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THE ECONOMIC CONTRIBUTION OF GATEWAY TECHNICAL COLLEGE

State of Wisconsin

FIRST DRAFT
Executive Summary

November 17, 2005

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HIGHLIGHTS

- Students enjoy an attractive **18.8%** annual return on their investment of time and money – for every \$1 the student invests in GTC, he or she will receive a cumulative **\$5.50** in higher future earnings over the next 30 years or so (after discounting).
- Taxpayers see a real money “book” return of **9.8%** on their annual investments in GTC and recover all investments in **13.0** years.
- The State of Wisconsin benefits from improved health and reduced welfare, unemployment, and crime, saving the public some **\$2.9 million** per year each year that the students are in the workforce.
- The present-day economy in the GTC Service Area owes roughly **\$1.2 billion** of its regional income to GTC operations and past student productivity effects. This figure amounts to roughly **10.7%** of a typical year’s regional economic growth.

INTRODUCTION

How do the GTC Service Area economy and the State of Wisconsin benefit from the presence of Gateway Technical College (GTC)?

An obvious question often asked, but rarely answered with more than anecdotes. In this study, CCbenefits, Inc. applied a comprehensive economic model they developed with funding from the Association for Community College Trustees (ACCT). The model captures and quantifies the economic benefits of community and technical colleges, and translates these into common sense benefit/cost and investment terms.

The study tracks four types of benefits:

1. **Regional Economic Benefits** – Local job and income formation;
2. **Student Perspective** – Higher earnings captured by exiting students;
3. **Taxpayer Perspective** – A collection of social benefits and avoided costs;
4. **Investment Analysis** – The return to taxpayers for their college support.

The economic impact model has been subjected to peer review and field-tested on over 500 different community and technical colleges throughout the U.S. and Canada. Model results are based on solid economic theory, carefully drawn functional relationships, and a wealth of national and local education-related data. The model also provides an analytical alternative from the all-too-common “advocacy analyses” that inflate benefits, understate costs, and thus discredit the process of higher education impact assessment.

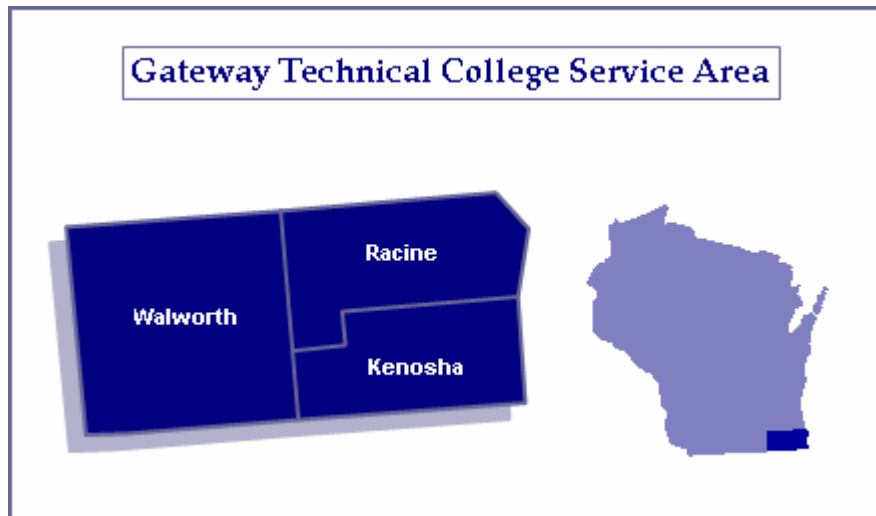
THE RESULTS



For a more in-depth discussion of the results, the reader is encouraged to consult the Main Report, “The Economic Contribution of Gateway Technical College,” containing the detailed assumptions, their context, and the computation procedures.

FIRST DRAFT

The Economic Contribution of Gateway Technical College
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skills translate to higher income and a more robust GTC Service Area economy. Based on current enrollment, turnover, and the growth of instruction over time, the local region workforce embodies an estimated 4.2 million credits of past and present instruction. The accumulated contribution

➤ Regional Economic Benefits

GTC affects the local economy in two ways: 1) through its local purchases, including the wages paid to its faculty and staff, and 2) through a human capital effect stemming from an increase in the skill-base of the local workforce. The effects of GTC break down as follows:

- *GTC Operations and Capital Spending*

GTC creates regional 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 GTC, we can say that the present-day GTC Service Area economy owes roughly \$17.6 million in labor and non-labor income to GTC operations and capital spending.

- *Higher Regional Income Due to Past Instruction*

Each year students leave GTC and join or rejoin the local workforce. Their added

of past and present GTC instruction adds some \$1.2 billion in regional income to the current GTC Service Area.

In sum, GTC contributes a total of \$1.2 billion in regional labor and non-labor income to the current GTC Service Area economy. This is the approximate equivalent of 23,200 jobs.

➤ Student Perspective

The student's perspective on the benefits of higher education is the most obvious: he or she sacrifices current earnings (as well as money to pay for tuition) in return for a lifetime of higher earnings. For every credit completed, GTC students will, on average, earn \$122 more per year each year they are in the workforce. Alternatively, for every full-time year they attend they will earn an additional \$3,648 per year. In the aggregate (all exiting students), the higher earnings amount to some \$21.3 million per year for each year they remain in the workforce.

From an investment standpoint, GTC students will enjoy a 18.8% rate of return

on their investments of time and money.

