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Sam Cordes

University of Nebraska - Lincoln, scordes1@unl.edu

Evert Van der Sluis

South Dakota State University, Brookings, SD

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**THE CONTEMPORARY ROLE OF THE FEDERAL
GOVERNMENT IN THE GREAT PLAINS ECONOMY:
A COMPREHENSIVE EXAMINATION OF FEDERAL
SPENDING AND RELATED FISCAL ACTIVITIES**

Sam Cordes

*Department of Agricultural Economics
58 Filley Hall
University of Nebraska-Lincoln
Lincoln, NE 68583-0947
scordes1@unl.edu*

and

Evert Van der Sluis

*Department of Economics
Box 504 Scobey Hall
South Dakota State University
Brookings, SD 57007-0895*

ABSTRACT—The Great Plains economy is influenced much more by federal spending and taxation than is the nation as a whole. Results were generated from analyzing federal fiscal activities at three different levels: a state-by-state analysis, an analysis of the 478-county region, and an analysis by county category for two Great Plains states (Nebraska and South Dakota). In several Great Plains states, federal spending represents well in excess of 25% of the state's economic activity. Federal spending, especially farm program payments, are of particular significance to nonmetropolitan counties in the Great Plains. This level of federal dependency, coupled with recent and proposed changes in federal programs and policies, make this a critical time for Great Plains residents and their advocates and political leaders. Much additional research is needed to help inform the relevant constituencies regarding the scope and importance of federal programs to the Great Plains region.

KEY WORDS: economy, federal spending, Nebraska, policy, South Dakota, transfer payments

Introduction

Beginning with the Lewis and Clark expedition in 1804-06, the US federal government has historically played a major role in the life of the

Great Plains region. Subsequent events have included military campaigns, massive expenditures for military installations and national defense, the Homestead Act, the creation of Indian reservations, the Missouri River water development program, the establishment of national parks, historical monuments, and national grasslands, and the development of the interstate highway system. For the most part, such high-profile programs and events seem to be a thing of the past. Consequently, the role of the federal government vis-à-vis the Great Plains economy is often grossly underestimated or poorly understood. To be sure, there is a general awareness that federal farm programs may have a considerable impact on the health of the Great Plains farm economy. However, as we will show, farm programs payments are a relatively insignificant part of federal spending in the Great Plains.

Why is it important to have a better understanding of the role of the federal government in the economy of the Great Plains? The reasons are threefold. First, in the absence of a comprehensive understanding of the role of the federal government in the Great Plains economy, citizens and their elected representatives are not well positioned to understand and respond appropriately to either the full impacts of *proposed policy changes*, or the very different ways that Great Plains economies and communities may be affected compared to other parts of the country. For example, the friends, relatives, and elected representatives of an elderly person in North Dakota or Alaska will likely share a common view about the impact on that elderly person of some significant change in Social Security. However, the state-wide economic effect of such a change will be markedly different between the two states, as only 5.5% of Alaska's population is age 65 or over, while 14.4% of North Dakota's population is age 65 or over. In other words, Social Security is a major economic engine in North Dakota but not in Alaska.

Second, the federal government—even *in the absence of policy changes*—is part of the external environment that defines the economic challenges and opportunities that operate at the local level. Again, Social Security, a major source of retirement income, is a good example of the opportunities that can be capitalized on at the local level. Kimball, NE, for example, has implemented one such strategy by building a major retirement housing project and providing related services in order to promote itself as “a senior-friendly town.” A local spokesperson notes, “We have stopped the exodus of retired people from this community by giving them a reason to stay here. That has kept their wealth of knowledge, their leadership and financial skills right here at home” (Nebraska Rural Development Commission 1999:43). As another example, hospitals are often the largest single

employer in many Great Plains communities (Cordes et al. 1999) and the federal Medicare program is the economic lifeline that supports these hospitals (Mueller and McBride 1999). With the massive baby boomer population approaching Medicare eligibility, health care represent a major growth industry (Myers and Cordes 1998). Will Great Plains communities position themselves to benefit from this federally financed economic development opportunity? Communities like Kimball, NE, seem to have grasped the concept, but most Great Plains communities have not.

A third reason for gaining an improved understanding of the role of the federal government in the economy of the Great Plains is its intraregion diversity. For example, farm program payments will not have direct economic significance in those areas without agriculture or where the type of agriculture (e.g., livestock) falls outside the federal farm program structure. Improving our understanding of the differential effects *within the Great Plains region* is important. This will enable specific areas and sub-regions within the Great Plains to position themselves as they see fit with respect to the challenges and opportunities associated with federal policy and programs.

A major contribution of this paper is its analysis of federal spending at three different levels: state-by-state, metropolitan vs. nonmetropolitan for the entire region, and substate in the case of South Dakota and Nebraska. Specifically, we provide what is the most comprehensive description and analysis to date of the direct economic role of the federal government in the Great Plains economy. This analysis allows us to answer three critical research and policy questions: (1) Exactly how important are federal fiscal activities in the Great Plains states relative to the rest of the United States and as a proportion of the current Great Plains economy? (2) Within the Great Plains region, how does federal spending and its impact vary between metropolitan and nonmetropolitan areas? (3) What can be learned by examining federal spending within individual states, using Nebraska and South Dakota as examples, about the usefulness of substate analysis?

