July 2009

LUPR 09-01

Land Use and Planning Report

Colorado State University Extension

Department of Agricultural and Resource Economics, Fort Collins, CO 80523-1172
http://dare.colostate.edu/pubs

ECONOMIC BASE OF CUSTER COUNTY, SOUTH DAKOTA

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Introduction

This purpose of this report is to provide basic background and demographic information as well as regional economic analysis for Custer County, South Dakota. This information provides a good starting point for future community planning at the local level. However, it should be noted that this type of analysis is unable to capture certain aspects of the community such as quality of life, environmental and other social factors. Additional information from stakeholders at the local level is a crucial supplement to an economic base analysis when being used for planning at the local level.

The first part of this report provides background information on Custer County from secondary data, primarily from federal government agencies. Information is provided on population growth, employment, income as well as other relevant demographic information for the county. The second section provides regional economic analysis information for the county including a location quotient analysis, a shift-share analysis and baseline data from an input-output model.

Background and Demographic Information

Population and Households

Custer County, South Dakota is a rural county with a relatively low population level, which has been increasing in the past two decades. Population growth and changes in demographic trends are often important in terms of community and economic planning. This section provides background information on recent trends in population, demographic, and household data for Custer County.

Historically, the population of Custer County increased throughout the 1920s and 1930s, decreased from 1940 to 1970 and has been increasing since 1970 (Figure 1). Population growth has been considerable since 1990. The population increased by 18 percent during the ten year period between 1990 and 2000, and was estimated to have increased an additional 9 percent between 2000 and 2006. Population growth in Custer County has outpaced that of South Dakota and the United States as a whole. The total county population increased from 6,179 in 1990 to 7,275 in 2000 and was

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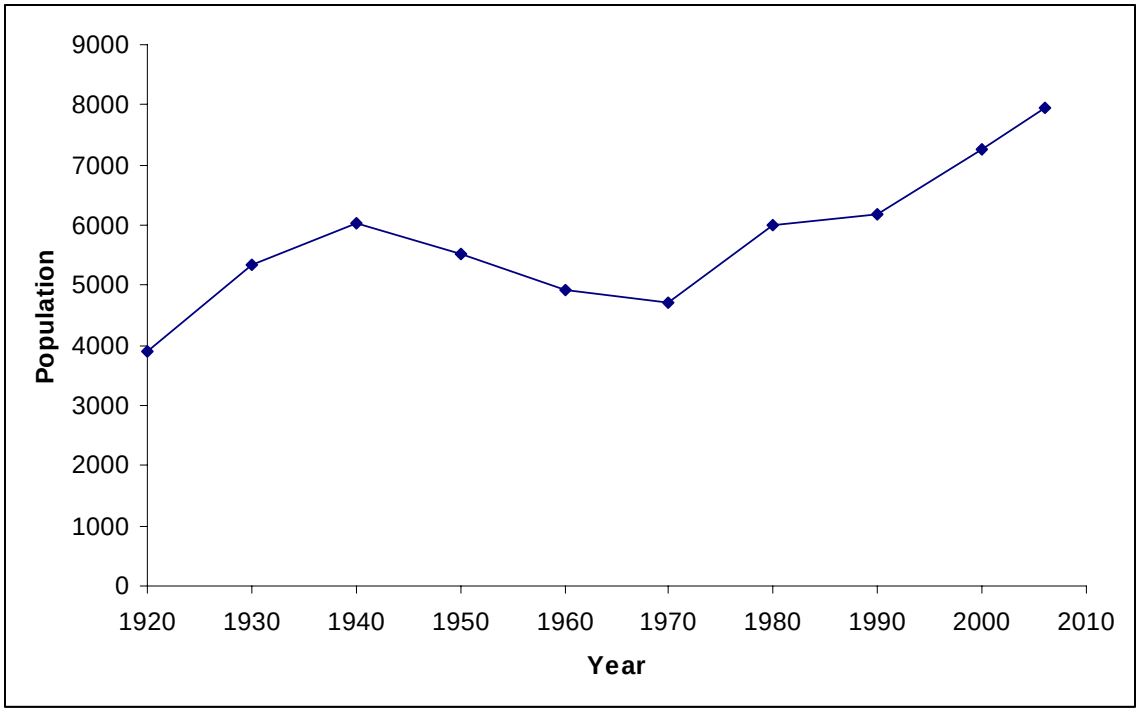

