The Economic Impact Of Minnesota’s State Colleges And Universities

An Update

a report prepared for MnSCU
August, 2002
Executive Summary

Statewide Impact of MnSCU Operations

The total statewide economic impact of Minnesota State Colleges and Universities in 2001 was over $3.0 billion as measured by estimates of direct and induced spending as well as the enhanced productivity of the state’s labor force.

The enhanced productivity of graduates of degree programs and training programs offered by MnSCU contributes over $2 billion to the Minnesota economy each year, a figure equal to about 2 percent of the total wages paid in the state.

When compared to estimated net state spending, the economic benefits returned to Minnesota by MnSCU amount to $6.28 for every dollar spent.

The increased productivity of Minnesota workers was the most important source of MnSCU’s economic impact on the state’s economy. The impact of net spending by the state was distributed as follows:

- Increased Productivity of Workforce $4.20
- Spending by MnSCU Employees $1.11
- MnSCU Spending on Services $0.63
- MnSCU Spending on Supplies $0.25

$6.28

These estimates are in line with other studies. A recent survey of impact studies conducted by the National Association of State Universities and Land-Grant Colleges recently said that, on average, those universities return $5 for every state dollar invested. Those different studies considered somewhat different factors than this study and did not try to quantify the impact of colleges on labor productivity as is done here.

Statewide Impact of MnSCU Capital Spending

The capital spending program of $158.8 million approved for MnSCU by the 2002 legislature will have a total impact of over $603 million on the state’s economy over the coming biennium.

The capital spending program would also generate:
- the equivalent of 3,895 new jobs, measured in person-years (or 1,948 jobs per year for two years)
- added payrolls in Minnesota of $116 million spread over two years
- additional income tax collections in Minnesota of over $4 million spread over two years
Local Economic Impacts of MnSCU Campuses

Preliminary estimates of local economic impact of all of the MnSCU campuses were also made.

Studies of the impact of an individual college campus on a local economy include the spending of students at the college and visitors attracted by the campus, factors not included in calculations of statewide impact because they are considered to be redistributions of spending within the state.

Four-year universities have the largest impacts on local areas, largely because they bring spending of a large number of resident students to the communities. The largest estimated impacts for universities were $388 million for Saint Cloud State and $341 million for Minnesota State University – Mankato.

Community college local impact estimates were distinctly less with Normandale CC being the highest at $46 million.

For combined community and technical colleges, Minneapolis CTC was estimated to have the highest local impact at $55 million.

Among the technical colleges, Hennepin TC was estimated to have the highest local impact of $63 million.

All of the individual campus estimates should be viewed as approximate and preliminary since they are not based on detailed information on student and visitor spending campus-by-campus.
I. Introduction

The purpose of this study is threefold.

First, it provides estimates of the statewide economic impact of the operations of the Minnesota State College and University System (MnSCU). In doing so, it updates a previous study with a similar title done in November, 1998.

Second, it extends the analysis done in the first study by providing estimates of the statewide economic impact of capital spending programs on the campuses of MnSCU institutions.

Third, it provides rough preliminary campus-by-campus estimates of the economic impact that MnSCU institutions have on their local communities.

Of course, the primary purpose of operating an educational system such as MnSCU is not to provide economic stimulus to a state or a region. Nevertheless, the economic impact of the system is an important dimension of the effect that MnSCU has on the lives of Minnesotans and, at times, it may be overlooked, if only because the concept is abstract or difficult to measure. Taken together, these estimates should provide educators, citizens, and public policymakers with a more accurate perspective on this aspect of MnSCU’s operations. These estimates serve to underscore the investment aspect of spending on higher education.

II. Statewide Impact of Operations

The method used to estimate the statewide impact of MnSCU operations was identical to that used in the earlier study. Since the method was explained in detail there, only a brief description is offered here. (The relevant sections of the previous report are included as an appendix to this
Direct Spending

The first element of the economic impact of the MnSCU system is the direct spending of the system and its employees within the state of Minnesota. The largest component of MnSCU spending is its payroll expenses, which totaled over $798 million in fiscal year 2001. However, not all of that spending is injected into the Minnesota economy. As in the previous study, adjustments were made to deduct financial fringe benefits and taxes from that amount. An additional minor adjustment was made to reflect the fact that some campuses are located near a state border. The final figure of $325 million is our estimate of the amount of in-state spending on goods and services by employees of MnSCU.