Data and Methods

One common delineation of the Great Plains is a 478-county-equivalent region (477 counties, plus one county-equivalent part of Yellowstone National Park) stretching eastward from the Rocky Mountains to include large portions of 10 states: North and South Dakota, Nebraska, Kansas, Oklahoma, Texas, New Mexico, Colorado, Wyoming, and Montana, and a

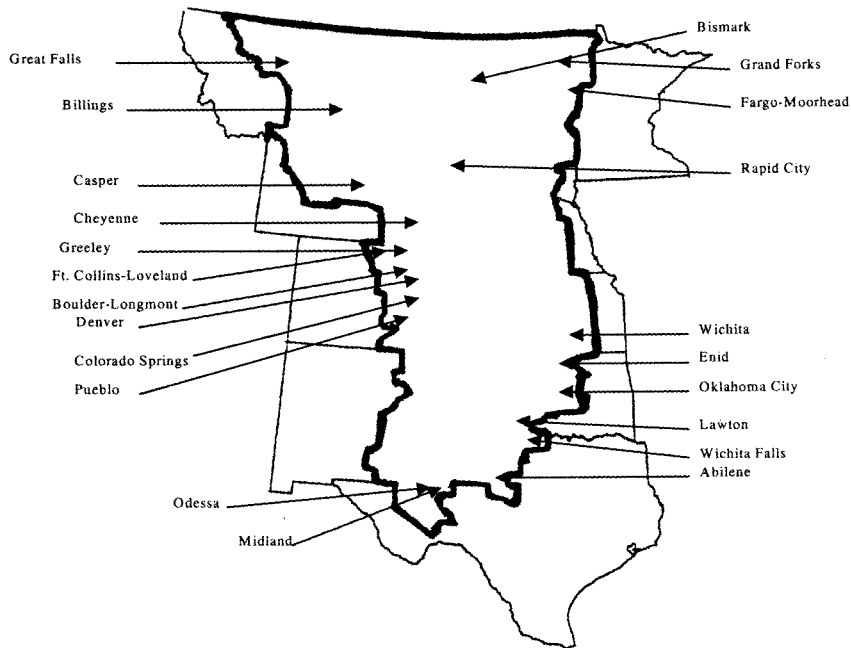


Figure 1. The US Great Plains region and location of metropolitan statistical areas. Source: Figure 3 in Rowley (1998) and US Department of Commerce (1992).

relatively small 10-county area in northwestern Minnesota (Fig. 1). The first research question addressed in this article (i.e., a state-by-state analysis) focuses on these 10 states. Minnesota was not included in the analysis because the Great Plains portion of that state constitutes a very small component of the state as a whole. With respect to the second research question (i.e., metropolitan and nonmetropolitan differences), the entire 478-county-equivalent region is analyzed. Finally, when exploring differences by county category (i.e., the third research question), Nebraska's 93 counties and South Dakota's 66 counties become the building blocks for the analysis. These two states were used simply to illustrate the importance of substate analysis and one approach for undertaking such an analysis.

The data used for the first two research questions were synthesized and summarized from existing published studies. The third research question involved original research and analysis using the most recent secondary data available. As a consequence, the data used for the third research

question are more recent than those that were available in the published work that we synthesized and summarized to answer the first two research questions. When possible, we attempt to rationalize differences associated with the different time periods.

Definitions of important terms and concepts (e.g., the metropolitan and nonmetropolitan distinction, and the different “types” of federal expenditures) are provided as part of the analytic framework and reporting of results. Limitations of the data and analysis are also discussed as the analysis and results are presented.

Analysis and Results

Research Question 1: State-by-State Analysis

The data presented in this section (Tables 1-3) illustrate the relative importance of federal fiscal activities in the Great Plains states. In fiscal 1997 the federal government spent nearly \$1.4 trillion that could be clearly traced to one or more of the 50 states (see Table 1). Approximately \$174 billion in federal funds was spent in the 10 Great Plains states. Excluded from these amounts were unreported federal expenditures (e.g., expenditures of the Central Intelligence Agency) and dollars that could not be traced or allocated to a particular state (e.g., interest on the federal debt and foreign aid). The table also shows that per capita federal spending ranged from a low of \$4,544 in the case of Texas to a high of \$7,192 in the case of New Mexico in 1997. Six of the 10 Great Plains states were above the national average of \$5,133 in per capita federal spending.

These per capita figures do not, however, allow one to gauge the importance of federal spending relative to each state’s economy. A standard economic approach for answering this question is to compare per capita federal expenditures to per capita personal income. Nationally, per capita federal spending relative to per capita income stood at 20.3% in 1997. In six of the 10 Great Plains states (Montana, New Mexico, North Dakota, Oklahoma, South Dakota, and Wyoming) federal expenditures as a percentage of total personal income significantly exceeded that of the nation as a whole, ranging from 24.4% in the case of Wyoming to 37.3% in the case of New Mexico. This means the economies of these six states are substantially more dependent on federal spending than is the nation as a whole. Moreover, the contribution of federal funds to total personal income in the remaining four Great Plains states was only slightly below the national average, ranging from 18.7% in the case of Colorado to 20.1% in the case of Kansas.

TABLE 1

PER CAPITA FEDERAL EXPENDITURES AS A SHARE OF PER
CAPITA PERSONAL INCOME, US AND GREAT PLAINS STATES,
FISCAL YEAR 1997

	Total federal expenditures, fiscal 1997 (million dollars)	Per capita federal expenditures, fiscal 1997 (dollars per capita)	Per capita personal income, calendar 1997 (dollars per capita)	Federal expenditures in relation to personal income (%)
Colorado	19,702	5,061	27,015	18.7
Kansas	12,507	4,820	23,972	20.1
Montana	5,132	5,840	19,660	29.7
Nebraska	7,809	4,713	23,618	20.0
New Mexico	12,441	7,192	19,298	37.3
North Dakota	4,331	6,758	20,103	33.6
Oklahoma	17,317	5,221	20,305	25.7
South Dakota	4,149	5,622	21,076	26.7
Texas	88,332	4,544	23,707	19.2
Wyoming	2,643	5,509	22,596	24.4
10 States	174,363	4,937*	23,316*	21.2*
United States	1,370,978	5,133	25,288	20.3

Sources: Federal expenditure data are from Tables 1 and 2 in Duggan and Andersen (1998:33-36). Per capita income data are taken from US Department of Commerce (1999).

*Based on total population of entire region, not a simple unweighted average of the ten states.