Figure 1: Historic Population Data for Custer County, South Dakota, 1920-2006

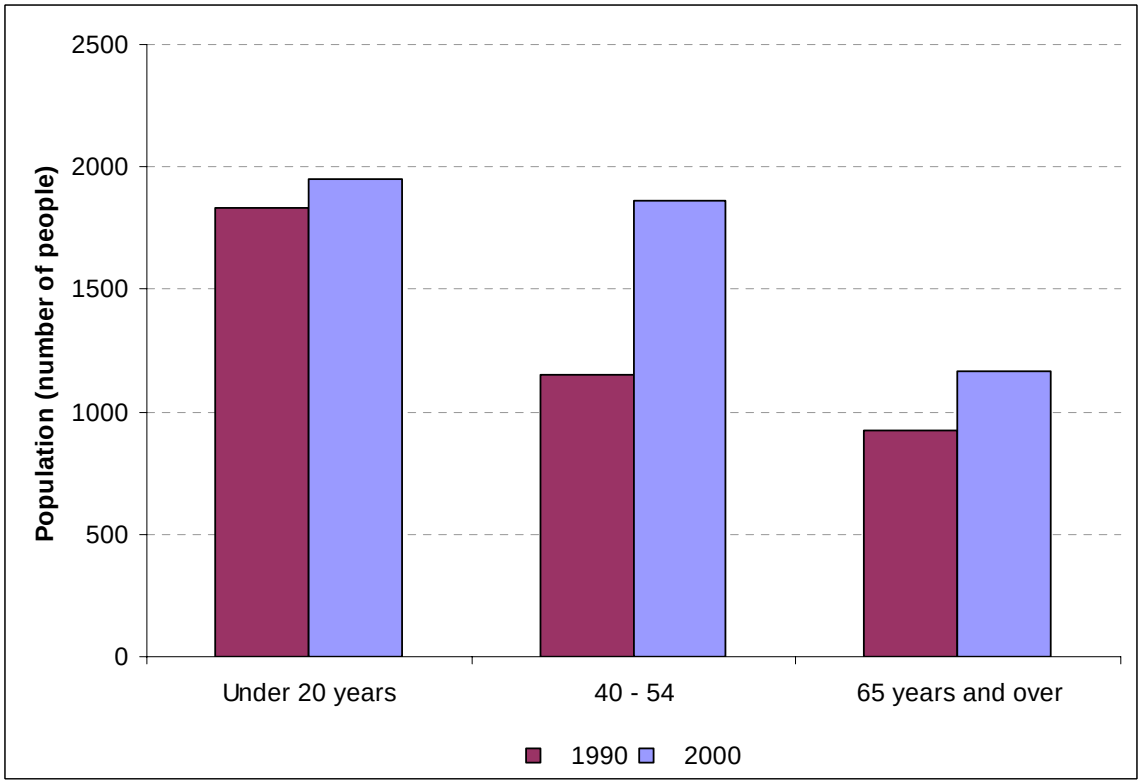

Figure 2: Population by Age Group, 2000 and 1990

an estimated 7,944 individuals in 2006. Based on 2001 data, Custer County ranked 25th out of 66 South Dakota counties in terms of total population size (US Census Bureau 2001).

The median age of the population increased from 1990 to 2000 as well, from 36.6 to 43.2 years. As shown in Figure 2, the 40-54 age group (or the baby boomer generation) had the largest increase in

population, followed by 65 years and over, and under 20 years. Population growth rates were 62 percent for the baby boomer generation, 25 percent for the 65 years and over age group, and 6 percent for the under 20 years age group. The large growth rates for the baby boomer and senior age groups indicate and influx of retirees into the county. This shift in demographics should be considered for future planning efforts in the county.

In terms of race, 94.2 percent of the population in 2000 was white, 3.1 percent was American Indian or Alaskan native, and 1.9 percent was listed as two or more races. All other racial categories were under one percent of the total. Hispanic or Latino residents made up 1.5 percent of the population.

Eighty-eight percent of Custer County residents age 25 and over have a high school education or higher. Twenty-four percent of the population has a Bachelor's degree or higher. These education levels are slightly higher than the South Dakota average, which indicates that 15 percent of state residents over 25 do not have a high school diploma and 22 percent have a college degree or higher.

