# Higher Education Administrative and Student Services Spending: Technical Colleges, Community Colleges, and State Universities

March 1992

Program Evaluation Division
Office of the Legislative Auditor
State of Minnesota

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Centennial Office Building, Saint Paul, MN 55155 • 612/296-4708

STATE OF MINNESOTA
**OFFICE OF THE LEGISLATIVE AUDITOR**
CENTENNIAL BUILDING, ST. PAUL, MN 55155 • 612/296-4708
JAMES R. NOBLES, LEGISLATIVE AUDITOR

March 4, 1992

Representative Ann H. Rest, Chair
Legislative Audit Commission

Dear Representative Rest:

In 1991, the Legislature voted to merge the technical college, community college, and state university systems, placing them under a single higher education "superboard" by 1995. Some legislators favored the merger because of the potential for better cooperation among campuses and cost savings. But data on actual costs were not widely available. As a result, the House Appropriations Committee asked the Legislative Audit Commission for a study of spending by the three systems, focusing on administrative and student services expenditures. In June, the commission directed us to do the study and present it to the 1992 Legislature.

Overall, we found that, since 1981, administrative and student services spending has increased in all three systems much faster than inflation and has grown as a proportion of total spending. We also found that in each system smaller campuses have higher administrative costs. Our study concludes that limited cost savings may be realized from a merger of central offices, more regional cooperation, and greater sharing of administrative services in cities that have both a technical college and a community college.

We thank the staff and administrators of the technical colleges, community colleges, and state universities for their assistance and cooperation during this study. We particularly appreciate the full cooperation of the central office staff and the chancellors of the three systems.

The report was researched and written by Joel Alter and Tom Walstrom (project managers), Dan Jacobson, and Kathi Vanderwall. They were assisted by interns Kristen Brunner and Nancy Van Maren, and by Jay Kroshus.

Sincerely yours,

James Nobles
Legislative Auditor

Roger Brooks
Deputy Legislative Auditor

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# HIGHER EDUCATION ADMINISTRATIVE AND STUDENT SERVICES SPENDING: TECHNICAL COLLEGES, COMMUNITY COLLEGES, AND STATE UNIVERSITIES

## Executive Summary

Over the past 30 years Minnesota has established a wide network of higher education institutions in four systems: the University of Minnesota, and the state university, community college, and technical college systems. Not including the University of Minnesota, Minnesota has 62 campuses that are part of 52 colleges and universities. In recent years, higher education enrollments have grown at the same time that the number of high school graduates was decreasing. This partially explains why appropriations for higher education increased 28 percent in constant dollars over the past decade.

With the growth of higher education spending has come increased legislative scrutiny. The Legislature has taken a variety of actions designed to reduce duplication among institutions and to differentiate the missions of Minnesota's four higher education systems. In 1991, the Legislature mandated the merger of the technical college, community college, and state university systems by 1995. In May of 1991, the Legislative Audit Commission, responding to a request from the House of Representatives Appropriations Committee, authorized a study of administrative and student services spending over the past decade. Specifically, we asked:

- **How has spending for administrative and student services changed since 1981 in the technical college, community college, and state university systems? What categories of spending have changed the most?**
- **How do expenditures per student for administrative and student services compare among the higher education systems?**
- **How do administrative and student service costs vary by the size of the institution?**
- **What are the cost implications of different forms of higher education administrative organization?**

Overall, we found that administrative and student services spending per student increased by about 30 percent since 1981 in each system, after adjusting

**Administrative and student services spending has gone up 30 percent since 1981.**

for inflation. The proportion of total institutional costs devoted to administrative and student services purposes increased, while the proportion devoted to instruction decreased. There are many reasons for these changes: the increasing number of part-time and non-traditional students; expansion of extension and remedial education programs; salary and fringe benefit increases above the inflation rate; investment in computer systems; more state mandates; and the addition of marketing and development staff.

Of the three systems we studied, state universities had the lowest administrative cost per student and technical colleges had the highest. However, economies of scale and differences in mission explain most of the difference in cost per student. The report recommends that the Higher Education Board consider multi-campus administrative arrangements, but cautions that regional administrative structures have not significantly reduced spending in the technical and community college systems.

# METHODS

We examined spending in the state universities, technical colleges, and community colleges for a common set of administrative and student services functional categories, listed on the next page. We visited 34 colleges and universities and had telephone discussions with officials at most campuses in order to learn more about each system's administrative and student services spending. Our efforts were complicated by three different accounting and personnel systems, different and inconsistent categorization of costs, and different degrees of data availability among systems. We have corrected and made adjustments for these constraints, but detailed cost comparisions among systems should be made with caution. The three systems' institutional missions differ considerably in ways that affect administrative spending.

Full-year-equivalent (FYE) enrollment rose 46 percent in the community college system and 31 percent in the state university system between 1981 and 1991. Technical college enrollments increased two percent overall, reflecting a 9 percent decrease in continuous student enrollment and a 95 percent increase in extension students. Many types of higher education spending and staffing are directly related to the number of students enrolled. Thus, in order to examine trends in spending, we report most comparisions on a cost per student basis. We also adjusted spending for the effects of inflation in years prior to 1991.

## Categories of Administrative and Student Services Spending

### INCLUDED:

**Institutional Support**

- **Executive management**, such as the governing board, chief system administrators, chief campus administrators, and system planning and budgeting;
- **Legal services**;
- **Fiscal operations**, such as accounting, disbursements, purchasing, loan collection, auditing, and grant and contract administration;
- **General administrative services**, such as data processing, personnel, and institutional research;
- **Logistical services**, such as printing, photocopying, campus communications, motor pool, mail service, space management, and management of supplies and materials;
- **Community relations**, such as publications, marketing, public relations, recruitment, development, and alumni relations;

**Student Services**

- **Student services administration**, such as the dean of students, admissions office, registrar, and student records;
- **Student counseling and career guidance**;
- **Financial aid administration**;
- **Other student services**, such as services to ethnic and cultural minorities and persons with disabilities;

**Academic Support**

- **Academic administration**, such as academic deans and coordinators, extension and continuing education administrators, and developmental education administrators;
- **Curriculum development.**

### EXCLUDED:

- **Instruction and community service;**
- **Library and audio-visual services;**
- **Museums and galleries;**
- **Academic computing services;**
- **Student social and cultural activities,** such as athletics, intramurals, theatre, yearbook, and other student activities;
- **Student housing services;**
- **Student health services;**
- **Self-supporting or "enterprise" activities,** such as the student center and food service;
- **Physical plant,** such as custodial and maintenance staff;
- **Small business management centers;**
- **Scholarships;**
- **Building rent or leases;**
- **Building repairs or alterations;**
- **Tuition refunds.**

# ADMINISTRATIVE AND STUDENT SERVICES SPENDING AND STAFFING TRENDS

## Spending Trends

Administrative and student services spending per student increased in each of the three systems between 1981 and 1991. We found:

- **After adjusting for inflation, spending per student for administrative and student services increased 32 percent in the community colleges, 31 percent in state universities, and 27 percent in the technical college system since 1981.**

Another way to examine spending trends is to express administrative costs as a percent of total operating expenditures. Administrative and student services spending as a percent of total expenditures increased in each system since 1981. We found:

- **Technical colleges' administrative and student services spending increased from 20 percent of total expenditures in 1981 to 24 percent in 1991. During the same period, administrative spending in state universities increased from 20 percent of the total to 22 percent, and community colleges' administrative spending increased from 26 percent of total spending to 28 percent.**

**Most of the increase in spending occurred in the early 1980s.**

Trend comparisons are subject to the base year chosen for comparison. In 1981, spending per student was at a relative low point. We found that virtually all of the increase in technical college and state university spending occurred between 1981 and 1986.

- **The state universities' spending per student did not increase between 1985 and 1991, after adjusting for inflation.**

- **Technical colleges' administrative and student services spending per student went up only 3 percent between 1986 and 1991, after adjusting for inflation.**

Spending increased more than average in certain expenditure categories. Measured in inflation-adjusted dollars, the technical colleges' spending in student services categories increased by 64 percent since 1981, while spending in other administrative categories increased by 16 percent. State university spending increased 110 percent for development activities, 55 percent for admissions, 44 percent for student services/counseling, and 37 percent for academic affairs and administration.

Community college spending for marketing and public relations staff grew 148 percent since 1981, and expenditures for continuing education administration staff increased 118 percent. Community college institutional service staff expenditures per student increased 46 percent, and there also were large increases in expenditures for computer equipment. In contrast to the state universities and technical colleges, student services spending accounted for a small portion of community college cost increases. Counseling expenditures per student actually decreased five percent between 1981 and 1991 while other student service spending increased 15 percent. Again, all of our comparisons are adjusted for the effects of inflation.

## Staffing Trends

**The number of administrative and student services staff grew 67 percent in community colleges, 17 percent in state universities, and 3 percent in technical colleges.**

The total number of community college administrative and student services staff grew 67 percent between 1981 and 1991, compared to a 46 percent enrollment increase. In the community college system, unlike the other systems, we were able to track the trends for particular categories of staff. We found that most of the staff increases occurred in middle and lower level management and professional positions, not in upper level positions. For example, the number of middle managers increased by 443 percent, and the number of lower level professional staff increased 432 percent. In contrast, the number of top administrators (presidents, provosts, vice-provosts, and deans) decreased 17 percent. Salaries for the middle and upper level managers at community colleges increased faster than inflation.

Technical college administrative and student services staffing data are not as reliable as expenditure data, but they suggest that the number of full-time-equivalent staff in administrative and student services increased by about 3 percent and average salary increased by about 8 percent in constant dollars. Fringe benefits increased from 16.6 percent of salary to 21.7 percent of salary, reflecting increases in social security taxes, retirement contributions, and health insurance costs. Other important factors explaining the technical colleges' spending changes from 1981 to 1991 include an increase in purchased services of 79 percent, and an increase in equipment purchases of 125 percent. Purchased services include services purchased from local school districts (including business office, school board, and superintendent office expenses), professional and technical services, data processing services, and printing services. Equipment increases probably reflect greater use of computers by office staff.

The state universities' administrative and student services full-time equivalent staff increased 17 percent since 1981. State university staffing increased the most in admissions, development, and academic administration. As in the other two systems, personnel became more expensive as fringe benefits increased from 20 percent of total salary to 25 percent.

# WHY HAS SPENDING INCREASED?

Administrative spending is influenced by a wide variety of factors including institutional mission, student demographics, students' preparation for college, institutional enrollment size, and the total resources available. Differences in organizational mission probably have the most important impact on costs for instruction and research, but they also affect administrative costs. State universities, because they are four-year institutions, support a wider diversity of institutional functions than the two-year technical and community colleges. National data shows that four-year universities tend to spend 20 to 25 percent more on administration than two-year colleges of the same size.

Differences in mission also translate into a different type of student attending two-year and four-year schools. Because there are no admission standards, technical and community colleges serve greater numbers of students with poor records of academic achievement who require more student services support. Technical and community colleges have a higher percentage of part-time students who require counseling, tutoring, and financial aid services, and the percentage of part-time students has increased in each system. The number of students with disabilities also increased in each system.

**There are more staff and more mandates.**

Spending for administrative and student services has increased in total dollars and as a percent of total spending in each of the three systems. What factors account for the increase? The most important component of higher education spending is salaries. Each system has added administrative and student service staff over the decade.

Colleges and universities have added staff for several reasons. First, we have noted the dramatic increases in enrollment in the state universities and community colleges. The workload of many administrative and student support functions is directly related to the number of students.

System and campus administrators cited a number of additional state and federal mandates that have been imposed in the last decade. There has been an increase in the number of legislatively mandated studies and coordination efforts that systems offices are required to conduct. Each system has hired new personnel in the central office to assist with these required reporting activities.

Federal mandates have had a relatively minor impact on administrative workloads in the community colleges and state universities. Recent federal legislation has required the systems to report annually on campus crime rates and athlete graduation rates, to provide services for students with disabilities, and to demonstrate compliance with civil rights laws. Ongoing changes in federal financial aid laws have required close monitoring by college staff.

The federal government has required technical colleges to conduct institutional planning and to develop programs for students with special needs. While up to five percent of federal vocational education funds can be spent for

administrative purposes, the technical colleges spend more funds on federal mandates than is provided by the federal appropriation.

College and university officials also cited a number of administrative requirements that have been common to all state agencies. For example, the systems have developed policies and educational materials for employees relating to sexual harassment, drug abuse, AIDS, and smoking. Other factors contributing to increased workloads include more complicated employee contracts and benefit packages, and the introduction of new payroll options such as direct deposit of checks.

# CENTRAL OFFICE STAFFING

Different functions and services are performed by each of the three system central offices. The community college central office provides more direct services to campuses than the technical colleges or state universities. More than one-half of community college central office staff directly provide fiscal, personnel, or computer services to campuses. The technical college and state university central offices provide few direct services to campuses. The technical colleges provide some central services, such as curriculum development and facilities management. The state universities' central office manages the international program in Akita Japan, facility construction and inspection, and most Revenue Bond Fund activities.

**Each system has added central office staff since 1981.**

The number of staff grew in each system office since 1981. Staffing grew 16 percent in the technical college central office, 40 percent in the state university office, and 84 percent in the community college office. Most of the community college central office staff growth (21 of 37 new positions) was in computer services and executive management positions. This staff growth reflects increased demands for information from colleges and outside groups, such as the Legislature, and the in-house development and maintenance of fiscal and student information computer systems.

State university central office staff increased from 39 to 55.5 full-time-equivalent (FTE) positions. The staff increases are largely due to: (1) increased demands for information from the Legislature, HECB, and other interested citizens, (2) the institution of a "system advancement" effort in the central office, and (3) increased responsibilities delegated by the Legislature. The 1984 Legislature transferred responsibility for construction management and inspection from the state architect's office to the central office. In 1989 and 1990, the Legislature transferred responsibility for retirement planning from the Teacher's Retirement System to the state university and community college systems.

The technical college central office staff increased from 81.5 FTE positions in 1981 to 94.5 positions in 1991. Staff increased most in the chancellor's office (5 FTE), and in internal personnel, licensure, and fiscal services (6.25 FTE).

New positions have also been added for marketing (1.5 FTE), telecommunications (1.5 FTE), civil rights enforcement (1.5 FTE), computer support (1.75 FTE), and technology preparation (1 FTE). The number of staff performing curriculum development functions decreased by about 7 positions. Technical college staff reported the same increased demands for external information as the community college and state university systems.

# SPENDING PER STUDENT IN 1991

## Spending per Student

In 1991, total administrative and student services expenditures ranged from $1,181 per full-year-equivalent (FYE) student in the state university system to $1,487 per FYE student in the technical college system. As the table shows, the state universities spend the lowest amount per FYE student for financial aid and student services, but spend the most on institutional services. The community colleges fall between the other two systems in every category except development and public relations and instructional administration, where expenditures are the lowest.

**Administrative and student services costs per student are lowest in state universities and highest in technical colleges.**

### Total Administrative and Student Services Costs per FYE, FY 1991

| Function | State University | Community College | Technical College |
|---|---|---|---|
| Chief Administrator's Office | $37 | $108 | $239 |
| Institutional Services | 437 | 429 | 356 |
| Development and Public Relations | 99 | 77 | 97 |
| Subtotal | 573 | 614 | 692 |
| Financial Aid Administration | 40 | 54 | 81 |
| Student Services | 244 | 300 | 325 |
| Subtotal | 284 | 354 | 406 |
| Instructional Administration | 324 | 279 | 389 |
| Total | $1,181 | $1,247 | $1,487 |

Source: OLA analysis of systems' data.

Officials who we interviewed disagreed on the administrative and student services costs associated with part-time students. State university officials and some technical college presidents felt many part-time students were less costly, while community college officials felt part-time students required the same amount of services as full-time students. If the costs of financial aid administration and student services are calculated based on the total number of students rather than FYE, the average cost per student is $217 in community colleges, $246 in state universities, and $346 in technical colleges.

National higher education researchers have found that administrative spending is closely related to the type and size of institutions. We believe that:

- **Economies of scale and differences in the three systems' missions explain much of the variation in spending per full-year-equivalent student.**

The highest cost system, technical colleges, has the smallest average enrollment per college (1,365 FYE in 1991). Each small campus requires a minimum number of administrative staff, including a president and support staff, which increases the cost per student. The technical colleges' mission requires more course development and lower student to staff ratios, both of which tend to raise administrative costs.

The state universities' average enrollment was almost 8,000 FYE in 1991. Each state university has more administrative staff than any of the technical or community colleges, but administrative costs are lower on a per student basis because of the higher enrollment levels. While economies of scale help keep state university costs per student down, the universities are also much more complex institutions than the technical or community colleges. The state universities are four-year residential institutions with a wider array of programs, student services, research, public service, and ancillary activities than in the two-year colleges. The increased complexity of the universities tends to increase costs. State universities also incur many administrative expenditures that have no counterparts in the other two systems. This may account for the state universities spending more in some functional areas such as institutional services.

## Economies of Scale

**Expenditures per student for most administrative functions are strongly related to campus size.**

Many national studies have shown that there are substantial economies of scale in administrative and instructional costs. For two-year colleges, national studies have shown that administrative unit costs decline up to 1,500 FYE enrollment. Studies have shown that administrative costs per student declined an average of 34 percent when enrollment increased 200 to 300 percent. In comprehensive four-year schools comparable to Minnesota's state universities, research has indicated that most economies of scale occur up to enrollments of 4,000 FYE, although for some administrative and support functions unit costs continue to decline up to 20,000 students. It is important to note that colleges can have high costs due to their small size, yet still spend available funds wisely. Conversely, larger colleges with inefficient operating practices can have relatively lower costs due to size-related efficiencies.

We examined economies of scale between the campuses in the three Minnesota systems we studied. We found that:

- **Economies of scale appear in each system. Expenditures per student for most administrative functions are strongly related to campus size.**

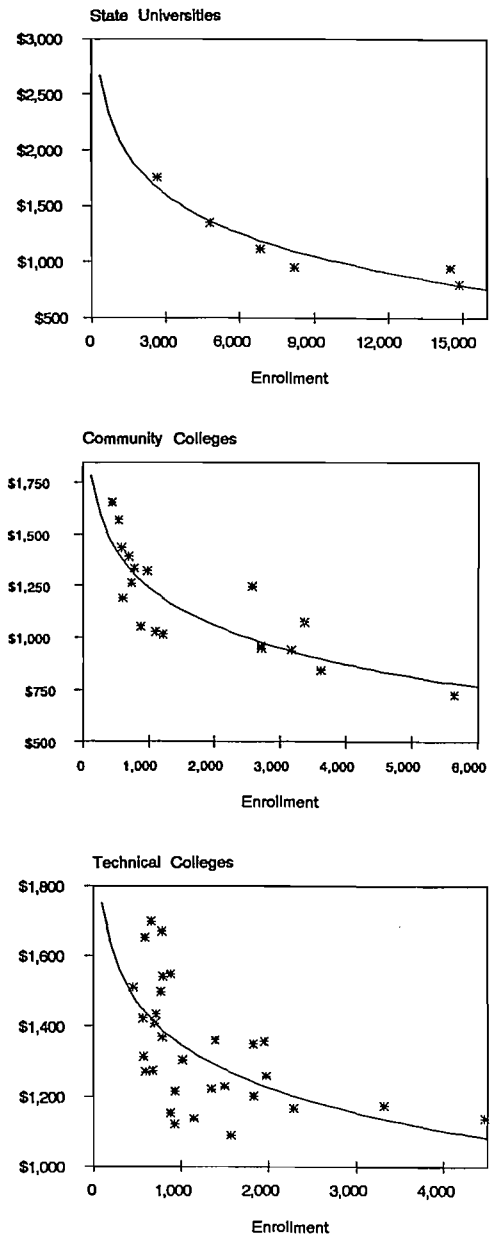
**Doubling of enrollments was associated with a decrease of per student spending.**

The figure shows the relationship between total administrative and student services spending and campus size for each system. Our analysis indicates that doubling enrollment was associated with a decrease in per student spending of 12 percent in technical colleges, 15 percent in community colleges, and 25 percent in state universities.

The relationship between size and the per student costs of services is especially strong in certain expenditure categories. In the technical college system, the larger colleges tend to spend less per student on the president's office, financial aid administration, and marketing. Larger community colleges tend to spend less per student on the president's office, institutional services, student services, and financial aid administration. Larger state universities tend to spend less per student for finance-related functions, development, student services and counseling, the president's office, admissions, and personnel/affirmative action.

These figures suggest that smaller campuses are less efficient than larger ones. However, in order to conclusively determine whether one school was more efficient than another, more information would be needed about the services provided. That is, a school that spends less per student may be providing fewer services, or services of lesser quality, than a more expensive school.

## Administrative and Student Services Expenditures Per Student by College Size




Source: Program Evaluation Division analysis of higher education systems data.

## State University Interstate Spending Comparisons

Interstate spending comparisions are difficult to make. We were not able to find reliable information to compare Minnesota technical colleges or community colleges with institutions in other states. We were able to compare state universities with their counterparts in other states for fiscal year 1989. We looked at three different measures of administrative spending both as a percent of total instructional expenditures and on a dollars per student basis. We found:

- **In 1989, Minnesota state universities, except for Southwest State, spent less on administrative and student service functions than comparable institutions in other states.**

# ALTERNATIVE ADMINISTRATIVE ARRANGEMENTS

The 1991 Legislature mandated important changes in the governance structure for the higher education systems. Effective in 1995, the governing boards for the state university, community college, and technical college systems will be replaced by a single Higher Education Board. Legislative advocates for the Higher Education Board suggested that a single board would save money by eliminating program duplication, improving credit transfer, making better use of existing facilities, and merging central office administrative positions. Opponents suggested that a single board would be tempted to cut technical college programs, which tend to be more expensive than general education programs, and that the costs of reducing salary and workload differences between staff in the three systems would outweigh any cost savings.

We looked at potential administrative cost savings from merging co-located community and technical colleges. There are 10 sites in the state where community and technical colleges are located relatively close to each other. Based on 1991 staffing levels, we determined that:

- **$3.0 to $4.0 million in administrative and student services costs could be saved by merging co-located colleges.**

However, technical colleges have recently started merging on a regional basis, and the efficiencies that result from these mergers might reduce the savings possible from subsequent mergers of co-located technical and community colleges. We think the Legislature and Higher Education Board should consider factors in addition to administrative costs--such as the potential for improved student services and reduced course and program duplication--when deciding whether to merge these colleges. We recommend that:

- **If the Legislature proceeds with merger of the state university, community college, and technical college systems in 1995, it should require the Higher Education Board chancellor to review the merits of merging co-located technical and community colleges. In early 1994, the chancellor should present the Legislature with a plan for multi-campus administrative structures that indicates (1) which, if any, co-located colleges should be merged, and (2) any realignment of current multi-campus administrative structures necessary to provide services in the most cost-effective manner possible.**

It would be difficult to merge co-located colleges before 1995 because there would be separate boards for community and technical colleges. We think that merging or sharing administrative services at co-located colleges is practical only if the combined institution reports to a single board that provides unified direction and priorities. There is little potential for combined services and administrative cost savings when institutions report to two different boards and have two different systems for admissions, registration, financial aid, computer services, and almost every other educational and student service.

We made a separate cost estimate for the co-located technical and community colleges because they offer the most obvious potential for staff consolidation. However, cost savings should be possible with other types of multi-campus administrative arrangements, such as the regional service centers recently suggested by the Commission on Post-Secondary Education. For example, it might be possible to have regional supervisors for functions such as financial aid, payroll processing, public information, and personnel. To maximize savings, it would be best for regional centers to serve campuses of different types, not just the campuses of a single higher education system. As with the mergers of co-located campuses, savings from regional administrative structures would depend on the development of common administrative procedures and information systems.

## Merger costs will be higher if bargaining units are joined together.

Many of the costs and benefits of the merger would be in instruction, not administration. The Higher Education Coordinating Board has estimated that net costs from the merger could range up to $18 million annually, not including one-time costs. HECB has estimated that one-time costs could be as much as $29 million, including one to five million for legal fees and integrating management information systems. We believe it is likely to cost more than five million to integrate the three systems' widely varying information systems.

