

The economic impact of Northland Community and Technical College

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Executive summary

Northland Community and Technical College generates an annual economic impact of \$85 million from its operations in the North West region. Based on the North West region economy of \$3.8 billion, this means that for every \$100 produced in the region, \$2 is directly or indirectly related to Northland College. The direct impact of the college in 2011 was \$64 million, while the indirect impact in other industries was \$21 million.

Similarly, during 2011 the college and its students generated an estimated 1,152 jobs in the North West region. These jobs included an estimated 974 direct jobs, and 178 additional indirect jobs, created by vendors, contractors, and businesses supplying inputs to the college and its students.

Additionally, by educating its students, Northland Community and Technical College enhances the productivity of both public and private organizations in Minnesota. Only considering the 548 degrees awarded by Northland Community and Technical College in 2011, this is equivalent to \$37.1 million of future value created in the state.

Introduction

Northland Community and Technical College has campuses in East Grand Forks and Thief River Falls, and a satellite site in Roseau, Minnesota. Northland Community and Technical College was founded in 1949, and it is accredited by the Higher Learning Commission, North Central Association of Colleges and Schools. The college offers a variety of programs in areas such as Career and Technical, Liberal Arts and Transfer, Farm Business Management, Customized Training, and Manufacturing Technology and Management.

Northland Community and Technical College serves approximately 5,700 students each year; over 40% of them are full-time students. The college has a total of 354 employees, including 233 faculty members. In 2011, the college awarded 548 associate degrees and 573 diplomas and certificates. During the same year, the college had operational expenses of \$33.8 million.

Northland Community and Technical College is one of the 31 institutions in the Minnesota State Colleges and Universities (MnSCU) system; the largest single provider of higher education in the state of Minnesota. The colleges and universities operate 54 campuses in 47 Minnesota communities, serving 430,000 students in credit and non-credit courses, with about 34,700 graduates each year.

This report estimates the economic impact of Northland Community and Technical College on the North West region. Through its daily activities, the college generates economic value for the region in several ways. First, spending by the college and its students directly impacts the personal income, employment, and tax revenues of the state. Secondly, these expenditures generate an indirect effect; all Northland Community and Technical College activities induce other organizations and business to spend more, creating what is known as a “multiplier effect.” Finally, by educating its students, the college enhances the productivity of both public and private organizations in Minnesota.

Data used in the analysis include:

- Northland Community and Technical College operational expenditures, salaries, and benefits from its 2011 financial statements
- Capital expenditures from the state’s bond projects that financed investments for Northland Community and Technical College during 2010 to 2012 from the Minnesota Management & Budget office¹
- Estimates of Northland Community and Technical College students’ spending. A survey of 59 students and their spending patterns was used in the IMPLAN model to estimate the direct and indirect effect of this spending for a given year²

¹ Minnesota Management and Budget (2012). Bond’s Proceeds Report. Retrieve at <http://www.mmb.state.mn.us/doc/bonds/proceeds/mnscu-bonds-fund-4020-FY10.pdf>

² The method used in the calculations of these impacts is the Input-Output model developed by IMPLAN. This method measures the direct impact of an organization’s spending in a particular region (a country, state or county) by estimating the inputs used by the organization and the multiplier effects in other industries in the region. For purposes of this study, the college expenditures and its indirect effects come from its operational activities, its capital investments, and its students’ spending.

Northland Community and Technical College impact on the North West region

Regional profile

During 2011, the North West region had around 86 thousand residents (approximately 2 percent of the state's population), with 56 thousand employees and a gross regional product of \$3.8 billion (1.4 percent of the state's total regional product). The main industries in the region, by employment levels, were wholesale trade businesses, education, grain farming, and sugarcane and sugar beet farming.

1. North West regional profile 2011

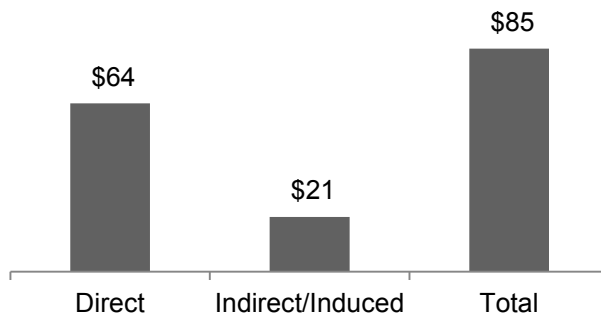
Population	86,038
Total employment	56,312
Gross regional product	\$3.8 billion
Average household income	\$94,933
Per capita gross regional product	\$45,000

Counties in the region: Kittson County, Marshall County, Norman County, Pennington County, Polk County, Red Lake County, Roseau County

Economic impact of Northland its College on the North West region

The annual economic impact of the Northland Community and Technical College in the North West region reaches \$85 million (Figure 2). Based on the North West region economy of \$3.8 billion, this means that for every \$100 produced in the North West region, \$2 are directly or indirectly related to Northland Community and Technical College. The sources of these direct and indirect impacts are the institution's operations (\$40 million), students' expenditures (\$45 million), and investments (\$206,623).