The federal government divides its spending activities into the following five "types" of expenditures, and it is instructive to examine spending across these categories (Table 2):

1. Direct payment to individuals. This is by far the largest single category and includes expenditures for Social Security, Medicare, the food stamp program, veterans benefits, unemployment insurance benefits, student loans, and other programs.
2. Grants and loans to state and local governments, including funds for Aid to Families with Dependent Children (now called Family Support Program), Medicaid, community development block grants, economic development, energy assistance, highways and airports, and a variety of other programs.

TABLE 2

PER CAPITA FEDERAL SPENDING BY TYPE OF EXPENDITURE,
US AND GREAT PLAINS STATES, FISCAL YEAR 1997

	Per capita total federal expenditures	Direct payments to indi- viduals	Grants and loans to state & local governments	Procure- ment	Salaries and wages	Other programs*
Colorado	5,061	2,397	628	898	870	269
Kansas	4,820	2,808	624	381	612	394
Montana	5,840	2,873	1,128	296	677	867
Nebraska	4,713	2,646	741	314	588	424
New Mexico	7,192	2,705	1,244	2,043	922	277
North Dakota	6,758	2,852	1,676	357	897	974
Oklahoma	5,221	3,077	757	358	793	237
South Dakota	5,622	2,756	1,331	343	692	501
Texas	4,544	2,461	678	684	561	161
Wyoming	5,509	2,606	1,588	311	782	225
United States	5,133	2,893	830	632	569	208

Source: Tables 1 and 2 in Duggan and Andersen (1998:33-36).

* Includes farm program payments.

3. Procurement, which represents the purchases of goods and services by the various federal agencies.
4. Salaries and wages paid to both civilian and military employees of the federal government.
5. Other programs, including spending for agricultural programs, the arts, and research.

Although all five types of expenditures affect local and statewide economies, they likely have specific differential impacts. For example, Reeder et al. (1996) argue that

Salaries and wages of Federal employees directly stimulate the local economy, and in many cases, they may be associated with services that benefit the local economy. Procurement contracts also tend to directly benefit the local economy, though in some cases, subcontracting may divert the economic effects to other areas.

Retirement and disability payments and other direct payments to individuals provide some stimulus to the local economy, though some of these payments may be spent elsewhere or saved by the individuals receiving payments. Most of the grant and loan programs should significantly affect local economic development, since many assist local governments and businesses. Grants are worth more to recipients than loans because they do not require repayment.

Table 2 shows that only one of the Great Plains states—Oklahoma—ranks above the national average with respect to the large category of “direct payment to individuals.” On the other hand, only one state in the Great Plains—Texas—falls below the national average in the case of “salaries and wages” and “other programs.” This relatively greater dependence of all Great Plains states, except Texas, on “other programs” is likely caused by the inclusion of agricultural price and income support programs in that particular category. In the case of North Dakota and Montana, per capita expenditures on “other programs” is more than four times the national average.

Half of the Great Plains states (Montana, New Mexico, North and South Dakota, and Wyoming) are also considerably above the national per capita average with respect to “grants and loans to state and local governments.” Only three of the Great Plains states—Colorado, New Mexico, and Texas—are above the national average with respect to per capita spending for the “procurement of goods and services.” In the case of New Mexico, per capita spending in this category is more than three times the national average.

Spending is, of course, only one side of the federal fiscal equation. The other side is taxes paid to the federal government. Table 3 provides a state-by-state analysis of the per capita tax burden and also a measure of “return on the federal tax dollar.” While the latter measure is somewhat imprecise, it does provide a rough gauge of the amount of federal taxes paid in relation to federal funding received. A ratio of 1.00 represents a state that receives as much federal funding as it pays in federal taxes. A ratio greater than one means that is a “net importer” of federal funds, and a ratio smaller than one means that it is a net “exporter” of federal funds. That is, a state with a ratio over 1.00 is sending fewer dollars to Washington, DC, in the form of federal taxes paid than it is receiving in terms of federal dollars flowing back to the state for the five types of expenditures noted above, and a ratio of less than

TABLE 3
PER CAPITA TAX BURDEN FOR US AND GREAT PLAINS STATES,
FISCAL YEAR 1997, AND RETURN ON FEDERAL TAX DOLLAR,
FISCAL YEARS, 1987-97

	Adjusted per capita tax burden*	Federal funds received per dollar federal taxes paid (1997)	Federal funds received per dollar federal taxes paid (average 1992-96)	Federal funds received per dollar federal taxes paid (average 1987-91)
Colorado	5,491	0.92	1.05	1.20
Kansas	4,855	0.99	1.05	1.09
Montana	3,903	1.50	1.42	1.46
Nebraska	4,819	0.98	1.05	1.17
New Mexico	3,778	1.90	1.96	2.12
North Dakota	4,132	1.64	1.47	1.61
Oklahoma	3,740	1.40	1.27	1.22
South Dakota	4,188	1.34	1.31	1.52
Texas	4,645	0.98	0.99	0.98
Wyoming	4,820	1.14	1.07	1.15
United States	5,133	1.00	1.00	1.00

Source: Tables 5 and 15 in Duggan and Andersen (1998:41-42, 61-62).

Note: "Return on federal tax dollar" is a somewhat imprecise measure of federal fiscal activity as it is influenced by both taxes paid and expenditures received. It is calculated by dividing per capita federal spending by adjusted per capita tax burden.

*Adjusted per capita tax burden accounts for deficit spending by making taxes equal to spending. It is calculated by multiplying unadjusted per capita tax burden by the ratio of total spending to total tax burden.

1.00 indicates that the state's federal tax payments exceed its receipts of federal funds.

Table 3 shows that in fiscal 1997, only a single Great Plains state—Colorado—had a per capita tax burden that exceeded the national average (\$5,491 compared to the national average of \$5,133). Four states—Colorado, Kansas, Nebraska, and Texas—were "net exporters" of federal revenues. However, the difference between taxes paid and revenues received for these four states—especially the latter three—was quite small. Hence, the ratio of funds received to taxes paid does not fall very far below the 1.00 threshold. In contrast, the remaining six Great Plains states were significant "net importers" of federal funds, with the "return on the federal tax dollar"

ranging from 1.14 in the case of Wyoming to 1.90 in the case of New Mexico.

