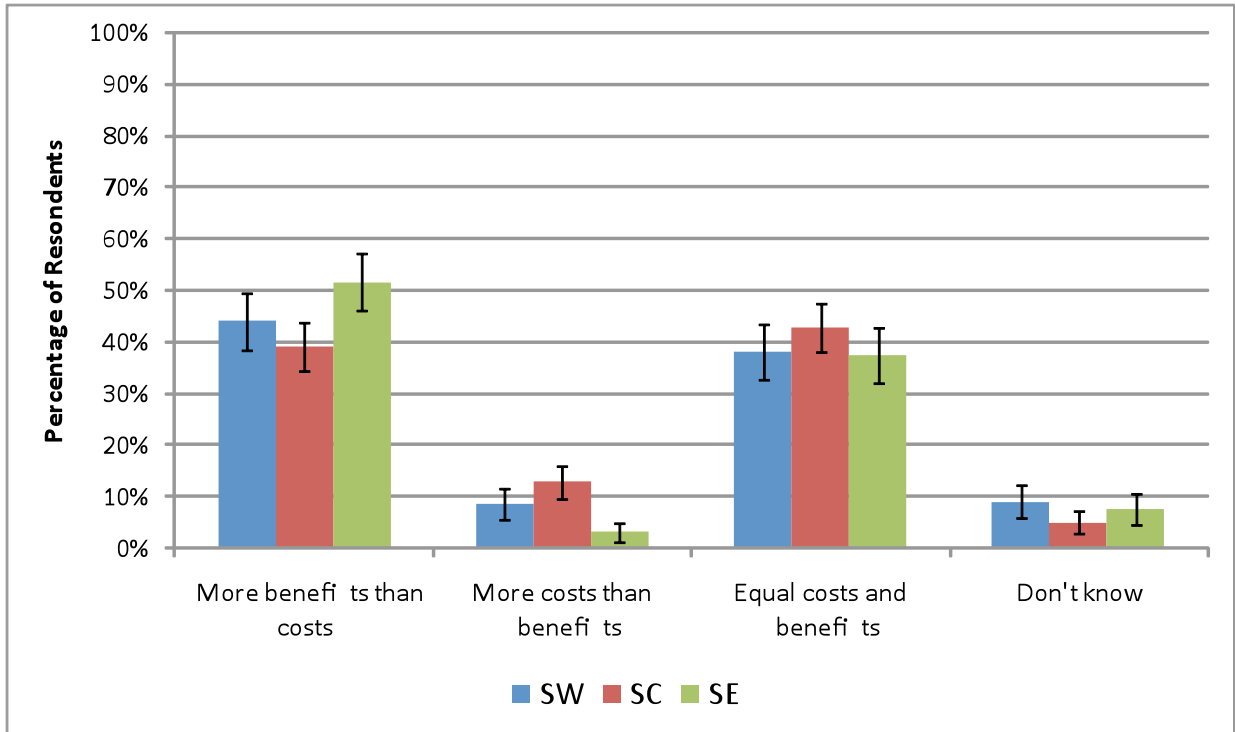


Figure H16. Where respondent lives by whether the dairy brings more costs or benefits (Chi-square = 11.28, d.f. = 6, p = 0.1717)