The costs of the merger will be much lower if the Higher Education Board and the Legislature maintain distinct bargaining units for community college, technical college, and state university faculty. According to HECB, there could be additional costs of as much as $59 million annually if faculty bargaining units

were consolidated and instructional loads and other contract provisions equalized.[1]

Until the Legislature and the Higher Education Board make additional decisions about the new structure, it is difficult to estimate its costs with any precision. Also, there have been no estimates of potential cost savings from less instructional duplication, faster degree completion, and better use of facilities. Without estimates of these savings, it is impossible to conclusively judge the cost-effectiveness of a merged system. Nevertheless, it appears to us that:

- **The administrative cost savings from a merger would likely be small compared to other costs and benefits.**

Administrative cost savings would result primarily from merging co-located technical and community colleges, consolidating central office functions, and possibly providing some institutional services regionally or centrally.

With or without a merger of the governing bodies, we think that long-term cost savings could result from consolidation of the information systems used by the state university, community college, and technical college systems. We recommend that:

- **Before the higher education systems proceed with significant revisions to fiscal, student, personnel, financial aid, and other information systems, the Higher Education Board should investigate ways to consolidate these systems.**

**Regional colleges have the potential to save money, but have not always done so in the past.**

Finally, we looked at the potential cost implications of developing multi-campus administrative arrangements. Minnesota has more higher education campuses than most states, so finding ways to consolidate administration on a regional basis might save money. In January 1992, the Governor's Commission on Post-Secondary Education recommended developing post-secondary districts throughout the state to provide services to institutions in each region. We examined the experience of the technical and community college systems with regional offices and found that:

- **Multi-campus administrative arrangements have provided member colleges with benefits, but have not reduced administrative and student services spending significantly.**

This may change in the technical colleges since cutting administrative costs is a focus of the technical college mergers scheduled for later this year. A recently-developed multi-campus college in southeastern Minnesota projects that its 1992 administrative and student services staff costs will be about ten percent lower than costs at its member colleges in 1991. However, a multi-

*1* Equalizing faculty instruction time between technical colleges and community colleges could cost as much as $34 million per year, according to HECB. HECB estimates that equalizing state university and community college faculty workloads could cost as much as $25 million. HECB did not estimate the cost of equalizing technical college and state university faculty workloads. HECB emphasizes that these are rough estimates that deserve further study.

campus technical college created in 1985 in southwestern Minnesota did not reduce administrative and student service costs. It continues to have higher administrative and student services costs than other comparably sized technical colleges.

In the community college system, the Arrowhead region consolidated several positions, but the savings have been used to strengthen student services. The colleges in this region continue to have higher costs than the states' other small community colleges. In northwestern Minnesota, three community colleges eliminated two positions by merging in 1984, but constant dollar spending for top administrative positions is about the same as before the merger. Based on our analyses of economies of scale, we think that administrative savings from regional administrative structures should be possible, but savings have been limited to date.

**Institutions should review administrative and student services.**

Finally, we think that each institution and campus should periodically review the way it provides administrative and student services. Several colleges and universities have used the approach known as "total quality management" to assess their services. Such a customer-based service review can highlight efficiencies and improvements that are not apparent in the type of broad expenditure study that we conducted.

# INTRODUCTION

Minnesota has an extensive network of higher education campuses, and its residents are more likely to have attended post-secondary institutions than residents of most states. During the past decade, the state's higher education appropriations increased 28 percent in constant dollars, and enrollment in the post-secondary institutions increased at a time when the number of high school graduates was declining.

There has also been more legislative scrutiny of higher education spending in recent years. To reduce duplication among institutions, the Legislature has encouraged the public higher education systems to differentiate their missions. It has reviewed higher education budgets more vigorously, particularly following the 1988 disclosure of excessive spending on the University of Minnesota president's residence. The 1991 Legislature mandated a merger of the state university, community college, and technical college systems, effective in 1995.

In Spring 1991, the Education Division of the House of Representatives Appropriations Committee requested the Legislative Audit Commission to undertake a study of administrative costs within each of Minnesota's higher education systems, including the University of Minnesota. The division specifically requested reviews of staffing trends over the past decade, contracting for services, and related administrative expenses. In May 1991, the Legislative Audit Commission authorized a study of administrative costs and opportunities for cost savings.

Following the commission's approval, we met with legislators, legislative staff, and staff from each of the higher education systems to help define a feasible study. Based on these early discussions, we made several changes in the scope of our study. First, we postponed a review of administrative costs at the University of Minnesota. Due to the impending merger of the other three higher education systems, legislators generally believed there was more immediate need for cost information on these systems. Second, we decided to include administrative costs from both the central offices and campuses in our review. The systems differ in the way they organize and deliver services, and looking at costs by function (rather than by organizational location) enabled us to develop better data for inter-system comparisons. Third, we decided to review student services staffing and spending, in addition to administrative

spending. Legislators expressed interest in the growth of student services functions such as financial aid, admissions, student recruitment, and counseling.

In our study, we try to answer several questions regarding the state university, community college, and technical college systems:

- **Has spending for administrative and student services increased since 1981, and what categories of spending have changed the most?**
- **How do expenditures per student for administrative and student services compare among the higher education systems?**
- **What are the options for structuring higher education governance--at the system and institutional level--and what are the cost implications of these options?**

We addressed these questions in a variety of ways. We reviewed spending data from each of the higher education systems. We also met with staff at all 7 state universities, 12 of 18 community colleges, and 15 of 27 technical colleges. We visited all locations that have a community and technical college in close proximity.

This report is organized into six chapters. Chapter 1 provides background on the higher education systems, their student populations, and factors affecting administrative costs. Chapters 2, 3, and 4 examine the technical college, community college, and state university systems in more detail. Chapter 5 compares expenditure data among the higher education systems, and Chapter 6 discusses possible administrative cost savings and alternatives for administrative structure.

# BACKGROUND

This chapter is organized into four parts. First, we provide general information about the missions and student populations of Minnesota's higher education systems. Second, we discuss the research methods used in our study. Third, we review national data on administrative and student services staffing. Finally, we discuss factors that have affected administrative costs during the past decade.

## MINNESOTA'S HIGHER EDUCATION SYSTEMS

Minnesota has four public higher education systems: the University of Minnesota, and the state university, community college, and technical college systems. In addition to the four public systems, there are a variety of private colleges that offer baccalaureate and graduate degrees, as well as vocational programs. Figure 1.1 shows the proportion of full-year-equivalent (FYE) students in each of Minnesota's post-secondary systems.[1]

Figure 1.2 shows the location of campuses in Minnesota's higher education systems. Compared with other states, Minnesota has a large number of public higher education institutions. Not including the University of Minnesota, Minnesota has 62 public campuses, which are part of 52 colleges and universities.[2]

This report provides information on costs in the state university, community college, and technical college systems. We did not review administrative costs at the University of Minnesota, which serves more than 50,000 students at five campuses.[3]

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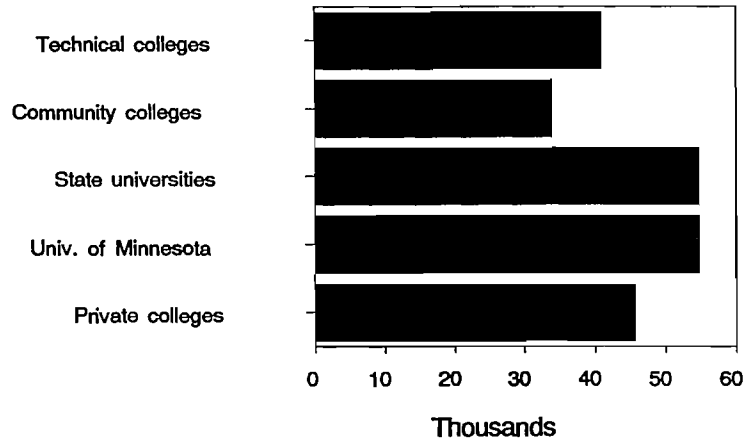
*1* Full-year-equivalent is calculated by dividing the total number of credit hours for a year by the normal credit load for full-time students. Figure 1.1 includes graduate and summer session enrollments, extension enrollments for the technical colleges and University of Minnesota, and state university off-campus enrollment.

*2* According to the National Center for Education Statistics, there were an average of 31 public higher education institutions per state in 1990. Including the University of Minnesota's five campuses, Minnesota has 41 regionally accredited public campuses, plus an additional 26 technical college campuses that are accredited by the state board of technical colleges through a contract with the U.S. Department of Education.

*3* The University of Minnesota provides a wide variety of undergraduate instruction, graduate education and research, and public service activities. It is Minnesota's major research university and the only public institution in Minnesota that grants doctoral degrees.

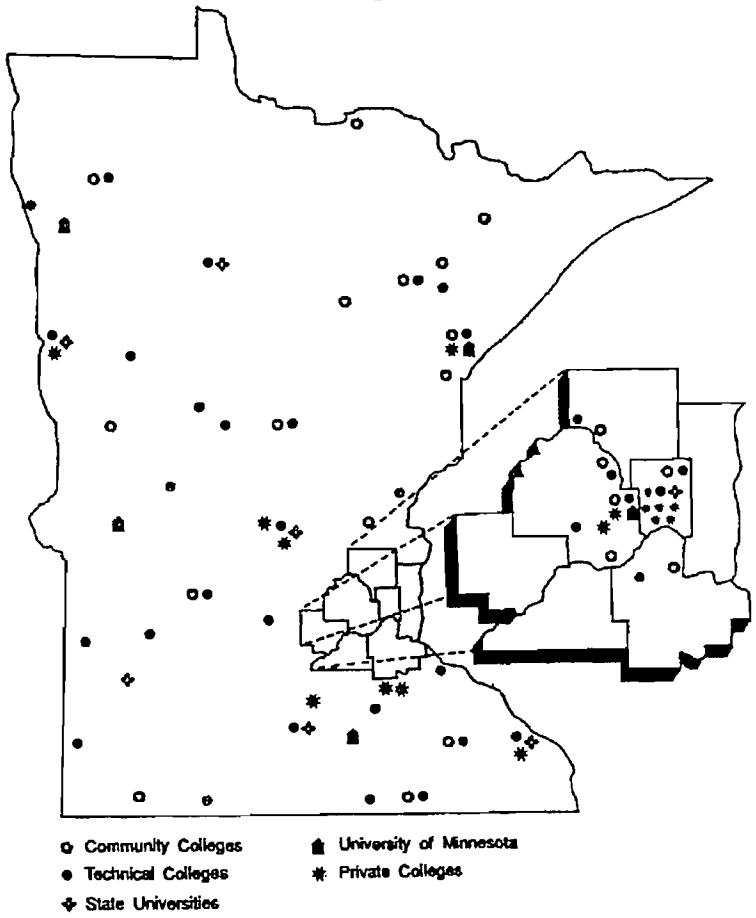
Figure 1.1: Students (FYE) in Minnesota Higher Education Systems, FY 1991




Source: Higher education systems, Higher Education Coordinating Board.

**Minnesota has more public higher education institutions than most states.**

## Figure 1.2: Location of Higher Education Institutions



# Organization and Governance

There are seven state universities that offer a wide variety of four-year undergraduate degrees, plus a smaller number of graduate and two-year programs. Five of the state universities were established as state teachers' colleges. The state university system recently adopted more stringent undergraduate admission standards, as did the University of Minnesota.

Minnesota's community and technical colleges do not have admission standards. Students can attend these colleges regardless of their previous academic records. The 18 community colleges provide courses comparable to those required for the first two years of a four-year degree, and students can seek two-year Associate of Arts or Associate of Applied Science degrees, or transfer their credits to four-year institutions. Technical colleges also offer Associate of Applied Science degrees, although most of their students are enrolled in diploma programs. There are now 27 technical colleges, but several will be merging into regional colleges during the coming year.[4]

Both community and technical colleges offer occupational programs. The 1991 Legislature defined the technical colleges' mission as offering training "for skilled occupations that do not require a baccalaureate degree." The Legislature defined part of the community college mission as offering "occupational programs in which all credits earned will be accepted for transfer to a baccalaureate degree in the same field of study."[5] In addition to serving students seeking degrees, diplomas, and transfer, community and technical colleges serve many students who take individual courses to upgrade their skills or knowledge. Increasingly, these colleges have developed courses to meet the needs of particular employers.

Most two-year colleges in the United States are comprehensive colleges that offer both technical and general education, but Minnesota's technical and community colleges operate under separate governance structures. Furthermore, Minnesota's technical colleges are administered by individual or joint school districts.[6]

Currently, the state university, community college, and technical college systems each have their own state governing boards, appointed by the Governor. However, 1991 legislation will significantly change the governance of these systems during the next several years. The Legislature created a "superboard" to oversee the state university, community college, and technical college systems. Members were appointed in mid-1991, and the board has hired an acting interim chancellor. On July 1, 1995, the state boards for the three higher

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4 There could be as few as 18 technical colleges if all of the smaller campuses become part of regional colleges.

5 *Minn. Laws* (1991) Ch. 356, Art. 2, Sec. 1, Subd. 1.

6 In three parts of the state, school districts have created joint districts for the sole purpose of administering a regional technical college. In addition, there are three joint districts that administer a technical college as well as providing other services; these are called "intermediate" school districts.

education systems will cease to exist, and their powers will be transferred to the new higher education board. According to state law:

**The 1991 Legislature created a board to oversee state universities, community colleges, and technical colleges.**

> The mission of the board is to provide programs of study that meet the needs of students for occupational, general, baccalaureate, and graduate education. The board shall develop administrative arrangements that make possible the efficient use of the facilities and staff of the former technical colleges, community colleges, and state universities for providing these several different programs of study, so that students may have the benefit of improved and broader course offerings, ease of transfer among schools and programs, integrated course credit, coordinated degree programs, and coordinated financial aid. In carrying out the merger of the three separate systems, the board shall control administrative costs by eliminating duplicative administrative positions and course offerings.[7]

The board has authority to prescribe courses of study, set admission standards, and adopt policies for the institutions it manages. State law requires the board to develop a common registration system for all institutions. The board must submit to the Legislature by March 1, 1992 a preliminary plan and timetable for merger. The board must also provide the Legislature with a proposal for administrative structure, although the law does not specify a deadline. The law suggests that the board give "special attention" to integrating personnel, purchasing, and property management functions. The Commissioner of Finance is instructed to develop a proposal for a single accounting system to serve the institutions. Technical college faculty (who are now school district employees) will become part of a new state bargaining unit, and other technical college employees will become part of existing state bargaining units.

The 1991 Legislature mandated that other administrative changes occur prior to the elimination of the three boards. First, the Legislature mandated that the state technical college board create between 9 and 15 technical college joint districts encompassing all portions of the state. Although the law allows some colleges to remain independent, most will become part of districts with joint administrative structures and employee contracts.[8] Currently, there are three "regional" colleges, with five more scheduled to start in July 1992. Second, the Legislature required the state boards of technical and community colleges to consolidate top administrators in certain community and technical colleges located close to each other. The state boards are to implement pilot consolidations at two sites no later than the 1992-93 academic year. Staff in the consolidated positions would be joint employees of the two state boards.[9] The technical and community college systems have not yet identified sites for the pilot projects and intend to ask the Legislature to repeal this requirement.

Finally, another agency with a role in Minnesota's higher education governance structure is the Higher Education Coordinating Board (HECB). State law

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7 *Minn. Laws* (1991) Ch. 356, Art. 9, Sec. 4.

8 *Minn. Laws* (1991) Ch. 356, Art. 2, Sec. 5. Excluded from the requirements were three intermediate school districts, three school districts in cities of the first class, and school districts operating colleges with non-extension enrollments above 1,500.

9 *Minn. Laws* (1991) Ch. 356. Art. 2, Sec. 3.

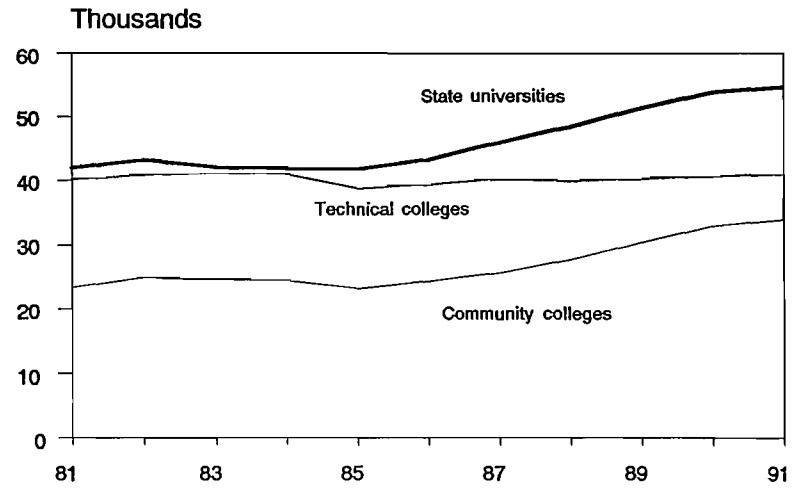
requires this 11-member board and its staff agency to develop long range higher education plans, study all phases of public and private higher education, determine the need for programs, monitor credit transfer between Minnesota institutions, and administer federal higher education funds. Until 1991, state law only authorized the board to approve or disapprove institutions' proposals for **new or modified** programs. The 1991 Legislature strengthened HECB by granting it authority to "approve or disapprove continuation or modification" of **existing** programs as well.[10]

# Student Populations

Figure 1.3 shows full-year-equivalent enrollment in Minnesota's higher education systems during the past decade. Despite the fact that the number of Minnesota high school graduates declined by 28 percent between 1981 and 1991, enrollment in the state university and community college systems increased significantly. Technical colleges maintained relatively steady enrollment during this period, largely because of an increase in the number of students served in extension programs.[11] A recent report completed for the Higher Education Coordinating Board projects "strong enrollment growth" during the next

**Enrollments grew at state universities and community colleges.**

Figure 1.3: FYE Enrollments in Higher Education Systems, FY 1981-91




Source: Higher education systems.

*10 Minn. Laws* (1991) Ch. 356, Art. 2, Sec. 4, Subd. 1. HECB's state-funded positions decreased from 51.0 in 1981 to 38.5 in 1982, and have since increased to 44.8. In constant 1991 dollars, HECB's state admininistrative costs in 1991 were 8 percent higher than in 1981, and 30 percent higher than in 1982. HECB's staffing for self-sustaining loan programs decreased from 28.0 in 1981 to 25.8 in 1991.

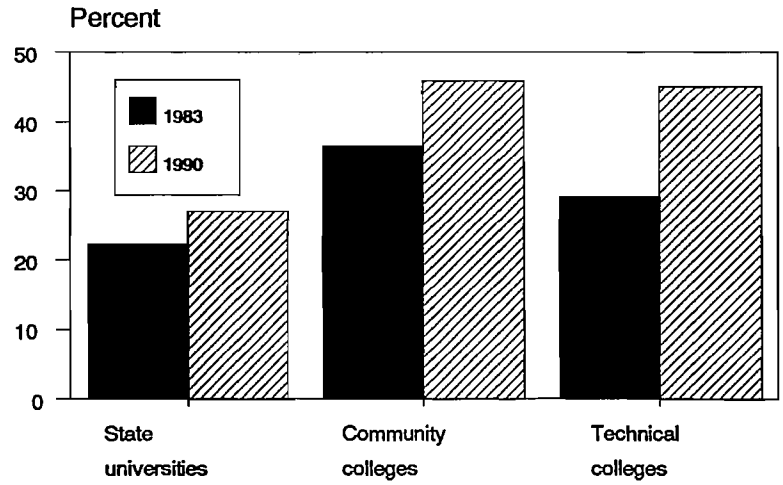
*11* The number of "continuous" students declined during this period, but this was offset by an increase in students in extension and management programs.

decade at state universities and community colleges, and "declining or stable" enrollments at technical colleges.[12] About 35 percent of Minnesota high schools' 1989 graduates attended a Minnesota state university, community college, or technical college in Fall 1989.[13]

The type of students served by the state university, community college, and technical college systems has also changed during the past decade, as shown in Figures 1.4 to 1.6. First, the average age of students has increased. In Fall 1990, 38 percent of Minnesota's undergraduate students in these systems were over age 25, compared to 29 percent in 1983.[14] As shown in Figure 1.4, community and technical colleges had the largest proportion of students over age 25 (about 45 percent in 1990).

**Colleges and universities are serving more older students.**

Figure 1.4: Percent of Students Over Age 25, FY 1983 and 1990




Source: Higher Education Coordinating Board.

Second, the proportion of part-time students has increased, as shown in Figure 1.5. Part-time students comprised 56 percent of community colleges' Fall 1990 headcount, the highest of the three systems. The large increase in part-time students at technical colleges partly reflects the effect of system changes--primarily the change to a credit-based curriculum--that made part-time

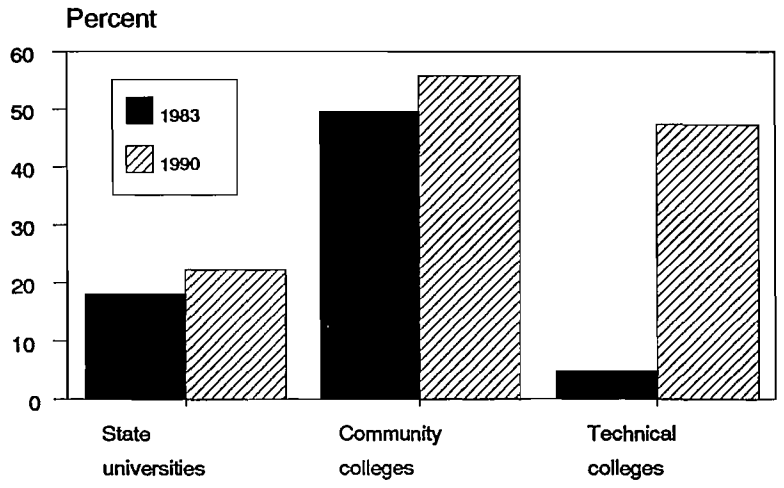
*12* SRI International, *Maintaining Minnesota's Educational Advantage: An Analysis of Future Higher Education Needs and Alternative Strategies to Address Them in Minnesota* (St. Paul, February 1989), 12.

*13* HECB, *Report to the Governor and 1991 Legislature: Technical Report* (St. Paul, January 1991), 11. Although graduates of Minnesota high schools are slightly more likely to attend college than are graduates of high schools nationally, a higher proportion of Minnesota's recent graduates have decided to attend college in another state.

*14* The source is data from the Higher Education Coordinating Board, excluding students from the total for whom age is unknown. In 1990, HECB had no age data for about one-third of the technical college students.

**The number of part-time students has increased.**

Figure 1.5: Percent of Students Who Are Part-Time, FY 1983 and 1990




Source: Higher Education Coordinating Board.

enrollment easier. However, this increase also reflects changes in methods of counting students; some extension students who were not counted as part of the "continuous" student population in 1983 were counted in 1990. Thus, the technical colleges have experienced a large increase in part-time enrollment, but their real increase was not as large as that shown in Figure 1.5.[15]

Finally, there have been increases in the number of minority students served, as shown in Figure 1.6. In 1990, minorities comprised a larger proportion of the student population at technical colleges (8.4 percent) than at state universities or community colleges. However, between 1983 and 1990, state universities and community colleges experienced faster growth in their minority populations than the technical colleges.

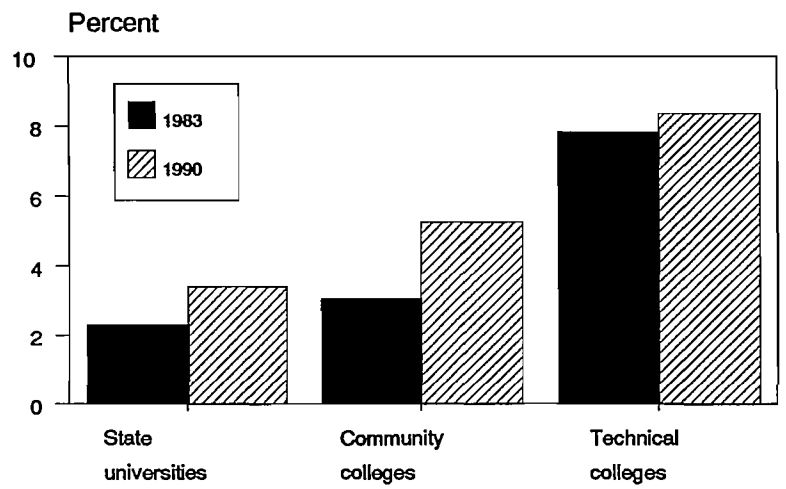
# Funding

Since 1983, the Legislature has provided base-level funding to Minnesota's public higher education systems using an approach known as "average cost funding." Systems receive state funds based on (1) the number of students they have in various categories of instruction, and (2) the average cost of these programs. The average cost funding formulas are based on enrollment data that are two years old, so the recent increases in higher education student populations have not been immediately reflected in appropriations.