On a historical basis, the positive balance of federal funds flowing into the Great Plains states is even more pronounced than in 1997. For example, during the 1987-91 and 1992-96 periods nine of the 10 Great Plains states had a positive flow of federal funds. Only Texas ran counter to this trend. However, the "rate of return" during the 1987-91 period tended to be higher than in the subsequent period of 1992-96. Oklahoma was the only state to experience an increase in its already positive rate of return over time.

Research Question 2: Metropolitan-Nonmetropolitan Differences

Table 4 relies on a recent analysis of Reeder et al. (1998) to examine how federal expenditures vary between metropolitan and nonmetropolitan counties within the 478-county-equivalent region described earlier. Metropolitan counties are those that have a place with a minimum population of 50,000 or an urbanized area with a total population of at least 100,000. Counties not meeting this definition are classified as nonmetropolitan. Using this approach, only 40 of the 478 counties in the Great Plains region are classified as metropolitan (Harrington and Dubman 1998). These 40 counties are associated with 22 metropolitan areas (Fig. 1) and were estimated to have a 1996 population of approximately 6.5 million people, or approximately 61% of the region's total population (Rathge and Highman 1998).

Table 4 reports that national per capita federal expenditures were \$4,973 in 1995. This amount is less than the figure of \$5,133 reported in Table 1. There are two reasons for the discrepancy. First, our analysis as reported in Table 1 is for fiscal year 1997 and the Reeder et al. data in Table 4 are for fiscal year 1995. Second, certain federal programs and expenditures that were included in the calculations underlying Table 1 are excluded from Table 4. For example, some programs report their spending at the national and/or state level, but not at the county level. Additionally, Reeder et al. (1998) excluded programs in which 25% or more of the programs' funding went to the county in which the state capital was located. It was reasoned that these programs are likely to be "pass through" funding that state governments then redistribute to local areas.

Table 4 shows that the average per capita federal expenditure for the 478-county Great Plains region exceeded the national average by \$474 (\$5,447 compared to \$4,973) in 1995. Both metro and nonmetro counties in the Great Plains exceeded the national averages of their counterparts, al-

TABLE 4
PER CAPITA EXPENDITURES AND SHARES OF FEDERAL FUNDS
BY TYPE OF EXPENDITURE, US AND GREAT PLAINS COUNTIES,
FISCAL YEAR 1995

Type of Expenditures	United States			Great Plains		
	Total	Metro	Nonmetro	Total	Metro	Nonmetro
All Expenditures	\$4,973	\$5,082	\$4,548	\$5,447	\$5,470	\$5,411
Share of Total Expenditures (%)						
Grants and Loans	22	21	22	22	20	26
Salaries and Wages	13	14	8	16	20	9
Direct Payments						
to Individuals	51	50	59	46	42	50
Procurement Contracts	14	15	7	12	17	5
Other Direct Payments*	1	0	2	4	1	10
TOTAL	100	100	100	100	100	100

Source: Figure 1 and Table 1 in Reeder et al. (1998, pp. 53 and 55).

Note: Not all columns sum to 100 due to rounding errors.

* Includes farm program payments.

though the difference was particularly pronounced in the case of nonmetro counties. Specifically, per capita expenditures in nonmetro counties of the Great Plains exceeded the national nonmetro level by \$863 (\$5,411 compared to \$4,548), whereas per capita federal expenditures for Great Plains metro counties exceeded those of the national average of metro counties by only \$388 (\$5,470 compared to \$5,082). On a related note, per capita federal expenditures varied only \$59 between metro and nonmetro counties in the Great Plains region, whereas nationally per capita spending in metro counties exceeded nonmetro spending by \$534.

Reeder et al. (1998) also allocate per capita spending in a proportional sense across five different types or categories of expenditures. The shares of total expenditures going to the five different categories do not differ markedly when the entire Great Plains region is compared to the nation as a whole. The greatest difference is the somewhat larger share nationally that is allocated to "direct payment to individuals" (51% compared to 46% for the Great Plains region). This difference becomes more pronounced as the

nation's metro and nonmetro counties are compared to their Great Plains counterparts. Fifty-nine percent of federal expenditures in the nation's nonmetro counties are for "direct payment to individuals," but the percentage is only one-half that in the nonmetro Great Plains counties. Nevertheless, as we stated earlier, the per capita dollar amount in the nonmetro counties in the Great Plains still exceeds the nonmetro national average. The other significant difference between the nation's nonmetro counties and those in the Great Plains is the much greater share of federal funding going to "other direct payments" in the nonmetro counties in the Great Plains (10% compared to 2%). This almost certainly reflects the relatively greater dependency of nonmetro counties in the Great Plains on agriculture (hence, greater farm program payments) relative to that of the nation as a whole.

Although the per capita amount of federal expenditures is almost identical between Great Plains metro and nonmetro counties, the allocation across types of expenditures varies considerably. These differences are most pronounced in four of the six categories. In the Great Plains, as well as nationally, a much larger share of per capita expenditures in metro counties, when compared to nonmetro counties, is for "salaries and wages" and "procurement contracts" (20% compared to 9%, and 17% compared to 5%, respectively). The relatively high proportion of "salaries and wages" in metro counties is likely influenced by the fact that it is the larger cities in the Great Plains where regional and district offices and administrative functions (hence, federal employees) of various federal offices and agencies tend to be concentrated. Also, major military installations are often located in or near urban centers (e.g., Omaha, NE; Rapid City, SD; Grand Forks, ND; and Colorado Springs, CO). In the case of "procurement contracts," much of the economic activity of the region is concentrated in the metro areas of the Great Plains, especially those types of economic activities that are likely to be sensitive to government procurement and contracts, such as manufacturing, wholesale trade, and transportation and distribution.