A second component of direct spending is MnSCU’s expenditures for purchased services. This spending includes the purchase of local utility services such as energy, sewer, and water. It also includes certain kinds of contract services provided by local vendors. In the fiscal year 2001, these expenses total just over $169.3 million. A small adjustment was made for cross-border spending. Total in-state spending on services was estimated as $167.0 million.

Another component of direct spending is MnSCU’s purchases of supplies used during the course of the year. Not all of the supplies purchased by MnSCU come from in-state vendors, so an adjustment was made to account for out-of-state purchases. In fiscal 2001, the total expenditure
on supplies was $76.3 million. Based on the previous study, roughly 87 per cent of supplies
were assumed to be purchased in Minnesota. This resulted in a figure of $66.4 million as the
estimate of in-state spending on supplies. Taken together, these three components produced total
direct spending in Minnesota of $557.9 million in fiscal 2001.

**Induced Spending**

The second element of the economic impact of MnSCU is the induced spending that takes place
in the state as result of MnSCU’s direct spending. This quantity reflects the fact that when
MnSCU or its employees spend money in the state there is a ripple effect of spending by other
parties and people. When employees purchase groceries or goods, businesses in the state have
higher sales and have higher profits or pay more in salaries to additional workers. Likewise,
when MnSCU buys supplies or services. Then the owners and/or the workers at those businesses
purchase additional goods and services from local businesses. The additional sales from this
second round of spending bring forward a third round of spending and so on. Since some
income is saved or diverted, each successive round of spending is smaller than the last but the
total spending continues to grow. The sum of these successive rounds of spending is finite. In
this study, it was assumed that these successive rounds added a total another 80 cents of
spending to each dollar spent initially.

Economists summarize the total effects of these additional rounds of spending in a single number
termed a multiplier. The multiplier is defined as the ratio of total spending to the first round of
direct spending. There is no very precise way to estimate the appropriate multiplier for different
types of spending on different areas and economic studies of different regions have used
different multipliers. For this study, a multiplier of 1.8 was used. This multiplier is somewhat
conservative but within the reasonable range of multipliers that have been used in similar studies.
Using this multiplier means that the additional rounds of spending contributed another 80 cents
for each dollar of direct spending in the first round. This additional spending is called induced
spending.

**Enhanced Productivity**

The third element of the economic impact of MnSCU is the enhanced productivity of the
Minnesota workforce as a result of MnSCU’s operations. This is the largest and most profound
economic effect that the system has on the state’s economy. Through training it students, the
system enhances the productivity of both public and private enterprises in Minnesota. In both
sectors, these former students of MnSCU institutions do not make just a one-time addition to the
state’s economy; they continue to contribute throughout their working lives.

Since performing a direct measurement of the contribution of MnSCU graduates to Minnesota
businesses and governments is not feasible, we chose to estimate this concept indirectly by
estimating the additional earnings of MnSCU graduates as a result of their training. This
estimate was constructed in three steps.¹

First, the numbers of MnSCU graduates from four-year colleges, two-year colleges, and
technical colleges were estimated using historical graduation data, the percentages of graduates

¹ For additional detail on these estimates, please refer to the Appendix that includes sections of the 1998 report.
who stay in the state, and assumptions about working lives and labor force participation.

Second, data on earnings by educational attainment were used to estimate the additional wages earned by the different groups of graduates. The numbers of graduates were multiplied by their additional earnings to get the added earnings for the entire group.

However, an additional step was needed to avoid overstating the impact of these workers on the labor force. The first two steps would be all that is needed if it were known that 100 percent of MnSCU graduates working in Minnesota would not have received equivalent training in the absence of the state college and university system. That clearly overstates the case because many of them would have gone to other colleges or might have received private technical training if MnSCU institutions were not available. On the other hand, it is reasonable to assume that a good number of those graduates might not have been able to attend college or technical school if the state were not covered as it is with institutions that offer quality education and training at relatively affordable tuition rates. Therefore, the total contribution figure was multiplied by 40 per cent, under the assumption that somewhat less than half of those workers would not have received similar training in the absence of MnSCU.