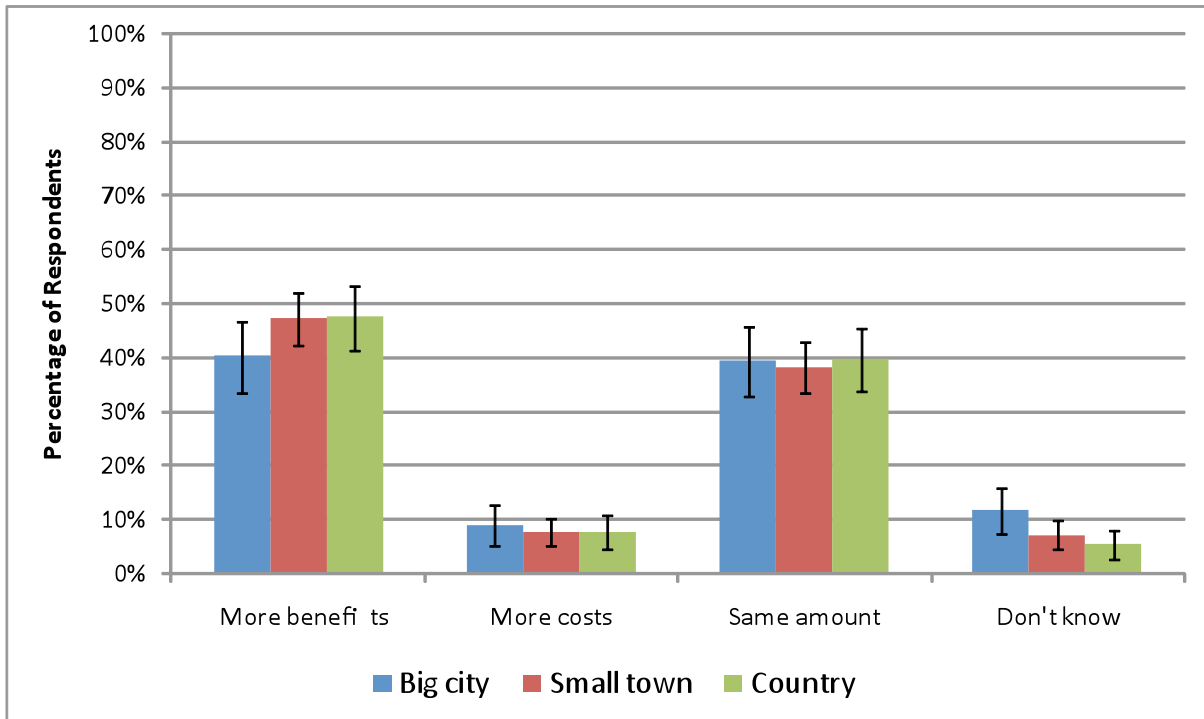


Figure H17. Does the dairy industry's need for laborers lead to illegal immigration by whether the dairy industry brings more costs or benefits. (Chi-square = 72.2493, d.f. = 9, p <0.0001)