According to U.S. Census data, there were 2,970 households in Custer County in the year 2000, with an average of 2.35 people per household. There were a total of 3,624 housing units in Custer County in the year 2000, with a 77 percent home-ownership rate. The home-ownership rate for the state of South Dakota in 2000 was somewhat lower at 68 percent. The median value of owner-occupied housing units in 2000 was $89,100, compared to $79,600 for the state of South Dakota. Rental occupied housing units made up 19 percent of the total housing units. The median gross rental rate for Custer County was $349.

Employment

Employment growth and the sectoral make-up of employment can have significant implications for economic development. In addition, unemployment rates and levels of seasonal employment can give an indication of the level and type of job growth that might be needed in the future. An assessment of employment by industry can provide information about an area's employment diversity which might indicate potential areas of economic vulnerability. This section provides background information about employment in Custer County that might be useful for future economic development planning.

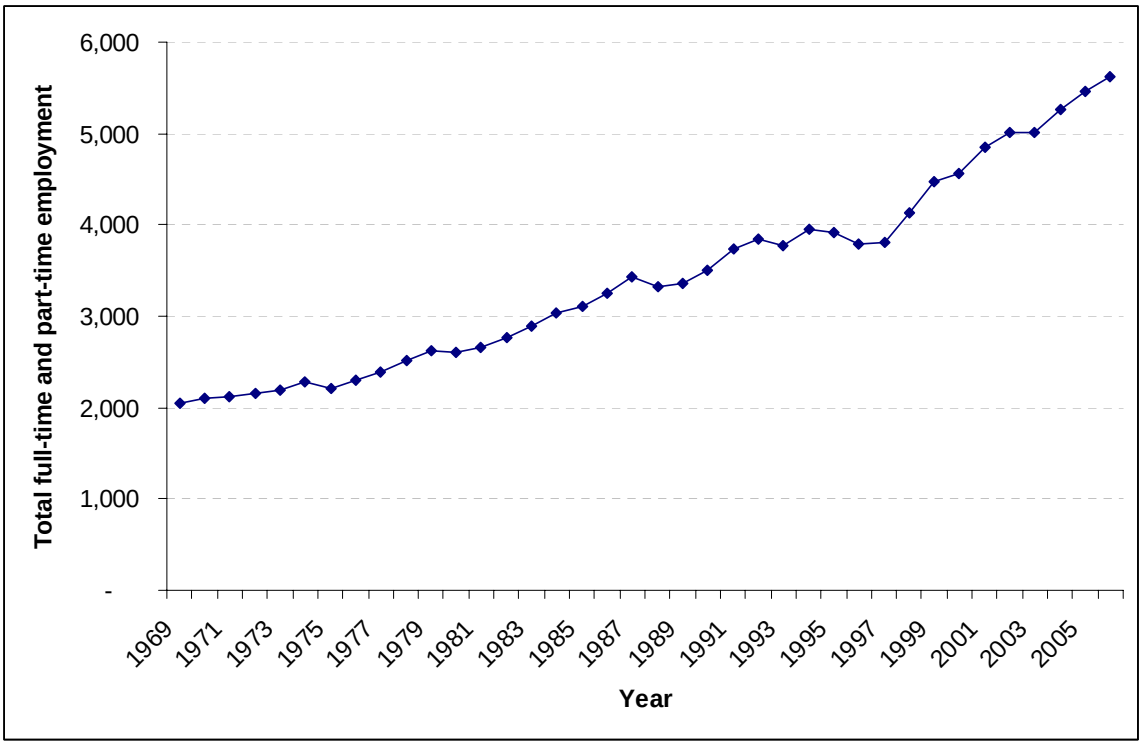

Figure 3: Full and part-time employment, 1969-2006

Employment has grown steadily for the past several decades. Full and part-time employment rose from 2,041 in 1969 to 5,618 in 2006 (Figure 3). This is an increase of 3,577 jobs over the 37 year time period. The majority (59 percent) of these additional jobs were proprietors (US Bureau of Economic Analysis 2009). On average, the annual employment growth rate was 2.8 percent. The unemployment rate for the county was 3.1 percent in 2006, very close to that for the state of South Dakota at 3.2 percent, and lower than the U.S. unemployment rate of 4.6 percent.