**Economic Impact from Operations**

The total annual economic impact of the ongoing operations of the MnSCU system is estimated to be $3,037,000,000 in 2001 dollars as shown in Table 1 below.
Table 1
Annual Statewide Economic Impact
Of MnSCU Operations
(in 2001 $ per year)

<table>
<thead>
<tr>
<th>Direct impact</th>
<th>$557 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Spending by faculty and staff</td>
<td>$324 million</td>
</tr>
<tr>
<td>• Purchased services</td>
<td>$167 million</td>
</tr>
<tr>
<td>• Purchased supplies</td>
<td>$ 66 million</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Induced impact</th>
<th>$447 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Additional activity</td>
<td>$ 447 million</td>
</tr>
</tbody>
</table>

Enhanced productivity of Mn workforce  $2,033 million

TOTAL IMPACT  $3,037 million

The direct effect of MnSCU spending is $557 million, comprised of non-housing spending of employees and MnSCU expenditures of purchased services and supplies. The indirect effect of that spending is induced spending of additional $447 million in the state. The largest effect is the increased productivity of the Minnesota workforce contributed by MnSCU graduates. That effect is estimated to be $2.033 billion as measured in 2001 dollars.

This total of just over $3.0 billion is 31.8 per cent higher that the impact of $2.3 billion in the earlier study which was based on spending data from fiscal year 1996/97. The increase is due to a combination of factors, including, inflation, the increased scale of MnSCU operations and the widening wage gap between higher-skilled and lower-skilled workers in the economy.
Comparison to State Spending

Additional perspective can be gained by comparing this benefit to the state with Minnesota’s actual spending of tax dollars to support the MnSCU system. Such a comparison would show the dollars of economic benefit the state receives for every dollar the state invests in the MnSCU system.

One approach is to compare total impact to gross state spending. We feel that a more accurate approach is to divide total impact by the net state appropriation. The net state appropriation is calculated by starting with the gross state budget appropriation for MnSCU from the state general fund. In fiscal 2001 that figure was just slightly more than $579 million. Adding state capital expenditures on MnSCU projects and debt service for MnSCU-related projects increases that number. In fiscal 2001, those quantities totaled approximately $50 million. Then the number is reduced by subtracting the estimated state income taxes and sales taxes paid by MnSCU employees and the additional income taxes and sales taxes paid MnSCU graduates as a result of their higher earnings. When these adjustments are made, the net state spending on MnSCU for fiscal 2001 is estimated to be $483.8 million.

By dividing total economic impact by net state spending, we estimate that Minnesota receives $6.28 of impact for each dollar of net spending on the MnSCU system as shown in Table 2 below.
Table 2
Comparison of Economic Impact of MnSCU Operations
To Net State Appropriation

<table>
<thead>
<tr>
<th>Economic impact</th>
<th>$3,037 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net state appropriation</td>
<td>$ 483 million</td>
</tr>
<tr>
<td>Ratio</td>
<td>$6.28</td>
</tr>
<tr>
<td>($ of economic impact per $ of net appropriation)</td>
<td></td>
</tr>
</tbody>
</table>

This $6.28 figure is similar to the benefit/cost ratios that are often calculated for prospective public spending projects to help policymakers form spending priorities and decide among competing projects. A ratio greater than 1 indicates there is a net benefit to the public from undertaking a particular investment. The higher the ratio the greater the return. Table 3 below enumerates the composition of the return to Minnesota from MnSCU.

Table 3
Composition of Economic Impact
per Dollar of Net State Appropriation

| Enhanced productivity of Mn workforce | $4.20 |
| Spending by faculty and staff         | $1.11 |
| Purchased services                    | $0.63 |
| Purchased supplies                    | $0.25 |
| **TOTAL IMPACT**                      | **$6.28** |

As the table shows, the majority of the impact comes from the increased productivity of the Minnesota workforce. Even if only the economic impact of MnSCU’s spending (as reflected in the last three terms) were considered, the ratio of economic impact to net state spending would be 1.99, still a favorable ratio.
III. Statewide Impact of Capital Spending

Just as system operations contribute to the state’s economy, when MnSCU capital improvements to its facilities also increase state economic activity. However, unlike the impact of ongoing operations, the effect of capital spending projects is a one-time effect that lasts only during the period of construction or renovation. Nevertheless, the effect can be quite large because the dollars amounts involved can be substantial and because construction typically takes place over a period of months, sometimes years.