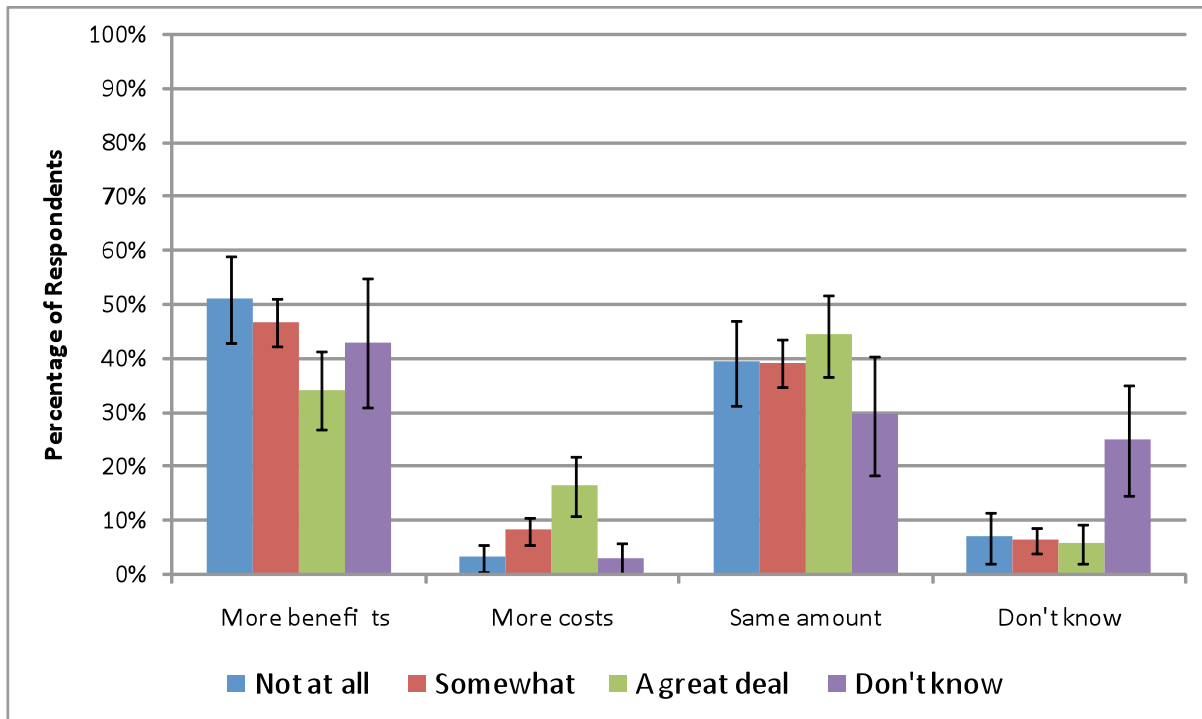


Figure H18. Level of education by whether the dairy industry brings more costs or benefits (Chi-square = 17.89, d.f. = 12, p = 0.2760)

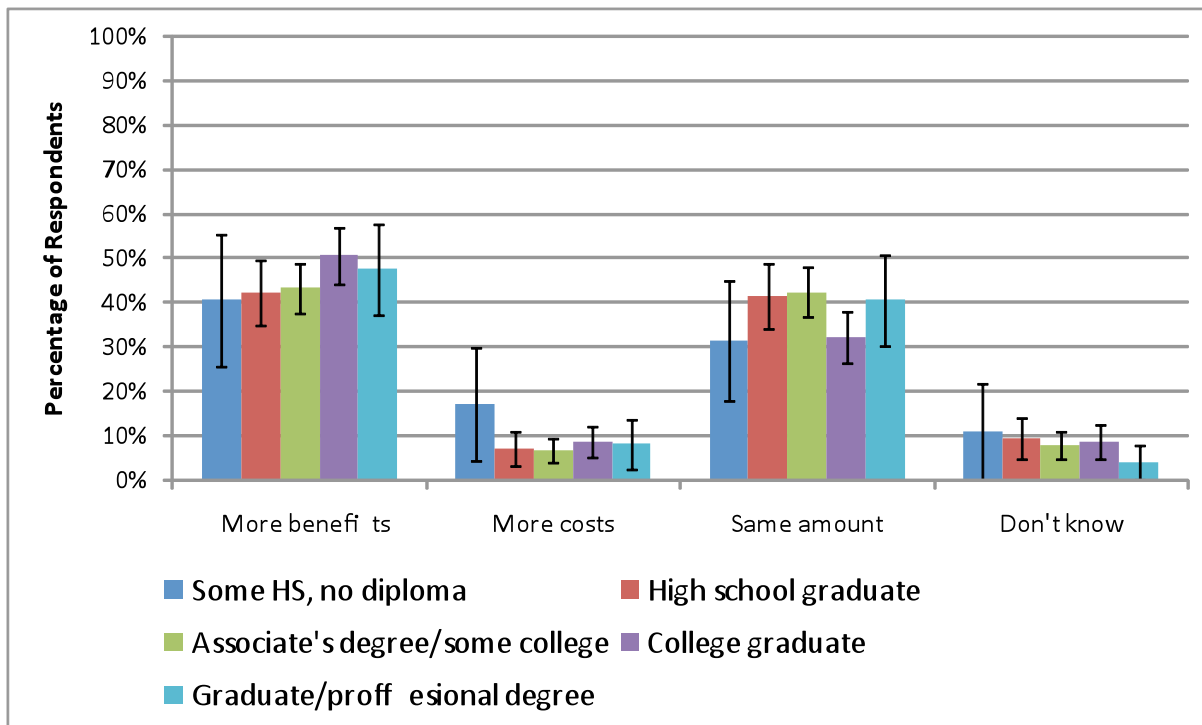


Figure H19. Income by whether the dairy industry brings more costs or benefits (Chi-square = 31.06, d.f. = 21, p = 0.0726)