Conversely, nonmetro counties receive a larger share of federal expenditures in the form of "direct payment to individuals" and "other direct payments" than do the region's metro counties. This is likely due to the fact that nonmetro counties in the Great Plains tend to have a much higher proportion of elderly than do the metro counties. Also, recall that "other direct payments" are largely agricultural or farm program payments. Hence, it is not surprising that metro counties, unlike nonmetro counties, receive a relatively small proportion of their federal funds in this particular category.

Research Question 3: Analysis within States—The Case of Nebraska and South Dakota

In addition to state-by-state and regionwide analyses, it is also possible and desirable to undertake analysis within states. We illustrate one approach to such analysis using Nebraska and South Dakota as case studies, and we encourage other researchers to examine other Great Plains states.

Our analysis involves creating a county typology and then providing insights on two major types of federal expenditures: “government payments to individuals” and “farm program payments.” There are several reasons why we chose to focus on government payments to individuals and farm program payments for more detailed analysis. First, as was noted in the previous section, these two types of federal expenditures appear to vary quite dramatically in their importance between metro and nonmetro counties in the Great Plains. Second, “government payments to individuals” are by far the largest single type of federal expenditure. Third, “farm program payments” are more important in the Great Plains states than elsewhere. Fourth, it is within these two types of expenditure categories that major changes have occurred or are being contemplated. Specific examples include welfare reform, major changes in farm programs, a recent national bipartisan commission on the future of Medicare, and a high-level national debate on the Social Security program and prescription drug benefits for the elderly. Finally, Medicare and Social Security, the largest single program included in the category of government payments to individuals, will almost certainly grow as today’s baby boomers begin to retire en masse during the first decade of the 21st century. Obviously, where they choose to live and retire will have a major impact on local economies.

Government payments to individuals are subdivided by the US Department of Commerce (1998) into seven major categories. The first category is that of retirement and disability insurance programs, constituting 49.9% of “government payments to individuals” at the national level in 1997, and 55.8% and 53.9% in Nebraska and South Dakota, respectively. The largest single program in this category is Social Security, with 33.5% of total payments for the nation as a whole in 1997, and 41.6% and 40.0% in the case of Nebraska and South Dakota, respectively. The second category is medical payments, which includes Medicaid and Medicare, and which constituted 35.8% of total payments at the national level, and 32.7% and 32.1% in Nebraska and South Dakota, respectively. The third group is income maintenance programs, representing 9.1% of “government payments

to individuals” at the national level and 6.3% and 7.0% for Nebraska and South Dakota, respectively. This category includes Aid to Families with Dependent Children, supplementary security income, the food stamp program, and the earned income tax credit. Each of the remaining four categories—unemployment insurance programs, veterans benefits, federal education and training assistance, and “other” payments to individuals—represented less than 3.5% of government payments to individuals in the United States, Nebraska, and South Dakota.

To facilitate our substate analysis, we grouped Nebraska’s 93 counties and South Dakota’s 66 counties into five categories. The first group is that of metropolitan counties—six in Nebraska and three in South Dakota. The remaining 150 nonmetropolitan counties were then placed into one of the following four subcategories: counties containing a large trade center (i.e., with a city of at least 7,500)—13 such counties in Nebraska and nine in South Dakota; counties containing a small trade center (in which the largest city has 2,500-7,499 people)—21 such counties in Nebraska and eight in South Dakota; counties classified as “rural” (in which there is no town larger than 2,499 *and* the county population density is six or more persons per square mile)—25 such counties in Nebraska and 16 in South Dakota; and “frontier” counties” (in which there is no town larger than 2,499 *and* the population density is less than six persons per square mile)—28 such counties in Nebraska and 30 in South Dakota. Figure 2 shows the location of metropolitan counties and the four different types of nonmetropolitan counties in Nebraska and South Dakota.

Summary statistics for each of the county types in Nebraska and South Dakota are presented in Table 5. The table shows that population growth was greater in metro counties than in nonmetro counties in both states between 1990 and 2000. In both states, the most sluggish population growth occurred in the frontier and rural counties. Indeed, in the case of Nebraska both county types registered a population decline. South Dakota’s frontier and rural counties fared somewhat better but still had slower growth rates than the rest of the state’s counties. On the other hand, South Dakota’s poverty rate was significantly higher than Nebraska’s for each type of county. The proportion of individuals with incomes below poverty was particularly high in South Dakota’s frontier and rural counties—22.9% and 16.7%, respectively. In both states the incidence of poverty tended to increase with the degree of rurality. Similarly, per capita income tended to decrease as the degree of rurality increased. The per capita income in Nebraska’s metropolitan counties tended to be significantly higher than in