The majority of workers in Custer County worked year-round, with 57 percent working 50 or 52 weeks per year. There appears to be some seasonal employment in the county as well, with 31 percent of employees working less than 40 weeks per year. With nearly a third of workers employed less than 40 weeks per year, additional analysis related to seasonal employment in the county may be useful to determine if additional measures need to be taken to try to develop more year-round job opportunities in the county. Most workers in Custer County were full-time as well, with 75 percent of all workers in the county working 35 hours or more per week in 1999.

Figure 4 shows the top ten sectors in the county economy in terms of full and part-time employment (US Bureau of Economic Analysis 2009).[2] The largest sectors are government and government enterprises at 21 percent, and accommodation and food services at 18 percent. Construction makes up 15 percent of local employment, and the retail trade sector makes up 14 percent. The rest of the top ten sectors in terms of employment are real estate, arts, entertainment and recreation, administrative and waste services, manufacturing, forestry, fishing and other related activities, and finance and insurance. All other sectors individually make up less than 3 percent of the total employment.

Employment in Custer County is relatively diverse compared to other counties in South Dakota. Custer County has a specialization index of 735

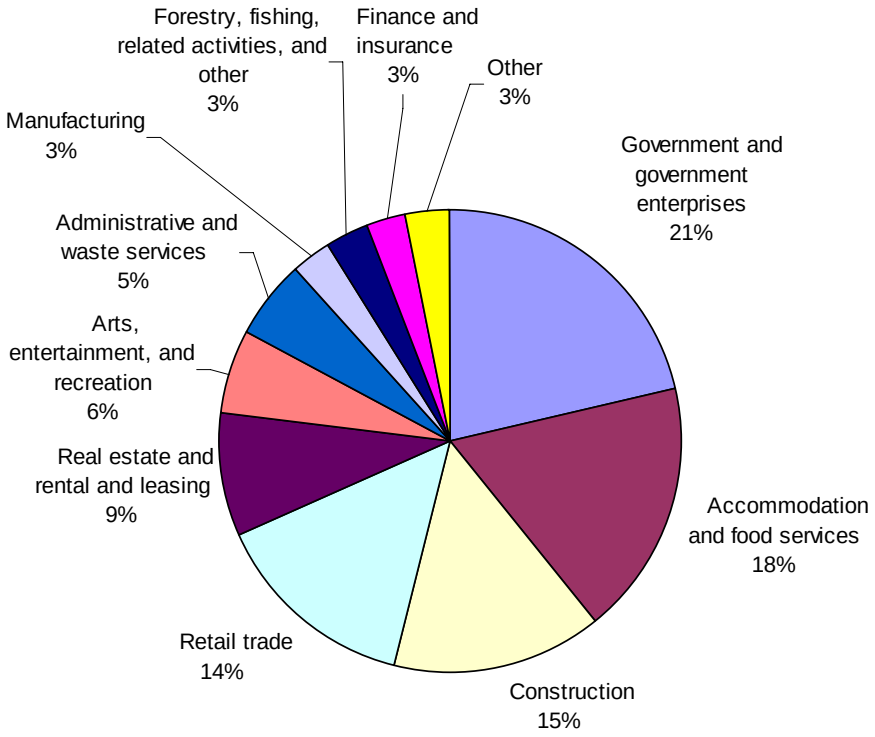

Figure 4: Top ten NAICS sectors for full and part-time employment

2 Some sectors are not included in the BEA data to avoid disclosure of confidential information. Those sectors are not reported in this analysis.

compared to a median index for all US counties of 961. A higher index value indicates a more specialized economy, meaning that Custer County is more diverse in terms of employment than most counties in the United States. In general, a more diverse economy would be expected to be a positive characteristic of a local economy. With greater diversity, a county should be able to more easily weather economic downturns in specific sectors of the economy and be more resilient overall.

Commuting

Most Custer County residents work inside the state of South Dakota, with only 3 percent traveling outside the state to work. Sixty-five percent of county residents remain inside the county for work, while 32 percent commute outside of the county to work. The fact that nearly a third of residents travel outside of the county for work may be a concern for county planning efforts in terms of tax revenues collected and expenditures on transportation and roads. Around 8 percent of residents work at home. The majority (84 percent) of residents travel by automobile to work, with 72 percent driving alone and 12 percent carpooling, and around six percent walk to work.

Income

Income levels are one measure of the general well-being of local residents. Average economic well-being can be measured by per capita and median household income levels but they do not provide information about distribution of income. This section provides several measures of income in Custer County to give a better idea of local economic well-being.