The systems receive state funding for a portion of their costs, and tuition makes up most of the balance. State law limits the number of students in each

*15* The data shown in Figure 1.5 do not include extension, graduate, or secondary students.

Figure 1.6: Percent of Students Who Are Minorities, FY 1983 and 1990




Source: Higher Education Coordinating Board.

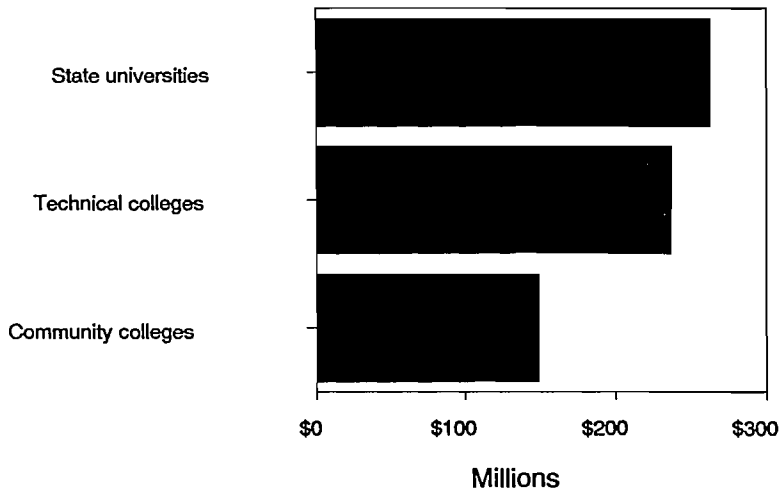
system that can be funded with direct appropriations. Systems that exceed these limits must use tuition to pay for costs. Direct state appropriations pay for about 70 percent of total operating costs in each of the systems. Average cost funding provides base level funding for each system, but the Legislature can appropriate additional funds for special purposes.

Figure 1.7 shows total expenditures from state general funds (including tuition and direct appropriations) by the state university, community college, and technical college systems in fiscal year 1991. In addition, the technical colleges receive about six percent of their operating budgets from federal funds, while federal funding for the other systems is minimal.

Figure 1.8 shows state general fund expenditures per FYE student in each system since 1978. The technical colleges have consistently been the most expensive system per student, with costs in 1991 of about $5,800. Typically, technical education costs more than academically-oriented education because of higher equipment costs and smaller class sizes.

Total expenditures per FYE increased in each system between 1978 and 1991, with community colleges experiencing the most rapid growth. The magnitude of increase depends on the base year selected for cost comparison. In general, higher education expenditures per student increased during the mid- to late-1970s, declined in the early 1980s, and increased with the introduction of average cost funding.

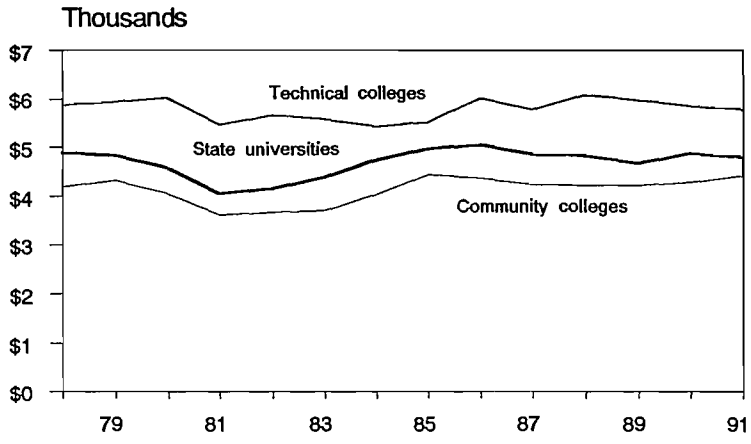
Figure 1.7: Higher Education State General Fund Expenditures, FY 1991




Source: Higher education systems.

**Technical colleges have the highest cost per student, and community colleges the lowest.**

Figure 1.8: Higher Education Expenditures Per FYE, FY 1978-91




Source: Minnesota Department of Finance, higher education systems.

# METHODS

## Defining Administrative and Student Services

A first step in our review of higher education spending was defining "administrative" and "student services" functions. We examined the staffing categories used by the Integrated Post-Secondary Education Data System (IPEDS), the primary database maintained by the National Center for Education Statistics.[16] We also reviewed expenditure accounts used by each of Minnesota's higher education systems. Figure 1.9 lists the categories we selected for review.

In some cases, such as academic administration, the definitions we used differed somewhat between higher education systems.[17] In Chapter 5, we have tried to adjust for or acknowlege these differences when making inter-system cost comparisons.

In our staffing review, we looked at all positions within the administrative and student services functions outlined above, including clerical and support staff. We reviewed staff from all bargaining units, including faculty. We looked at actual expenditures, not the allocations made to campuses for particular functions. We did not try to evaluate the salaries of staff in detail. In the community college and state university systems, which receive relatively small amounts of federal funding, we examined only state-funded positions. In the technical college system, which receives a larger portion of its budget (about six percent) from federal funds, we examined both state and federal positions.

## Sources of Data

Despite starting our review with this common framework of functions, our analysis was complicated by the fact that each system has its own way of maintaining cost and staffing data. Although the state universities and community colleges report certain cost data to the Statewide Accounting System, both systems maintain more detailed data systems in their central offices. The technical colleges report their costs to the Minnesota Department of Education's Uniform Financial Accounting and Reporting Standards (UFARS) system. The three higher education systems use different accounting structures to classify expenditures, with the state universities having the most detailed

*16* IPEDS superceded the Higher Education General Information Survey (HEGIS), which collected similar information through 1986. Colleges submit data to NCES as part of an integrated series of surveys on staffing, finance, enrollment, and program outcomes. NCES is directed by federal law to collect and analyze information on education in the U.S. and to help states improve their education information systems.

*17* For example, in some of our analyses, we looked at state university staff in academic deans' offices, but not lower-level department heads. In community and technical colleges, it is more difficult to differentiate between the functions of deans of instruction--which not all colleges have--and other academic administrators. Thus, at the two-year colleges, we reviewed academic administrators below the level of deans.

## Figure 1.9: Categories of Administrative and Student Services Included and Excluded In This Study

**INCLUDED:**

- **Executive management**, such as the governing board, chief system administrators, chief campus administrators, and system planning and budgeting;
- **Legal services**;
- **Fiscal operations**, such as accounting, disbursements, purchasing, loan collection, auditing, and grant and contract administration;
- **General administrative services**, such as data processing, personnel, and institutional research;
- **Logistical services**, such as printing, photocopying, campus communications, motor pool, mail service, space management, and management of supplies and materials;
- **Community relations**, such as publications, marketing, public relations, recruitment, development, and alumni relations;
- **Student services administration**, such as the dean of students, admissions office, registrar, and student records;
- **Student counseling and career guidance**;
- **Financial aid administration**;
- **Other student services**, such as services to ethnic and cultural minorities and persons with disabilities;
- **Academic administration**, such as academic deans and coordinators, extension and continuing education administrators, and developmental education administrators;
- **Curriculum development.**

**EXCLUDED:**

- **Instruction and community service**;
- **Library and audio-visual services**;
- **Museums and galleries**;
- **Academic computing services**;
- **Student social and cultural activities**, such as athletics, intramurals, theatre, yearbook, and other student activities;
- **Student housing services**;
- **Student health services**;
- **Self-supporting or "enterprise" activities**, such as the student center and food service;
- **Physical plant**, such as custodial and maintenance staff;
- **Small business management centers**;
- **Scholarships**;
- **Building rent or leases**;
- **Building repairs or alterations**;
- **Tuition refunds.**

accounts.[18] Furthermore, there are inconsistencies within each system in the accounts used by individual institutions to categorize expenditures. In an effort to categorize costs consistently, we talked extensively with central office and campus staff about their accounting systems and account structures.[19] In general, however, we think the most valid comparisons of costs between systems and colleges are those in which costs are aggregated into broad categories, rather than comparisons of more detailed expenditure categories.

*18* The more detailed the accounts, the better able we were to include or exclude particular expenditure categories in our analysis.

*19* We were still unable to resolve some inconsistencies. For example, we were unable to track non-personnel costs for instructional administration in community colleges because some colleges combined these costs with instructional costs.

The years for which we reviewed data from each system also differed somewhat. The state universities and technical colleges provided us with data for each fiscal year since 1981. The community colleges did not have computerized non-personnel data available for years before 1984.[20] We obtained community college personnel data for each year since 1980, but many of our analyses focused on two years (1981 and 1991) for which we supplemented existing data with a survey of colleges' staffing practices.

Because the results of trend analyses depend on the base years chosen for comparison, we reviewed data using different base years, when possible. It is worth noting that the base years used for many of our comparisons (early 1980s) represented a period of relatively low spending per student by Minnesota's higher education institutions. We were unable to obtain detailed expenditure data from the late 1970s, when total spending per student was at higher levels.

Using the national IPEDS database for 1989 expenditures, we conducted some comparisons of Minnesota's higher education costs to those of other states. Chapter 4 reports some of these comparisons for state universities, but we had sufficient concerns about the comparability of data for community and technical colleges that we chose not to report detailed comparisons. In the case of technical colleges, only two of Minnesota's technical colleges reported expenditure data to the National Center for Education Statistics in 1989, making it difficult to develop useful national comparisons.[21]

In addition, the national database contains no information on the costs of states' central administrative offices. This is a particular problem for community college expenditure comparisons since Minnesota's community college central office is larger than those of most states.[22] Another difficulty with inter-state comparisons was the difference between the mission of Minnesota's community colleges and those in other states. Most states have "comprehensive" two-year institutions that offer both technical and academic programs, but Minnesota's community colleges have fewer technical programs. These differences have cost implications for which it is hard to control. Finally, there were significant differences between some of the administrative and student services costs reported by Minnesota community colleges in the national database and those in our own analyses.[23] Without reviewing states' IPEDS data in considerable detail, it would be difficult to determine whether the cost variations we found reflect differences in efficiency, institutional mission, or data reporting practices.

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*20* Hard copies of summary data for years before 1984 were available, but not in as much detail as subsequent years.

*21* Staff from the technical college board office told us that NCES now receives information on all of Minnesota's technical colleges.

*22* The lack of information on central office costs is less of a problem for state universities. State universities are usually large enough to provide most of their institutional services at the campus level, with the system office providing a smaller portion of these services.

*23* For example, student services costs for Minnesota community colleges in the national IPEDS database were much higher than those calculated in our study, apparently due to differences in definitions.

In addition to our data analysis, we visited many campuses to interview staff and tour facilities. We visited all seven state universities, 12 of 18 community colleges, and 15 of 27 technical colleges. There are seven locations outside the Twin Cities area and three locations in the Twin Cities where technical and community colleges are located in close proximity. We visited each of these sites in Fall 1991 to discuss with administrators the potential for merging or sharing services.

## Inflation Adjustments

When evaluating cost trends, the primary index we used to adjust costs for inflation was the gross national product (GNP) price deflator for state and local governments. This index reflects changes in the prices paid by state and local governments (including higher education) for goods and services. The Minnesota Department of Finance uses this index to evaluate the cost trends of higher education and state agencies.

To determine whether our choice of an index affected our results, we also evaluated costs using (1) the national consumer price index (CPI), which measures price changes paid by consumers for their goods and services, and (2) the Higher Education Price Index (HEPI), which measures changes in prices paid by colleges and universities for goods and services. Of the three indices, the CPI index increased the least during the past decade and the HEPI index increased the most, reflecting the fact that higher education salaries increased faster than the general inflation rate.[24] The GNP price deflator for state and local governments represents a "middle ground" assumption about recent inflation rates.

## Criteria for Evaluation of Costs

**There are few benchmarks for administrative and student services spending.**

It is difficult to find good benchmarks to evaluate administrative and student services spending. Previous research on costs is of limited value because the studies have used varying definitions of administrative and student services. Also, there are few measures of administrative productivity or output, which complicates the task of defining "appropriate" administrative spending levels.

The purpose of this study was to describe recent spending patterns for administrative and student services, and suggest possible ways for Minnesota's higher education systems to streamline these services. To help us in this task, we compared spending levels over time, among colleges within Minnesota's higher education systems, and among the higher education systems. We also talked with staff at colleges and universities to help us evaluate the feasibility of consolidating various positions under different administrative arrangements.

*24* Between 1981 and 1991, CPI-measured prices increased 54.8 percent, HEPI-measured prices increased 72.6 percent, and state and local prices measured by the GNP deflator increased 60.9 percent. Some of the "inflation" measured by these indices is caused by controllable factors--such as salary settlements--rather than market conditions.

We have used caution in our cost comparisons because the higher education systems have different missions, the institutions are of varying sizes, and there are legitimate differences of opinion on how to staff and organize administrative functions. A leading higher education researcher has suggested that peer comparisons can identify cost differences that warrant further investigation, but noted that the causes of institutional spending levels are complex and often beyond the control of the institution.[25] We discuss some of the factors that affect costs later in this chapter.

When evaluating the data in this report, it is important to consider that administrative and student service costs represent only a portion--20 to 30 percent--of total higher education costs. Legislative decisions about the governance and structure of Minnesota's higher education systems should consider more than the administrative cost savings that might be possible. As we discuss in Chapter 6, the cost implications of changes in organizational structure might be greatest in instructional, not administrative, functions.

**Conclusive judgments about efficiency cannot be made solely on the basis of spending levels.**

Finally, it is important to consider that the efficiency of colleges and universities is determined both by expenditures and the outcomes of these expenditures. If institutions have low costs because they have sacrificed essential instructional or administrative services, they should not be viewed as efficient.[26] This study focuses on expenditures, largely because the outcomes of administrative and student services are so difficult to measure. Nevertheless, we recognize that conclusive judgments about efficiency cannot be made solely on the basis of costs.

# NATIONAL TRENDS IN ADMINISTRATIVE STAFFING AND COSTS

We reviewed existing research on higher education administrative costs to acquaint ourselves with both the methods and findings of past studies. Some of the authors of these studies have noted the lack of available data and published analyses regarding administrative cost trends in higher education.[27]

The primary source of national trend data on higher education staffing is the federal Equal Employment Opportunity Commission (EEOC), which surveys

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*25* Kent Halstead, *Higher Education Revenues and Expenditures* (Washington, D.C.: Research Associates of Washington, 1990), 250-1. The author suggests that cost differences in peer comparisons of more than 25 percent merit further investigation, but smaller differences "probably signify little other than normal style and mechanical variations occurring in all complex human activities."

*26* Likewise, institutions that provide high quality education might be inefficient, depending on the cost required to provide these services.

*27* W. Lee Hansen and Thomas F. Guidugli, in "Comparing Salary and Employment Gains for Higher Education Administrators and Faculty Members," *Journal of Higher Education* (March/April 1990), 142-159, noted that costs had previously been analyzed for some particular institutions, but not for higher education as a whole. Alice Brown, in "How the Administration Grows: A Longitudinal Study of Growth in Administration at Four Universities," *Research in Higher Education* (Vol. 14, No. 4, 1981), 335-352, said that most research on administrative costs has focused on business, not higher education.

all higher education institutions every two years to determine the sex and race of staff. Federal law requires institutions to complete the survey. We obtained all EEOC summary reports since 1975, and Table 1.1 summarizes the results. Using the staffing categories as defined by EEOC, we found that:

- **Nationally, the main growth in college and university staffing in the past 15 years has been among "other professional" staff. There was slight growth in top administrative staff.**

## Table 1.1: Occupations of Staff at U.S. Higher Education Institutions, 1975-89

| | Percent of Full-Time Staff Who Are:[1] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Faculty | Executive, Administrative, and Managerial | Other Professionals | Clerical | Technical, Para-Professional | Skilled Craft | Service and Maintenance | Total |
| 1975 | 32.2% | 7.4% | 12.0% | 21.8% | 8.2% | 3.7% | 14.8% | 100.0% |
| 1977 | 31.5 | 7.3 | 13.2 | 21.9 | 8.2 | 3.6 | 14.3 | 100.0 |
| 1979 | 30.6 | 7.3 | 14.4 | 21.8 | 8.4 | 3.7 | 13.8 | 100.0 |
| 1981 | 30.5 | 7.6 | 15.0 | 21.5 | 8.3 | 3.7 | 13.5 | 100.0 |
| 1983 | 30.6 | 7.4 | 16.1 | 21.0 | 8.4 | 3.6 | 12.9 | 100.0 |
| 1985 | 30.0 | 7.6 | 17.0 | 20.9 | 8.2 | 3.7 | 12.5 | 100.0 |
| 1987 | 29.3 | 7.6 | 18.2 | 21.1 | 8.5 | 3.6 | 11.6 | 100.0 |
| 1989 | 28.9 | 7.7 | 19.3 | 20.8 | 8.3 | 3.6 | 11.3 | 100.0 |

Source: Equal Employment Opportunity Commission, Form EEO-6 summaries, 1975-89.

[1]Includes staff at both public and private institutions.

According to the EEOC definition, "other professionals" include "librarians, accountants, personnel staff, counselors, systems analysts, coaches, lawyers, and pharmacists, for example."[28] As a proportion of total higher education staff, the number of administrators and other professionals grew during the past 17 years, while the number of faculty and maintenance staff declined.

We also reviewed summaries of IPEDS financial data reported by the National Center for Education Statistics for various types of U.S. higher education institutions. We examined aggregate spending increases in three general categories for fiscal years 1977 to 1988: institutional support, student services, and academic support (not including libraries). The proportion of total spending in these categories increased from 16.7 percent to 17.6 percent at public research

*28* This category together with the "executive, administrative, and managerial" category appear to include most of the positions being reviewed in our study of Minnesota higher education. However, our review does not include librarians, health services staff, or coaches. The "executive, administrative, and managerial" category includes persons with "primary (and major) responsibility for management of the institution, or a customarily recognized department or subdivision. Assignments require the performance of work directly related to management policies or general business operations of the institution department or subdivision, etc.... Report in this category all officers holding such titles as President, Vice President, Dean, Director, or the equivalent, as well as officers subordinate to any of these administrators... if their principal activity is administrative."

universities (like the University of Minnesota), from 22.5 percent to 24.6 percent at public four-year colleges (like Minnesota's state universities), and from 26.5 percent to 31.2 percent at public two-year colleges (like Minnesota's community and technical colleges).[29]

# FACTORS AFFECTING ADMINISTRATIVE COSTS

In general, we think there are more similarities than differences between the administrative functions performed by Minnesota's higher education systems, and it is reasonable to make certain types of inter-system cost comparisons. However, such comparisons, as well as analyses of cost trends over time, require a general understanding of the factors that may have affected recent spending levels.

This section discusses determinants of administrative and student services costs that have been discussed in research literature, or brought to our attention by staff in the three systems we examined. As we conducted the analyses reported in subsequent chapters, we have tried to consider possible reasons for cost differences, although we did not attempt to isolate the effect of individual factors on costs.

## Mission

The mission of an institution can affect the amount it spends to educate students. Differences in mission probably have their most significant impact on costs for instruction and research, but they also affect administrative costs. For example, technical and community colleges provide instruction, but state universities also engage in some research and public service activities. State universities might require more staff to support a wider diversity of institutional functions.[30] Using a national higher education expenditure database, we found that, after controlling for college size, administrative expenditures per student at four-year colleges are about 25 percent higher than those at two-year colleges.[31]

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*29* U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics: 1991*, (Washington, D.C., 1991), 319-321. A recent study for the U.S. Department of Education reported that, nationally, administrative expenditures for all categories of higher education institutions increased from 17.2 percent of total expenditures in 1974-75 to 19.2 percent in 1984-85. This study included institutional support and student services, but not academic administration expenditures. See Eva C. Galambos, "Higher Education Administrative Costs and Staffing," *Higher Education Administrative Costs: Continuing the Study* (Washington, D.C.: U.S. Department of Education, 1988), 34.

*30* Peter M. Blau, in *The Organization of Academic Work* (New York: John Wiley and Sons, 1973), found that large higher education institutions–particulary universities with Ph.D. programs--often have more clerical staff because there are more departments, some very specialized. However, Blau found that the proportion of administrators in large institutions is smaller due to economies of scale.

*31* We used the fiscal year 1989 data volume accompanying Kent Halstead, *Higher Education Revenues and Expenditures: A Study of Institutional Costs* (Washington, D.C.: Research Associates of Washington, 1990). Our analysis included Comprehensive I and II and Liberal Arts I and II four-year colleges. Costs include institutional support, student services, and academic support (excluding libraries).

The cost of providing student services is also affected by mission. Unlike the state universities, community and technical colleges do not have admission standards. Because they serve more students without good records of academic achievement, the two-year colleges generally provide more student support services. Also, the two-year colleges have more "non-traditional" students (such as adults attending college part-time) who need counseling, tutoring, and financial aid.

Some researchers have downplayed the role of mission in cost differences between institutions. An extensive study of higher education costs by Howard Bowen found "astonishing" variations in cost per student.[32] Bowen found that substantial cost differences existed even among institutions with similar missions. For example, in a sample of six similar state colleges in small cities, institutional support costs ranged from 5 to 27 percent of total expenditures, and student services costs ranged from 2 to 9 percent.

# Revenues

Spending levels depend primarily on the amount of revenues colleges receive, according to some researchers. Bowen found that the unit costs of operating colleges are determined more by:

> the amount of money institutions are able to raise per unit of service rendered than by the inherent technical requirements of conducting their work.... Unit costs are determined not by changes in efficiency but by changes in revenues.[33]

**Spending depends largely on the amount of funding available.**

Bowen calls this the "revenue theory of costs." He suggests that, in the short run, appropriations, tuition, and other revenue sources determine overall higher education unit costs, and administrators merely spend whatever funding they are able to obtain. Legislators respond to a variety of public pressures when determining higher education appropriations: pressures to improve access and quality, and pressures to limit taxes and tuition. Administrators can spend allocations efficiently or inefficiently, but their first goal is to obtain the highest level of resources possible for their institutions.

In Minnesota, public colleges and universities have considerable autonomy to spend their budgets as they wish, within broad limits set by the Legislature, state governing boards, and other fund sources. College administrators can target funding to or away from particular cost categories, such as administration and student services. Nevertheless, an institution's overall funding level will affect the resources available for administrative expenditures, so the revenue theory of costs merits consideration.

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32 Howard Bowen, *The Costs of Higher Education: How Much Do Colleges and Universities Spend Per Student and How Much Should They Spend?* (San Francisco: Jossey-Bass, 1987), 114-129.

33 *Ibid.*, 15,17.

A recent study indicated that the total amount of revenue per student that Minnesota higher education institutions received from state appropriations and tuition was slightly above the national average (Minnesota ranked twenty-second among the states).[34] As shown in Table 1.2, Minnesota ranked seventeenth in direct state and local appropriations per student and twenty-sixth in tuition (less state appropriated student aid) per student.[35] As noted earlier, expenditures per student increased in all three systems between 1978 and 1991 after adjusting for inflation, with the largest increase in the community college system.