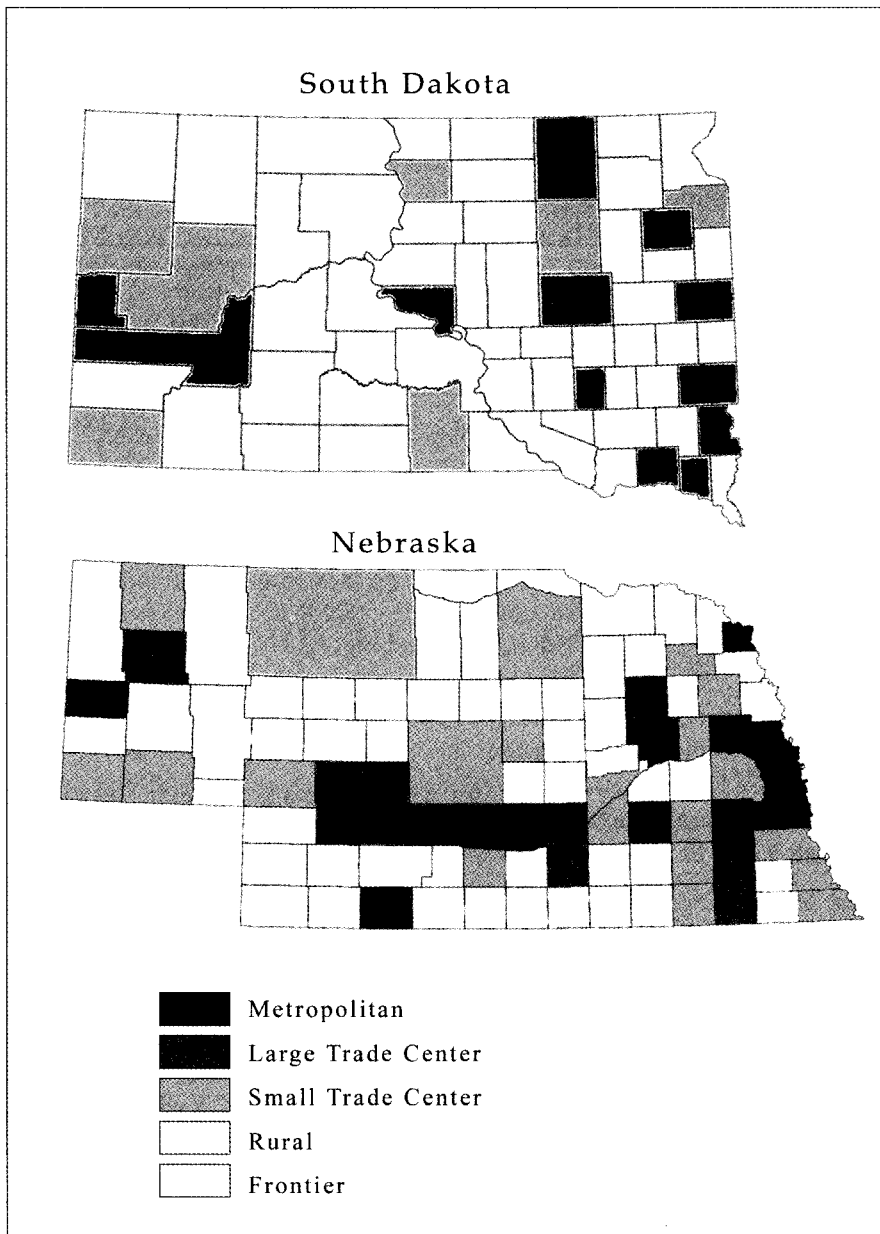


Figure 2. Location of county types for South Dakota and Nebraska. Maps by Sonja Rossum.

TABLE 5

SELECTED STATISTICS BY COUNTY TYPE,
NEBRASKA AND SOUTH DAKOTA

State	State Total	Metro	Nonmetropolitan				
			Total	Large trade center	Small trade center	Rural	Frontier
Nebraska							
Per capita personal income (\$)¹	27,047	30,632	23,136	24,284	22,828	21,900	20,034
Population density, 2000 (people per square mile)², ⁵	22.3	342.9	10.9	34.0	9.3	10.6	2.2
Population change, 1990-2000 (%)²	8.4	14.3	2.6	6.5	2.2	-2.5	-6.7
Poverty, 1997 (% of total population)³	9.6	8.8	10.5	10.3	9.9	11.1	12.4
Population of 65+, 1999 (% of total population)⁴	13.7	10.6	17.1	14.9	18.2	19.8	20.0
Farm employment, 1999 (% of total full- and part-time employment)¹	5.9	0.7	12.6	5.4	15.6	23.3	30.3
Total farm labor and proprietors' income, 1999 (% of TPI) ¹	3.3	0.3	7.7	4.1	10.0	13.4	9.8
South Dakota							
Per capita personal income (\$)¹	25,041	28,509	23,218	25,343	23,877	22,053	20,008
Population density, 2000 (people per square mile)², ⁵	9.9	62.7	6.9	19.3	8.3	9.4	2.6
Population change, 1990-2000 (%)²	8.5	18.3	3.9	6.2	3.5	3.1	0.7
Poverty, 1997 (% of total population)³	13.8	10.5	15.4	11.4	13.6	16.7	22.9
Population of 65+, 1999 (% of total population)⁴	14.4	11.3	16.0	14.5	16.2	18.0	16.4
Farm employment, 1999 (% of total full- and part-time employment)¹	7.6	1.5	11.6	4.6	12.1	16.6	23.5
Total farm labor and proprietors' income, 1999 (% of TPI)¹	5.5	0.9	8.4	3.5	7.8	13.1	15.0

Sources: 1. US Department of Commerce (2001c),
 2. US Department of Commerce (2001a), using years 1992 and 2002,
 3. US Department of Commerce (2001d),
 4. US Department of Commerce (2001b),
 5. U.S. Department of Commerce (1994).

South Dakota's metropolitan counties (\$30,632 compared to \$28,509). However, the same pattern did not hold when making cross-state comparisons of nonmetropolitan counties. The proportion of the population age 65 and over also tended to increase in both states as rurality increased. In Nebraska's frontier counties one in every five residents is at least 65 years of age. Table 5 also shows that, not surprisingly, the farm share of total employment increases with rurality. The share of farm income as a proportion of total personal income tends to follow the same pattern except in Nebraska's frontier counties, where the pattern is broken. Finally, it is noteworthy that the farm employment share of total employment exceeds the farm income share of total personal income in each of the county groups for both states.

Table 6 provides data for both states on "government payments to individuals" and "farm program payments." Note that the per capita "payments to individuals" for both states are substantially higher than what was reported earlier in Table 2. This difference is due to two reasons. First, expenditures were somewhat higher in 1999 than 1997. However, the second and more significant factor in the difference between the two tables is associated with how expenditures are handled for Medicaid and Aid to Families with Dependent Children. These two large programs involve federal funding that first goes to state governments, who then administer the funds and pass them along to individuals and families within their states. Hence, in Table 2 where the unit of analysis is the state, federal expenditures associated with these programs are included in the category "grants and loans to state and local governments." In Table 6 (and 7), in which the data are disaggregated by type of county, the federal funds for these two programs are included in "government payments to individuals."

