

## Economic Impact of Sisseton-Wahpeton College on the Regional Economy

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As economic development has become increasingly based on technology and information, education and training have become increasingly critical to the economic well being of both individuals and communities. Thus, decision makers are concerned that all North Dakotans have access to quality education and training programs. Responsibility for provision of workforce training and skills development extends from the state's research universities to its community colleges. This report estimates the contribution of the Sisseton-Wahpeton College to the regional economy.

Sisseton-Wahpeton College (SWC) was founded in 1979. Over time, the SWC has grown and developed into a fully accredited two-year institution with strong relationships with other institutions of higher education in the region. Currently, the SWC has 274 students and offers 7 Associate of Arts degrees, 6 Associate of Applied Sciences degrees, 2 Associate of Science degrees, and 4 certificate programs.

### Purpose

The purpose of this study is to measure the economic contribution of the Sisseton-Wahpeton College to the regional economy. An economic contribution analysis, as defined in this study, represents an estimate of all in-state expenditures and returns associated with an industry, project, or activity. The economic contribution approach to estimating economic activity has been used for several similar studies (Bangsund and Leistritz 2007; Coon and Leistritz 2001; Hodur et al. 2006a; Hodur et

al. 2006b; Leistritz et al. 2008). This study treated the SWC as if it was a local industry in the Sisseton area, and employed methods of estimating economic activity that would be applicable to other industries or basic sectors.

Sisseton-Wahpeton College can be easily defined as a single business or public service entity for purposes of estimating economic activity. Essentially, the college provides a bundle of services, measured in terms of students, educational attainment, and vocational activities. Educational and vocational services are treated as basic sector activities. Through the provision of those activities, the college purchases inputs, incurs maintenance and upkeep on facilities, expends resources for payroll, and retains business and professional services. Thus, expenditures used to provide educational and vocational services (basic sector output) can be treated as the purchase of outputs from other nonbasic sectors of the regional economy. Measuring those expenditures (nonbasic sector outputs) provides the basis for estimating the magnitude of economic activity sustained and created by the college's ongoing activities.

As with any economic impact or contribution analysis, measures of economic activity are usually defined by the magnitude of changes in direct and secondary employment, secondary economic activity, economy-wide personal income, gross business volume, and tax collections. Therefore, measuring the contribution of the SWC to the regional economy allows the college, tribal leaders, and regional and state

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policymakers a common perspective on the relative economic size and influence of the college to other activities and entities in the region.

## Methods

The initial task in any impact assessment is estimating the direct impacts (or “first-round effects”) of the activity being studied. In this study, the SWC budget for fiscal 2009 was analyzed to determine expenditures made to entities in the South Dakota, North Dakota, and Minnesota region. These expenditures included both outlays for on-going operations and one-time expenditures for capital improvements. The SWC has a program of capital improvements which suggests that expenditures for capital improvements can be expected to continue into the future. The North Dakota Input-Output Model was used to estimate the secondary economic impacts based on these data.

The North Dakota Input-Output Model consists of interdependence coefficients or multipliers that measure the level of business activity generated in each economic sector from an additional dollar of expenditures in a given sector. (A sector is a group of similar economic units, e.g., the firms engaged in retail trade make up the retail trade sector.) For a complete description of the input-output model, see Coon and Leistriz (1989). The model estimates the changes in gross business volume (gross receipts) for all sectors of the area economy resulting from the direct expenditures (or direct impacts). The increased gross business volumes are used to estimate secondary employment based on historic relationships. The procedures used in the analysis are parallel to those used in estimating the impact of other facilities and activities (Leistriz and Coon 2008; Bangsund and Leistriz 2004, Hodur et al. 2006). Empirical testing has confirmed the model’s accuracy in estimating changes in levels of economic activity in North Dakota;

over the period 1958-2006, estimates of statewide personal income derived from the model averaged within 4 percent of comparable values reported by the U.S. Department of Commerce (Leistriz et al. 1990, Coon and Leistriz 2008).

## Results

The SWC expenditures to North Dakota entities for fiscal year 2009 totaled more than \$3.6 million (Table 1). The economic sector receiving the greatest level of expenditures was the *Households* sector, with nearly \$1.8 million in outlays for wages and salaries. Other economic sectors having substantial direct spending included *Construction* (\$1,309,000), *Retail Trade* (\$253,000), and *Finance, Insurance, and Real Estate* (\$120,000). Direct expenditures by SWC in most economic sectors, other than *Construction*, represented the spending associated with annual academic operations, while spending in the *Construction* sector represented the effects of ongoing programs to improve and upgrade its facilities.

SWC expenditures (direct effects) were allocated to the input-output model sectors. When the input-output model coefficients were applied to these direct impacts, secondary impacts were estimated to total \$6.5 million, with the largest secondary economic activity occurring in the *Households* (\$2.2 million) and *Retail Trade* (\$2.1 million) sectors (Table 1). The secondary economic effects in the *Households* sector represent economy-wide personal income derived from the business activity created by the spending and re-spending of the direct effects as those first-round expenditures flow through various economic sectors of the economy. Impacts in the other economic sectors accrue in a similar manner.

Total (direct plus secondary) economic impacts totaled \$10.1 million. SWC has a substantial impact on economy-wide personal income as approximately \$3.9

million or nearly 40 percent of the \$10.1 million in gross business volume was observed in the *Households* sector. Total economic effects were also substantial in the *Construction* (\$1.6 million) and *Retail Trade* (\$2.3 million) sectors. The economic contribution of the SWC also was sufficient

to support about 106 full-time equivalent jobs in various sectors of the local and state economies. SWC directly supported 82 positions at the college in fiscal year 2009. Of those 82 positions, 46 represent full-time jobs (Table 2).

Table 1. Direct, Secondary, and Total Economic Impacts of Sisseton-Wahpeton College Operations, Fiscal Year 2009

Economic Sector	Direct	Secondary	Total
	----- 000s \$ -----		
Construction	1,309	254	1,563
Communications & public utilities	102	314	416
Retail trade	253	2,086	2,339
Finance, insurance & real estate	120	459	579
Business & personal services	66	166	232
Professional & social services	0	253	253
Households	1,779	2,154	3,933
Other <sup>1</sup>	0	791	791
<b>Total</b>	<b>3,630</b>	<b>6,477</b>	<b>10,107</b>

<sup>1</sup>Includes agriculture, mining, transportation, manufacturing, and government.

## Conclusion

The mission of the SWC is to provide higher education opportunities, including vocational and technical training, primarily for the Sisseton-Wahpeton tribal members. Over time, the college has expanded its programs and upgraded its facilities, and in the process expanded its enrollment to 274 students. The benefits of the programs offered by the SWC, both for individuals and for the community are manifold, and some would be difficult to quantify. However, this study demonstrates that the immediate economic impact associated with SWC operations is substantial. Further, because the funding for

Table 2. Direct and Secondary Employment, Sisseton-Wahpeton College, Fiscal Year 2009

Employment Category	Number of Jobs
<b>Direct Employment</b>	
Full-time positions	46
Part-time positions	22
Adjunct positions	14
Secondary Employment (FTE) <sup>1</sup>	106
<b>Total Supported Employment</b>	<b>188</b>

<sup>1</sup> Full-time equivalent positions in various sectors of the regional economy.

SWC programs comes primarily from out-of-state sources (e.g., federal programs, grants), the economic impacts (contribution) discussed here represent a contribution of new wealth to the regional economy, as well as to the local economies of several key regional trade centers (e.g., Watertown, Wahpeton).

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