To estimate the economic impact of construction activity on the state’s economy, we use a method similar to that used to estimate the impact of MnSCU operations, viz. direct spending is scaled up through the use of a multiplier. In this case, there is an especially appropriate multiplier. We used the multiplier that has been estimated for construction spending in Minnesota by the Bureau of Economic Analysis of the U.S. Department of Commerce. The bureau publishes a Regional Input-Output Modeling System (RIMS II) that includes a multiplier for new construction of 2.23. RIMS also includes employment multipliers that show the direct and induced employment effects of spending on construction. Thus, it also possible to estimate how much additional employment will be generated in Minnesota as a result of proposed capital spending by MnSCU.
Table 4
Statewide Economic Impact of Capital Spending
Budget Request of $268 million

<table>
<thead>
<tr>
<th>Total economic activity</th>
<th>$603.0 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total employment</td>
<td>6,584 jobs (FTEs)</td>
</tr>
<tr>
<td>(in person-years)</td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows the estimated economic impact from the proposed capital spending of $268 million that was contained in MnSCU’s budget request to the 2002 legislature. The capital spending would have added $603 million of economic activity to the state’s economy on a one-time basis spread over a period of between one and two years. In addition, the capital spending would have added over 6,500 jobs to the state’s economy, measured on a full-time equivalent basis. Most of these jobs would have been in construction and related fields; the rest would have been spread across other industries in the state as the stimulus from the direct spending on the project produced employment gains in other sectors.

Table 5
Statewide Economic Impact of Capital Spending
Approved Spending of $158.8 million

<table>
<thead>
<tr>
<th>Total economic activity</th>
<th>$357.0 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total employment</td>
<td>3,895 jobs (FTEs)</td>
</tr>
<tr>
<td>(in person-years)</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 shows the amount of economic stimulus that will be provided to Minnesota as a result of the $158.8 million in MnSCU capital spending that was approved by the Minnesota Legislature and the Governor’s office. The resulting increase in economic activity will be $357 million, again on a one-time basis. The capital spending will also add a little less than 4,000 full-time
equivalent jobs to the state’s economy. The jobs will be of varying duration and will be most heavily concentrated in construction-related fields.

IV. Local Impact of Campuses

In addition to estimates of the statewide impact, this report also includes rough preliminary estimates of the local economic impacts of MnSCU campuses. These estimates have been produced using methods similar to those used to produce the statewide estimates for the entire system. However, these estimates seek to characterize the impact on the local area that contains the campus. In the Twin Cities, the impact area may be thought of as the metropolitan area. In Greater Minnesota, the area of impact may be thought of as the city in which the campus is located and the contiguous surrounding townships. In many medium-sized cities that are county seats, this impact area is operationally almost equivalent to the county itself.

Since we are analyzing the local effects of campuses, there are some additional categories of direct spending that need to be considered in calculating economic impact. Spending by students and spending by guests who visit MnSCU campuses were not included in the statewide impact calculations because they represent a redistribution of spending within the state rather than an addition to overall spending in Minnesota. However, such redistributions should be included in measurements of the economic impact on a particular city or region. In fact, in the cases of the four-year residential colleges, spending by students is the single largest category of direct spending, surpassing the total direct spending of the school itself. So these two categories of spending were added to the direct spending by the institutions in calculating local economic impact.
A local multiplier is applied to local direct spending in order to estimate the induced spending in a particular community. It could be argued that the multiplier for some categories of spending, such as supplies, should be lower for a smaller community because it is likely that a greater percentage of a school’s purchases would be from suppliers located in other areas. It is also the case that somewhat different multipliers might be applied to communities that are located within driving distance of substantially larger communities on the theory that more spending might be diverted to those communities at each round of induced economic activity. A detailed analysis of different multipliers for different communities is outside of the scope of this study, however. So the multiplier of 1.8 that was used in the statewide estimates was also used for all of the individual campus estimates. This multiplier was chosen from the lower part of the range of multipliers used in statewide studies and it is in line with multipliers used in other local studies.