Both South Dakota and Nebraska are often referred to as farm states. However, "farm program payments" are dwarfed by federal "payments to individuals" (Table 6) in these two states. Specifically, per capita "government payments to individuals" exceeded "farm program payments" by a factor of four in the case of Nebraska and by a factor of three in the case of South Dakota. Federal per capita "payments to individuals" is nearly identical in South Dakota and Nebraska (\$3,214 compared to \$3,231). However, per capita "farm program payments" are considerably higher in South Dakota than in Nebraska (\$1,018 compared to \$794). Hence, total per capita payments are somewhat higher for South Dakota than Nebraska (\$4,232 compared to \$4,024). Because South Dakota also has a lower per capita income, the role of both types of payments becomes more pronounced when

TABLE 6

GOVERNMENT PAYMENTS TO INDIVIDUALS AND FARM PROGRAM
PAYMENTS PER CAPITA IN NEBRASKA AND SOUTH DAKOTA, 1999

State	State Total	Metro	Nonmetropolitan				
			Total	Large trade center	Small trade center	Rural	Frontier
Nebraska							
Government payments to individuals	3231	2850	3646	3556	3574	3895	3839
Retirement and disability insurance benefits payments	1554	1302	1829	1753	1840	1926	2026
Medical payments	1250	1125	1386	1364	1331	1535	1341
Income maintenance	244	239	250	243	224	285	302
Unemployment insurance	29	25	34	36	29	34	35
Veterans benefits	110	113	107	115	102	94	111
Education/training assistance	41	44	38	44	46	18	21
Other payments to individuals	2	2	2	2	1	2	4
Farm program payments	794	76	1577	773	1677	2763	3318
Total payments	4024	2926	5222	4329	5250	6658	7158
South Dakota							
Government payments to individuals	3214	2733	3467	3143	3717	3562	3787
Retirement and disability insurance benefits payments	1506	1338	1594	1563	1735	1629	1510
Medical payments	1197	999	1301	1182	1433	1347	1378
Income maintenance	256	166	303	171	233	343	557
Unemployment insurance	21	16	23	17	23	27	31
Veterans benefits	130	142	123	96	228	98	125
Education/training assistance	41	30	47	86	30	19	17
Other payments to individuals	64	42	75	26	35	99	169
Farm program payments	1018	170	1464	706	1217	2019	2466
Total payments	4232	2903	4931	3849	4933	5582	6253

Source: US Department of Commerce (2001c).

considered in relation to personal income (Table 7). In terms of programmatic subcategories, one of the most marked differences is in the case of "other payments to individuals." The per capita amount for Nebraska is \$2, but that for South Dakota is \$64. This category includes Bureau of Indian Affairs payments, and South Dakota has a much larger American Indian population than does Nebraska.

Tables 6 and 7 further indicate that the sum of "government payments to individuals" and "farm program payments" are considerably more important for nonmetropolitan counties than for metropolitan counties in both Nebraska and South Dakota. This finding is true when considered from two different dimensions: the absolute level of per capita federal expenditures on these programs, and their expenditures in relation to per capita personal income. Specifically, Nebraska and South Dakota nonmetro counties received \$5,222 and \$4,931 per capita, or 22.6 and 21.2 cents out of every dollar of personal income, from the combination of "government payments to individuals" and "farm program payments" in 1999, respectively. In comparison, metro counties in Nebraska and South Dakota received \$2,926 and \$2,903 per capita, respectively, or 9.6 and 10.2 cents out of every dollar of personal income, from these two sources. The biggest contributor to these differences of more than \$2,000 per capita was the nonmetro-metro differential in "farm program payments." However, significantly higher per capita payments for retirement and disability programs and medical programs were also big contributors.

In addition to distinct differences in federal payments received by metro and nonmetro counties, other differences also exist. Within the nonmetropolitan counties of both states, total per capita federal payments increased as the degree of rurality increases (Table 6). This same trend held in the case of farm program payments and with retirement and disability program payments. Given the lower incomes as rurality increased, an even more pronounced pattern occurs when payments are examined in relation to per capita income (Table 7). Virtually every type of program payment increases in relation to per capita income as the degree of rurality increases. In both states, the economies of frontier counties are about twice as dependent upon federal payments as are nonmetropolitan counties containing large trade centers, and frontier counties are more than three times as dependent upon federal payments as are metropolitan counties. Approximately one-third of the per capita income received in frontier counties in both states is from the combination of "government payment to individuals" and "farm program payments."

TABLE 7

GOVERNMENT PAYMENTS TO INDIVIDUALS AND FARM PROGRAM
PAYMENTS AS A SHARE OF PER CAPITA PERSONAL INCOME BY
COUNTY TYPE, NEBRASKA AND SOUTH DAKOTA, 1999

State	State Total	Metro	Nonmetropolitan				
			Total	Large trade center	Small trade center	Rural	Frontier
Nebraska							
Government payments to individuals	11.9	9.3	15.8	14.6	15.7	17.8	19.2
Retirement and disability insurance benefit	5.7	4.2	7.9	7.2	8.1	8.8	10.1
Medical payments	4.6	3.7	6.0	5.6	5.8	7.0	6.7
Income maintenance	0.9	0.8	1.1	1.0	1.0	1.3	1.5
Unemployment insurance	0.1	0.1	0.1	0.1	0.1	0.2	0.2
Veterans benefits	0.4	0.4	0.5	0.5	0.4	0.4	0.6
Education/training assistance	0.2	0.1	0.2	0.2	0.2	0.1	0.1
Other payments to individuals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Farm program payments	2.9	0.2	6.8	3.2	7.3	12.6	16.6
Total payments	14.9	9.6	22.6	17.8	23.0	30.4	35.7
South Dakota							
Government payments to individuals	12.8	9.6	14.9	12.4	15.6	16.2	18.9
Retirement and disability insurance benefit	6.0	4.7	6.9	6.2	7.3	7.4	7.5
Medical payments	4.8	3.5	5.6	4.7	6.0	6.1	6.9
Income maintenance	1.0	0.6	1.3	0.7	1.0	1.6	2.8
Unemployment insurance	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Veterans benefits	0.5	0.5	0.5	0.4	1.0	0.4	0.6
Education/training assistance	0.2	0.1	0.2	0.3	0.1	0.1	0.1
Other payments to individuals	0.3	0.1	0.3	0.1	0.1	0.5	0.8
Farm program payments	4.1	0.6	6.3	2.8	5.1	9.2	12.3
Total	16.9	10.2	21.2	15.2	20.7	25.3	31.3

Source: US Department of Commerce (2001c).

