



EXECUTIVE SUMMARY

The Economic Contribution of

Northwestern Michigan College

State of Michigan

*M. Henry Robison
and
Kjell A. Christophersen*



Economic Growth Analysis
Investment Analysis



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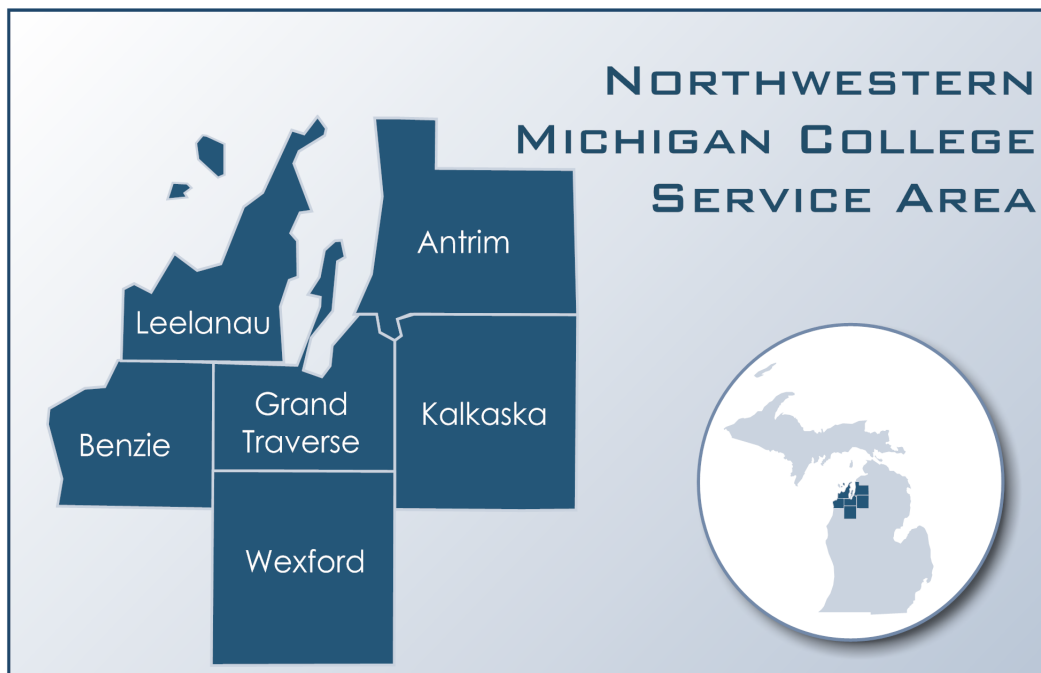


SOCIOECONOMIC IMPACT (SEIM) STUDY

Study Highlights

- Students enjoy an attractive **17%** annual return on their investment of time and money.
- For every \$1 students invest in NMC, they receive a cumulative **\$5.30** in higher future income over the course of their working careers.
- Taxpayers see a return of **10%** on their annual investments in NMC.
- The State of Michigan benefits from improved health and reduced welfare, unemployment, and crime, saving the public some **\$1.6 million** per year each year that students are in the workforce.
- The accumulated credits of past and present NMC instruction translated to **\$187.7 million** in added income in FY 2007-08 due to the higher earnings of students and the increased output of businesses.

Greater Grand Traverse Region Map



EXECUTIVE SUMMARY

Introduction

How do the Greater Grand Traverse Region and the State of Michigan benefit from the presence of Northwestern Michigan College (NMC)?

In this study, EMSI applies a comprehensive model designed to quantify the economic benefits of community and technical colleges, and translates these into common sense benefit/cost and investment terms. The study includes two major analyses:

1. **Economic Growth Analysis:** Measures added income in the service area due to college operations, student spending, and the accumu-

lated skills of past and present students still in the workforce.

