

The economic impact of Dakota County Technical College

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Executive summary

Dakota County Technical College generates an annual economic impact of \$162 million from its operations in the Twin Cities. Based on the Twin Cities metro economy of \$190.7 billion, this means that for every \$1,000 produced in the Twin Cities metro area, \$9 are directly or indirectly related to Dakota County Technical College. The direct impact of Dakota County Technical College in 2011 was \$95 million, while the indirect impact in other industries was \$67 million.

Similarly, during 2011 the college and its students generated an estimated 1,554 jobs in the Twin Cities. These jobs included an estimated 1,089 direct jobs, and 465 additional indirect jobs, created by vendors, contractors, and businesses supplying inputs to the college and its students.

Additionally, by educating its students, Dakota County Technical College enhances the productivity of both public and private organizations in Minnesota. Only considering the 426 associate degrees awarded by Dakota County Technical College in 2011, this is equivalent to \$39.9 million of future value created in the state.

Introduction

Dakota County Technical College offers more than 50 academic programs at its main Rosemount campus plus the Partners in Higher Education site in Apple Valley and IT Training Center in Eagan. The college is accredited by the Higher Learning Commission, North Central Association of Colleges and Schools.

The college offers 50 Associate's Degree Programs and 84 Certificate and Diploma Programs, with a total of 332 employees, including 206 faculty members. In 2011 the college awarded 426 associate degrees and 474 diplomas and certificates. During the same year, the college had operational expenses of \$31 million.

Dakota County 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 Dakota County Technical College on the Twin Cities metro area. Through its daily activities, Dakota County Technical College generates economic value for the Twin Cities 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 Dakota County Technical College activities induce other organizations and businesses 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:

- Dakota County Technical College operational expenditures, salaries, and benefits from its 2011 financial statements
- Capital expenditures from the state's bond projects that financed investments for Dakota County Technical College during 2010 to 2012 from the Minnesota Management & Budget office¹
- Estimates of Dakota County Technical College students' spending. A survey of 161 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's expenditures and its indirect effects come from its operational activities, its capital investments, and its students' spending.

Dakota County Technical College impact on the Twin Cities metro area

Regional profile

During 2011, the seven-county metro area had 2.8 million residents (54 percent of the state's population), with 2 million employees and a gross regional product of \$190.7 billion (66 percent of the state's total regional product). The main industries in the region, by employment levels, were food services and drinking places, education, and government.

1. Twin Cities regional profile 2011

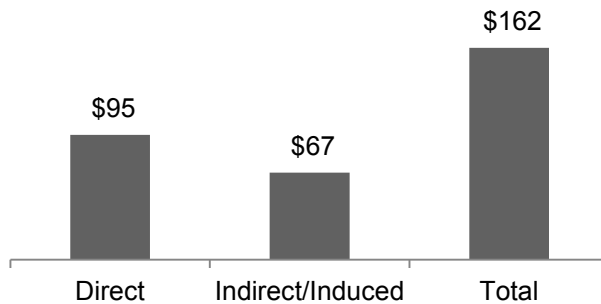
Population	2,884,747
Total employment	2,031,089
Gross regional product	\$190.7 billion
Average household income	\$127,779
Per capita Gross regional product	\$66,103

Counties in the region: Anoka, Ramsey, Hennepin, Washington, Dakota, Carver, and Scott

Economic impact of Dakota County Technical College on the seven-county metro area

The annual economic impact of the Dakota County Technical College in the metro area reaches \$162 million (Figure 2). Based on the Twin Cities metro economy of \$190.7 billion, this means that for every \$1,000 produced in the Twin Cities, \$9 are directly or indirectly related to Dakota County Technical College. The sources of these direct and indirect impacts are the institution's operations (\$52 million), and students' expenditures (\$110 million).

2. Economic impact of Dakota County Technical College in the Twin Cities metro in 2011 (\$ millions)



Real estate is the main industry sector impacted by Dakota County Technical, with \$34.1 million supported by the college. Other industries impacted by Dakota County 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 Dakota County Technical College in 2011.

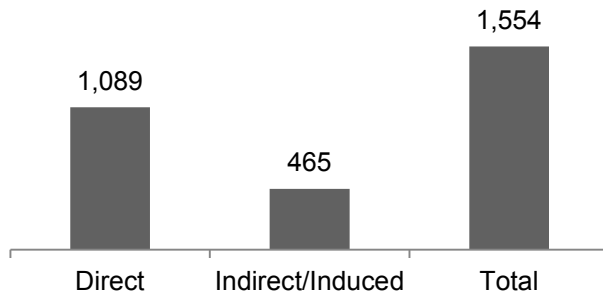
3. Top ten industries impacted by Dakota County Technical College in the Twin Cities in 2011 (\$ millions)

Real estate establishments	34.1
State and local government education	26.5
Food services and drinking places	13.6
Child day care services	7.1
Telecommunications	5.6
Imputed rental activity for owner-occupied dwellings	4.5
Medical and diagnostic labs and outpatient and other ambulatory care services	3.8
Wholesale trade businesses	3.4
Personal and household goods repair and maintenance	3.3
Retail Stores - Food and beverage	3.2

Impact on jobs

During 2011, Dakota County Technical College generated an estimated 1,554 jobs in the Twin Cities. These jobs include 1,089 direct jobs generated by the college and its students, and 465 additional indirect jobs, created by vendors, contractors, and businesses supplying inputs to the college and its students (Figure 4).

4. Impact on employment of Dakota County Technical College in the Twin Cities metro in 2011 (jobs)



The sources of these direct and indirect impacts are the institution’s operations (548 jobs), and students’ expenditures (1,006 jobs). A total of 389 jobs are created directly by the college’s operational activities (Figure 5).

5. Impact on employment of Dakota County Technical College in the Twin Cities metro by source (jobs)

	Direct	Indirect	Total
Operational expenditures	389	159	548
Students' spending	700	306	1,006
Investments	0	0	0
Total	1,089	465	1,554

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	363
Food services and drinking places	235
Real estate establishments	197
Child day care services	161
Retail Stores - Food and beverage	51
Retail Stores - Clothing and clothing accessories	45
Personal and household goods repair and maintenance	30
Medical and diagnostic labs and outpatient and other ambulatory care services	26
Employment services	25
Retail Stores - General merchandise	20

Impact on taxes

Dakota County Technical College generates about \$15 million in tax revenues for state and local governments each year. Through its operational activities, its employees' and students' spending, Dakota County Technical College supports the activities of the seven-county metro area by paying sales, property, and income taxes. Similarly, the college and its employees' social insurance contributions add to the state tax revenues. Since Dakota County Technical College's operational activities and spending create demand for other businesses and industry sectors, there are additional tax revenues coming from businesses 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, Dakota County 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 businesses and government.

Only considering the 426 associate degrees awarded by Dakota County Technical College in 2011, this is equivalent to \$39.9 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 \$69 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*.