Custer County per capita income in 1999 was $17,945, very close to the per capita income of South Dakota at $17,562. This is slightly lower than the US average of $21,587. The median household income in 2004 was $41,412, slightly higher than the South Dakota median of $39,265. Approximately 10 percent of the population of Custer County was living below the poverty line in 2004 (US Census Bureau 2009).

Figure 5 shows the distribution of household income in Custer County in 1999. The largest percentage of households is in the $35,000 to $49,999 category, followed by $50,000 to $74,999. Most of the remaining households have incomes of less than $35,000 per year. Less than five percent of households have incomes of over $100,000 per year. This figure

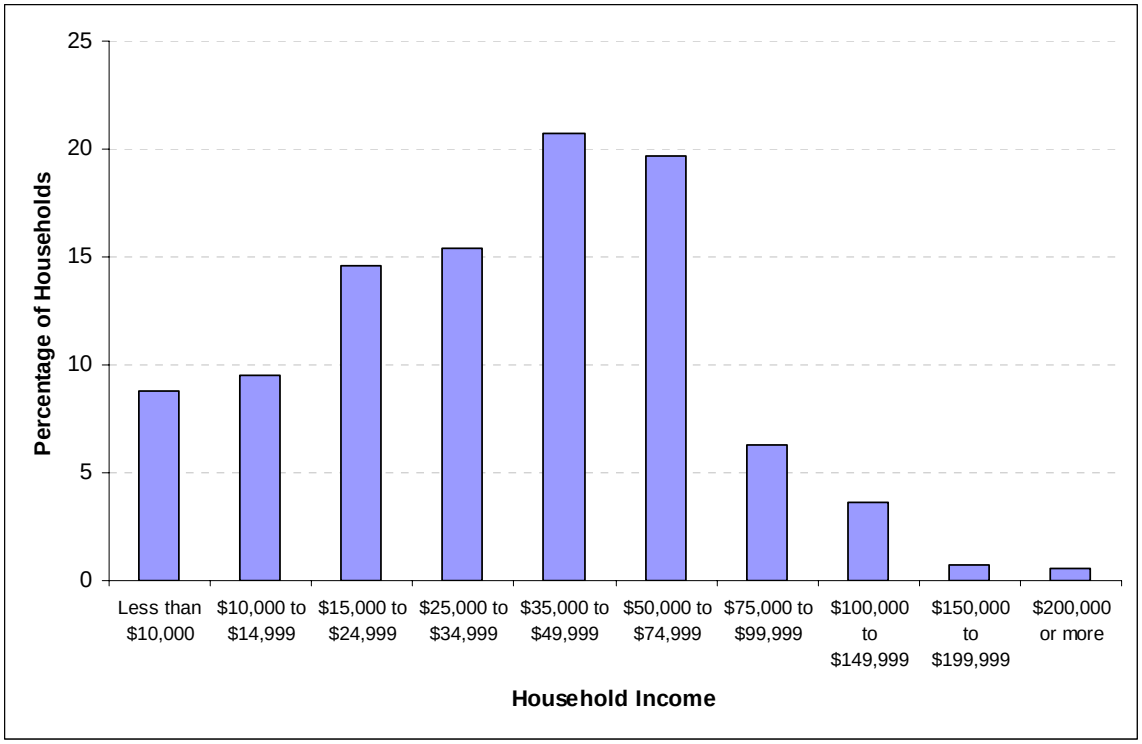

Figure 5: Household Income Distribution, 1999

shows that although most households tend to be near the median income level, around thirty percent of households are less well-off with incomes of less than $25,000 per year.

Data from the US Bureau of Economic Analysis shows that total personal income (in 2006 dollars) in Custer County has increased since 1969 (Figure 6). Total personal income is measured as private earnings plus income from government and government enterprises, dividends, interest, and rent, and transfer payments plus adjustments for residence minus personal contributions for social insurance. Personal income grew throughout the 1970s, remained relatively steady throughout the 1980s, declined briefly in the early 1990s and began increasing again beginning around 1995.

Historically, per capita income has also been increasing in Custer County since 1969 (Figure 6). The trend has been similar to that for personal income, with increases throughout the 1970s, stagnation throughout the 1980s, and a rebound beginning in the mid-1990s.

