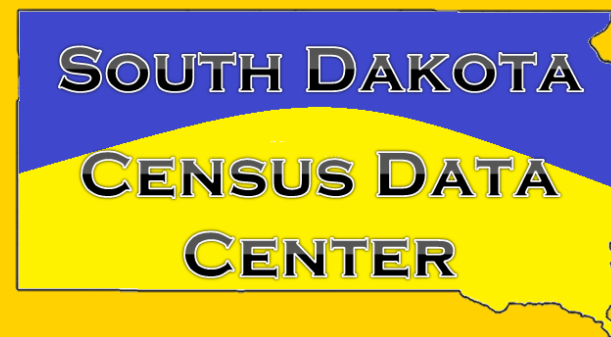




South Dakota State University



# Asking the Right Questions

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June 12, 2014

Brookings, SD

# The Census Data Center Works to Provide Answers

- We take questions from all parts of South Dakota and in relation to a great many topics.
- We try to find answers from a variety of sources that most closely meet the needs and expectations of the questioner.
- Sometimes the questions that come into the Data Center cannot be answered in the way that they come in.

# Some Data Sources

- US Census Bureau
  - Decennial Census
  - American Community Survey (ACS)
  - County Business Patterns
- Census of Agriculture
- Bureau of Labor
- South Dakota Department of Labor and Regulation
- South Dakota Department of Health

# Census Research as the Art of the Possible

Much of this comes down to how you are asking your question and how attached you are to specific definitions that may or may not be in the available data.

Decennial Census Data is collected and available every 10 years.

ACS Data is collected on an ongoing basis with geography and questions to follow the larger decennial census.

Other Data products have their own schedule.

# What Does the Collection Cycle Have to Do With It?

- Quite a bit actually
  - Every ten years the geographies get revamped, so what is available may change based on local circumstances
    - Incorporation or Disincorporation of a municipality
    - Merging of counties
    - New geographies become available (ex. School Districts in 2010)
  - Similarly the questions being asked get looked at on the same cycle
    - Race has been looked at in every census since 1790 due to our history with slavery and its relation to politics, but ethnicity, separate from nations of origin, wasn't looked at until 1950 and has only been included in every census since 1970

# The Data Products Change

- The Census does and has long done more than just its Constitutionally mandated enumeration of the population.
  - The Census conducted a Census of Religion from 1906-1936  
(Public Law 94-521 prohibits the Census from collecting this data now)
  - The Census of Ag is done every 5 years in years ending in 2 and 7  
(New Census of Ag data was released May 2014)
- Non-Census data sets have their own unique cycles and collection practices particular to their purpose and funding.

# Ok, the Data Changes, So What?

This can have an impact on how we can provide answers and how the answers may change over time.

For example, if you needed to have a comparison of the change in time of the Hispanic population from 1930 to 1980, that is going to be a problem because the Census has not collected that data over the whole period.

# More, So What?

Some data points are simply not available, and in such cases we will work with you to get as close as possible.

For example, say you need the number of people living in poverty in 2013 for Day and Minnehaha Counties.

That this question has a couple of small problems, so how would we answer it?



# Poverty, for Example

The question is now, “How many people lived in poverty in Day and Minnehaha Counties in 2013?”

What are the issues we have with this question?

1. The most recent data we have is for 2012
2. That would be coming out of the ACS and we could get very current data for Minnehaha but not for Day counties due to the data collection practices of the ACS.

# More on Poverty

3. The data that we can get for Day counties is from the 2012 ACS 5-year estimates, so it would actually represent an average for the period 2008-12.
4. We could get data specifically for 2012 for Minnehaha counties, but that may create issues with comparisons with the Day county data. That depends on what you are doing with it.
5. The Margin of Error for Day county may be quite large (More on MOE later).

# So How Would We Answer that Question?

After consulting with the requester on their specific needs, we would most likely give the figures from the 5-year estimates for Minnehaha and Day counties with cautions about the MOE and timeframe involved.