2. Economic impact of Northland Community and Technical College in the North West region in 2011 (\$ millions)



Real estate is the main industry sector impacted by Northland Community and Technical College, with \$27.3 million supported by the College. Other industries impacted by Northland Community and Technical College are state and local government education (e.g. public universities), and food services and drinking places (e.g. restaurants, bars, etc.). Figure 3 below shows the top ten industries affected by Northland Community and Technical College in 2011.

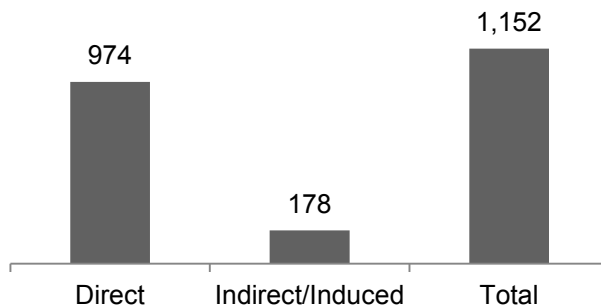
3. Top ten industries impacted by Northland Community and Technical College in the North West region in 2011 (\$ millions)

Real estate establishments	27.3
State and local government education	12.9
Food services and drinking places	7.7
Child day care services	5.2
Telecommunications	3.3
Imputed rental activity for owner-occupied dwellings	3.2
Medical and diagnostic labs and outpatient and other ambulatory care services	2.8
Wholesale trade businesses	1.9
Personal and household goods repair and maintenance	1.6
Retail Stores - Food and beverage	1.5

Impact on jobs

During 2011, Northland Community and Technical College generated an estimated 1,152 jobs in the North West region. These jobs include 974 direct jobs generated by the college and its students, and 178 additional indirect jobs, created by vendors, contractors, and businesses supplying inputs to the college and its students (Figure 4).

4. Impact on employment of Northland Community and Technical College in the North West region in 2011 (jobs)



The sources of these direct and indirect impacts are the institution’s operations (607 jobs), students’ expenditures (543 jobs), and investments (2 jobs). A total of 511 jobs are created directly by the college’s operational activities (Figure 5).

5. Impact on employment of Northland Community and Technical College in the North West region by source (jobs)

	Direct	Indirect	Total
Operational expenditures	511	95	607
Students' spending	460	82	543
Investments	2	1	2
Total	974	178	1,152

The same three industries mentioned before are also the most impacted by the college in its employment, directly or indirectly (Figure 6).

6. Top ten industries impacted by employment in 2011 (jobs)

State and local government education	492
Food services and drinking places	159
Real estate establishments	128
Child day care services	80
Retail Stores - Food and beverage	36
Retail Stores - Clothing and clothing accessories	28
Personal and household goods repair and maintenance	20
Medical and diagnostic labs and outpatient and other ambulatory care services	15
Employment services	12
Retail Stores - General merchandise	9

Impact on taxes

Northland Community and Technical College generates about \$5 million in tax revenues for state and local governments each year. Through its operational activities, its employees' and students' spending, Northland Community and Technical College supports the activities of the North West region by paying sales, property, and income taxes. Similarly, the college and its employees' social insurance contributions add to the state tax revenues. Since Northland Community and Technical College's operational activities and spending create demand for other business and industry sectors, there are additional tax revenues coming from business that serve the college. These taxes include sales, income, and property taxes, along with others, such as corporate taxes.

Benefits beyond operations: enhanced productivity

By educating its students, Northland Community and Technical College enhances the productivity of both public and private organizations in Minnesota. Its alumni provide the skills and knowledge needed to improve the functioning of many organizations in the state.

Since performing a direct measurement of the contribution of graduates to Minnesota businesses and governments is not feasible, we estimate the additional earnings of graduates as a result of their training. This measure of additional earnings is equivalent to estimating the increase in productivity due to students' education; the students are able to earn more as they better fit the needs of business and government.

Only considering the 548 associate degrees awarded by Northland Community and Technical College in 2011, this is equivalent to \$37.1 million of future value created in the state. Unlike previous estimations in this report, this is an additional value to the state, not just the region, since we cannot know where the students live after graduation.³

Some studies present the enhanced productivity without discounting the future income received by students (for example, the Tripp Umbach study for the University of Minnesota). If we calculate the additional future earnings in this way, the economic benefit from enhanced productivity reaches \$64 million.⁴

³ This estimation assumes 40 years of work life, a discount rate of 3 percent and two important parameters. The first one is that the total is adjusted by 30 percent (similar to Tripp Umbach's 2011 report for the University of Minnesota), to allow for the forgone income while attending the college or university, future periods of unemployment, time out of the labor force, and other events. The second parameter included in the estimation is that 80 percent of students stay in the state after graduation (MnSCU Amazing Facts, 2010). The economic value created by the enhanced productivity of students should consider only those students staying in the state; if they leave there is not economic impact for Minnesota in the years following their graduation.

⁴ Tripp Umbach (2011). *The Economic and Societal Impact of the University of Minnesota*.