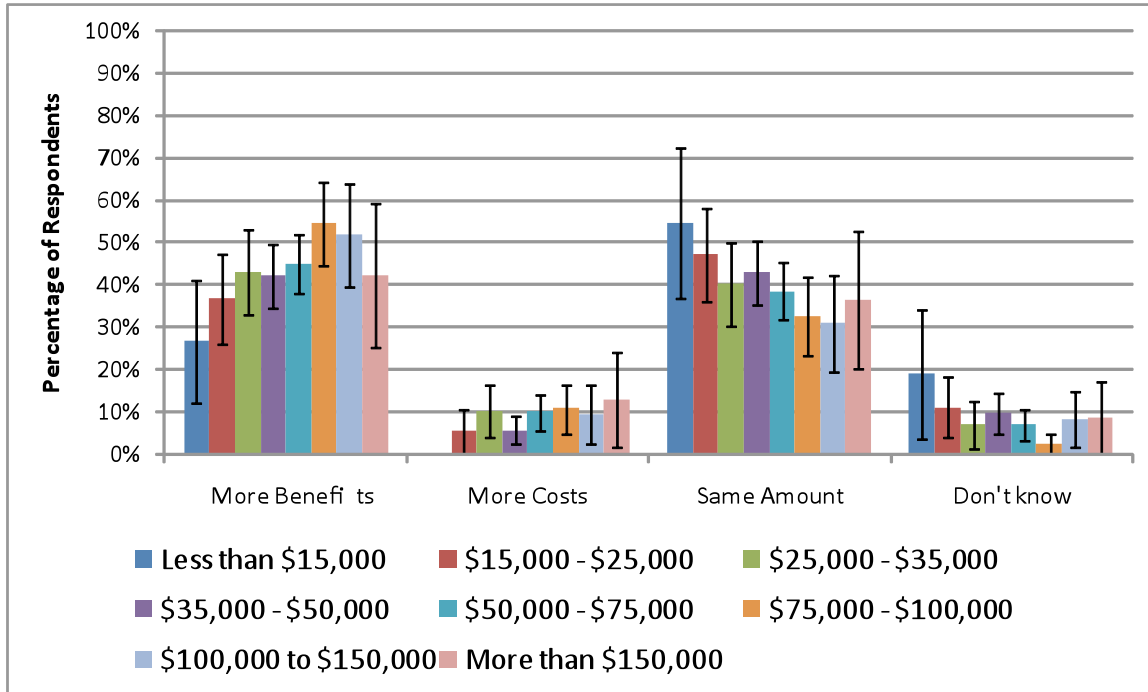


Figure H20. Age category by whether or not immigration is a problem in their area (Chi-square = 23.9384, d.f. = 18, p = 0.3470)