This compares favorably with the returns on other investments, e.g., the long-term return on U.S. stocks and bonds. The corresponding benefit/cost ratio is 5.5, i.e., for every \$1 the student invests in GTC education, he or she will receive a cumulative of \$5.50 in higher future earnings over the next 30 years or so. Note that this is a *real* return and accounts for any discounting that may occur during the entire thirty-year period. The payback period (the time needed to recover all costs) is 7.6 years.

➤ Taxpayer Perspective

State and local government spent \$55.0 million in support of GTC during the analysis year. Is this a good use of taxpayer money? Our analysis indicates that the answer is a resounding yes: Returns far outweigh the costs, and the attractiveness of the taxpayer investment is even stronger when a collection of incidental social savings is included in the assessment.

For example, persons with higher education are 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 \$17 per credit per year, counted as an indirect benefit of GTC education. **When aggregated across all exiting students, the State of Wisconsin will benefit from \$2.9 million worth of avoided costs per year, each year that the students are in the workforce.** These

savings, commonly known as externalities, are broken down as follows:

- *Improved Health*

Employers in the State of Wisconsin will see health-related absenteeism decline by 3,800 days per year, with a corresponding annual dollar savings of approximately \$322,000. The state will benefit from the health-related savings of roughly 250 fewer smokers and 80 fewer alcohol abusers. The corresponding dollar savings are \$761,000 and \$567,000 per year, now and into the future (these savings include insurance premiums, co-payments and deductibles, and withholding for Medicare and Medicaid).

- *Reduced Crime*

Incarceration drops with each year of higher education. In the State of Wisconsin, about 60 fewer individuals will be incarcerated per year, resulting in annual savings of \$454,000 (combined savings from reduced arrest, prosecution, jail, and reform costs). Reductions in victim costs (e.g., property damage, legal expenses, lost workdays, etc.) result in savings of \$146,000 per year. Finally, that people are employed rather than incarcerated adds \$204,000 of earnings per year to the economy.

- *Reduced Welfare/Unemployment*

There will be around 300 fewer people on welfare, and 70 fewer drawing unemployment benefits per year, saving some \$412,000 and \$70,000 per year, respectively.

➤ Investment Analysis

The return on a year's worth of state and local government investment in GTC is obtained by projecting the associated educational benefits into the future, discounting them back to the present, and weighing these against the \$55.0 million state and local taxpayers spent during the analysis year to support the college. The analysis is based on the portion of GTC operations that is wholly dependent on state and local government support. Two investment perspectives are possible, one broad and one narrow.

- *Broad Perspective*

Taxpayers expect their annual investment in GTC to result in higher lifetime earnings for students and social savings from lifestyle changes (reduced crime, welfare and unemployment, and improvements in health). From a broad investment perspective, the value of all future income and associated social savings is compared to the year's worth of state and local taxpayer support that made the benefits possible. Following this procedure, it is estimated that GTC provides a benefit/cost ratio of 11, i.e., every dollar of state or local tax money invested in GTC today returns a cumulative of \$11 over the next 30 years. As above, this is a *real* return, accounting for any discounting that may occur during the thirty-year period. The *nominal* return would be significantly higher.

- *Narrow Perspective*

The narrow perspective limits the benefit stream to state and local government budgets, namely, increased tax collections and expenditure savings. For example, in place of total 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 portions that translate to actual reductions in state and local government expenditures.

Note here that it is normal for the state government to undertake activities wanted by the public, but which are 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 just greater than 1, or a rate of return equal to or just greater than the 4.0% discount rate used in this analysis) would be a favorable outcome, certainly one that justifies continued taxpayer support of the college. For GTC, the narrow perspective results greatly exceed the minimum expectations.

The results indicate strong and positive returns: a rate of return of 9.8%, a benefit/cost ratio of 2.3 (every dollar of state or local tax money invested in GTC today returns \$2.29), and a short payback period of only 13.0 years.

CONCLUSION

The results of this study demonstrate that GTC 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.

Benefits at a Glance

Regional Analysis		Regional Impact	
Regional Economic Growth			
College contribution to regional income (labor and non-labor)			\$17,624,000
Student contribution to regional income (labor and non-labor)			\$1,194,963,000
Job equivalent			23,200
Annual Benefits			
<i>Higher earnings</i>			
Aggregate (all students)			\$21,330,000
Per Credit			\$122
Per full-year equivalent student			\$3,648
<i>Social savings</i>			
Aggregate (all students)			\$2,936,000
Per Credit			\$17
Per full-year equivalent student			\$502
Investment Analysis	RR	B/C Ratio	Payback (Years)
Students	18.8%	5.5	7.6
Taxpayers: Broad Perspective	NA	11.5	NA
Taxpayers: Narrow Perspective	9.8%	2.3	13.0

Source: See Volume 1: Main Report and Volume 2: Detailed Results.

This short summary report is one of six products generated for this impact study. In addition, one long report intended for economists and college institutional researchers (99 pp) lays out the detailed assumptions and analysis. Another report (11 pp) provides detailed tabular results by gender, ethnicity, and entry levels of education, and a one-page fact sheet contains highlights of the study results at a glance. The study also includes a one-page write-up in layman's terms about the differences between the broad and narrow taxpayer perspectives. Lastly, a PowerPoint presentation is developed showing the main results for college presidents to adapt and use in speeches before state legislators and other education stakeholders.