That being said, another issue that might creep in is if you need data at a specific poverty level that is not in the data. Anyone need poverty at 130% for a grant application?

# How About a Real Question

Last year, a long-time citizen of South Dakota mailed in a question to the Data Center that was not actually possible to answer with data that is available from public sources.

The Question:

“What percentage of people between the ages of 18 and 65 make their living from farming compared to other workers in South Dakota, Moody County, and East River”

Sounds easy, right?

# The Not So Easy Question

This question came in the mail without a phone number or email address, so there wasn't an opportunity to ask the questioner for any clarification, so I set about to answer it the best I could.

Issues abound with this question. What are some of them?

1. What do you mean by earn their living? All of it? Most of it? Do you mean in terms of dollars earned, time worked, or how they consider themselves?
2. What about people who work on and off farm?

# More Issues

3. Census of Ag data youngest age category is “less than 25”, so we cannot get to 18.
4. The Census does not tabulate data based on West or East River.
5. The most current Census of Ag was from 2007, what do we compare that to for total population?
6. Where do we get numbers of non-farm workers for comparison?

# How Did We Answer It?

“In the end, given the data and the nature of your question, it would be difficult for someone to refute the statement that between 3-6% of workers in South Dakota derive their income from tilling the soil.”

	South Dakota	East River	Moody County
Number of Farmers	31,169	22,865	556
Estimated Number of Primary Farmers	19,080	13,840	384
South Dakota Employees	328,411	250,064	1,743
Estimated Percent Farmers	5.7%	5.4%	--
Estimated Percent Non-farmer workers	97.9%	98.1%	--
Number of Farmers under 65	22,935	16,981	420
Number of Farmers over 65	8,234	5,884	136

# Sources for That Answer

We used primarily the 2007 Census of Agriculture and the 2007 Business Patterns Survey.



# Redo of Question

Recently, knowing that the new Census of Ag was to be released, the questioner resubmitted his questions:

“What percentage of the workforce in South Dakota makes a living from farming or ranching?” And “What percentage of the workforce in Moody County[,] South Dakota makes a living from farming or ranching?”

# Redo of Question

- This question has some similar issues, but is much more answerable as written.
- We will likely look at the workforce as reported to the SD Department of Labor and compare that to the number of farmers in the 2014 census of Ag.
- But it still has issues that make it difficult to answer the question as written.

# Redo of Question

- While this question is more answerable, I do not expect the answer to have changed a great deal from the previous answer.
- I still expect that the answer will be somewhere between 3 and 6%.

# Another Question

How do I categorize a state as either rural or not?

First answer, “You don’t”

Second answer, “Let’s think about that”

# Rural or Not?

After discussion of the question we decided on a definition that was basically a ratio of the people that live in metro regions of a state to non-metro regions.

This conceptualization took the quite a bit of time to tabulate because of the need to separate out counties in metro regions that cross state lines.

# Is *That* Rural?

The answer is no. That student was actually defining rural basically as the complement of Metro/Micro area, which is problematic, but it was sufficient for the student's purposes.

That still begs the question then, “What is rural?” This is actually what, in one way or another we are often asked.

# What is Rural?

- Is it Metro/Micro vs. Non?
  - Or Metro vs. Micro vs. Non?
- Is it population density?
- Is it Beale codes?
- Is it Urban vs. Non
- Is the definition Ag dependent?
- Is the definition hidden somewhere in the 107 page report published by the USDA:  
*Report On The Definition Of "Rural"*
- Is it a matter space or a mindset?

# What is Rural?

Ultimately, it comes down to what you are trying to say and about whom you are trying to say it.

If this part of your “Question”, or a large part of your concern with the data you use, give us a call, and we will talk about your needs and figure out how to best meet those needs.

Sorry, no resolution to the question...



# Answering Questions with Public Data

- There is a great deal a researcher can investigate with public data
- As I said earlier, it ultimately comes down to how specific and committed you are to the precise wording of your question
- Any question can be answered with enough resources, but not always with public data

# Thank You

We are here to help you with your data needs.

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Rural Life and Census Data Center