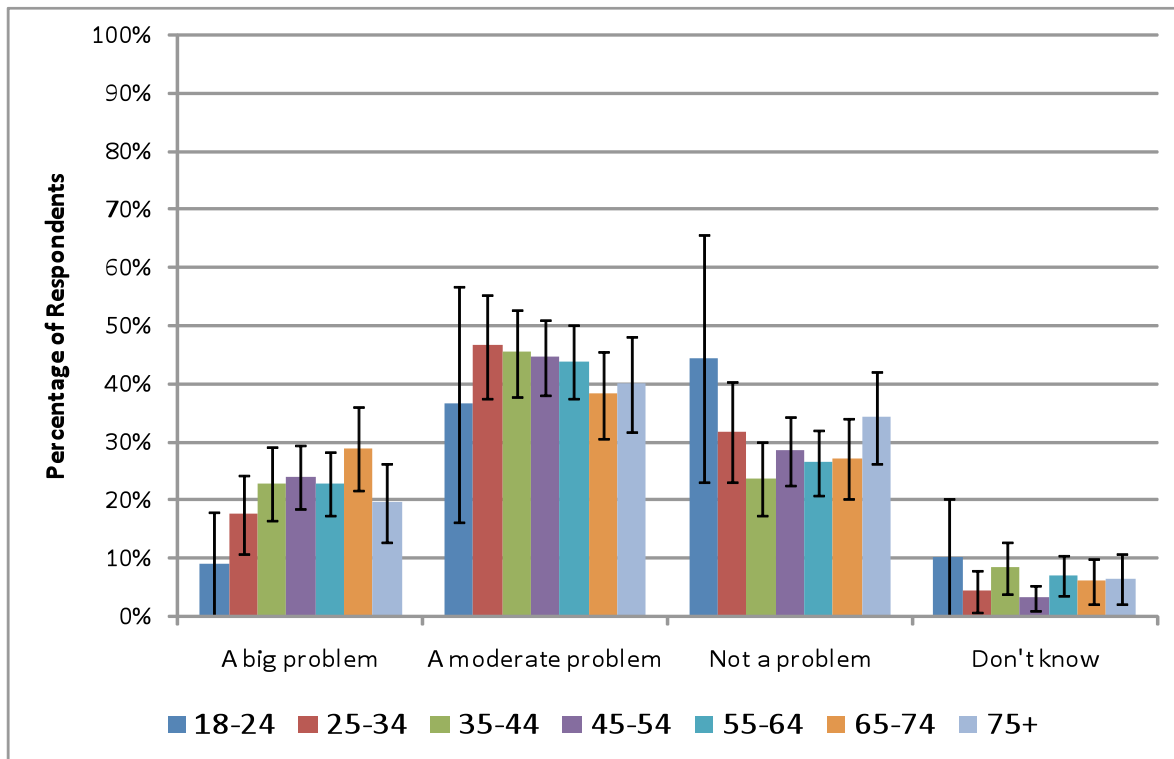


Figure H21. Level of education by whether or not immigration is a problem in their area. (Chi-square = 19.9018, d.f. = 12, p = 0.1879)

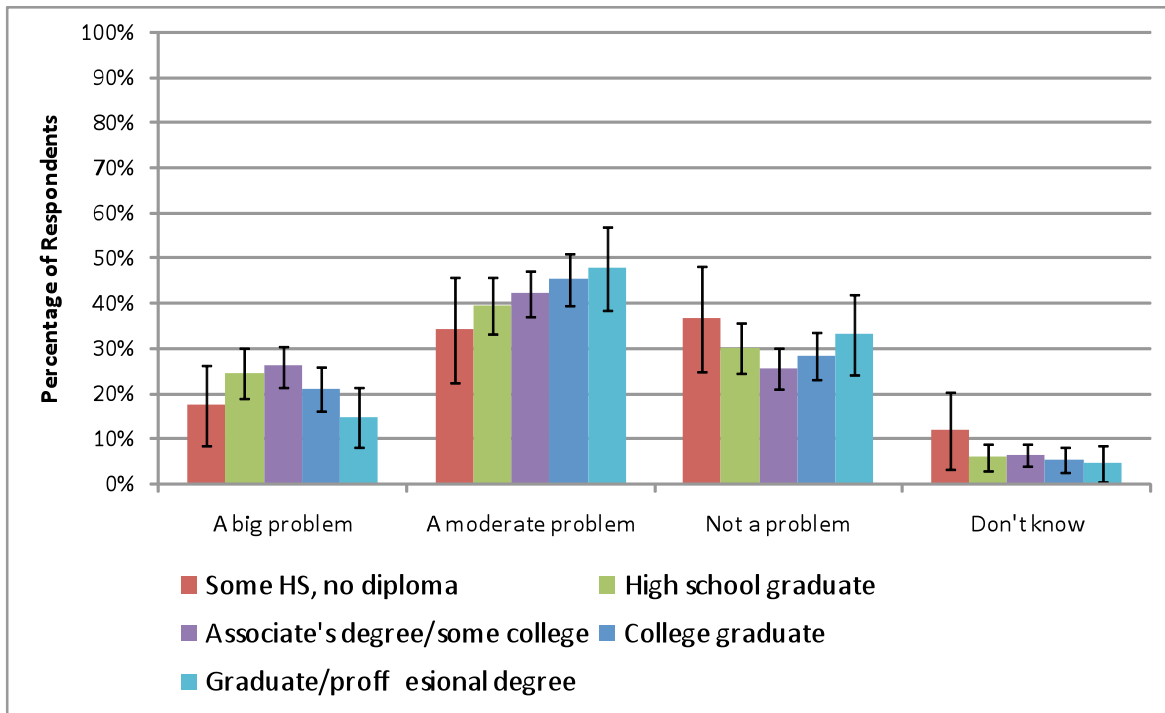


Figure H22. Age category by awareness of the dairy industry (Chi-square = 33.7155, d.f. = 12, p = 0.0038)