We can see from Figure 6 that both total personal income and per capita personal income are increasing in Custer County. The increase in per capita income in addition to total income indicates the increase in income is not only due to increasing population. The increase in per capita income provides evidence that residents are better off economically than they were in the past.

Regional Economic Analysis

Regional economic analysis gives additional information beyond what is provided in basic economic and demographic trends for a county. This section provides results from three different types of regional economic analysis: a location quotient analysis, a shift share analysis, and an input-output analysis. The information presented in this section provides additional information about the importance of different industries in terms of employment growth in Custer County.

Location Quotient

Location Quotients are often used in regional economic analysis in order to assess a region's specialization in different industrial sectors. A Location Quotient (LQ) compares a local or regional economy to that of a benchmark location (often at the national level). In this analysis, we will be calculating an employment LQ which compares the percentage of employment in a sector at a particular location (in this

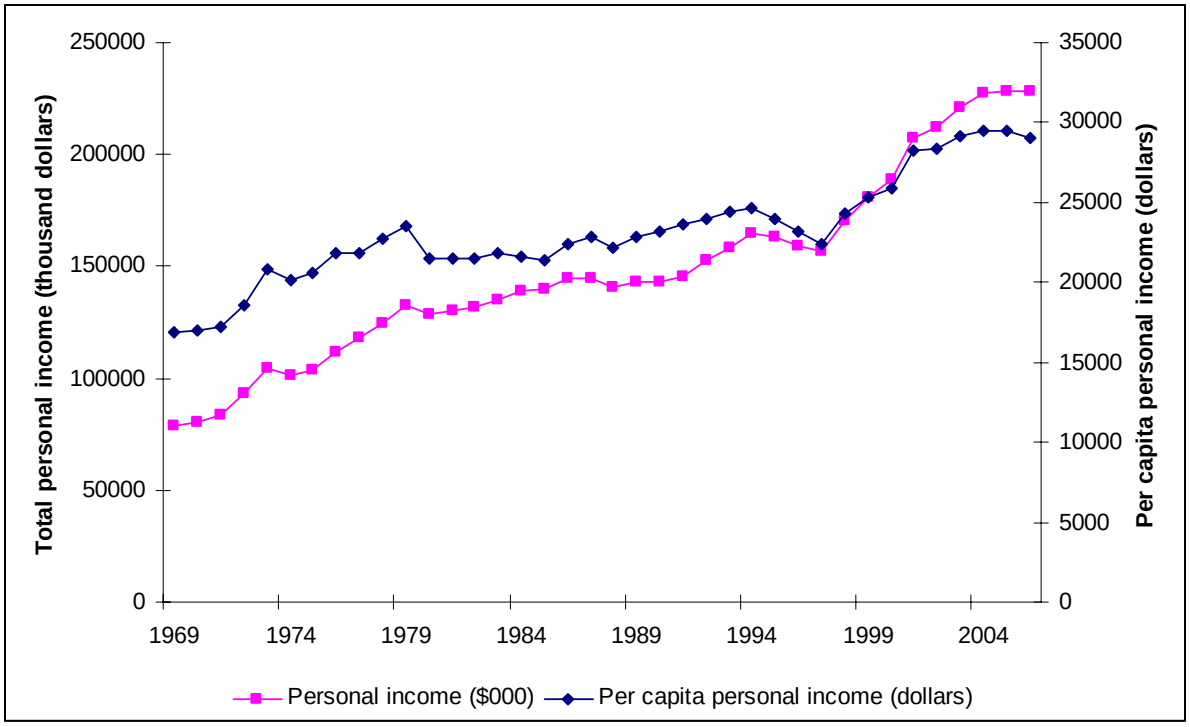

Figure 6: Total Personal Income and Per Capita Personal Income in Custer County, 1969-2006

case Custer County) to the percentage of employment in that industry for the United States as a whole.

The LQ shown in Table 1 is estimated as the percentage of Custer County employment in the particular industry divided by the percentage of employment in that industry for the United States. If the LQ is equal to one, Custer County has the same percentage of employment in the given industry as the U.S. average, if the LQ is greater than one, the percentage of employment in the industry is higher in Custer County than at the national level, and if the LQ is less than one, Custer County has a lower percentage of employment in the industry than the national average.