2. **Investment Analysis:** Treats education funding as an investment, calculating all measurable returns and comparing them to costs, from the perspectives of students, taxpayers, and society as a whole.

The economic impact model has been field-tested to generate more than 800 studies for community and technical colleges in the United States, Canada, and the United Kingdom.

The Results

For an in-depth discussion of the results, the reader is encouraged to consult the Main Report, “The Economic Contribution of Northwestern Michigan College.”

Economic Growth Analysis

NMC affects the local economy in three ways: (1) through its local purchases, including wages paid to faculty and staff; (2) through the spending of students who come from outside the service area; and (3) through the increase in the skill base of the local workforce. These effects break down as follows:

NMC Spending Effect

NMC creates income through the earnings of its faculty and staff, as well as through its own operating and capital expenditures. Adjusting for taxes and other monies withdrawn from the local economy in support of NMC, it is estimated that the Greater Grand Traverse Region economy

received a net of \$23.6 million in added labor and non-labor income due to NMC operations in FY 2007-08.

Student Spending

Approximately 5% of NMC’s 2007-08 student population either commuted or relocated to the Greater Grand Traverse Region to attend college. Out-of-area students spent money to buy books and supplies, while those who moved to the area rented apartments, purchased food, paid for transportation, attended sports and cultural events, and so on. These expenditures created revenue for local businesses. It is estimated that the spending of NMC’s out-of-area students in FY 2007-08 generated around \$497,100 in added income in the Greater Grand Traverse Region economy.

Student Productivity

NMC’s greatest contribution to the economy is its capacity to provide worker training and career

Economic Growth Results at a Glance

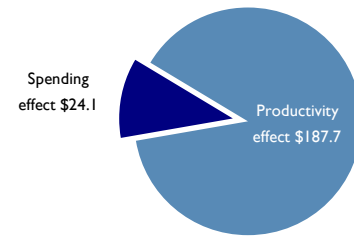
Added Income

College Spending Effect	\$23,627,700
Student Spending Effect	\$497,100
Productivity Effect*	\$187,650,900

* Measures the effect of past and present students who were still active in the workforce during the analysis year.

Source: See the Main Report.

Total Added Income Due to NMC



enhancement opportunities to area residents. Unlike the college operations effect and the student spending effect, the accumulation of NMC skills in the workforce increases over time as newly-trained students enter the workforce year after year. Based on historical enrollment at NMC over the past thirty-year period, it is estimated that there were 1.4 million credits of past and present NMC instruction still active in the service area workforce in FY 2007-08. These skills translated to higher earnings for students and increased output for businesses, yielding a total impact of approximately \$187.7 million in added income in FY 2007-08.

It is important to note that, while the college and student spending effects would disappear immediately should NMC cease to exist, the student productivity effect is unique in that much of it would remain in the economy even without the presence of the college. Over time, however, the effects of student productivity would gradually reduce and ultimately become zero as former students leave the workforce.

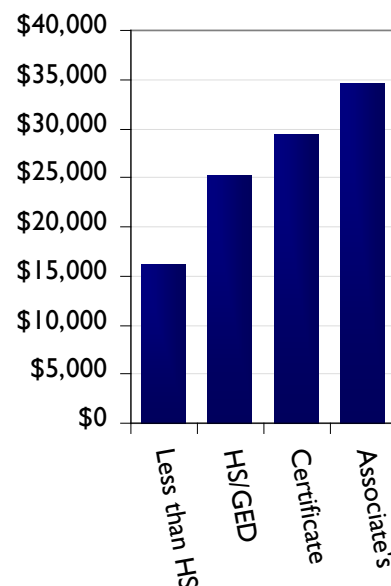
Investment Analysis

Student Perspective

Benefits of higher education are most obvious from the student perspective: students sacrifice current earnings (as well as money to pay for tuition) in return for a lifetime of higher income. For every credit completed, NMC students earn,

on average, \$137 more per year each year they are in the workforce. Compared to someone with a high school diploma, Associate Degree graduates will see an increase in income of around \$353,400 over the course of a working lifetime. Aggregate higher income for the 2007-08 student population amounts to approximately \$14.3 million per year for each year students remain in the workforce.