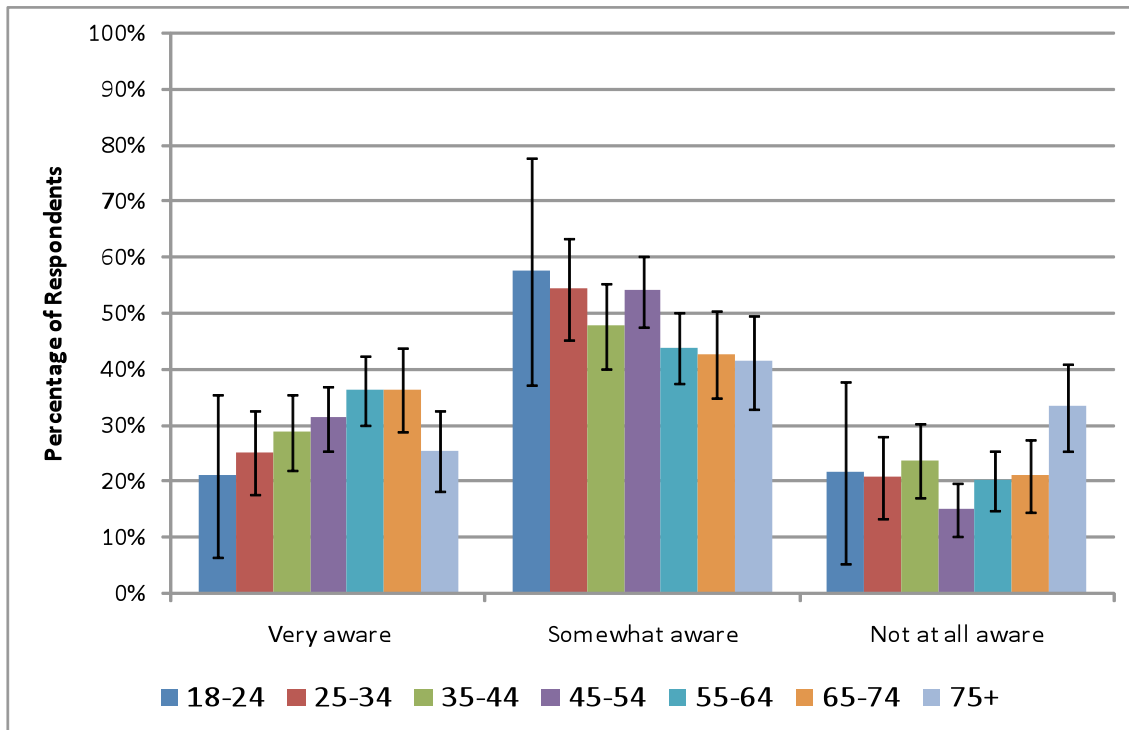


Figure H23. Education by awareness of the dairy industry (Chi-square = 27.5799, d.f. = 8, p = 0.0032)