**Minnesota's appropriations per student ranked seventeenth highest among the states.**

## Table 1.2: Minnesota Public Higher Education Enrollment and Revenues, Compared to U.S. Averages

| | 1990-91 | | | |
|---|---|---|---|---|
| | Minnesota | U.S. | National Rank[1] | Recent Trends |
| High school graduates per 1,000 population | 12.2 | 10.2 | 12 | Minnesota's number of graduates per 1,000 population was 28 percent above the national average in 1977-78, compared to 19 percent above in 1990-91. |
| Public higher education students per 1,000 population | 41.5 | 31.7 | 4 | Minnesota's number of students per 1,000 population was 18 percent above the national average in 1977-78, compared to 31 percent above today. |
| Higher education direct appropriations per student | $4,547 | $4,328 | 17 | Minnesota's appropriations were 16 percent above the national average in 1977-78, compared to 5 percent above today. |
| Higher education tuition (less state appropriated student aid) per student | $1,563 | $1,533 | 26 | Minnesota's tuition was 10 percent below the national average in 1977-78, compared to 2 percent above today. |
| Total appropriations and tuition per student | $6,110 | $5,862 | 22 | Minnesota's total revenues were 10 percent above the national average in 1977-78, compared to 4 percent above today. |

Source: Kent Halstead, *State Profiles: Financing Public Higher Education 1978 to 1991* (Washington, D.C.: Research Associates of Washington, September 1991).

[1]One to 50, where one is highest.

*34* Kent Halstead, *State Profiles: Financing Public Higher Education 1978 to 1991* (Washington, D.C.: Research Associates of Washington, September 1991), 84.

*35* Minnesota has relatively high tuition and fees compared to other states, but students at Minnesota institutions also have more state financial aid available to them.

Although Minnesota's higher education revenues **per student** have been somewhat above the national average, Minnesota's state and local revenues **per capita** ranked even higher (seventh in the nation) in 1990-91. Minnesota's high number of students per capita in its public higher education institutions accounts for the difference between these two measures of state financial support. Minnesota's enrollment per capita grew faster than the national average during the past 15 years.

## Economies of Scale

Most organizations have some "fixed" costs that do not vary with their size. For example, colleges need at least a minimal administrative framework, including a chief executive, a business office, and some basic student services. But small colleges have higher fixed costs per student because they sometimes find it impractical to purchase portions of resources, such as a part-time president or part of a computer system. If these fixed costs can be spread out over a larger student population, unit costs will decline.

However, some unit costs increase as colleges grow and expand their missions. One researcher notes that:

> As colleges grow they change in subtle ways, generally increasing the scope and level of the curriculum, elevating the quality of senior faculty, adding research, enriching the library, expanding student services, etc. Such accompanying quality improvements are as likely to increase average unit expenditures as growth is likely to result in their reduction.[36]

To control for differences in mission, most empirical studies have evaluated economies of scale for particular types of institutions, such as two-year colleges, four-year colleges, and research universities. A good summary of research on higher education economies of scale is a 1985 compilation of dozens of studies conducted over the past several decades. The authors summarized their findings as follows:

**Studies have shown that costs per student decline as enrollment increases.**

> (1) Two-year and four-year colleges, on average, do experience positive returns to size; (2) substantive size-related economies are most likely to occur at the low end of the enrollment range; (3) the enrollment range over which such economies are likely to be found differs by type of institution; (4) the extent of such economies differs by function, with the administrative area typically experiencing the greatest reduction in unit cost and instruction the least; (5) for educational and general expenditures, the broadest category, a three- to four-fold difference in enrollment among small institutions is accompanied by a difference in cost per student, at the mean, of 25 percent for two-year institutions and 23 percent for four-year institutions; and (6) the extent to which scale-related economies or diseconomies are demonstrated by a given set of institutions

36 Kent Halstead, *Higher Education Revenues and Expenditures: A Study of Institutional Costs* (Washington, D.C.: Research Associates of Washington, 1990), 127-8.

> depends on variations among them in the scope and variety of the programs and services they offer, the salaries they pay, and the general disposition of their resources.[37]

For two-year institutions, studies have indicated substantial economies of scale in administrative costs up to 1,500 FYE enrollment. Studies have shown that administrative costs per student declined an average of 34 percent when enrollment increased 200 to 300 percent.[38] About half of Minnesota's two-year institutions are smaller than 1,500 FYE.[39] In 1991, the median FYE enrollments for Minnesota's technical and community college systems were about 1,050, well below the national median for two-year colleges of about 1,750.[40]

For comprehensive four-year schools comparable to Minnesota's state universities, research has indicated that most economies of scale occur up to enrollments of 3,000 to 4,000 FYE.[41] Two Minnesota state universities had 1991 enrollments below these thresholds: Southwest State (2,636) and Metro State (2,870). However, some studies show that unit costs continue to decline even at higher enrollments. A study of California's state universities showed that doubling enrollments from 3,000 to 6,000 students reduced cost per student by 20 percent, and doubling enrollment to 12,000 reduced costs an additional 10 to 15 percent.[42]

There has been little study of the economies of scale associated with particular categories of administrative or student services spending, such as fiscal services or financial aid administration. However, the research showing economies of scale in broad administrative categories suggests that colleges do not necessarily have to add administrative staff in direct proportion to student growth. The workloads of many administrators are driven more by the functions they oversee than the number of students in the institution. In contrast, enrollment likely has a more direct effect on the workloads of staff such as instructors and counselors.

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*37* Paul T. Brinkman and Larry L. Leslie, "Economies of Scale in Higher Education: 50 Years of Research," *Proceedings of the Annual Meeting of the Association for the Study of Higher Education* (Chicago, March 15-17, 1985).

*38* *Ibid.*, 11-22. Based on 14 studies, with mean enrollment increases from about 450 to 1,600. Total costs per student--including non-administrative costs--declined an average of 25 percent for these enrollment increases.

*39* Twenty-four of Minnesota's 45 two-year colleges have enrollments less than 1,500, although this will decrease as technical colleges form more regional colleges. We have not separately counted technical college campuses that are presently part of a multi-campus college.

*40* The technical college median (1,058) is based on 30 colleges that existed in 1991, and the community college median (1,046) is based on 18 colleges, excluding centers. We derived the national median from a 1989 IPEDS database compiled by Research Associates of Washington, D.C.; it uses a slightly different method of calculating FYE.

*41* *Ibid.*, 17-22. Based on a review of past studies, Brinkman and Leslie found that when enrollment increased from 600 to 2,000 FYE at four-year institutions, administrative costs declined an average of 34 percent, and total costs declined an average of 22 percent. Also, see Brinkman, "Higher Education Cost Functions," in *The Economics of American Universities*, ed. Stephen A. Hoenack and Eileen L. Collins (Albany, New York: State University of New York Press, 1990), 121.

*42* California Coordinating Council for Higher Education, *Meeting the Enrollment Demand for Public Education in California Through 1977--The Need for Additional Colleges and University Campuses* (Sacramento, Cal., 1969), Appendix D-1. The findings of the original study were confirmed in a 1988 followup.

**Despite higher costs, small colleges also offer educational benefits.**

The presence of economies of scale in higher education does not necessarily mean that "larger is better." In industry, economies of scale enable a large plant to generate products identical to those at smaller plants at a lower cost. In higher education, however, the "products" of large and small colleges might not be identical. Some educators believe that smaller campuses provide better learning environments. In addition, a large number of small campuses provides better access to higher education than a few large campuses. In the late 1960s, the Higher Education Coordinating Board recommended that the state have one publicly-supported post-secondary institution within 35 miles of every Minnesota community with a population of 5,000 or more. Thus, the Legislature should weigh these benefits against the higher costs of small colleges discussed later in this report.

Colleges can have high costs due to their small size, yet still spend available funds wisely. Likewise, there may be colleges that lack good operating practices but have relatively low costs due to size-related efficiencies. Thus, to evaluate variations in operating efficiency, it is best to compare colleges of comparable size.

## Institutional Growth

Changes in the number of students served have affected the workloads of administrators and student services staff in Minnesota's higher education systems. Enrollment affects the staffing requirements for functions such as admissions, registration, financial aid, counseling, and other student services. As noted earlier, state university and community college student enrollments increased significantly during the past decade. Technical college enrollment remained relatively stable during this period, but there was an increase in the number of extension students.

All three systems are serving a greater proportion of part-time students than they used to, and some college staff told us that the work required to provide services such as registration or counseling to a part-time student is comparable to that required for a full-time student. In addition, because the student populations of the three systems have included increasingly more "non-traditional" students--such as older students, working mothers, and students with limited English proficiency--institutions have had to provide more student services.

Along with enrollment increases, institutions have also experienced staff growth. Increases in the number of employees directly affect the workloads of personnel and payroll staff. According to a Department of Employee Relations analysis of staff changes from 1982 to 1991, the number of full-time staff increased 23 percent at community colleges during this period, and 12 percent at state universities. The total number of employees increased 94 percent at community colleges during this time, and 33 percent at state universities.[43] Comparable data on technical college staffing were not available.

*43* Memo from Commissioner Linda M. Barton to state agency heads, May 8, 1991. As of January 1991, community colleges employed 1,811 full-time employees and 3,866 total. State universities employed 3,905 full-time employees and 5,803 total.

Finally, there was an increasing amount of construction at campuses in recent years, so the planning and oversight of this work has increased some administrative workloads. Table 1.3 shows the amount of capital bonding approved by the Legislature for each system since 1981. The amounts have generally been larger in recent years, particularly in 1987 and 1990.[44]

## Table 1.3: State Appropriations for Capital Improvements, 1981-91

| Year of Appropriation | State Universities[a] | Community Colleges | Technical Colleges | Total |
|---|---|---|---|---|
| 1981 | $597,000 | $ 0 | $184,000 | $781,000 |
| 1982 | 924,000 | 0 | 752,300 | 1,676,300 |
| 1983 | 3,360,000 | 470,000 | 850,000 | 4,680,000 |
| 1984 | 19,505,000 | 25,038,400 | 10,057,600 | 54,601,000 |
| 1985 | 14,557,700 | 5,306,700 | 7,164,400 | 27,028,000 |
| 1986 | 0 | 0 | 0 | 0 |
| 1987 | 52,491,200 | 34,960,000 | 33,198,100 | 120,649,300 |
| 1988 | 2,900,000 | 2,791,200 | 2,697,000 | 8,388,200 |
| 1989 | 27,830,000 | 5,805,000 | 5,485,000 | 39,120,000 |
| 1990 | 44,408,000 | 50,500,000 | 25,362,000 | 120,270,000 |
| 1991 | 0 | 0 | 0 | 0 |
| Total 1981-91 | $166,572,900 | $124,871,300 | $85,750,400 | $377,194,600 |

Source: 1981-91 bonding bills.

[a]The state universities also issued $29.1 million in revenue bonds during this period.

# State and Federal Mandates

In recent years, the Legislature has enacted an increasing number of mandates for the higher education systems. Typically, systems have been required to develop reports or plans for the Legislature or Higher Education Coordinating Board. There have been relatively few cases where the Legislature has singled out individual systems for mandates, and in most such instances the requirements were modest and probably did not contribute substantially to administrative workloads.[45] The main exception is the transfer of retirement planning responsibilities from the Teachers' Retirement Association to the state university and community college systems in 1989 and 1990. This action has added significant new responsibilities to personnel and fiscal services staff in these two systems' central offices. Also, the Legislature has transferred responsibility for construction management and inspection from the state architect's

*44* Staff from the systems also told us that land acquisition procedures, building codes, and building systems have become more complicated in recent years, further increasing the administrative requirements for new construction.

*45* In 1989, for example, the Legislature required the technical college system to report on its new student placement tracking system, the community college system to report on the feasibility of a textbook rental system, and the state universities to report on nursing education outreach programs.

office to two of the system offices (the state universities in 1984, and the technical colleges in 1988).

Most of the recent state mandates have applied equally to each of the three systems we reviewed. For example, during the past decade the Legislature has asked each of the higher education systems to develop distinct missions and articulate plans for managing enrollment levels. The 1983 Legislature required each of the higher education systems to develop "system plans" outlining their missions, programs, and anticipated enrollment.[46] The 1985 Legislature instructed the systems to develop clearer distinctions between their missions. The 1989 and 1990 Legislatures asked each system to examine their existing use of space and consider ways to enhance programs without new construction. The 1990 Legislature again asked each system to reconsider its mission statement, and also required each to develop an enrollment management plan so that existing facilities could be used more efficiently.

**There has been an increase in state mandates.**

Figure 1.10 lists legislative mandates that were common to the three systems from 1988 to 1991. There has been more legislative oversight of the higher education systems in recent years, and the increase in mandates is one manifestation of this. Most of the Legislature's requests for reports are directed to the Higher Education Coordinating Board, not the individual systems. However, HECB often relies on information and analysis from the systems to develop its reports, so HECB mandates have also increased the systems' administrative workloads.

Federal requirements have had a relatively minor impact on administrative workloads in community colleges and state universities. Recent federal laws have required colleges to annually report campus crime rates and athlete graduation rates, provide services for students with disabilities, and demonstrate civil rights compliance. Also, ongoing changes in federal financial aid programs have required close monitoring by college staff.

Federal mandates have had a more significant impact on technical college workloads. The federal government has required the state board to develop annual plans for using federal vocational education funds and programs for various categories of disadvantaged students. The system office monitors compliance with the plan and submits annual spending reports to the federal government. While up to five percent of the state's federal vocational education funds can be spent for administrative purposes, the technical colleges spend more state than federal funds on work related to federal mandates.[47]

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*46* *Minn. Laws* (1983) Ch. 258, Sect. 34.

*47* In addition, the state technical college board evaluates and accredits colleges every five years so that students can qualify for federal loans and grants.

## Figure 1.10: Legislative Mandates Common to the Higher Education Systems, 1988-91

**The 1988 Legislature required the systems to:**

- Review curricula to determine opportunities for community service components;
- Report on faculty exchange programs;
- Report on a joint loaned executive action program;
- Assess the effects of child care legislation on the needs of post-secondary students;
- Report on actions taken to implement 1988 legislative requirements regarding American Indian education;
- Set prices for goods and services sold through student services to approximate cost as closely as possible.

**The 1989 Legislature required the systems to:**

- Develop growth plans, including reviews of space use;
- Study ways to encourage students to complete programs in a timely manner;
- Develop policies on sexual harrassment and sexual violence, and provide students with information on these policies;
- Develop alternatives for students who cannot afford child care.

**The 1990 Legislature required the systems to:**

- Jointly develop criteria to help the Legislature decide on child care facility requests;
- Develop parking plans;
- Develop enrollment management plans;
- Develop plans for providing undergraduate and practitioner-oriented graduate programs in the Twin Cities metropolitan area;
- Review mission statements;
- Develop plans for incorporating debt service retirement into operating budgets;
- Report on programs that provide initial training and continuing education for administrators and faculty;
- Annually report information on off-campus sites.

**The 1991 Legislature required the systems to:**

- Report on how faculty members spend their time;
- Implement and maintain tracking systems for their graduates;
- Review and re-design programs and courses in accordance with the system missions adopted by the 1991 Legislature;
- Report on ways to improve student retention, graduation, and transfer;
- Review and update credit transfer policies, and develop procedures for tracking the progress of transfer students;
- Report on the status of cultural diversity initiatives on each campus;
- Develop policies to provide for the needs of students with disabilities, and report on these policies to the Legislature;
- Provide students receiving financial aid with voter registration forms.

Source: *Minn. Laws* (1988, 1989, 1990, 1991).

# Other Factors

In some cases, factors affecting the administrative workloads of all state agencies have also affected Minnesota's higher education system. For example, the workloads of administrative staff have been increased by more complicated employee contracts and benefit packages, and the introduction of new payroll options, such as direct deposit of paychecks. In addition, the Department of Employee Relations required both the state university and community college systems to add a full-time affirmative action position to their central offices, a statutory requirement for all agencies with more than 1,000 employees.[48] As have many other state agencies, the higher education systems have developed policies and educational materials for employees related to sexual harassment, drug abuse prevention, AIDS, and smoking. Also, state agencies and higher education systems have had to develop more sophisticated computer systems in the past decade, which has increased costs for equipment, operation, and staff training.

In addition, the administrative and student services costs of Minnesota's higher education systems have been affected by:

- Negotiated salary and benefit levels,
- Employee productivity,
- Increased efforts to recruit students,
- Increased efforts to recruit and retain disadvantaged student groups, such as minority and disabled students,
- More emphasis on private fund-raising,
- Governing board policy initiatives and fund allocation methods,
- Development of new student services, such as child care, and
- More inter-system task forces and cooperative agreements.

*48* The technical college central office has assigned affirmative action responsibilities to its personnel officer.

# TECHNICAL COLLEGE SYSTEM

## Chapter 2

Minnesota's technical college system includes 27 colleges with 34 campuses. About 40,000 full-time-equivalent students are enrolled in over 200 occupational programs, including technical, health, trade and industrial, agricultural, and business and office occupations. In this chapter, we address the following questions:

- **How did administrative and student service costs change between 1981 and 1991?**
- **How do administrative and student service costs vary by size of college?**
- **How do regional administrative college structures affect administrative and student service costs?**
- **What are the functions of the technical college system office? How has staffing changed over the past decade?**

Overall, we found that after adjusting for inflation, administrative and student service expenditures per student increased by about 27 percent between 1981 and 1991. Larger colleges tend to have significantly lower administrative and student service costs per student. Colleges with over 2,000 students spent, on average, about 17 percent less per student than colleges with less than 1,000 students. It is too early to accurately measure how the development of regional college structures will affect costs. The 1985 merger of four small colleges improved services, but did not significantly reduce costs. One of the two additional regional colleges that were established in July 1991 anticipates administrative cost reductions of 10 percent, but results are preliminary.

This chapter is organized into seven sections. The introduction describes the mission and organization of the technical college system. The second section discusses the methods we used to examine spending trends. The third and fourth sections examine expenditures and how they have changed since 1981. The fifth section describes how administrative and student service costs vary by college size. The sixth section looks at how regional college structures affect administrative costs. The last section describes functions and staffing of the system office and how they have changed since 1983.

# INTRODUCTION

**Minnesota's Technical Colleges**

| | 1991 FYE |
|---|---|
| Albert Lea | 743 |
| Alexandria | 1,928 |
| Anoka | 2,000 |
| Bemidji | 939 |
| Brainerd/Staples | |
| Brainerd | 906 |
| Staples | 1,025 |
| Dakota County | 1,818 |
| Detroit Lakes | 835 |
| Duluth | 1,349 |
| East Grand Forks | 855 |
| Eveleth | 435 |
| Hennepin | 4,423 |
| North | |
| South | |
| Hibbing | 782 |
| Hutchinson | 854 |
| Mankato | 1,587 |
| Minneapolis | 1,982 |
| Moorhead | 1,090 |
| North East Metro | 1,862 |
| Pine City | 520 |
| Red Wing | 587 |
| Riverland | |
| Austin | 1,026 |
| Faribault | 662 |
| Rochester | 1,178 |
| Southwestern | 2,310 |
| Canby | |
| Granite Falls | |
| Jackson | |
| Pipestone | |
| St. Cloud | 1,749 |
| St. Paul | 3,202 |
| Thief River Falls | 1,232 |
| Wadena | 787 |
| Willmar | 1,544 |
| Winona | 760 |
| TOTAL | 40,972 |

## Mission

The mission of the technical college system is to provide vocational and technical training that leads to employment and to improve the job skills of the existing workforce. Under state law, technical colleges are to provide vocational training for occupations which do not require four-year degrees. Technical colleges offer programs of less than a baccalaureate degree to full-time and part-time students. Technical colleges, like community colleges, have no admission standards.

During the past decade, overall enrollment has been stable, but the composition of the student body has changed significantly. Students today are older and more likely to be employed than students in the early 1980s. The percentage of students who are 25 or older went from 29 percent in 1983 to 45 percent in 1990. Through the development of "extension" courses, technical colleges now place greater emphasis on technical training for currently employed workers. Technical colleges have worked actively with businesses to develop training programs customized to meet the needs of particular businesses. As a result, the number of extension students nearly doubled between 1985 and 1991, from 4,127 to 8,052 full-year-equivalent (FYE) students.

In addition, technical colleges have restructured regular programs to allow students to more easily attend school on a part-time basis. The percentage of students in regular programs that attend school part-time has grown from about 5 percent in the early 1980s to about 47 percent in 1991.[1]

Recently, the State Board of Technical Colleges initiated a "total quality management" program which is designed to improve services to students. In addition, the Chancellor set a goal of reducing administrative expenditures by 15 percent in order to increase funds available for programs directly serving students.[2]

## History and Organization

The state's first technical institute opened in Mankato in 1947. By 1972, all 34 current campuses were established in the communities shown in the box at the left. Post-secondary enrollment (excluding extension students) grew from about 2,000 students in 1960 to 22,472 in 1973 to 31,233 in 1981. During the 1980s, extension enrollment continued to grow but regular enrollment declined. Total full-year-equivalent enrollment remained near the 40,000 level

*1* Part of the growth in number of part-time students is due to the reclassification of some extension students as regular students. But the growth would be large even if some extension students were not reclassified.

*2* The 15 percent reduction applies to a base of administrative expenses (including president's office, institutional services, and instructional administration) and five percent of student services (including admissions, registration, counseling, special needs supervision, and financial aid administration).

throughout the 1980s. In the 1990-91 school year, total enrollment was 40,972 full-year equivalent students.

For the 1990-91 school year, individual college enrollments ranged from 435 to 4,423 full-year equivalent students. The median was 1,058 students. The largest college (Hennepin Technical College) has two campuses. St. Paul Technical College is the largest single-campus technical college (3,202 students in 1990-91).

**Minnesota has 27 technical colleges with 34 campuses.**

The State Board of Technical Colleges, which has 11 members appointed by the Governor, was established in 1984. The state board directs the activities of a central office and oversees Minnesota's 27 technical colleges. Prior to 1984, the Minnesota State Department of Education oversaw the technical institutes.

The state board office prepares budgets for the system, allocates state aid to the colleges, and administers federal aid programs for vocational education. The office provides coordination and technical assistance to colleges for curriculum, student services, and other support services. In contrast to the community college and state university systems, the federal government provides about six percent of technical college operating funds.

While the state and federal government provide most of the system's funding, local school districts are responsible for operating the colleges. Unlike Minnesota's other higher education systems, both personnel and fiscal operations are decentralized in the technical college system. Local or regional school districts negotiate labor agreements with technical college staff. In contrast, the community college and the state university systems have statewide bargaining. The community college system also has centralized fiscal services.

Minnesota's technical colleges are organized in three different ways:

- **Twenty one colleges are governed by the local elementary/secondary school district in which the college is located.**
- **Three colleges in the Minneapolis-St. Paul suburbs are governed by intermediate school districts.**
- **Three regional multi-campus colleges are governed by joint districts formed by the local school districts in which the campuses are located.**

In the 21 colleges from the first category, the president of the technical college reports to the superintendent and school board of the local school district. The local school district manages the college's budget, sets college policies, and oversees college operations, including personnel and contract negotiations. School districts often provide business, personnel, and maintenance services to the colleges for a fee. In fiscal year 1990, 26 colleges paid a total of $3.2 million for these services.[3]. These district service fees ranged from $27,000 to

3 In fiscal year 1990, 26 colleges were governed by individual school districts.

$375,000. As Table 2.1 shows, business services accounted for 49 percent of district service charges, followed by 22 percent for superintendent office expenses, 9 percent for building and grounds, and 7 percent for school board expenses.

## Table 2.1: Local School District Charges for College Services, FY 1990

| Function | Charge (in thousands) | Percent of All Charges |
|---|---|---|
| School Board | 169 | 6% |
| Superintendent's Office | 577 | 22 |
| Business Office | 1,309 | 49 |
| Building and Grounds | 243 | 9 |
| Other | 382 | 14 |
| Subtotal | 2,680 | 100% |
| Not Allocated[1] | 475 | |
| Total | 3,156 | |

Note: Excludes intermediate school district charges

Source: Program Evaluation Division analysis of technical college data.

[1]Two colleges did not allocate charges by function.

The three intermediate school districts were formed by elementary/secondary school districts in the Minneapolis-St. Paul suburbs.[4] Each intermediate school district operates a technical college and provides special education and secondary vocational services to member school districts. Intermediate school districts have the same governance responsibilities as the local school districts in the previous category.

**Several small technical colleges have formed multi-campus regional colleges.**

Local school districts which have a technical college may merge colleges into a regional college by forming a joint school district. The joint school district oversees the operation of the college, including contract negotiations and budget decisions.