Six of the industrial sectors included in the analysis have a LQ of greater than one (Table 1). Forestry, fishing and related activities have a LQ of 3.59, mining has a LQ of 2.20, arts, entertainment and recreation has a LQ of 1.93, accommodation and food services has a LQ of 1.80, construction has a LQ of 1.59 and real estate, rental and leasing has a LQ of 1.37. The remaining 5 sectors, manufacturing, wholesale trade, retail trade, finance and insurance, and administrative and waste services all have a LQ of less than one.

The LQ can also be used to calculate export employment. We can determine the amount of employment that would be expected in a given industry in order for that sector to be self-sufficient by dividing the percentage employment at the regional level in a given industry by the percentage employment in that industry in the United States and multiplying that figure by the total employment in the county. By comparing these values to the actual employment in each industry at the county level, we can calculate the net import or export employment for the county.

Custer County is a net exporter of accommodation and food services, construction, arts, entertainment and recreation, real estate, forestry and fishing and mining. The net importing sectors include manufacturing, finance and insurance, wholesale trade and administrative and waste services. These sectors are producing less than would be expected based on the national average and must be imported from outside of the region. The results from the LQ analysis point to the importance of natural resources in Custer County's economy. The importance of forestry, fishing and mining point to the importance of the direct use of natural resources, while the importance of entertainment and recreation and accommodation and food services point to the importance of the tourism industry, which is also driven by natural resources in the county.

Shift-Share Analysis

Shift-share analysis is another type of regional economic analysis that is often used to look at historic changes in employment over time. The shift-share analysis breaks down the total shift, or historic change in employment over the time period, down into three different components. The national component represents the part of change in employment that is due to national growth. This figure shows what would have

Table 1. Location Quotient Analysis for Major Industries in Custer County

Industry	Location Quotient	Self Sufficient	Actual Employment	Import/ Export
Forestry, fishing, related activities, and other	3.59	32	114	82
Mining	2.20	28	61	33
Construction	1.59	363	576	213
Manufacturing	0.25	462	115	-347
Wholesale trade	0.30	205	61	-144
Retail trade	0.92	601	556	-45
Finance and insurance	0.39	265	103	-162
Real estate and rental and leasing	1.37	241	330	89
Administrative and waste services	0.63	335	210	-125
Arts, entertainment, and recreation	1.93	113	219	106
Accommodation and food services	1.80	375	675	300

happened in the industry if the area had grown at the same rate as the United States. The second component is the mix component. The mix component reflects the share of growth explained by the growth of a particular industry at the national level. The mix component would be larger if a region has a larger proportion of employment in faster growing industries. The competitive component shows an area's comparative advantage if particular facets of the area make certain industries more competitive.

Table 2 shows the three components of the shift-share analysis for Custer County, South Dakota. The national component reflects the 9 percent increase in employment that occurred at the national level between 1990 and 2000. The mix component shows the growth in a particular industry in Custer County compared to the national growth rate for that industry. A positive number indicates faster growth than the national average and a negative number indicates slower growth. Custer County had faster growth in the services, construction and agriculture, forestry and fisheries sector. Overall, the mix component was 10, indicating that Custer County had a slightly larger proportion of fast growing counties than the United States as a whole. The competitive component is related to any competitive advantage the region might have, i.e. growth that cannot be explained by the other two factors. In the Custer County analysis, Table 2 shows positive competitive component values for retail trade, services, finance, insurance and real estate, construction, and transportation and public utilities. Only the manufacturing sector has a negative value for the competitive component.

The total shift, or overall job growth, in Custer County between 1990 and 2000 was 1,064. The largest part of this growth comes from the competitive component. Overall, the services, retail trade, and finance, insurance and real estate are the industrial sectors with the largest gain in employment.

Input-Output Modeling

Input-Output (I-O) models are used to look at linkages between different sectors in a regional economy. I-O models are often used to estimate the overall economic effects of a particular policy change or other shock to the local economy. I-O models estimate three different types of economic effects: direct effects, indirect effects and induced effects. Direct effects are the effects that occur directly in the sector in which the shock occurred. Indirect effects are the result of linkages between different sectors. A shock that occurs in one sector is felt in other sectors that purchase inputs