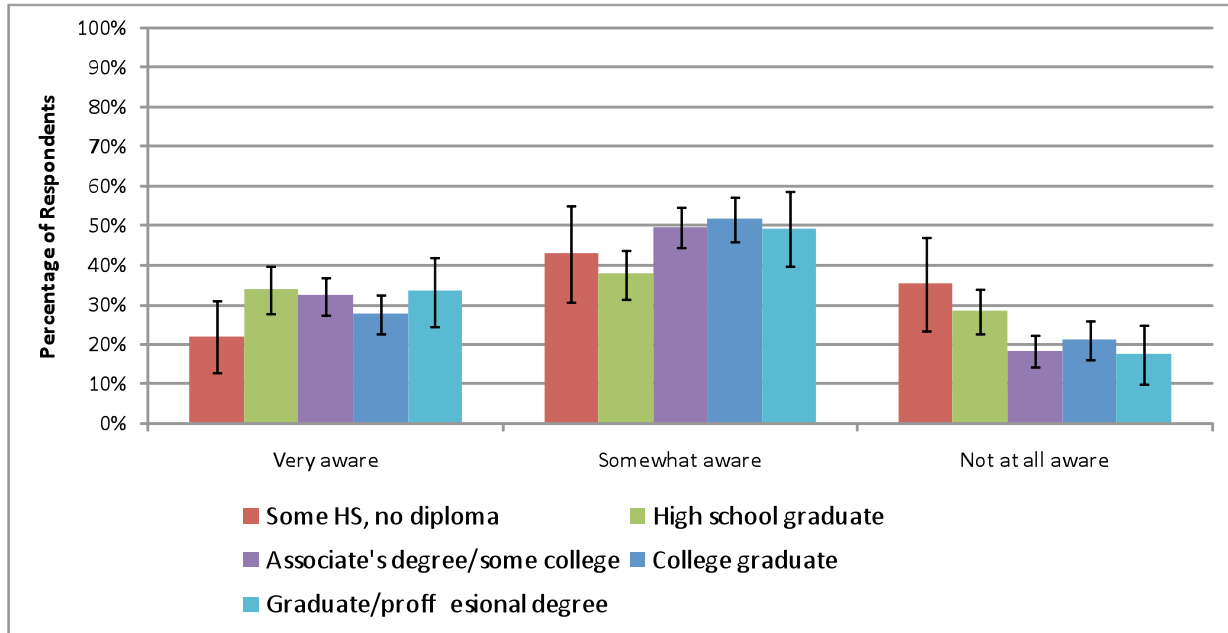
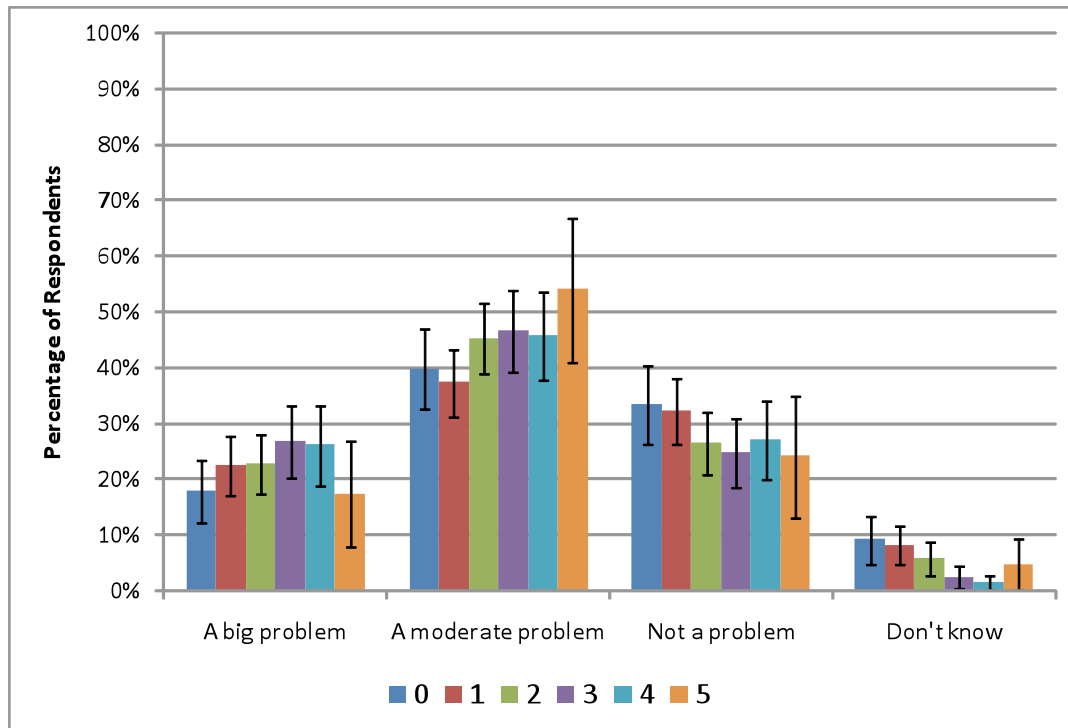