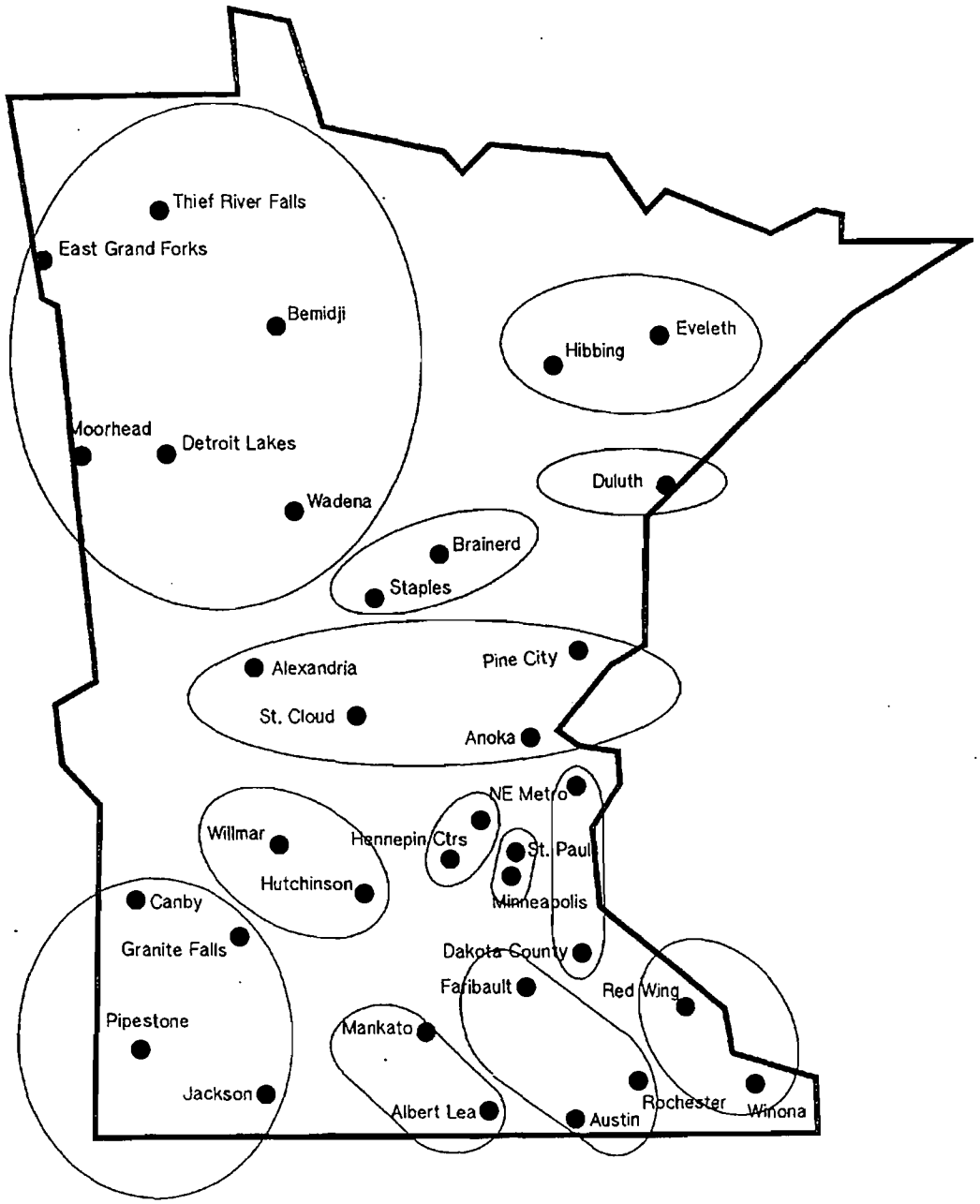
Southwestern Technical College became the first regional college when the local school districts of Granite Falls, Canby, Pipestone, and Jackson agreed to form a joint district effective July 1985. Two more regional colleges were created in July 1991: Riverland Technical College (consisting of campuses in Rochester, Austin, and Faribault) and Brainerd/Staples Technical College.

The 1991 Legislature directed the state board to designate between nine and fifteen districts that would form regional colleges. The law exempted the ten largest colleges from this requirement: Minneapolis, St. Paul, Duluth, Hennepin, Dakota, Northeast Metro, Anoka, Alexandria, St. Cloud, and Southwest-

4 See *Minn. Stat.*, Chapter 136D for legislative authorization.

ern (which was already a regional college). In December 1991, the State Board of Technical Colleges designated 13 districts, shown in Figure 2.1. If the 10 exempt colleges choose to remain independent, there will be a total of 18 colleges, including eight regional colleges. Currently, three regions already exist and school districts in five regions have already approved mergers and plan to start regional colleges in July 1992. These five regions include the six colleges in northwest Minnesota, Mankato/Albert Lea, Hibbing/Eveleth, Willmar/Hutchinson, and Winona/Red Wing.

## Figure 2.1: Technical College Regions




Source: State Board of Technical Colleges.

Minnesota's technical colleges vary in administrative staffing. The typical college has a president, an extension or customized training director, a student services director, a business manager, a financial aid director, and a director (or directors) of instruction. Some small colleges do not have a business manager and instead use the local school district's business manager. In addition, administrative staff of small colleges are often responsible for a combination of functions. Top administrative staff are supported by various professional and clerical staff, including counselors, extension coordinators, and marketing specialists. The number of support staff varies greatly among colleges.

# METHODS

## Technical Colleges

To analyze trends in technical college spending, we obtained college financial data reported to the system office for fiscal years 1981 through 1991. Technical colleges have been reporting financial data under the Uniform Financial Accounting Reporting System (UFARS) since 1981. Comparable data prior to 1981 are not available.

To better understand college financial data, we met with state board staff, visited 15 colleges, and interviewed staff of several other colleges by phone. We talked with college staff about data inconsistencies and large variations in costs.

To make meaningful comparisons over time, we adjusted the data for several financial changes during this time period. Significant statewide adjustments are discussed below. Prior to fiscal year 1986, the state paid the employer's retirement contribution under the teacher's retirement plan. As a result, when technical colleges started making these payments in 1986, fringe benefit costs doubled in one year. Consequently, we added estimates of the state contribution to college expenses prior to 1986.

Agricultural coordinators were paid by the state through the 1983-84 school year, after which they were paid by technical colleges. As a result, we added estimated state payments to college expenses for years 1981 through 1984. We also omitted these expenses from our analysis of the technical college system office spending.

Reliable data are not available for extension administration expenditures prior to 1986. Furthermore, extension student full-year-equivalent data were not reported prior to 1985. We assumed that extension administration costs changed at the rate of inflation between 1981 and 1986 and that the number of students remained constant prior to 1985. Extension headcount data from this period suggest that these assumptions are reasonable.

Our analysis of administrative and student service expenditures uses the categories defined in Figure 2.2. The financial data are audited but colleges do not use codes consistently. This reflects both reporting problems and the different organizational structures of colleges. We made adjustments to fiscal year 1990 data when we discovered coding errors. Consequently, we used 1990 data to analyze variation in college expenditures. In general, the data are more reliable for total administrative and student service costs than for individual categories.

**Figure 2.2: Technical College Administrative and Student Service Categories**

| | |
|---|---|
| **ADMINISTRATIVE** | |
| President's Office | President, Vice-President, plus immediate support staff; and extension director |
| Extension Administration | All extension administration except the extension director |
| Institutional Services | Business office, personnel, information system, logistical services, school board, superintendent's office |
| Marketing | Advertising, publications, catalogs, student recruiting |
| Instructional Administration | Administration of instructional areas, curriculum development, staff development |
| Research | Curriculum or other non-academic research--often financed by federal or state grants |
| Agricultural Coordinator | Coordination of school district farm business management programs taught in local high schools |
| **STUDENT SERVICES** | |
| Admissions, Registration, and Counseling | |
| Financial Aid Administration | Administering state and federal financial aid programs for students |
| Special Needs Administration | Supervisor of special needs programs for handicapped or disadvantaged students |

We obtained both expenditure and staffing data, but we think that the expenditure data are more reliable. We do not report the staffing data because they are not audited, are sometimes inconsistent with the financial data, and college staff raised questions about their reliability.

# System Office

To examine expenditure and staffing trends in the technical college system office, we interviewed system office staff and examined financial and staffing

data from statewide accounting records, budget documents, and internal agency documents.

There were significant organizational changes in the system office during fiscal year 1984, complicating analysis of cost and staffing trends. Prior to 1984, state administration of vocational education was carried out by the Vocational-Technical Division of the Minnesota Department of Education. When the State Board of Technical Colleges was created in 1984, vocational division employees who worked directly on post-secondary or adult vocational education were transferred to the new board. Division employees who worked on secondary vocational education remained with the Department of Education. After the new board was created, the department continued to provide indirect support services under contract with the technical college system office.[5] These services included personnel, fiscal, and office services and licensing of technical college staff. Gradually, the technical college system office hired its own staff to carry out these services. By 1991, it performed nearly all of these services. Thus, to compare expenditures over time, we excluded expenditures for secondary vocational education, and included the cost of support services for post-secondary vocational education provided by other divisions within the Department of Education.[6]

We also excluded expenditures for instructional programs and library services provided by the central office. For 1991, we excluded system office expenditures for the Air Traffic Control Center and the Fire Center Library. For 1981, we excluded instructional expenditures of the fire training program, under which nine instructors employed by the system office trained fire fighters throughout the state. While these programs are staffed by the system office, they are not administrative in nature. However, these programs require fiscal, personnel, and supervisory services from the system office.

To make comparisons of system office staffing, we excluded the same activities as above. Staffing data are better for examining functional changes by the system office.

# EXPENDITURES AND REVENUES, 1991

## Expenditures

**Administrative and student services spending was 24 percent of total operating expenses.**

In fiscal year 1991, the technical college system's operating expenses were about $253 million. As Table 2.2 shows, regular instruction cost $127.9 million and extension instruction cost $19.3 million, together representing 58 percent of total operating expenses. Administration and student services (defined in Figure 2.2) cost $61.4 million, 24 percent of total operating expenses. This

5 The Department of Education charged the new state board $256,827 for these services during the first six months of 1984.

6 To estimate support service costs, we used the contract amount paid for the first six months of 1984 adjusted for inflation.

## Table 2.2: Technical College Operating Expenditures, FY 1991

| | Amount (in millions) | Percent |
|---|---|---|
| **Colleges** | | |
| Regular Instruction | $127.9 | 50.5% |
| Extension Instruction | 19.3 | 7.6 |
| Media/Library | 4.8 | 1.9 |
| Plant Operation | 24.3 | 9.6 |
| Insurance/Fixed Costs | 4.2 | 1.7 |
| Special Needs Service | 7.2 | 2.8 |
| Miscellaneous Support | 0.3 | 0.1 |
| Curriculum Restructuring | 1.3 | 0.5 |
| Administration and Student Services | 53.9 | 21.3 |
| President's Office | 9.5 | 3.7 |
| Institutional Support | 10.2 | 4.0 |
| Marketing | 3.8 | 1.5 |
| Instructional Administration | 6.5 | 2.6 |
| Extension Administration | 7.3 | 2.9 |
| Special Needs Management | 1.9 | 0.7 |
| Financial Aid Administration | 3.2 | 1.3 |
| Student Services | 10.3 | 4.1 |
| Agricultural Coordinator | 0.5 | 0.2 |
| Research | 0.8 | 0.3 |
| **System Office** | | |
| Administration | 7.5 | 3.0 |
| Air Traffic Control, Fire Library | 2.9 | 1.1 |
| Total | $253.5 | 100.0% |

Source: Program Evaluation Division analysis of technical college data.

includes 3 percent from the system office and 21 percent from the colleges (16 percent from college administration and 6 percent from college student services).

**Technical colleges get 69 percent of their funding from the state.**

# Revenues

In fiscal year 1991, Minnesota's technical college system financed 69 percent of its operating expenses with state aid, 25 percent with tuition, and 6 percent with federal aid.[7] Local property taxes support a portion (currently 15 percent) of construction costs, but do not support operating expenses.

Most of the federal aid for the technical college system comes from the Carl Perkins Vocational Education Act, which, in Minnesota, is administered by the

7 These figures do not include revenue from sale of supplies and equipment. Instead, we subtracted this revenue from supply and equipment expenses.

State Board of Technical Colleges. In fiscal year 1991, the Carl Perkins program provided $12.8 million for post-secondary vocational education and $1.3 million for secondary vocational education. It allocated funds for disadvantaged students (22 percent), handicapped students (10 percent), and single parent students (8.5 percent). It provided 3.5 percent for services designed to promote sex equity in program enrollment. Up to 7 percent could be used for state administration. Beginning in fiscal year 1992, the federal government is relying more on standards that colleges must meet (for example, requiring the availability of certain services for disadvantaged students) rather than directing how federal funds should be allocated among different target groups.

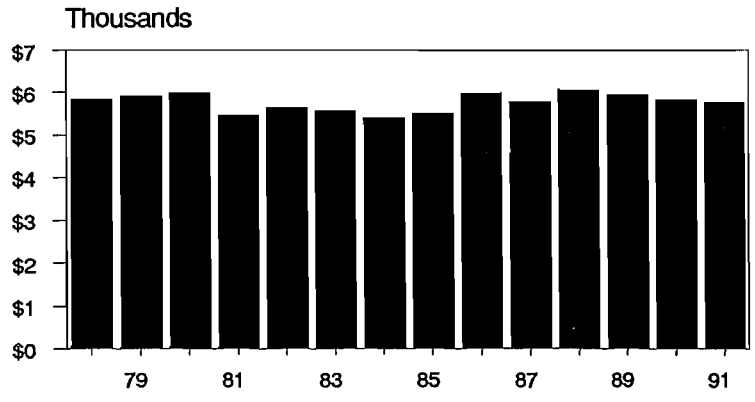
The federal Job Training Partnership Act (JTPA) sets aside a portion of its funds for education of economically disadvantaged adults. In Minnesota, the State Board of Technical Colleges administers the education portion of the JTPA program. In fiscal year 1991, JTPA provided $2.5 million of education grants in Minnesota.

# EXPENDITURE TRENDS

In this section, we discuss trends of administrative and student service expenditures between 1981 and 1991. As we discussed earlier, expenditure trend calculations are sensitive to the base year selected. Fiscal year 1981 was a relative low point in revenue per student for technical colleges. Figure 2.3 shows technical college operating revenues per student in constant dollars during fiscal years 1978 through 1991. Fiscal year 1980 was the high point

**1981 was a low point in operating revenue per student.**

Figure 2.3: Technical College Operating Revenues Per Student, FY 1978-91




Note: Includes state appropriations and tuition revenue in constant FY 1991 dollars.

Source: Minnesota Department of Finance.

during the late 1970s and early 1980s. After 1980, technical college operating revenues did not keep pace with inflation and enrollment increases. In fact, operating revenues per student declined by nine percent between 1980 and 1981, largely the result of an enrollment increase. As a result, we present results using 1986 as well as 1981 as a base year. We were unable to use 1980 as a base year because comparable data on administrative expenditures are not available prior to fiscal year 1981.

Technical college system expenditures for administration and student services grew from $29.4 million in fiscal year 1981 to $61.2 million in fiscal year 1991. We found:

- **After adjusting for inflation, technical college expenditures per student for administrative and student services increased by 26 percent between 1981 and 1991.**

- **Administrative expenditures of the technical college system office increased by 28 percent.**

Overall, the increase for the technical college system was 27 percent. Table 2.3 and Figure 2.4 show that most of the growth in administrative and student service costs occurred prior to 1986. For colleges, administrative and student

**Between 1981 and 1991, administrative and student service costs per student increased by 27 percent.**

## Table 2.3: Technical College Administrative and Student Services Expenditures, FY 1981, 1986, and 1991 (expenditures in thousands of dollars)

| | Technical Colleges Expenditures | System Office Expenditures | System Total Expenditures |
|---|---|---|---|
| **ACTUAL EXPENDITURES** | | | |
| FY 1981 | $25,797 | $3,576 | $29,373 |
| FY 1986 | 40,607 | 5,322 | 45,929 |
| FY 1991 | 53,653 | 7,507 | 61,160 |
| **EXPENDITURES ADJUSTED FOR INFLATION[1]** | | | |
| FY 1981 | $41,508 | $5,753 | $47,261 |
| FY 1986 | 50,375 | 6,603 | 56,978 |
| FY 1991 | 53,653 | 7,507 | 61,160 |
| **EXPENDITURES PER STUDENT, ADJUSTED FOR INFLATION[1]** | | | |
| **Dollars** | | | |
| FY 1981 | $1,035 | $143 | $1,178 |
| FY 1986 | 1,281 | 168 | 1,449 |
| FY 1991 | 1,309 | 183 | 1,493 |
| **Percent Change** | | | |
| 1981-86 | 24% | 17% | 23% |
| 1986-91 | 2 | 9 | 3 |
| 1981-91 | 26 | 28 | 27 |

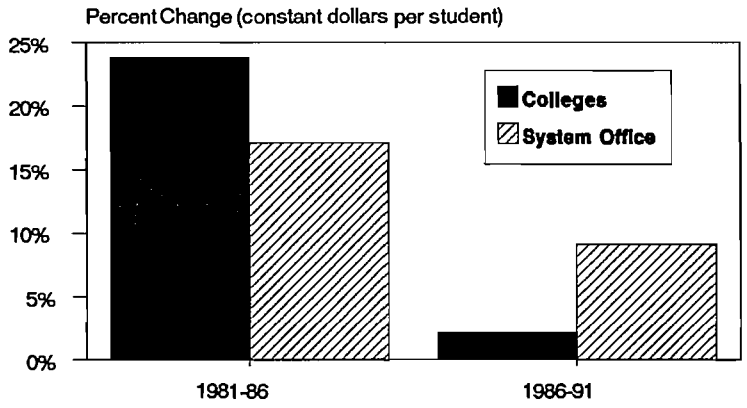
Source: Program Evaluation Division analysis of technical college data.

[1]Figures are in constant FY 1991 dollars.

service spending per student increased by 24 percent (in constant dollars) between fiscal years 1981 and 1986, but went up by only 2 percent between 1986 and 1991. As Figure 2.5 shows, it reached a peak in 1989, after which it declined by 3 percent during the following two years. Administrative spending by the system office increased by 17 percent between 1981 and 1986, and by nine percent between 1986 and 1991.

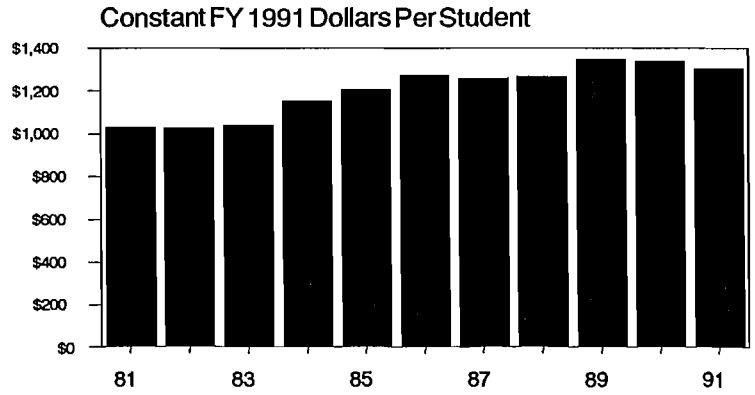
**Most of the increase in administrative and student service spending occurred between 1981 and 1986.**

Figure 2.4: Technical College Administrative and Student Services Expenditures, FY 1981-86 and 1986-91




Source: Program Evaluation Division analysis of technical college data.

Figure 2.5: Technical College Administrative and Student Services Expenditures, FY 1981-91




Source: Program Evaluation Division analysis of technical college data.

College administrative and student service expenditures exclude the cost of the major restructuring initiative that began during the late 1980s and is nearly complete in 1992. System office expenditures exclude expenditures for program delivery, aid to colleges, and aid to students.

As we discussed in Chapter 1, the constant dollar growth rate depends on the inflation index that is used. The 27 percent increase is based on the Gross National Product price deflator for state and local governments. If we used the Consumer Price Index, which measures inflation in the price of consumer goods, the growth rate would be 32 percent. On the other hand, if we used the Higher Education Price Index, which measures inflation in goods and services purchased by colleges, the growth rate would be 18 percent.

Another way to examine cost trends is to express administrative costs as a percent of total operating expenditures. We found:

- **Administrative and student service expenditures grew from 20 percent of total technical college operating expenses in 1981 to 24 percent in 1991.**

Table 2.4 shows technical college expenditure trends for different spending categories after adjusting for inflation and number of students. Spending by the system office are not included in these data. Salaries, fringe benefits, and purchased services are the three largest spending categories, accounting for about 86 percent of total expenditures. Among these three categories, purchased services grew the fastest (79 percent), followed by fringe benefits (44 percent), and salaries (11 percent). While equipment expenditures increased

## Table 2.4: Technical College Administrative and Student Service Expenditures Per Student by Type of Spending, FY 1981-91

| Year | Salary | Fringe | Travel | Purchased Services | Other Expend | Net Supply | Net Equipment | Total |
|---|---|---|---|---|---|---|---|---|
| 1981 | $650 | $108 | $20 | $141 | $15 | $67 | $33 | $1,035 |
| 1982 | 648 | 113 | 18 | 146 | 19 | 54 | 33 | 1,031 |
| 1983 | 626 | 112 | 18 | 147 | 37 | 63 | 41 | 1.044 |
| 1984 | 696 | 127 | 23 | 187 | 15 | 47 | 65 | 1,160 |
| 1985 | 708 | 140 | 23 | 210 | 18 | 49 | 61 | 1,209 |
| 1986 | 725 | 146 | 24 | 237 | 22 | 55 | 71 | 1,281 |
| 1987 | 719 | 145 | 24 | 227 | 24 | 55 | 70 | 1,264 |
| 1988 | 725 | 144 | 26 | 208 | 26 | 57 | 84 | 1,271 |
| 1989 | 758 | 159 | 27 | 245 | 28 | 53 | 86 | 1,356 |
| 1990 | 742 | 160 | 28 | 249 | 30 | 49 | 88 | 1,346 |
| 1991 | 723 | 156 | 27 | 253 | 28 | 48 | 74 | 1,309 |
| Percent Change 1981-91 | 11% | 44% | 35% | 79% | 82% | -28% | 125% | 26% |

Note: In constant fiscal year 1991 dollars per FYE student.

Source: Program Evaluation Division analysis of technical college data.

by 125 percent, supply expenditures declined by 28 percent. Equipment and supplies combined increased by 22 percent.

Determining trends for functional categories is complicated by changes in the number of categories used by the technical college accounting system. Special needs administration became a category in 1982, financial aid in 1984, and marketing in 1989. According to state board office staff, colleges consider financial aid and special needs administration to be student services. As a result, it is likely that expenditures for these two categories would have been classified as student services in 1981. However, it is possible that some of the financial aid and special needs expenditures were classified in another category in 1981.