Summary of Findings

The federal government, via its taxing and spending policies, plays a major role in the Great Plains economy. The significance of this impact can be measured in at least four different ways: (1) Per capita federal spending for both the Great Plains states and the region is *higher* than the national average; (2) the per capita tax burden for the Great Plains states is significantly *lower* than the national average; (3) a very high “rate of return on the federal tax dollar” accrues to the Great Plains states, meaning that the Great Plains is a major “net importer” of federal revenues; and (4) in several Great Plains states, federal spending represents well in excess of 25% of the economic activity of those states. A summary of other salient findings follows:

- While the Great Plains states experience a high rate of return on the federal tax dollar, it appears this rate of return has been declining in recent years.
- Per capita federal expenditures for both metropolitan and nonmetropolitan counties in the Great Plains region exceed by considerable amounts the national metropolitan and nonmetropolitan averages, respectively. However, the difference is particularly pronounced in the case of nonmetro counties.
- Per capita federal expenditures are nearly identical when comparing metro and nonmetro counties in the Great Plains region. This is substantially different from what is found when analyzing the nation as a whole, in that national per capita expenditures are much higher in metropolitan areas. This difference is likely explained by the greater dependency of nonmetro counties in the Great Plains on agriculture (hence, greater farm program payments) relative to the nation as a whole.
- Certain types of federal expenditures—namely, expenditures for “salaries and wages” and “procurement and contracts”—tend to favor the metropolitan counties in the Great Plains. Other types of expenditures, such as “direct payments to individuals” and “farm program payments,” tend to favor the region’s nonmetropolitan counties.
- From our analysis of two major categories of spending (“payments to individuals” and “farm program payments”) by different types of counties for Nebraska and South Dakota, several conclu-

sions can be drawn. Although both South Dakota and Nebraska are often referred to as farm states, federal per capita "payments to individuals" dwarf per capita "farm program payments." Despite demographic and socioeconomic differences between Nebraska and South Dakota, these states exhibit similar patterns regarding the way "government payments to individuals" and "farm program payments" are allocated among county groups. Whereas South Dakota is generally more dependent upon these two categories of federal expenditures than is Nebraska—especially as a proportion of personal income—the metro-nonmetro difference *within* each state is considerably greater than is the overall difference *between* the two states. The greater dependency of nonmetro counties is due largely to payments associated with the farm program, retirement and disability, and the medical programs. As the degree of "rural-ity" increases, so does dependency on these two categories of federal payments—both on a per capita basis and as a proportion of personal income. For example, "government payments to individuals" and "farm program payments" accounted for about one-third of the personal income in the frontier counties of these two states. This dependency on these types of federal payments in frontier counties is more than three times greater than that in the metropolitan areas of these two states.

Discussion

One of the purposes of this research was to provide the most comprehensive description and analysis to date of the direct economic role of the federal government in the Great Plains economy. In completing this task, at least five implications have emerged for further discussion and consideration by policymakers, community residents, and scholars.

First, federal spending and taxation—regardless of how measured—is of tremendous consequence to the people, communities, and economy of the Great Plains. It is *highly unlikely* that any other region of the country is more dependent upon the policy and programmatic direction of the federal government.

Second, the importance of federal fiscal activities, combined with recent and proposed changes in federal programs, policy, and philosophy, suggest this is a critical time for residents of the Great Plains. It is incumbent upon these residents, their advocates and representatives, to be well in-

formed, vigilant, and actively involved in the policy debates occurring at the national level. Much is at stake for the Great Plains and its communities when such divergent policy areas as Social Security reform, Medicare changes, farm policy, welfare reform, and armed forces base closures are debated.

Third, researchers have an opportunity and responsibility to help inform this debate by providing objective information and analysis. It is not enough to simply say federal programs and expenditures are important to the Great Plains. What is needed are much more detailed analyses and understanding. For example, what states and areas of the Great Plains are most likely to be affected, and how, by changes in Social Security? By welfare reform? By changes in government procurement practices? As another example, why are “procurement” expenditures extraordinarily large in the case of New Mexico? The analysis presented here has just scratched the surface but does represent a foundation upon which more detailed and sophisticated analyses can build.

Fourth, because the Great Plains is a remarkably diverse region, federal policy changes will have significantly different intraregional impacts. Nonmetropolitan areas, especially our most rural areas, are most dependent—hence, most vulnerable—to changes in federal policies and programs. Much additional substate analysis similar to what we present for Nebraska and South Dakota is essential to help inform both policymakers and local residents of the challenges and opportunities associated with federal policies, programs, and related activities.

The fifth and final implication of this research is perhaps the most interesting and intriguing—at least from a philosophical perspective. The Great Plains and its people, politics, and communities are often characterized as politically conservative, independent, self-reliant, and suspicious of government—especially the federal government (Peirce 1973; Frazier 1989; Matthews 1992). Against this backdrop, it is ironic that the income of Great Plains residents and the economies of the Great Plains communities are so heavily dependent upon federal largesse. What is the significance of this apparent paradox or love-hate relationship that appears to exist with the federal government? Can it be rationalized and understood? These philosophical or value-based questions obviously go beyond economics and the scope of this paper. Nevertheless, they represent an important set of issues for residents and leaders of the Great Plains, as well as for Great Plains scholars.

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