Figure H24. Degree of association with farming by whether or not illegal immigration is a problem in their area⁸ (Chi-square = 34.5672, d.f. = 15, p = 0.0157)



⁸ Degree of association corresponds to how many times the respondent answered 'yes' to questions 40-44; someone with a score of zero has no economic or personal relationship to farming and someone with a five has very strong economic and personal ties to farming

Figure H25. Degree of association with farming by whether the dairy industry brings more costs or more benefits (Chi-square = 28.2974, d.f. = 15, p = 0.0889)

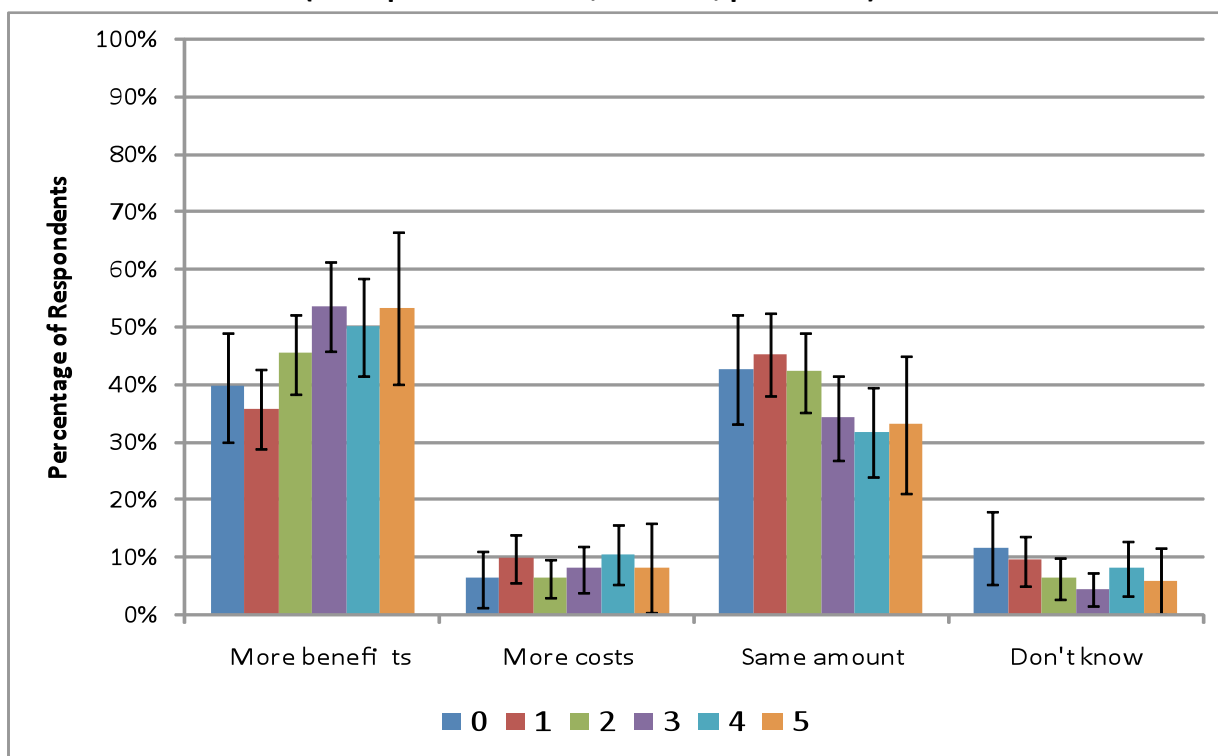


Figure H26. Degree of association with farming by whether or not the dairy industry's need for laborers leads to illegal immigration (Chi-square = 49.0285, d.f. = 15, p = 0.0007)