Estimating the impact of a MnSCU institution on the labor force in its immediate area is much more complicated than estimating the system’s impact on the state labor force. While we have some relatively reliable data on the proportions of MnSCU graduates who take jobs within the state, relatively little is known about the percentages of students who take jobs in particular communities. It is logical to believe that the percentage of grads taking jobs nearby is highest for the technical colleges, somewhat lower for community colleges, and lowest for the four-year institutions. But beyond that there is little other than arbitrary assumptions on which to base such a calculation. Therefore, the effect on local labor force has not been included in these preliminary estimates but could be investigated in more detail at some other time.
The preliminary estimates include in the next section should be thought of as a starting point for analyzing the local economic impact of MnSCU institutions. Some simplifying assumptions have been made such as the use of the same multiplier for all campuses. Different levels of student and visitor spending were assumed for four-year colleges, two-year community colleges, and technical colleges. However, the same level of spending per student was assumed for all of the institutions within each group, clearly a gross approximation. These estimates could be refined considerably with more time and resources, but, as mentioned above, should serve as a useful starting point for further work.

Four-year Universities

To calculate the local impact of four-year state universities, we used actual campus-by-campus data on direct spending by the school and assumed levels of student spending and visitor spending on a per-student basis. Total student and visitor spending were added to the school’s expenditures to get total direct spending. Then a multiplier was applied to total direct spending in order to calculate the additional induced spending.

Student direct spending was estimated by multiplying an assumed annual spending level of $8000 per year times the unduplicated headcount on each campus. Visitor spending was estimated at $500 per year per student. Both figures are in line with survey information done as part of single-campus impact studies done at several of the MnSCU institutions.2

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As an example of the relative importance of different classes of spending, Table 6 shows the detailed estimate of the local impact of Minnesota State University – Mankato.

### Table 6

**Annual Local Economic Impact**  
**Minnesota State University – Mankato**  
**Fiscal year 2001**

<table>
<thead>
<tr>
<th>Direct impact</th>
<th>Induced impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Spending by faculty and staff</em> $31.3$ million</td>
<td><em>Additional activity</em> $151.6$ million</td>
</tr>
<tr>
<td><em>Purchased services and supplies</em> $24.3$ million</td>
<td></td>
</tr>
<tr>
<td><em>Student spending</em> $126.1$ million</td>
<td></td>
</tr>
<tr>
<td><em>Visitor spending</em> $7.9$ million</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL IMPACT** $341.2$ million

As the table shows, the total local economic impact is estimated as $250.2 million for fiscal year 2001. Direct spending was $139.2 million in 2001 and induced activity added an additional $111.2 million. The largest single category of direct spending was student spending which contributed $75.7 million in fiscal 2001. Table 7 below includes the total impact estimates for all of the four-year colleges in the system.
The estimates of local impact range from a high of $388 million for Saint Cloud State University to a low of $51 million for Metropolitan State. The estimates are roughly proportional to the student headcounts at the different schools, given the simplifying assumptions that have been as part of these preliminary calculations.
Community Colleges

Local economic impact estimates for two-year community colleges are shown in Table 8. These estimates were produced assuming lower per student annual spending of $800 per year, reflecting the fact that the campuses serve a largely local or regional student population who live in the area rather than move to the area to take up residence at the school. So this amount is meant to reflect spending that takes place in the local area arising from campus visits by commuting students from outside of the impact area. No visitor spending was estimated for these institutions because we have little basis for an assumption, but, clearly, there are some visits to campus cities that should be included in a more detailed analysis.