Earnings by Education Level



From an investment standpoint, NMC students enjoy a 17% rate of return on their investments of time and money. This compares favorably with returns on other investments, e.g., long-term return

on stocks and bonds. The corresponding benefit/cost ratio is 5.3, i.e., for every \$1 students invest in NMC education, they receive a cumulative of \$5.30 in higher future income over their working careers. This is a real return that accounts for any discounting that occurs during the entire period. The payback period is 9 years.

Social Perspective

From the perspective of society as a whole, the benefits of education accrue to different publics, whether students, homeowners, businesses, or taxpayers. For example, students benefit from higher earnings, while the public at large enjoys benefits associated with an expanded economic base. In addition, the public benefits from a variety of external social savings due to reduced substance abuse, lower welfare and unemployment, and reduced crime.

In terms of added income, students expand the economic base of the state economy through their added skills, which serve to make them and the businesses that employ them more productive. *It is estimated that the activities of NMC's 2007-08 student body will contribute a total of \$20.5 million in taxable income to the Michigan economy each year (in the aggregate).*

Persons with higher education are also less likely to smoke or abuse alcohol, draw welfare or unemployment benefits, or commit crimes. This translates into associated dollar savings (avoided costs) amounting to some \$15 per credit per year, counted as an indirect benefit of NMC education. *When aggregated across all exiting students, the State of Michigan benefits from \$1.6 million worth of avoided costs per year, each year that students are in the workforce.* Social savings break down as follows.

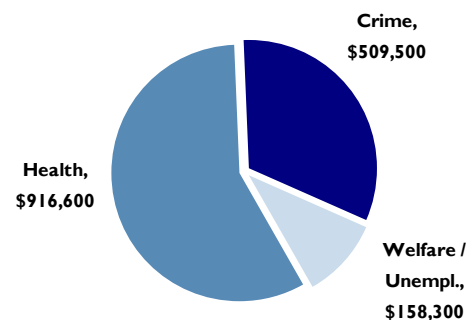
Improved Health: Employers in the State of Michigan see annual dollar savings of \$214,700 due to reduced worker absenteeism. The State also benefits from health-related savings of roughly \$446,300 and \$255,600 per year as a result of reduced tobacco and alcohol abuse. These sav-

ings include insurance premiums, co-payments, deductibles, and withholding for Medicare and Medicaid.

Reduced Crime: Incarceration drops with each year of higher education. In the State of Michigan, crime-related savings will amount to \$274,700 each year, including savings from reduced arrest, prosecution, jail, and reform costs. Reductions in victim costs (e.g., property damage, legal expenses, lost workdays, etc.) will result in savings of \$88,100 per year. Finally, the productivity of people who are employed rather than incarcerated adds \$146,700 of earnings per year to the economy.

Reduced Welfare/Unemployment: The number of fewer people claiming welfare or unemployment benefits will save the public some \$116,100 and \$42,200 per year, respectively.

Social Savings Attributable to NMC



These benefits accrue for years out into the future, as long as students remain in the workforce. The return on a year's worth of government funding in NMC is obtained by projecting the associated educational benefits into the future, discounting them back to the present, and weighing them against the \$22.5 million state and local taxpayers spent during the analysis year to support the college.

Following this procedure, it is estimated that NMC provides a benefit/cost ratio of 19.1, i.e., every dollar of state and local tax money invested in NMC today returns a cumulative of \$19.10 over the stu-

dents' working careers, in terms of added income and avoided social costs. This is a "real" return, meaning that results reflect current year dollars. The unadjusted, or "nominal," return would be significantly higher.