We grouped the technical college functional spending categories under two broad categories--student services (including admissions, registration, counseling, financial aid, and special needs administration) and administration (the other seven categories). As Table 2.5 and Figure 2.6 show:

- **Student service spending increased by 64 percent between 1981 and 1991. Administrative spending increased by 16 percent.**

Student service expenditures have increased for a number of reasons. First, while the number of full-time-equivalent students has remained stable during the past decade, the number of part-time students has grown rapidly. Many

**Student service costs grew faster than administrative costs.**

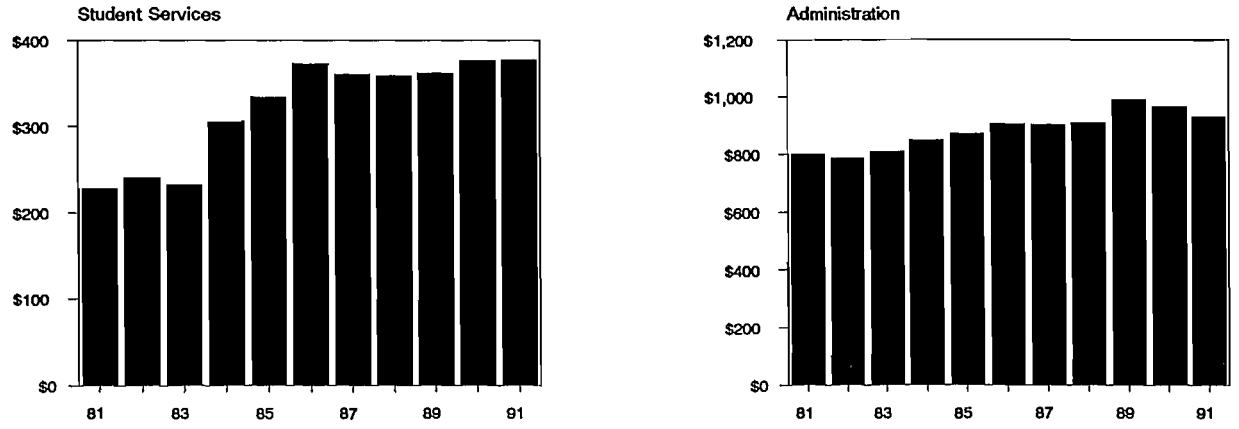
## Table 2.5: Technical College Administrative and Student Service Expenditures Per Student, FY 1981-91

| | Student Services | Administration | Total |
|---|---|---|---|
| **YEAR** | | | |
| 1981 | $229 | $805 | $1,035 |
| 1982 | 241 | 790 | 1,031 |
| 1983 | 233 | 811 | 1,044 |
| 1984 | 306 | 853 | 1,160 |
| 1985 | 334 | 875 | 1,209 |
| 1986 | 373 | 908 | 1,281 |
| 1987 | 361 | 903 | 1,264 |
| 1988 | 359 | 912 | 1,271 |
| 1989 | 362 | 994 | 1,356 |
| 1990 | 377 | 969 | 1,346 |
| 1991 | 377 | 933 | 1,309 |
| **PERCENT CHANGE** | | | |
| 1981-86 | 63% | 13% | 24% |
| 1986-91 | 1 | 3 | 2 |
| 1981-91 | 64 | 16 | 26 |

Note: Figures are in constant fiscal year 1991 dollars per FYE student.

Source: Program Evaluation Division analysis of technical college data.

**Figure 2.6: Technical College Administrative and Student Service Expenditures Per Student by Category, FY 1981-91**




Note: In constant fiscal year 1991 dollars per FYE student.

Source: Program Evaluation Division analysis of technical college data.

part-time students require as many counseling, admission, and registration services as full-time students. Second, more students use financial aid today than in 1980 because of tuition increases and expanded loan programs. Third, some college administrators told us that today's students want more counseling services than a decade ago. Finally, state and federal governments have expanded requirements for serving students who are members of special populations, including students who are handicapped, academically disadvantaged, single parents, incarcerated, and limited in English proficiency.

# ECONOMIES OF SCALE

Technical colleges are forming regional colleges, in large part, to reduce administrative costs. System administrators believe that regional structures will enable small colleges to take advantage of economies of scale. This is also a reason for 1991 legislation that required pilot consolidations between technical and community colleges. By 1992-93, state boards of technical and community colleges are to consolidate administrative staff in two communities that have both technical and community colleges.

To better understand the potential for cost savings, we examined the relationship between college size and cost per student. These results should be regarded as suggestive and not definitive because the proposed mergers involve multi-campus regional colleges or inter-system consolidations. The data, however, are based mostly on single-campus technical colleges.

Furthermore, as we discussed in our literature review of economies of scale, size is only one of many factors that can affect cost per student. By focusing

on technical colleges in Minnesota, we avoid many of the problems with comparing colleges from different states and with different missions. However, some important differences remain. For example, administrative costs in Minnesota's technical colleges are affected by local school district charges for administrative services. Since the services actually provided as well as the method for computing the charge vary from college to college, it is not possible to correct for these differences. District service charges are included in the "institutional services" category. Need or demand for student services (counseling, financial aid) may also vary among colleges.

Another cause of cost variation is administrative salaries, which vary by school district. A previous study by this office found that school districts in the Twin Cities area pay higher salaries than most other Minnesota districts.[8] Although colleges in the Twin Cities metropolitan area are all larger than average, their higher salaries may offset some economies of scale. We can partially compensate for this problem by adjusting costs of colleges in the metropolitan area.

To compare administrative and student service expenditures among Minnesota's technical colleges, we excluded research and restructuring expenditures because they varied greatly from year to year and depended largely on federal or state grants. We also excluded agricultural coordinator expenditures (and students) because only six colleges had this function and because the programs were run by local high schools.

**A doubling of student enrollment is associated with a 12 percent decline in administrative and student service spending per student.**

Table 2.6 shows how costs vary with college size. It shows:

- **Larger colleges spend significantly less per student on administration and student services than smaller colleges.**

The three largest colleges (enrollments over 2,000) spent an average of $1,157 per student, compared with $1,406 for the smallest eight colleges (enrollments under 750). Results for all 30 colleges are plotted in Figure 2.7. Our analysis indicates that doubling of student enrollment is associated with a decline of 12 percent in administrative and student service expenditures per student.[9]

We examined how size is related to spending per student for various functional categories in fiscal year 1990. We found:

- **Larger colleges tend to spend significantly less per student for the president's office, financial aid, and marketing.**

- **There is no statistically significant relationship between enrollment and spending for institutional services, student services,**

8 Office of Legislative Auditor, *Teacher Compensation*, (St.Paul, 1991).

9 Based on logarithmic regression of student enrollment on college expenditures per student, using the equation ln(expenditure per student) = a + b*ln(enrollment). To adjust for metropolitan/non-metropolitan salary differences, we divided metropolitan college expenditures by 1.1. The relationship between enrollment and spending per student is statistically significant at the .001 level with R Squared=.53.

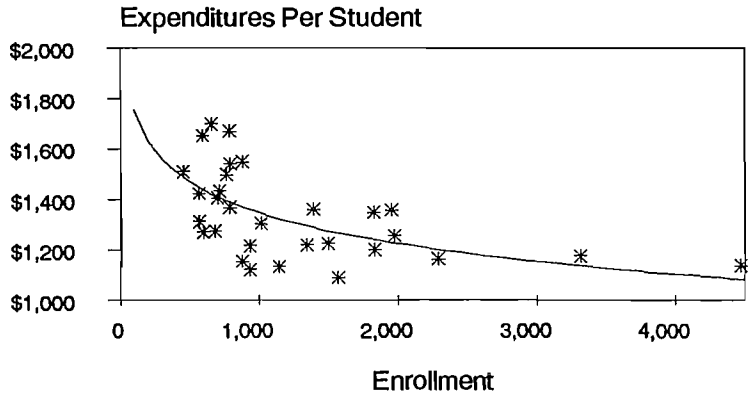
## Table 2.6: Technical College Expenditures Per Student by Size of College, FY 1990

| | Over 2,000 Students | 1,500-2,000 Students | 1,000-1,500 Students | 750-1,000 Students | Less Than 750 Students |
|---|---|---|---|---|---|
| Admin. and Student Services | 1,157 | 1,257 | 1,250 | 1,380 | 1,406 |
| President's Office | 140 | 187 | 199 | 298 | 410 |
| Institutional Services | 259 | 259 | 237 | 270 | 218 |
| Extension Administration | 245 | 147 | 162 | 144 | 130 |
| Marketing | 52 | 62 | 86 | 160 | 114 |
| Instructional Administration | 135 | 221 | 199 | 141 | 119 |
| Admissions, Registration, and Counseling | 225 | 277 | 246 | 209 | 239 |
| Financial Aid Administration | 39 | 63 | 81 | 95 | 134 |
| Special Needs Management | 62 | 43 | 41 | 62 | 44 |
| Number of Students | 10,067 | 9,149 | 6,388 | 6,758 | 5,522 |

Note: In dollars per FYE student.

Source: Program Evaluation Division analysis of technical college data.

Figure 2.7: Total Administrative and Student Services Expenditures by College Size, FY 1990



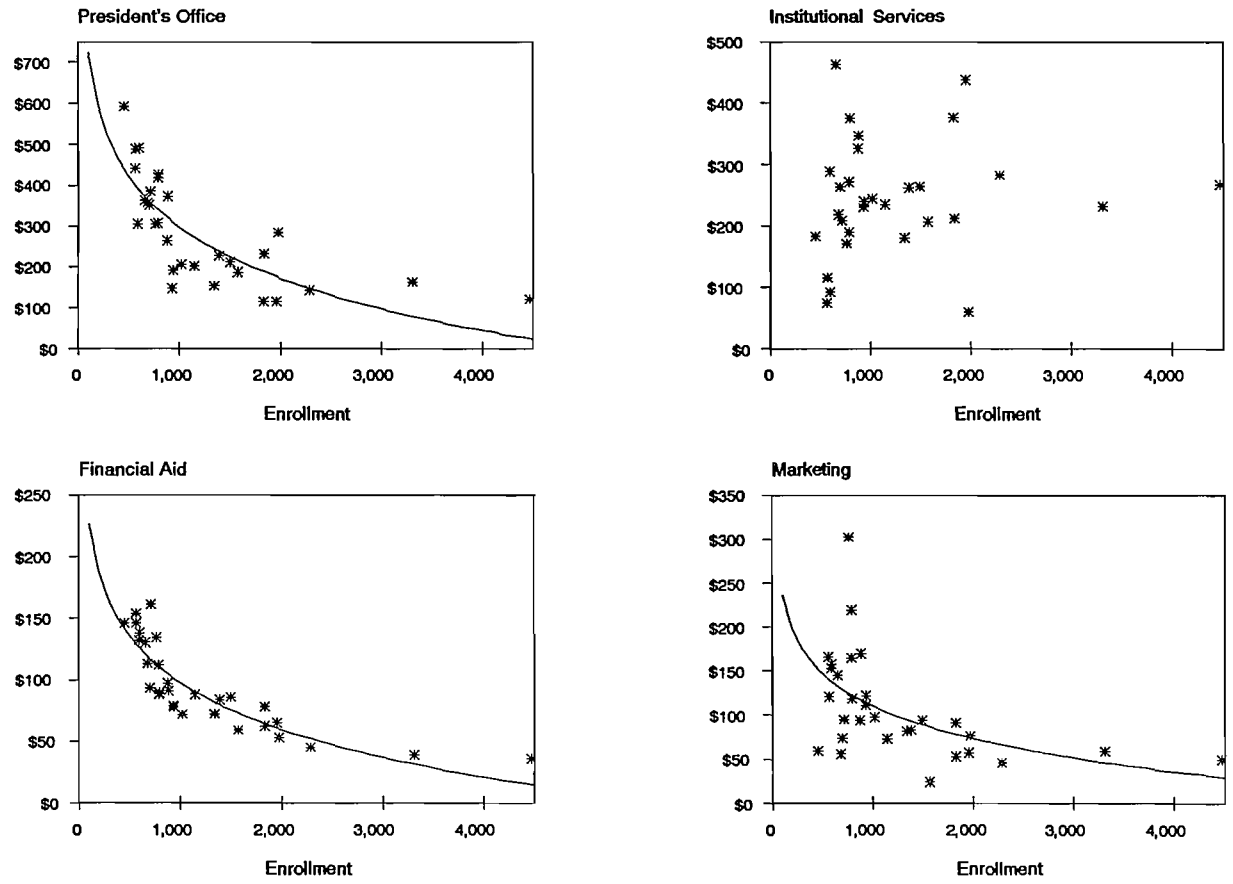

Source: Program Evaluation Division analysis of technical college data.

**instructional administration, extension administration, or special needs administration.**

**The data for institutional services do not reflect economies of scale.**

Figure 2.8 shows the relationship between enrollment and expenditures per student for several categories. Costs for institutional services are strongly affected by district service charges by local school districts. For example, Anoka school district charged an unusually low amount for institutional services in order to help the technical college's finances. On the other hand, administrators from several colleges told us that these services could be provided more efficiently through a regional college structure. Consequently, the data do not reflect economies of scale for institutional services.

## Figure 2.8: Technical College Expenditures Per FYE Student by Category and College Size, FY 1990




Note: For Southwestern Technical College, this analysis uses the average enrollment of its four campuses.

Source: Program Evaluation Division analysis of technical college data.

# COST IMPACT OF REGIONAL COLLEGE STRUCTURES AND INTERMEDIATE SCHOOL DISTRICTS

To see how regional structures for technical colleges affect costs, we made two types of comparisons. First, we compared costs before and after the regional college was established. Second, we compared multi-campus colleges with single campus colleges of the same size to see whether they achieve the same economies of scale. In this section we look at the costs of two regional colleges: Southwestern Technical College and Riverland Technical College. We then look at how the costs of colleges governed by intermediate school districts compare with other colleges.

## Southwestern Technical College

**The merger of four southwestern colleges benefited students, but did not reduce administrative costs.**

Four small colleges (Granite Falls, Pipestone, Jackson, and Canby) merged to establish Southwestern Technical College in July 1985. Administrators at the college said that reducing costs was not the main purpose for creating a regional college. They cited a number of benefits of a regional college, including greater cooperation among the four campuses, better ties with the region's businesses, improved marketing and improved student assessment. In addition, the four campuses now have a more uniform curriculum, allowing students to more easily transfer credits.

We compared Southwestern's administrative and student service spending in fiscal year 1985 with its spending in fiscal year 1991.[10] After adjusting for inflation, administrative and student service costs (excluding extension costs) increased by 11 percent between 1985 and 1991, or within one percent of the change for other technical colleges.

We compared Southwestern's expenditures with other colleges based on fiscal year 1990 data. Southwestern had 2,252 full-year-equivalent students--an average of 563 students per campus--in fiscal year 1990. Southwestern's administrative and student service expenditures ($1,409 per student) were slightly higher than the average level for colleges with less than 750 students ($1,406 per student).[11] They were about 22 percent higher than the cost of other colleges with over 2,000 students and 12 percent higher than the cost of colleges with between 1,000 and 2,000 students. Overall, we concluded that:

*10* We made several adjustments to make the 1985 data comparable with the 1991 data. First, we excluded extension administration costs because comparable data for fiscal year 1985 was not available. We excluded extension administration expenses in fund 14 and extension director expenditures in fund 11 (coded in the president's office). Second, we excluded fringe benefits because the colleges began to fund teachers retirement in 1986. Third, we excluded costs of Southwestern's computer specialists contracted by the state to help develop the student information system used by 22 college campuses. Finally, we excluded restructuring expenses.

*11* This excludes expenditures for the agricultural coordinator and the farm business management students taught in local high schools.

- **The formation of Southwestern Technical College has not reduced administrative and student service costs.**

**For recent mergers, the state board is placing greater emphasis on reducing administrative costs.**

These results do not imply that Southwestern or other regional colleges cannot achieve economies of scale and thereby reduce costs. The focus of Southwestern's merger was to improve services, not to reduce costs. The state board is placing greater emphasis on cost reduction for the recent mergers and is working with Southwestern on ways to reduce administrative costs.

## Riverland Technical College

Colleges in Rochester, Austin, and Faribault merged to form Riverland Technical College in July 1991. These three campuses enrolled 2,866 full-year-equivalent students in fiscal year 1991. To examine how the regional administrative structure affects costs, we compared actual fiscal year 1991 expenditures with budgeted 1992 expenditures and talked with college staff about staff changes. These comparisons are preliminary because only budgeted data is available and it may take several years before the full effect of the merger is realized.

The comparisons include salary and fringe benefit costs, district service charges, and school board expenses. We excluded the portion of district service charges attributable to supplies and building and grounds maintenance. We excluded some other administrative expenses because of changes in how costs are categorized. The costs we examined did not include many one-time start-up expenditures, including costs of legal work, computer hardware, redesigning publications and other marketing materials, and unifying reports and forms.

Table 2.7 shows estimated changes in Riverland's administrative and student service costs between fiscal years 1991 and 1992. We found:

- **Riverland estimates that administrative and student service staff expenditures will decline by about 10 percent, or about $275,000.**

**Riverland reduced administrative costs primarily because it no longer pays district service charges.**

The category with the largest reduction is institutional services ($266,000), followed by instructional administration ($134,000). Categories with increases are student services, research, and president's office (including extension administration).

The large reduction in institutional services is due to the elimination of charges by local school districts. In fiscal year 1991, colleges in Rochester, Austin, and Faribault paid a total of $358,000 to their local school districts for the costs of local school boards, school district superintendents, business services, personnel, and miscellaneous services. To provide services previously performed by local school districts, Riverland budgeted $43,000 for its new school board and $54,000 for new business office positions.

## Table 2.7: Expenditures Before and After the Establishment of Riverland Technical College, FY 1991 and 1992

| Category | Rochester, Austin, and Faribault (FY 1991) | Riverland (FY 1992) | Change | Percent Change |
|---|---|---|---|---|
| Institutional services | $559,000 | $293,000 | - $266,000 | - 48% |
| President's office | 723,000 | 758,000 | 35,000 | 5 |
| Marketing | 297,000 | 264,000 | - 33,000 | - 11 |
| Financial aid administration | 211,000 | 201,000 | - 10,000 | - 5 |
| Student services | 396,000 | 468,000 | 71,000 | 18 |
| Special needs administration | 144,000 | 147,000 | 3,000 | 2 |
| Instructional administration | 397,000 | 263,000 | - 134,000 | - 34 |
| Agricultural coordinator | 75,000 | 89,000 | 14,000 | 19 |
| Research | 0 | 45,000 | 45,000 | -- |
| Total Administrative and Student Services | $2,802,000 | $2,527,000 | - $275,000 | - 10% |

Note: FY 1992 figures are budgeted, not actual expenditures. Expenditures for both years include salaries and fringe benefits, district service charges (excluding supplies and building and grounds expenses), and school board expenses.

Source: Riverland Technical College.

# Intermediate School Districts

Minnesota has three colleges governed by intermediate school districts -- Hennepin (a two campus college with about 4,400 full-time-equivalent students), Dakota County (1,800 students), and Northeast Metro (1,900 students). Table 2.8 compares administrative and student service expenditures of these three colleges with other technical colleges in fiscal year 1990.

Hennepin Technical College spent about 11 percent less per student than other colleges in the state for administrative and student services. It spent about nine percent less per student than the other five colleges in the Twin Cities metropolitan area. In fact, Hennepin had the lowest administrative and student service spending per student in the metropolitan area. One reason for Hennepin's relatively low spending may be that it has taken advantage of economies of scale even though it has two campuses.

The other two colleges governed by intermediate school districts had relatively high spending for administrative and student services. Together, Northeast Metro and Dakota County technical colleges spent about 6 percent more than the state average even though they are both larger than the average college. They spent about 15 percent more per student than the other four metropolitan colleges. Dakota County and Northeast Metro were the technical colleges with the highest spending in the metropolitan area.

## Table 2.8: Expenditures of Technical Colleges Governed by Intermediate School Districts Compared with Other Colleges, FY 1990

| College | Students (FYE) | Administrative and Student Service Expenditures per FYE Student: Total | Institutional Services | Other |
|---|---|---|---|---|
| Intermediate Districts | | | | |
| Hennepin | 4,468 | $1,138 | $268 | $870 |
| Dakota County | 1,824 | 1,350 | 376 | 974 |
| Northeast Metro | 1,950 | 1,357 | 437 | 920 |
| Intermediate District Average | 2,748 | $1,237 | $332 | $905 |
| Average of Other Twin City Colleges | 2,524 | $1,194 | $202 | $992 |
| State Average | 1,319 | $1,273 | $258 | $1,015 |

Source: Program Evaluation Division analysis of technical college data.

The spending category that explains most of these differences is institutional services, which includes district service charges, business office, and information systems. Northeast Metro and Dakota County are high in two components of district service charges: school board and superintendent's office expenses. In fiscal year 1990, Northeast Metro spent $125 per student for the superintendent's office, compared with $63 for Dakota County, and $22 for other colleges in the state. Northeast Metro spent $39 per student for school board expenses, compared with $14 for Dakota County, and $7 for the other colleges.

# STATE BOARD OFFICE FUNCTIONS AND STAFFING

## Current Functions and Staffing

The State Board office has four divisions, each managed by a vice chancellor who reports to the chancellor and deputy chancellor. Figure 2.9 shows the functions of each division and the chancellor's office.

The state board is the agency designated by the Legislature to administer federal funds for vocational education under the Carl Perkins Act and the Jobs and Training Act. Federal programs fund 24 of the State Board's staff.[12] Federal funds support administration of the JTPA grants and Carl Perkins grants, planning, research, and evaluation activities, and civil rights enforcement. The

*12* Not including Air Traffic Control Center staff.

## Figure 2.9: Technical College System Office Staffing

**Chancellor's office**
- 1 Chancellor
- 1 Deputy chancellor
- 1 Legislative liaison
- 1 Higher education liaison
- 2 Executive assistants (currently working on "total quality management initiative")
- 4 Support staff
- 2.75 Personnel services staff (1 director, .75 professional, 1 support)

**System budget and financial services**
(allocate aid and provide technical assistance to colleges, collect college financial data, conduct general system office accounting)
- 1 Vice chancellor
- 3 Professional budget staff
- 1 Accounting director
- 1 Accounting supervisor
- 4 Account clerks
- 1 Stores clerk
- 1 Procurement clerk
- 5 Support staff

**System improvement services**
- 1 Vice chancellor
- .5 Vice chancellor's secretary
- 6.5 Planning and improvement staff (1 supervisor, 3 professional, 2.5 support staff) develop federally required state plans; monitor civil rights compliance; conduct fiscal audits; financial aid
- 3 Evaluation staff (1 supervisor, 2 support staff) accredit colleges on a five-year cycle so that students are eligible for federal grants and loans
- 1.75 Computer services staff (1 manager, .75 professional) develop central office systems, provide assistance to campuses
- 6 Research and program review staff (1 supervisor, 3 professional, and 2 support staff) conduct institutional research related to student demographics, student outcomes, and program effectiveness)
- 5 Staff (1 supervisor, 2 professional, 2 support) license technical college staff

**Capacity development**
- 1 Vice chancellor
- 1 Vice chancellor's secretary
- 1 Facilities and information services supervisor
- 4.5 Facilities management staff (3 professionals, 1.5 support)
- 6.5 Information staff (4 professional and 2.5 support staff) manage systemwide telecommunications network, manage systemwide marketing, provide program information to students, and develop high school curriculum to prepare students for technical colleges
- 8 Fire service staff (1 supervisor, 6 professional, 1 support) develop training for firefighters, emergency medical technicians, and hazardous material

**System operations services**
- 1 Department secretary
- 1 Instructional services supervisor
- 1 Support staff
- 1 Professional helps colleges restructure their curricula to a credit-based system
- 4 Staff (3 professional and 1 support) administer federal grants for economically disadvantaged students, under JTPA
- 5 Staff (1 manager, 3 professional, and 1 support) help colleges develop customized business training and consumer homemaking courses
- 6 Student services staff (1 supervisor, 3 professional, 2 support) administer federal grants and provide leadership to colleges for student services

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94.5 Total full-time equivalent employees as of February 1992

Note: Excludes staff who primarily work in the Air Traffic Control Center, the FIRE Center, or in secondary vocational education.

state board staff evaluates and accredits colleges on a five-year cycle to ensure the quality of instructional programs, management, and support services. In addition, accreditation ensures that students who meet financial need criteria are eligible for federal financial aid.

The state board has been active in developing the curricula of the technical colleges. Its role has been to coordinate curricula, provide technical assistance, and approve or disapprove new college programs and program modifications. Over the past four years, the state board has led a major effort to restructure the curricula of the technical colleges from a system based on clock-hours to one based on credits. Previously, most programs were offered in a six hour-per-day format that required students to attend full-time throughout the school year.

The state board system office has devoted considerable staff time to curriculum development for college campuses. As part of a move to decentralize this function, it has trained college staff how to use computerized curriculum software. In addition, technical college staff we interviewed expect regional colleges to improve curriculum development by allowing more specialization. In July 1991, the state board eliminated 9 curriculum specialist positions from its office staff, including 7 from regular program areas and 2 from customized training/extension areas. It retained 13 employees (11 professional, 2 clerical) who coordinate customized training for businesses and training of firefighters, emergency medical technicians, farmers, and small business managers. They also help colleges develop courses on consumer homemaking and hazardous materials. In addition, one employee works on the curriculum restructuring project that began four years ago.