Table 2. Shift Share Analysis for Custer County

	Custer County Employment			United States Employment (thousands)			Shift Share Analysis			
Industry	1990	2000	% Change	1990	2000	% Change	Total Shift	National	Mix	Competitive
Agriculture Services, Forestry, Fishing	52	(D)	-	1.45	1.93	32.72	-	5	12	-
Mining	65	(D)	-	1.04	0.5	-52.46	-	6	-40	-
Construction	182	291	59.89	7.26	8.80	21.20	109	17	22	70
Manufacturing	278	85	-69.42	19.69	18.29	-7.15	-193	26	-46	-173
Transportation and Public Utilities	120	186	55.00	6.55	6.74	2.89	66	11	-8	63
Wholesale Trade	31	(D)	-	6.72	4.67	-30.56	-	3	-12	-
Retail Trade	603	865	43.45	22.87	15.22	-33.49	262	56	-258	464
Finance, Insurance and Real Estate	139	308	121.58	10.72	8.94	-16.61	169	13	-36	192
Services	792	1443	82.20	38.67	60.65	56.83	651	74	376	201
Total	2262	3178	40.50	115	125.73	9.33	1064	211	10	817

or outputs from the affected sector. Induced effects occur from the introduction of households into the model. Households buy goods and services from certain sectors and receive wages from the sectors in which they are employed. If a shock occurs in a particular sector, it can have additional effects throughout the economy based on the additional impacts that occur on household spending.

The sum of these direct, indirect and induced effects makes up the total regional effects resulting from the particular policy shock being modeled. IMPLAN is an I-O modeling software that uses data on employment, payroll and output to allow researchers to assess particular policy shocks in a particular economy by estimating indirect and induced effects. Economic multipliers are used to estimate the interactions between different sectors and are calculated based on information about where an industry makes its purchases. These multipliers are often described as "ripple effects" in the sense that they show the ripples of any direct effects in a particular sector on other sectors throughout the economy.

Table 3 shows the baseline information for the Custer County I-O model using 2007 data. The total industry output was $378 million in 2007. The major industries in terms of output include manufacturing, construction, professional services and agriculture, forestry, fishing and hunting. Total employment in 2007 was 4,456, with the most employment in the manufacturing sector, followed by construction, information and finance and insurance.

Summary

Custer County, South Dakota is a rural county with relatively low population levels. Population growth in the county has been increasing during the past few decades, however. Between 1990 and 2000, the county's median age has increased, as population growth in the baby boomer generation was particularly large. This influx of retirees and older residents to the county may have significant implications for county services that are required and possible changes in the local tax base.

Per capita income levels were similar to the state average. Employment in Custer County is largest in the government, accommodation and food services, construction, and retail trade sectors. Additional regional analysis indicates that forestry and fishing,

Table 3. Output, Employment and Value Added Summary from Input-Output Model

Industry	Industry Output*	Employment	Employee Compensation*	Proprietor Income*	Other Property Income*	Indirect Business Tax*	Total Value Added*
Ag, Forestry, Fish & Hunting	28.0	347.5	1.4	0.9	6.4	0.8	9.5
Mining	14.9	100.1	1.9	2.7	2.0	0.3	6.9
Utilities	19.4	22.1	1.6	2.4	7.6	2.3	14.0
Construction	65.9	607.1	5.3	10.7	2.8	0.3	19.2
Manufacturing	106.9	971.1	13.3	11.1	23.2	7.9	55.5
Wholesale Trade	0.4	2.9	0.0	0.0	0.0	0.0	0.1
Transportation & Warehousing	25.0	283.8	11.1	1.0	1.2	0.2	13.4
Retail trade	20.8	345.6	6.3	0.9	3.4	1.7	12.3
Information	23.2	491.0	5.1	1.6	1.8	1.1	9.5
Finance & insurance	18.3	418.8	9.2	0.0	-0.8	0.4	8.8
Real estate & rental	5.6	30.1	1.4	0.0	0.6	0.0	2.0
Professional- scientific & tech services	49.9	836.6	44.3	0.0	5.6	0.0	49.9
Totals	378.2	4456.4	100.9	31.4	54.0	14.8	201.1

*Millions of dollars

mining and construction are all important sectors in the regional economy. These sectors seem to point to the importance of natural resources in the local economy, both in terms of traditional industries as well as an increase in the construction and services sectors that is likely driven by population growth and tourism in the county.

As noted in the introduction, while this report provides basic background and economic information that is useful in community planning, input from different stakeholders and additional local level information is crucial in developing future long term economic plans. Community planning should be inclusive of all stakeholders, and efforts should be made to reach collaborative decisions about community goals and objectives for future development. Factors not included in this report such as quality of life and environmental quality should also be considered in any long term planning process.

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