Taxpayer Perspective

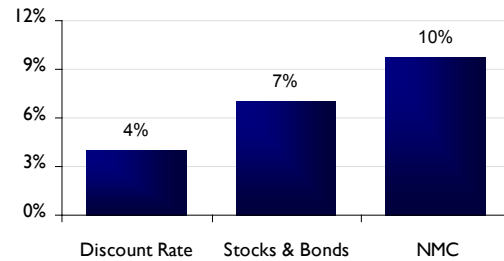
Under the taxpayer perspective, only benefits that accrue to state and local government are counted, namely, increased tax collections and reduced government expenditures. For example, in place of increased income, the narrow perspective includes only the increased state and local tax receipts from those higher incomes. Similarly, in place of overall crime, welfare, unemployment and health savings, the narrow perspective includes only those that translate to actual reductions in state and local government expenditures.

Note here that government often undertakes activities wanted by the public, but which may be unprofitable in the marketplace. This means that

positive economic returns are generally not expected from government investments. From the narrow taxpayer perspective, therefore, even a small positive return (a benefit/cost ratio equal to or greater than 1, or a rate of return equal to or greater than the 4% discount rate used in this analysis) would be a favorable outcome. For NMC, the narrow perspective results greatly exceed the minimum expectations.

The results indicate strong and positive returns: a rate of return of 10% and a benefit/cost ratio of 2.3 (every dollar of state or local tax money invested in NMC today returns \$2.30).

Taxpayer Rate of Return



Investment Analysis at a Glance

Annual Benefits

Benefit Type	Annual Amount
Higher Earnings	
Aggregate (all students)	\$14,346,600
Per credit hour equivalent (CHE)	\$137
Per full-time equivalent (FTE) student	\$4,119
Social Savings	
Aggregate (all students)	\$1,584,400
Per credit hour equivalent (CHE)	\$15
Per full-time equivalent (FTE) student	\$455

Investment Summary

Stakeholder	Rate of Return	Benefit/Cost	Payback (Years)
Students	16.5%	5.3	8.8
Social (Broad) Perspective	NA	19.1	NA
Taxpayer (Narrow) Perspective	9.7%	2.3	13.0

Source: See the Main Report.

Conclusion

The results of this study demonstrate that NMC is a sound investment from multiple perspectives. The college enriches the lives of students and increases their lifetime incomes. It benefits taxpayers by generating increased tax revenues from an enlarged economy and reducing the demand for taxpayer-supported social services. Finally, it contributes to the vitality of both the local and state economies.

About the Full Study

This short summary is one of nine documents that comprise the full impact study. The Main Report is intended for economists and college institutional researchers and lays out the detailed assumptions and analysis. Several fact sheets highlight the results from key perspectives: General Overview, Business Perspective, Social Perspective, Taxpayer Perspective, Broad vs. Narrow Taxpayer Perspective, and Student Perspective. Lastly, a PowerPoint presentation shows the main results in a brief, conference-friendly format.

About EMSI

EMSI is a leading provider of socioeconomic impact and strategic planning tools to community and technical colleges in the United States and Canada. Visit us at www.economicmodeling.com for more information. To see full documentation of the study, please contact the college.



Socioeconomic Impact (SEIM) Study

What are the measurable benefits of higher education?

Is education a worthwhile public investment?

Can students increase their earning potential by taking college courses?

Who benefits more from higher education: students or the general public?

This report summarizes the results from “The Economic Contributions of Northwestern Michigan College” detailing the role that the college plays in promoting economic development, enhancing students’ careers, and improving quality of life. Data sources include, but are not limited to, 2007-08 academic and financial reports from the college, industry and employment data from the U.S. Bureau of Labor Statistics, earnings and demographic data from the U.S. Census Bureau, and a variety of studies and surveys relating education to social behavior.

Contact Us:

EMSI
1187 Alturas Dr.
Moscow, ID 83843
(866) 999-3674
www.economicmodeling.com