**In 1991, the system office cut nine curriculum specialist positions.**

# Technical College System Office Staffing Trends

To examine trends in the system office in more detail, we looked at staffing changes from 1983 to 1991. We did not use expenditure data because financial data broken down by functional categories were not available from the early 1980s. We found:

- **System office administrative staffing for post-secondary education increased from 81.5 in 1983 to 94.5 in 1992, an increase of 16 percent.**

The staff increases occurred in a number of areas. The chancellor's office increased by five positions, including two clerical and three professional.[13] The current office has a liaison to higher education systems and the Higher Education Coordinating Board (HECB), a legislative liaison, and a deputy chancellor, compared to one professional who handled external relations in 1983. This increase reflects more intersystem planning and cooperation and more

*13* For 1983, the office comparable to the chancellor's office was the office of the assistant commissioner of vocational education within the education department. Formally, there were four staff in this office in 1983. In addition, one person served as a special assistant to the assistant commissioner. We excluded the staff of the personnel section from the chancellor's office in 1992 to make it functionally comparable to the 1983 office.

coordination with HECB. It also reflects additional work with the Legislature and additional responsibilities associated with being an independent agency with its own state board. Special assistants increased from one to two. Currently, these staff are working on the chancellor's total quality management initiative and Campaign 2001.

Staff positions for internal personnel, fiscal and office services and licensure of college staff increased from 13.5 to 19.75. In fiscal year 1992, this includes 2.75 employees who handle internal personnel services, 5 employees who license technical college staff, and 12 employees who provide the office's fiscal and office services. In 1983, these services were provided by support staff within the education department.[14] Unlike 1983, the office now also provides these services to the Air Traffic Control Center and the FIRE center.

The functions of college budget and allocations, planning, research, information management, and fiscal audits of colleges increased from 13.5 positions to 15 positions. These increases reflect greater attention to college allocation methods, more information gathered from colleges, and greater planning requirements by the federal Carl Perkins Act. The office also has started researching the supply and demand for technical/vocational occupations by geographic area.

**New system office activities include marketing, telecommunications, civil rights enforcement, and technology preparation.**

During the 1980s and 1990s, the state board has undertaken several new activities, including marketing (1.5 positions), telecommunications (1.5 positions), civil rights enforcement (1.5 positions), and technology preparation (1 employee working with high schools to develop curricula that prepares secondary students for technical college education).

The system office now plays a more active role in facility construction and repair. As before, it examines the need for new facilities and repairs, and it distributes state aid. In addition, because of new authority granted by the Legislature, it now reviews bids for new construction, hires architects, and monitors construction. State board office staff no longer distribute gifts and military surplus equipment and supplies to colleges.

Office staff have increased their use of computers, resulting in 1.75 new positions to develop and maintain computer hardware and software, and to train staff. In addition, the data system manager provides technical assistance to the colleges and manages contracts with 3.7 full-time-equivalent employees who help coordinate a student records computer system used by 22 college campuses.

The system office has made many staffing changes in curriculum development during the past decade. In 1983, there were about 13 staff (7 curriculum specialists, 1 manager, 4 clerical, 1 intern) who helped develop and coordinate post-secondary curricula in technical colleges. In addition, 19 staff (1 manager, 13 professional, 4 clerical, 1 intern) coordinated or taught extension

*14* The estimate of 13.5 full-time-equivalent staff was made by staff from the state board office and the education department.

courses, including nine field instructors who taught fire and rescue training to fire departments statewide. In the 1984-85 school year, the system office transferred the firefighter instructional activity to the technical colleges. Subsequently, three field instructors retired and were not replaced. Currently, six field instructors plus a supervisor remain. Three of these six employees perform primarily new activities. One employee coordinates emergency medical services training at technical colleges. A second employee prepares curriculum for and coordinates hazardous material training. A third develops fire protection curriculum for technical colleges. In addition, the latter two employees work part time in the Fire Information, Research and Education (FIRE) Center, which the Legislature transferred from the University of Minnesota to the system office in 1986. The FIRE center staff maintains a 2,000 volume library, prepares fire protection resource information, and answers questions about fire protection.[15]

The remaining three field instructors coordinate fire training classes taught by technical college staff and report attendence records to local fire departments. In some counties, college staff coordinate class schedules. Since coordinating firefighter class schedules is performed by college staff as well as system office staff, we think the state board and the chancellor should examine whether shifting more responsibility for this activity to colleges would increase efficiency.

# SUMMARY

In fiscal year 1991, technical college administrative and student services cost $62.8 million, 24 percent of total operating expenses. This includes 22 percent from college campuses and 3 percent from the system office. After adjusting for inflation, technical college system expenditures per student for administrative and student services increased by 27 percent between 1981 and 1991. Most of this growth occurred between 1981 and 1986. Administrative and student service spending went up only three percent between 1986 and 1991.

Student service expenditures grew at a higher rate than campus administrative expenditures. Between 1981 and 1991, student service spending increased by 64 percent, while administrative spending went up by 16 percent.

Larger technical colleges tend to spend less per student for administrative and student services. On average, as enrollment doubles, spending per student declines by about 12 percent. Larger colleges tend to spend significantly less per student for the president's office, financial aid administration, and marketing.

Economies of scale indicate that merging small technical colleges into regional colleges could significantly reduce costs. The development of regional colleges is an important part of the state board's strategy for reducing administrative costs by 15 percent.

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*15* The FIRE center staff also includes a half time librarian and one clerical employee.

It is too early, however, to empirically measure how the development of regional colleges will affect costs. The merger of four small colleges in southwestern Minnesota has improved services but has not reduced administrative and student service costs. The establishment of seven additional regional colleges in 1991 and 1992 may substantially reduce costs because, unlike Southwestern Technical College, cost savings are a major goal of these seven mergers. Riverland Technical College, established in July 1991 by three colleges in southeast Minnesota, anticipates that it will reduce administrative and student service costs by about ten percent in its first year. However, these results are preliminary.

# COMMUNITY COLLEGE SYSTEM

## Chapter 3

Minnesota's 18 community colleges offer a variety of general education, remedial, occupational, and career courses. Full-time students can complete community college degrees in two years, but more than half of the students are part-time. Among Minnesota's higher education systems, the community college system experienced the most rapid student and staff growth during the past decade. We asked:

- **How did administrative and student service costs change during the past decade, and how do these costs vary by college?**
- **How much growth has there been in central office expenditures?**
- **Did the creation of the Arrowhead and Clearwater regional administrative structures reduce costs?**

We found that community college administrative expenditures per student increased faster than inflation during the past decade, and faster than other categories of college expenditure, such as instruction. Student services costs also increased faster than inflation, but not as much as in the state university and technical college systems. Most of the increase in community college administrative staff was in middle- and lower-level management and professional positions. Administrative expenditures by the central office increased much faster than campus expenditures, largely due to an expansion of centralized computer services. The creation of the community college system's two regional administrative structures resulted in some administrative staff consolidations and has provided important benefits to member colleges, but the regions have not significantly reduced total administrative and student services costs.

This chapter is organized into six parts. We begin by providing background information on the community college system and its mission. Second, we discuss our research methods. Third, we present cost and staffing trends between 1981 and 1991. Fourth, we discuss the relationship between college size and expenditures. Fifth, we discuss central office organization and staffing. Sixth, we review costs in the community college system's two regional administrative structures.

# INTRODUCTION

## History and Organization

The earliest two-year colleges in the United States were developed in the mid-1850s. Some educators believed that the first two years of college were similar in nature to secondary education and should be run by local school districts. In 1914, the University of Minnesota Senate adopted policies for recognizing credits earned at post-secondary institutions not considered "full" colleges. That same year, the Cloquet school board established Minnesota's first "junior college," although the Legislature did not formally authorize school districts to start colleges until 1925.[1] The Legislature authorized state aid to districts with junior colleges in 1957, recognizing that many students from outside the sponsoring districts were attending the colleges. School districts were operating 11 junior colleges in 1963 when the Legislature created a five-member State Junior College Board to oversee a system of state-supported colleges. All of the existing colleges were located outside the Twin Cities metropolitan area, and the board incorporated them into the new system.[2] The Legislature originally authorized the board to establish up to 15 state junior colleges; this was later amended to 18. In 1973, the Legislature changed the name "junior college" to "community college."

**Minnesota has 18 community colleges.**

Today, a nine-member community college board and a chancellor oversee 18 colleges, listed in the box at the right. All were established before 1970. In 1991, these colleges ranged in size from 448 to 5,638 full-year-equivalent (FYE) students, with a median size of 1,046. Twelve of the 18 colleges have their own presidents. Five colleges in northeastern Minnesota (the "Arrowhead Region") share a president and certain administrative functions. Three colleges in northwestern Minnesota (the "Clearwater

| Community Colleges | 1991 FYE |
|---|---|
| Normandale (Bloomington) | 5,638 |
| North Hennepin (Brooklyn Park) | 3,623 |
| Lakewood (White Bear Lake) | 3,365 |
| Anoka-Ramsey (Coon Rapids) | 3,169 |
| Inver Hills (Inver Grove Heights) | 2,712 |
| Rochester | 2,708 |
| Minneapolis | 2,575 |
| Brainerd | 1,220 |
| Willmar | 1,107 |
| Itasca (Grand Rapids) | 985 |
| Fergus Falls | 880 |
| Austin | 787 |
| Mesabi (Virginia) | 739 |
| Hibbing | 702 |
| Worthington | 610 |
| Thief River Falls | 596 |
| Vermilion (Ely) | 545 |
| Rainy River (International Falls) | 448 |
| Cambridge Center | 705 |
| Duluth Center | 550 |
| Fond du Lac Center (Cloquet) | 274 |
| | 33,938 |

1 By 1925, school districts operated junior colleges in Rochester, Hibbing, Eveleth, Virginia, Coleraine, and Ely. Four other colleges had opened and subsequently closed. The 1925 law called for supervision of junior colleges by the State Department of Education.

2 Two of the existing colleges merged (Eveleth and Virginia).

Region") share a president. Colleges jointly established these regional structures in the early 1980s, primarily as cost-saving measures at a time when small schools with declining enrollments faced possible closure.

In addition, there are three community college "centers," each affiliated with a larger campus. These centers served a total of 1,529 FYE in 1991. Cambridge Center started in 1978 and is administered by Anoka-Ramsey Community College.[3] The 1987 Legislature established the Fond du Lac Center in Cloquet as part of the Arrowhead Region, and a new campus is now being constructed. Mesabi Community College in Virginia coordinates some administrative functions at the Fond du Lac Center, including financial aid, registration, records management, and curriculum development. The Duluth Center has never had formal legislative authorization, but Hibbing Community College initially developed nursing and radiation technician programs in Duluth in the late 1980s following the closing of a Duluth private college. The 1991 Legislature instructed the Higher Education Coordinating Board to develop a plan for transferring the Duluth Center's courses to Duluth Technical College, the Fond du Lac Center, and the University of Minnesota at Duluth.

**Some community colleges share presidents and use faculty to assist in administration.**

Community colleges vary considerably in organization, but most large colleges have a president, a dean of instruction, and a dean of students. In recent years, colleges have increasingly used staff below the level of deans to manage administrative and student service functions. Members of the faculty bargaining unit provide most community college counseling services, and faculty administer financial aid at some campuses. Many community college faculty receive "release time" from their teaching duties to coordinate academic units. At large campuses, these coordinators perform some functions comparable to those of deans of instruction at smaller campuses, although coordinators lack the formal authority of administrators. For example, coordinators cannot hire, fire, or evaluate employee performance.

## Mission

When the 1963 Legislature created the state board for community colleges, it authorized the board to "prescribe the course of study including undergraduate academic programs, training in semiprofessional and technical fields, and adult education..."[4] This authorization remains in state law, but the 1991 Legislature adopted a community college mission statement that does not discuss the college role in adult education. According to 1991 law, community colleges are to provide:

> lower division instruction in academic programs, occupational programs in which all credits earned will be accepted for transfer to a bacca-

3 In 1970, the state Junior College Board designated Cambridge as a site for a new college, and the 1971 Legislature appropriated building funds for Cambridge. However, the 1973 Legislature provided no operating funds for Cambridge, and it never became a full college.

4 *Minn. Laws* (1963) Ch. 837, Sec. 29, Subd. 4 (2).

> laureate degree in the same field of study, and remedial studies, for students tranferring to baccalaureate institutions and for those seeking degrees.[5]

In keeping with the term "community college," the state board's 1988 mission statement indicates that community service is an important function of these institutions. Community service includes cooperation with schools, businesses, industries, community agencies, and other higher education institutions.[6]

According to a 1987 survey of community college students, 55 percent expected to earn a degree at their college, and 53 percent hoped to transfer community college credits to a four-year college.[7] Although community colleges are often described as "two-year colleges," relatively few students graduate or transfer within two years. Among students who initially enroll full-time, 10 percent graduate within two years, 18 percent within three years, and 21 percent within four years.[8] A 1991 study by the House of Representatives Research Department found that 16 percent of the students who started at a community college in 1987 had transferred to a Minnesota four-year college within four years. Among **full-time** students, 26 percent transferred within four years.[9]

**Community colleges are open to all students.**

Like the technical colleges, the community college system does not have admission standards. Community colleges are open to students regardless of previous performance in school. The community college board has initiated a "student success" program to improve colleges' rates of retention, graduation, and student transfer. Starting in fiscal year 1991, the board required all students taking eight credits or more to have their basic skills assessed. More than 23,000 students were assessed last year. Colleges used the assessment results to counsel students registering for English, writing, and math courses, and they offered remedial courses in these subjects.[10] In addition, the community college system office allocated funds to all colleges in 1990-91 to help them do more research on student outcomes, and it required each college to develop a plan for student assessment, remedial education, and measurement of student outcomes. The system office has conducted studies during the past four years to help colleges establish baseline data on student outcomes.

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5 *Minn. Laws* (1991), Ch. 356, Art. 2, Sect. 1.

6 The board's statement also outlines educational missions in the following areas: general, career, continuing, and developmental education, and education in the liberal arts and sciences.

7 The system office survey of 1,700 students at six colleges showed that 23 percent wanted to complete courses but no degree, 21 percent wanted to complete courses and transfer, 23 percent wanted an associate degree, and 32 percent wanted to earn an associate degree and transfer.

8 State Board for Community Colleges, *Quality Incentives in the Minnesota Community Colleges: Retention, Graduation, Transfer* (St. Paul, September 18, 1991), 10.

9 Minnesota House of Representatives Research Department, *Retention of Minnesota College Students: What About the Community Colleges?* Working Paper 5 (St. Paul, November 1991), 54, 57. The study says that the Legislature should consider whether to limit state subsidies for community college students who are not enrolled in a degree program.

10 Once the system office has reviewed the validity of assessments in detail, the community college board may consider making remedial education mandatory for some students.

The state board has also taken actions to improve the diversity of community college student populations. For example, the board allocated $500,000 to the six Twin Cities area campuses in fiscal year 1991 to help them achieve a goal of doubling minority enrollment and staff by 1995. The board has also provided annual allocations and special grants to help colleges throughout the state improve services for minority and disabled students.

# METHODS

We based most of our review of administrative and student services costs in the community college system on data from the central office's internal accounting systems. Because the codes used by campuses to describe the activities of staff were not used consistently and were sometimes less detailed than those used by the other higher education systems, some of our trend analyses relied on two years of data, rather than data from all years during the past decade. With a more limited review, we were better able to verify data accuracy. In October 1991, following our preliminary reviews of personnel data, we sent each campus a list of its state-funded staff for fiscal years 1981 and 1991, assigned to functional categories.[11] The campuses reviewed these lists for accuracy. In addition, each campus provided us with their charts of accounts for non-personnel expenditures, and we talked with business managers at each campus to better understand the accounts used in recent years. During visits to 12 of the 18 community colleges, we also interviewed chief administrators about the functions of their staff.

Analyses of cost trends are sensitive to the base year chosen for comparison. Community college costs per student varied considerably between the mid-1970s and mid-1980s, so it is difficult to determine a representative base year. Our base year for comparisons of community college personnel costs is 1981, when total college expenditures per student were at their lowest point in recent years, as shown in Figure 3.1.[12] For this reason, the trends discussed in this chapter should be viewed with appropriate caution.[13]

We report both expenditure and full-time-equivalent (FTE) personnel data in this chapter, but we think the expenditure data is more useful. In part, this is because some of the personnel data relies on assumptions about the hours worked by various staff. For example, in the case of faculty members who coordinate academic units, we have assumed that these staff work only the

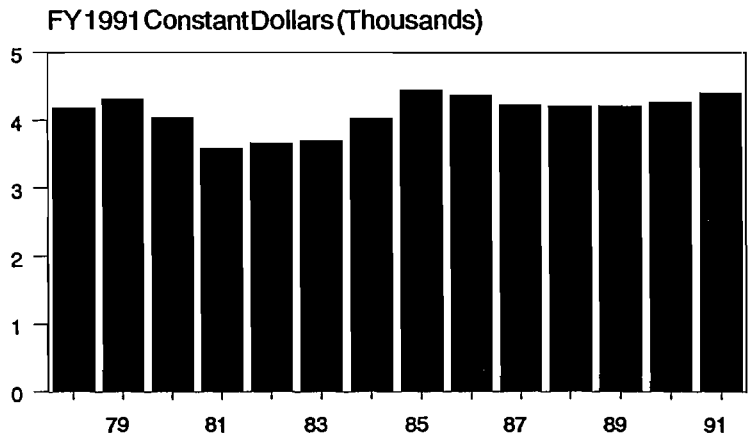
*11* In the case of staff whose positions are classified in the state's personnel system, we used fiscal year 1990 data, adjusted for negotiated 1991 salary increases. Expenditures for federally-funded administrative and student services positions, which we did not review in detail, accounted for about $40 per student in fiscal year 1991.

*12* The low expenditures per student in the early 1980s reflected the national recession and the state's budget problems. The Legislature did not fund enrollment growth between 1978 and 1983.

*13* Although administrative and student services costs per student (in constant 1991 dollars) were relatively steady between 1981 and 1983, costs in these years were about 10 percent lower than costs in 1980 and 1984. Costs per student rose following the Legislature's introduction of average cost funding in 1983.

**Total spending was at a low point in 1981, our base year for many comparisons.**

Figure 3.1: Community College Total Spending Per FYE, FY 1978-91




Source: Minnesota Department of Finance and Community College System.

number of hours for which they have been "released" from teaching duties--a maximum of 20 hours per week, or 0.5 FTE.[14]

This chapter does not report comparisons of costs between Minnesota's community colleges and similar institutions in other states. We conducted some preliminary comparisons of campus-level costs, but encountered several problems. First, the national database that served as the basis for our comparisons did not include central office costs. Without data on these costs, it is difficult to make conclusive comparisons between Minnesota's colleges and those elsewhere.[15] Second, the national data suggested that Minnesota had much higher student services costs than our analysis indicated, apparently due to differences in definition. Third, unlike Minnesota, most states have comprehensive two-year colleges that offer both technical and general education. The technical education component tends to make comprehensive colleges more expensive than colleges providing primarily general education, so it is difficult to conduct useful comparisons between Minnesota and other states.

We report administrative and student services costs per full-year-equivalent (FYE) student in this chapter. We have included continuing education administrative costs in this analysis even though continuing education students are not included in community college FYE student counts. Continuing education

*14* Although some administrators told us that this reflects actual work assignments, others told us that "full-time" academic coordinators work 40-hour weeks.

*15* We conducted our preliminary analysis using the IPEDS database, discussed in Chapter 1. Minnesota community college system office staff acknowledge that Minnesota has a central office larger than those of most other states' community college systems.

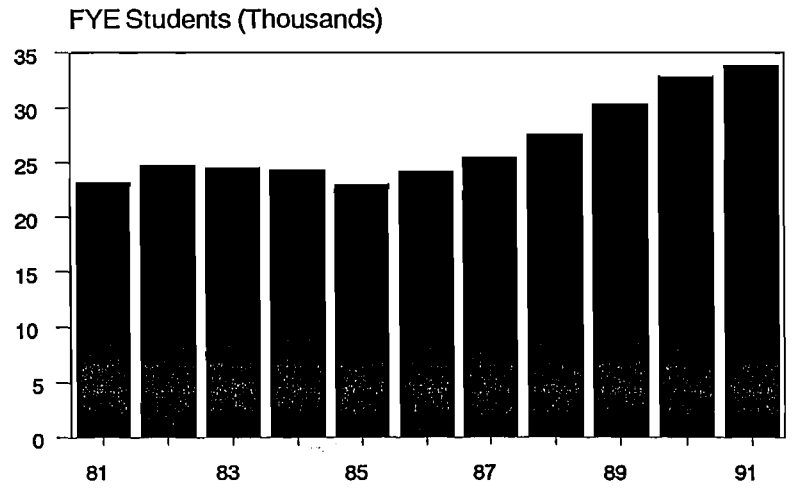
administration costs are a relatively small portion (less than four percent) of total administrative and student services costs.

# COST AND STAFFING TRENDS, 1981-91

The past decade has been one of growth for the community college system. The number of full-year-equivalent (FYE) students increased 46 percent from 1981 to 1991, as shown in Figure 3.2. During this period, the student headcount increased 50 percent.[16] About 56 percent of community college students are part-time, up from 50 percent in 1983. In addition, the proportion of students over age 25 increased from 37 percent in 1983 to 46 percent in 1990, and the proportion of minority students increased from 3.1 to 5.6 percent.

**Enrollment grew 46 percent between 1981 and 1991.**

Figure 3.2: Community College System
FYE Enrollment, FY 1981-91




Source: Community College System.

Total community college expenditures also increased during the past decade. Unadjusted for inflation, expenditures increased from $52.3 million in 1981 to $149.7 million in 1991. After adjusting for inflation, total expenditures per FYE grew from $3,612 in 1981 to $4,410 in 1991.[17]

This section examines recent expenditure trends for administrative and student services functions. We discuss trends for personnel and non-personnel costs separately, mainly because computerized records of non-personnel data were

*16* "Full-year-equivalent" students are computed by dividing the number of credit hours taken in an academic year by 45 credits, which is a typical full-time course load. "Headcount" is the total number of part-time and full-time students.

*17* Cost per FYE are in 1991 dollars, adjusted using the GNP price deflator for state and local governments.

available only since 1984, while records of personnel data were available for earlier years. Also, the personnel and non-personnel data systems do not use common coding systems for expenditures, which hinders the integration of cost information. However, we were able to estimate the change in **total** administrative and student services expenditures between 1981 and 1991 by making some assumptions about non-personnel expenditure increases in the years prior to 1984.[18] Analyzing spending in constant dollars (using the GNP price deflator for state and local governments), we found that:

**Adjusted for inflation, administrative and student services spending increased 32 percent over the past 10 years.**

- **Total community college expenditures per FYE for administrative and student services grew from $942 in 1981 to $1,247 in 1991--a 32.4 percent increase. Non-personnel expenditures per FYE increased 48 percent, and personnel expenditures per FYE increased 28 percent.**

As noted in Chapter 1, the GNP price deflator for state and local governments is one of several indices that could be used to adjust cost changes for inflation. Using the Higher Education Price Index, which measures price increases for goods and services used in higher education, community college administrative and student support expenditures per FYE increased 23.4 percent between 1981 and 1991. Using the Consumer Price Index, which measures price increases faced by consumers, expenditures per FYE increased 37.6 percent. We also found that:

- **As a percent of total community college expenditures, administrative and student services expenditures increased from 26.1 percent in 1981 to 28.3 percent in 1991. An increase in central office administrative costs accounted for most of this increase.**[19]

## Salary and Fringe Costs

Expenditures for salaries and fringe benefits represent nearly 80 percent of community college administrative and student services costs. Total personnel expenditures for the administrative and student service categories that we examined increased from $11.0 million in 1981 to 33.0 million in 1991, unadjusted for inflation.[20] This includes both central office and campus expenditures. After adjusting for inflation, we found that:

- **Personnel expenditures per FYE for administrative and student services increased 28 percent between 1981 and 1991 (from $757 to $972).**

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*18* Based on a review of summary data from the community college system office, we assumed that total non-personnel expenditures for administrative and student services increased 27 percent between 1981 and 1984. We also assumed that non-personnel costs increased at the rate of inflation between 1990 and 1991.

*19* Central office expenditures increased from 3.2 to 5.1 percent of total costs.

*20* For unclassified staff, our analysis assumed that fringe benefits were 20.0 and 23.0 percent of salaries in 1981 and 1991, respectively. We had more detailed data on fringe costs for classified staff.

