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# **Economic Impact of Cankdeska Cikana Community College on the North Dakota 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 Cankdeska Cikana Community College located in Fort Totten, North Dakota, to the North Dakota economy.

The history of the Cankdeska Cikana Community College dates back to the 1970s. Classes were initially held in 1970 as an off-campus program of the Lake Region Junior College. The Cankdeska Cikana Community College (CCCC) then became a founding member of the American Indian Higher Education Consortium (AIHEC), which succeeded in obtaining federal support for tribal colleges under P. L. 95-471, Tribally Controlled Community College Act of 1978. CCCC became eligible for federal support under the Act in 1980, and it continues to be the primary funding source for the institution. Over time, the CCCC has grown and developed into a fully accredited (1990) two-year

institution with strong relationships with other institutions of higher education in North Dakota. By the fall of 2008, the CCCC had 411.9 full-time equivalent (FTE) students including 268 full-time students and offered 12 Associate Degree programs and a Certificate in carpentry.

## **Purpose**

The purpose of this study is to measure the economic contribution of the Cankdeska Cikana Community College to the North Dakota 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 CCCC as if it was a local industry in Devils Lake, and employed methods of estimating economic activity that would be applicable to other industries or basic sectors.

Cankdeska Cikana Community 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

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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 CCCC to the state economy allows the college, tribal leaders, and regional and state policymakers the ability to compare the relative economic size and influence of the college to other activities and entities in the state.

## **Methods**

The initial task in any impact assessment is estimating the direct impacts (or "first-round effects"). In this study, the CCCC budget for fiscal 2008 was analyzed to determine expenditures made to North Dakota entities. These expenditures included both outlays for on-going operations and one-time expenditures for capital improvements. The CCCC 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., firms engaged in retail trade make up the retail trade sector.) For a complete description of the input-output model, see Coon and Leistritz (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 and tax revenues based on historic relationships.

The procedures used in the analysis are parallel to those used in estimating the impact of other facilities and activities (Leistritz and Coon 2008; Bangsund and Leistritz 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 (Leistritz et al. 1990, Coon and Leistritz 2008).

## **Results**

The CCCC expenditures to North Dakota entities for fiscal year 2008 totaled more than \$3.8 million (Table 1). The

economic sector receiving the greatest level of expenditures was the *Households* sector, with over \$2 million in outlays for wages and salaries. Other economic sectors having substantial direct spending included *Construction* (\$870,000), *Finance, Insurance, and Real Estate* (\$287,000), and *Business and Personal Services* (\$229,000). Direct expenditures by CCCC 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.

CCCC 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 \$7.1 million, with the largest secondary economic activity occurring in the *Households* (\$2.4 million) and *Retail Trade* (\$2.3 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 almost \$11 million. CCCC has a substantial impact on economy-wide personal income as approximately \$4.4 million or 40 percent of the \$11 million in gross business volume was observed in the *Households* sector.

Total economic effects were also substantial in the *Construction* (\$1.1 million) and *Retail Trade* (\$2.5 million) sectors. The economic contribution of the CCCC also was sufficient to support about 49 full-time equivalent jobs in various sectors of the local and state economies. CCCC directly supported 87 positions at the college in fiscal year 2008. Of those 87 positions, 54 represent full-time jobs (Table 2). In addition, a gross business volume of \$11 million would generate \$180,000 in state sales and use and personal income tax collections in North Dakota.

## Conclusion

The mission of the CCCC is to provide higher education opportunities, including vocational and technical training, primarily for the Spirit Lake Dakota Nation. Over time, the college has expanded its programs and upgraded its facilities, and in the process expanded its enrollment to more than 411 FTE students. The benefits of the programs offered by the CCCC, 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 CCCC operations is substantial. Further, because the funding for CCCC 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 state economy, as well as to the local economies of several key regional trade centers (e.g., Devils Lake, Minot, Grand Forks).

Table 1. Direct, Secondary, and Total Economic Impacts of Cankdeska Cikana Community College Operations, Fiscal Year 2008

Economic Sector	Direct	Secondary	Total
	----- 000s \$ -----		
Construction	870	276	1,146
Communications & public utilities	129	355	484
Retail trade	180	2,282	2,462
Finance, insurance & real estate	287	507	794
Business & personal services	229	190	419
Professional & social services	45	283	328
Households	2,005	2,368	4,373
Other <sup>1</sup>	112	856	968
Total	3,857	7,117	10,974

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

Table 2. Direct and Secondary Employment, Cankdeska Cikana Community College, Fiscal Year 2008

Employment Category	Number of Jobs
Direct Employment	
Full-time positions	54
Part-time positions	33
Secondary Employment (FTE) <sup>1</sup>	49
Total Supported Employment	136

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

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