<table>
<thead>
<tr>
<th>Community Colleges</th>
<th>Annual Local Economic Impact</th>
<th>Two-year MnSCU Community Colleges</th>
<th>Fiscal year 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anoka-Ramsey CC</td>
<td>$ 34 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fergus Falls CC</td>
<td>$ 12 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fond du Lac TCC</td>
<td>$ 8 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inver Hills CC</td>
<td>$ 27 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Itasca CC</td>
<td>$ 13 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normandale CC</td>
<td>$ 46 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Hennepin CC</td>
<td>$ 32 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rainy River CC</td>
<td>$ 7 million</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The estimates range from a high of $46 million for Normandale CC to a low of $7 million for Rainy River CC.
Combined Community and Technical Colleges

Local economic impact estimates for combined community and technical colleges are included in Table 9. These estimates were produced using actual college spending for fiscal year 2001 and the same per student spending assumptions used for the community colleges.

Table 9
Annual Local Economic Impact
Combined Community and Technical Colleges
Fiscal year 2001

<table>
<thead>
<tr>
<th>College</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Lakes CTC</td>
<td>$29 million</td>
</tr>
<tr>
<td>Century CTC</td>
<td>$48 million</td>
</tr>
<tr>
<td>Hibbing CTC</td>
<td>$37 million</td>
</tr>
<tr>
<td>Lake Superior CTC</td>
<td>$35 million</td>
</tr>
<tr>
<td>Mesabi Range CTC/Vermillion CC</td>
<td>$27 million</td>
</tr>
<tr>
<td>Minneapolis CTC</td>
<td>$55 million</td>
</tr>
<tr>
<td>Minnesota West CTC</td>
<td>$39 million</td>
</tr>
<tr>
<td>Northland CTC</td>
<td>$18 million</td>
</tr>
<tr>
<td>Ridgewater CTC</td>
<td>$41 million</td>
</tr>
<tr>
<td>Riverland CTC</td>
<td>$33 million</td>
</tr>
<tr>
<td>Rochester CTC</td>
<td>$37 million</td>
</tr>
</tbody>
</table>

These estimates range from a high of $55 million for Minneapolis CTC to a low of $18 million for Northland CTC.
Technical Colleges

Estimates of the local economic impact of the MnSCU technical colleges are contained in Table 10.

<table>
<thead>
<tr>
<th>Technical College</th>
<th>Economic Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandria TC</td>
<td>$25 million</td>
</tr>
<tr>
<td>Anoka-Hennepin TC</td>
<td>$36 million</td>
</tr>
<tr>
<td>Dakota TC</td>
<td>$36 million</td>
</tr>
<tr>
<td>Hennepin TC</td>
<td>$63 million</td>
</tr>
<tr>
<td>MSC – Southeast Technical</td>
<td>$18 million</td>
</tr>
<tr>
<td>Northwest TC</td>
<td>$51 million</td>
</tr>
<tr>
<td>Pine TC</td>
<td>$11 million</td>
</tr>
<tr>
<td>South Central TC</td>
<td>$42 million</td>
</tr>
<tr>
<td>St. Cloud TC</td>
<td>$30 million</td>
</tr>
<tr>
<td>St. Paul TC</td>
<td>$37 million</td>
</tr>
</tbody>
</table>

Hennepin TC was estimated to have the largest local impact at $63 million and Pine TC the lowest at $11 million.

Next Steps

These preliminary estimates of local impact should be viewed as suggestive rather than definitive indications of the impact of the individual institutions. They don’t allow for some of the obvious differences across campuses and communities but are based on broad assumptions that surely mean there is some overstatement and some understatement in these figures.
If more detailed estimates were to be constructed, there are several steps that could be taken to sharpen these preliminary estimates. They would include:

- Estimating the impact of each campus on labor force productivity in the local area based on the type of training provided, the mix of industries in the area, and (possibly) information on the percentage of students taking jobs locally.

- Developing better data on student spending associated with each campus. This might include surveys at different campuses. Spending varies at different types of institutions and also probably varies with respect to other factors such as the mix of credit and non-credit students, the mix of residents versus commuters, and the characteristics of the city in which a campus is located.

- Developing better information on visitor spending at different campuses through surveys and other means.

- Developing different multipliers for different regions based on their individual economic characteristics.

All of these steps would produce sharper estimates that would more closely reflect the local impact of MnSCU campuses.

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3 One study of economic impact at a technical college (Pine TC) showed very substantial visitor spending but we hesitate to generalize from that example without further information.