Table 3.1 shows the expenditures for various categories of administrative and student services. Adjusting for both inflation and enrollment growth, expenditures in all functional areas except counseling grew between 1981 and 1991. The number of administrative and student services full-time-equivalent staff grew from 416 in 1981 to 694 in 1991 (a 67 percent increase), or a 14.6 percent increase in staff per 1,000 FYE students.

One noteworthy change was the increase in marketing and public relations staff. Expenditures per FYE for these staff increased from about $10 in 1981 to $24 in 1991, a 148 percent increase after adjusting for inflation. The increased spending reflects college efforts to recruit students and publicize course offerings. Some institutions have recruited students to maintain their

## Table 3.1: Community College Administrative and Student Services Personnel Expenditures and Staff by Function, FY 1981 and 1991 (Including Central Office)

| | Salary and Fringe Expenditures Per FYE Student (In Constant FY 1991 Dollars) | | | Full-Time-Equivalent Staff Per 1,000 FYE Students[a] | | |
|---|---|---|---|---|---|---|
| Function | 1981 | 1991 | Percent Change | 1981 | 1991 | Percent Change |
| **INSTITUTIONAL SUPPORT** | | | | | | |
| Chief Administrator's Office | $86.80 | $94.44 | 8.8% | 1.69 | 1.39 | -17.7% |
| Institutional Services | 159.88 | 234.11 | 46.4 | 5.17 | 6.31 | 21.9 |
| Marketing and Public Relations | 9.80 | 24.28 | 147.7 | 0.22 | 0.52 | 132.2 |
| Development | 0.00 | 13.40 | -- | 0.00 | 0.29 | -- |
| **STUDENT SERVICES** | | | | | | |
| Financial Aid Administration | 39.86 | 51.67 | 29.6 | 1.04 | 1.29 | 24.4 |
| Counseling | 123.23 | 117.02 | -5.0 | 2.30 | 2.00 | -13.3 |
| Other Student Services | 158.44 | 181.96 | 14.9 | 4.09 | 4.60 | 12.3 |
| **ACADEMIC ADMINISTRATION** | | | | | | |
| Instructional Administration and Coordination[b] | 159.62 | 213.81 | 33.9 | 2.85 | 3.06 | 7.2 |
| Continuing Education Administration | 19.16 | 41.80 | 118.1 | 0.47 | 1.00 | 111.9 |
| Total | $756.78 | $972.48 | 28.5% | 17.8 | 20.5 | 14.6% |

Source: Program Evaluation Division survey of community colleges (October 1991) and community college system personnel data.

[a]1.0 FTE is full-time for 12 months. In the case of faculty given release time to coordinate academic areas, we assumed that they devote no more than 20 hours a week (0.5 FTE) to these functions. Twenty hours is the maximum amount of student contact time for full-time teachers. If we assume that faculty coordinators devote up to 40 hours a week to these tasks (1.0 FTE), the change in total staff per 1,000 students would be 15.3 percent, rather than 14.6.

[b]Includes curriculum development and administration of developmental (remedial) education, as well as other coordination of for-credit academic programs.

viability and prevent staff layoffs. In other cases, there have been political pressures for institutions to increase their enrollments. Some people believe that the state's enrollment-based funding formula encourages recruitment, while others believe that the two-year lag between enrollment and formula funding deters enrollment growth.[21]

At some colleges, marketing staff also perform "development" functions, or the solicitation of private funds. We were unable to identify any staff in 1981 who devoted significant amounts of time to development. By 1991, however, colleges spent $13 per student for development activities. Despite the large increase in staffing for marketing and development, we note in Chapter 5 that the community colleges' combined cost per FYE for these activities is less than that in either the state university or technical college systems.

Another category with a large increase from 1981 to 1991 is continuing education administration. The 118 percent increase in this category reflects the fact that many colleges have added specialized staff to oversee continuing education programs. Also, some staff counted as "instructional administrators" in 1981 might have had some responsibility for continuing education. When combining the categories of instructional administration and continuing education, total costs per student increased 43 percent from 1981 to 1991.

## Administrative spending increased faster than other types of college spending.

We aggregated the categories shown in Table 3.1 to determine how the expenditures for administrative and student services compared to total community college spending. We found that:

- **Between 1981 and 1991, administrative personnel expenditures grew faster than other community college costs. Expenditures for student services staff declined as a percent of total spending.**

Total personnel costs for administrative and student services represented about 22.0 percent of all community college spending in 1991, compared to 21.0 percent in 1981. Figure 3.3 shows percent of total costs for three general categories of administrative and student services expenditures.[22]

The increase in administrative costs came at a time when the community college system reduced the proportion of total personnel expenditures for instruction, libraries, and physical plant. The proportion of total expenditures for instructional staff declined from 57.5 percent to 55.9 percent between 1981 and 1990, mainly due to reductions in vocational programs.[23]

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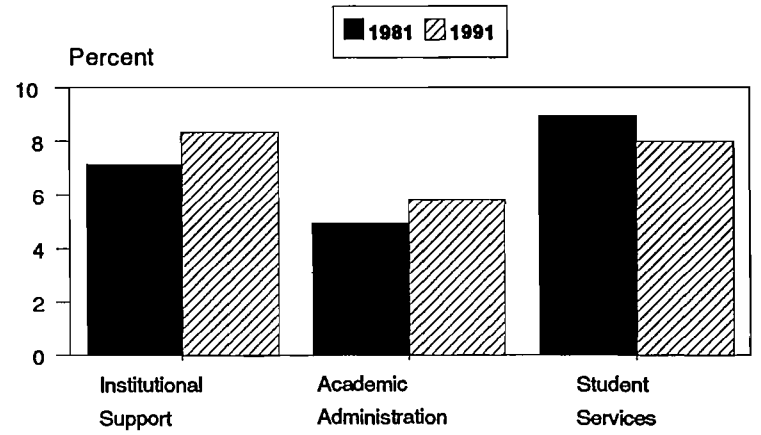
*21* When an enrollment increase occurs, average cost funding does not provide additional base-level funding until two years after the increase.

*22* Community colleges have only recently developed some functions--such as institutional research, curriculum development, and developmental education administration--so these categories account for some of the increases in Table 3.1. Excluding these categories, total administrative and student services personnel expenses represented about 21.2 percent of total 1991 community college expenditures.

*23* Based on analysis of annual reports prepared by the system office. Physical plant staff expenditures declined from 7.2 to 5.7 percent of total expenditures, and library staff expenditures declined from 3.8 to 2.9 percent.

**Student services spending declined as a percent of total spending.**

Figure 3.3: Administrative and Student Services Personnel Costs as a Percent of Total Community College Costs, FY 1981 and 1991




Source: Program Evaluation Division analysis of community college data.

Campus-level administrative and student services expenditures increased more slowly than central office expenditures between 1981 and 1991.[24] Table 3.2 shows trends in total personnel costs for each of the community college campuses. Constant dollar personnel costs per student declined significantly at one college (Fergus Falls) between 1981 and 1991, but increased at most others. The largest increase was 65 percent (Lakewood). Overall, personnel expenditures per student at the six Twin Cities metropolitan area colleges increased by about 28 percent, compared to 21 percent for colleges elsewhere in the state.[25]

## Staffing Trends, by Position

To conduct our assessment of cost and staffing changes from 1981 to 1991, we obtained a computerized record of salary payments to all individuals employed during these years. Included in this data were codes that identified staff by their positions. This allowed us to track the number of staff in various positions over time, which we were unable to do for the other higher education systems in a systematic way.

We looked at staffing and expenditure trends for five general categories of staff.[26] The categories are as follows:

*24* During this period, total central office personnel expenditures per student increased by 72 percent in constant 1991 dollars, while campus expenditures increased by 23 percent.

*25* This analysis does not include costs of the three community college centers in Cloquet, Duluth, and Cambridge.

*26* All of these categories are for staff in "unclassified" civil service positions.

## Table 3.2: Constant Dollar Administrative and Student Services Personnel Expenditures at Community Colleges, FY 1981 and 1991 (Excluding Central Office)

| College | 1981 Student FYE | 1981 Salary and Fringe Expenditures Per FYE | 1991 Student FYE | 1991 Salary and Fringe Expenditures Per FYE | Percent Change in Expenditures Per FYE |
|---|---|---|---|---|---|
| Austin | 734 | $734 | 787 | $1,157 | 57.5% |
| Brainerd | 515 | 859 | 1,220 | 856 | -0.4 |
| Fergus Falls | 518 | 1,026 | 880 | 839 | -18.2 |
| Hibbing | 553 | 735 | 702 | 1,175 | 59.8 |
| Itasca (Grand Rapids) | 609 | 956 | 985 | 1,129 | 18.1 |
| Willmar | 769 | 818 | 1,107 | 837 | 2.3 |
| Worthington | 463 | 924 | 610 | 994 | 7.5 |
| Vermilion (Ely) | 502 | 828[a] | 545 | 1,171 | 41.4 |
| Rochester | 2,211 | 626 | 2,708 | 826 | 31.8 |
| Northland (Thief River Falls) | 419 | 942 | 596 | 1,111 | 17.9 |
| Mesabi (Virginia) | 612 | 786 | 739 | 1,066 | 35.5 |
| Minneapolis | 2,088 | 715 | 2,575 | 1,080 | 51.0 |
| Anoka-Ramsey (Coon Rapids) | 2,283 | 582 | 3,169 | 800 | 37.5 |
| N. Hennepin (Brooklyn Park) | 2,656 | 671 | 3,623 | 736 | 9.6 |
| Lakewood (White Bear Lake) | 2,400 | 554 | 3,365 | 916 | 65.4 |
| Rainy River (International Falls) | 346 | 1,288 | 448 | 1,442 | 12.0 |
| Normandale (Bloomington) | 3,538 | 561 | 5,638 | 568 | 1.3 |
| Inver Hills (Inver Grove Heights) | 1,918 | 598 | 2,712 | 818 | 36.9 |
| Cambridge Center | 160 | 636 | 705 | 460 | -27.7 |
| Duluth Center | 0 | 0 | 550 | 382 | -- |
| Fond Du Lac Center (Cloquet) | 0 | 0 | 274 | 1,431 | -- |
| System Total | 23,294 | $680 | 33,938 | $841 | 23.6% |

Source: Program Evaluation Division survey of community colleges, October 1991.

Note: Regional office costs have been allocated to campuses based on FYE. Expenditures are in constant FY 1991 dollars.

[a]Vermilion staff noted that faculty instructional coordinators were not included in our 1981 data for that college. In 1991, instructional coordinators accounted for expenditures of about $120 per FYE at Vermilion.

- **Presidents and provosts.** These are the chief administrative officers for each of the campuses. The Arrowhead and Clearwater regions each have a president, plus provosts at each campus.[27] Also, the central office had several provosts until 1984.

- **Vice-provosts, deans, and associate deans.** Most campuses have a dean of students, who oversees student services. Many also have a dean of instruction, who serves as the campus' primary instructional administrator. Some campuses also have other deans, such as deans who oversee campus business functions, as well as associate deans. The campuses with provosts each have a vice-provost whose duties are comparable to those of deans.

- **Middle managers.** Staff in these positions have administrative responsibilities in a variety of functional areas, including student services, academic administration, institutional services, and development.[28]

27 There are no provosts at campuses outside these two regions.

- **Lower-level professional staff.** Many of the staff in this category have some supervisory responsibilities, but because they are represented by the bargaining units of classified staff (the Minnesota Association of Professional Employees and the Middle Managers Association), community college personnel staff do not consider them to be true administrators. These staff typically work in functional areas that are related to administration or student services, so we have included them in our analysis.[29] According to a recent analysis by the community college system office, more than half of these staff work in student services, such as admissions, financial aid, and services to minority and disabled students.

- **Counselors.** These are staff represented by the faculty bargaining unit who advise students on academic and personal issues. The community college state board requires counselors to have a masters degree in counseling or counseling psychology.

Figures 3.4 through 3.13 show staffing levels and total salaries for each of these categories. In general, we found that:

**There was particular growth in middle and lower level professional staff.**

- **The primary area of expenditure and staffing growth among administrative and student service staff has been in middle and lower level management and professional positions, rather than in higher level positions.**

This finding is generally consistent with the national higher education staffing trends reported in Chapter 1, which showed that growth in high level executive and administrative positions has been less than that of lower level professional staff.

Figures 3.4 through 3.11 show that, from 1981 to 1991:

- **The number of presidents and provosts decreased by 17 percent (due to the reclassification of several provost positions in the central office), while constant dollar salary expenditures for these staff increased by six percent. Average salaries, adjusted for inflation, increased from $62,805 to $80,106.**

- **The number of vice-provosts, deans, and associate deans decreased by 17 percent, and constant dollar expenditures stayed the same. Average salaries, adjusted for inflation, increased from $54,366 to $65,525.**

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*28* This category includes community college directors 3, 4, and 5.

*29* This category includes community college directors 1 and 2, administrative assistants 1 and 2, and program supervisors.

## Figures 3.4 - 3.7: Staffing and Salary Expenditures for Community College Top Management

### Presidents and Provosts

Figure3.4

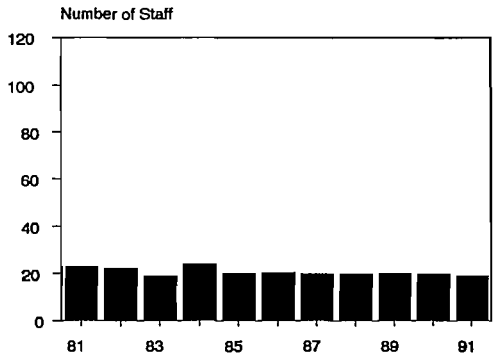
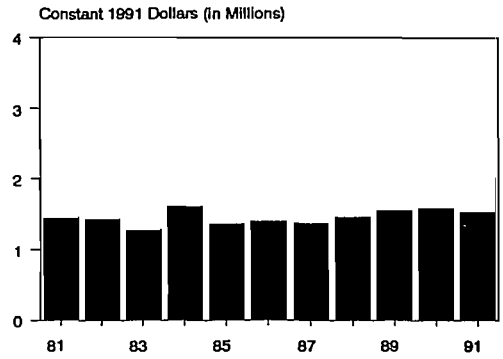



Figure3.5




### Vice Provosts, Deans, and Associate Deans

Figure3.6

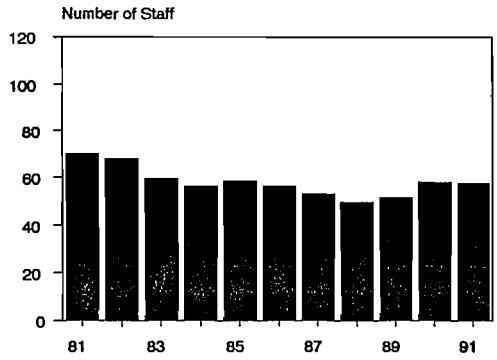
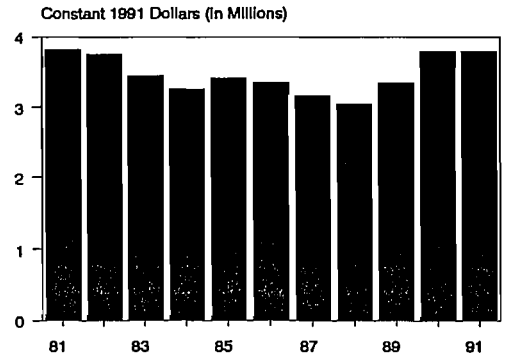



Figure3.7




Source: Program Evaluation Division analysis of Community College System data.

- **The number of middle managers increased by 443 percent, and constant dollar expenditures increased by 522 percent. Average salaries, adjusted for inflation, increased from $46,810 to $53,597.**

- **The number of lower level professional staff increased by 432 percent and constant dollar expenditures increased by 386 percent. Average salaries, adjusted for inflation, decreased from $31,120 to $28,459.**

## Figures 3.8 - 3.11: Staffing and Salary Expenditures for Community College Middle Management and Professional Staff

### Middle Managers

Figure3.8

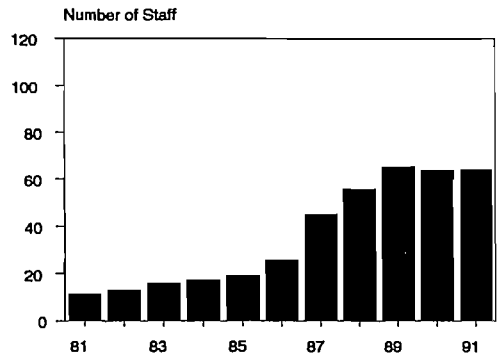
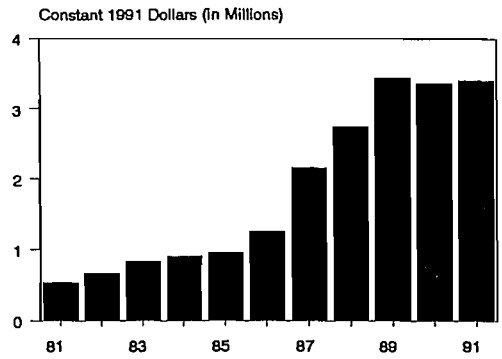



Figure3.9




### Lower Level Professional Staff

Figure3.10

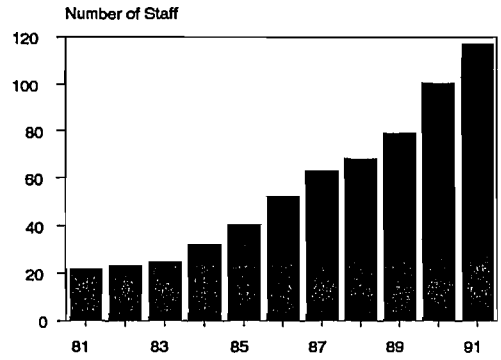
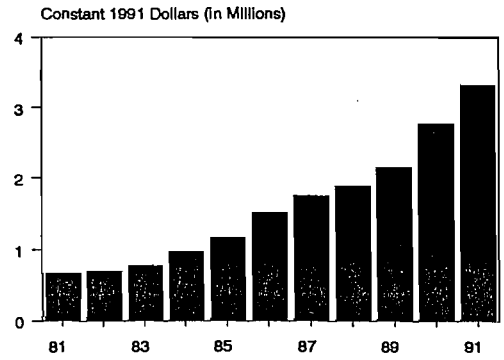



Figure3.11




Source: Program Evaluation Division analysis of Community College System data.

In part, these trends reflect the practice by colleges of assigning duties previously done by high level staff to lower level staff. For example, Rochester Community College had three deans and four associate deans 10 years ago. Today, despite having a larger student body, the college has only two deans and one associate dean. More functions have been delegated to lower level staff, such as a registrar and a recruiting specialist. Likewise, the largest community college (Normandale) operated with just one dean in recent years, while several other colleges had three.

The trends also reflect the increasing specialization of administrative and student services staff. Colleges have devoted more staff, particularly in lower-level professional positions, to functions such as services to students with special needs, remedial education, placement, marketing, fund-raising, and

grant-writing. Previously, many of these functions were not done or were done by staff assigned to other tasks. As these functions have been given greater visibility, supervisors and line staff have been hired to perform them.

Adjusted for inflation, total salary expenditures for presidents, provosts, deans, directors, administrative assistants, and program supervisors increased 86 percent from 1981 to 1991. Enrollment increases explain part of this increase, but we also found that:

- **Expenditures per FYE for these administrative and student services positions increased from $280 in 1981 to $356 in 1991, after adjusting for inflation. This reflects increases in both the number of staff and their salaries.**

As noted in Chapter 1, increasing enrollment does not necessarily require larger numbers of high-level administrators (such as presidents, provosts, and deans). The workload of these administrators is determined more by functional responsibilities than by enrollment levels. This is less true for lower level professional staff, some of whom have workloads that increase more directly with increases in enrollment.

Finally, we examined staffing levels for counselors, whose workload is determined largely by the size of the student population. In the staffing data shown in Figure 3.12, we adjusted the full-time-equivalent (FTE) data for counselors to reflect the fact that their "full-time" work years are, by contract, shorter than those of administrators.[30] We found that the number of counselors increased

## Figures 3.12 - 3.13: Staffing and Salary Expenditures for Community College Counselors

Figure3.12

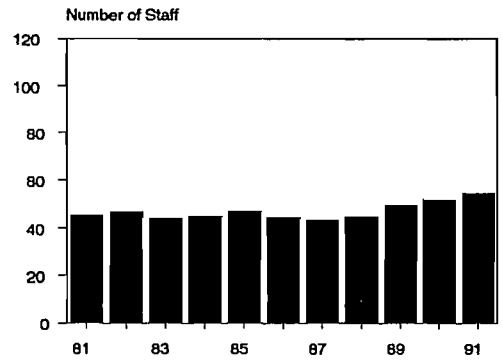
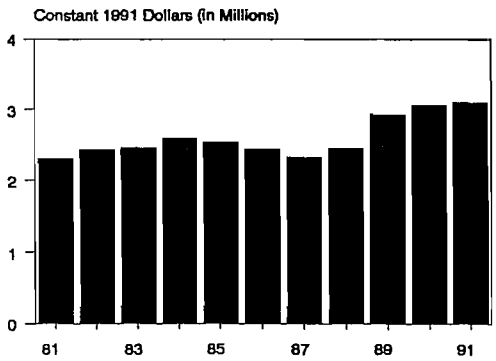



Figure3.13




Source: Program Evaluation Division analysis of Community College System data.

*30* A "full-time" counselor, as part of the faculty bargaining unit, works about a nine-month work year. Most counselors also work during the summer sessions, for which they receive additional compensation. Because the central office bases its FTE data for counselors on a nine-month year, we converted counselor FTEs to 12-month equivalents. We multiplied counselor FTE by 0.75 to arrive at the data represented in Figure 3.12.

by 21 percent between 1981 and 1991, and counseling salary expenditures in constant dollars increased by 34 percent. However:

- **Personnel expenditures per student for counselors declined slightly between 1981 and 1991. The number of FYE students per full-time counselor (where full-time is based on a nine-month academic year) increased from 384 to 466.**

Costs per student for faculty counselors declined about eight percent between 1981 and 1991. Including support staff for these counselors, costs declined by about five percent.[31]

**Lower spending for counselors was offset by increases for other student services.**

To some extent, the decrease in counseling expenditures per student was offset by increases in other staff. During the past decade, colleges have added a variety of specialized student services staff, some of whom perform services similar to counselors. For example, many colleges have staff who work solely with minority students, and some have staff who work with women or non-traditional students. These staff are not reflected in Figures 3.12 and 3.13.[32] In the past few years, colleges have also added credit courses in study skills to their curricula, thus meeting needs partly met by counselors previously. In addition, the actual workweeks of counselors vary considerably, and it is difficult to know how the average contact time with students changed during the past decade. Administrators told us that some counselors work no more than the limits of their contracts (25 hours of contact time per week), while others routinely work more.

In 1991, colleges paid their counselors up to $46,300--the maximum faculty salary--for nine months of work, and up to $9,000 additional salary for working during the summer sessions. Some administrators told us that certain academic and career counseling services could be provided more cost-effectively with non-faculty staff, or staff without master's degrees.[33]

Many community colleges have members of the faculty bargaining unit administering their financial aid programs. In 1991, 11 colleges had faculty financial aid administrators, and all but one were paid annual salaries exceeding

*31* The eight percent estimate is based solely on staff with positions identified as "counselors" in the community college personnel database. The five percent estimate is based on the data we sent to colleges for verification and includes support staff for counseling services, as well as some professional staff not coded as counselors in the system office's data.

*32* Some student services staff that perform duties similar to counselors have job titles of directors, administrative assistants, or program supervisors, and thus are not reflected in the summary data on counselors. Also, there were about 5 full-time-equivalent counselors and 14 other student services staff funded with federal funds in 1991, compared to about 3 and 5 in 1981, respectively.

*33* The Legislative Commission on Employee Relations (LCER) determined in 1980 that instructors, counselors, and librarians should comprise the community college "instructional" unit for collective bargaining purposes. According to staff we talked with from the state Bureau of Mediation Services (BMS), the Legislature has sole authority to modify the composition of this unit, unless the job has changed substantially since 1980--in which case, the community college system could petition BMS for modification.

$49,500. By comparison, colleges with non-faculty financial aid administrators paid annual salaries averaging about $30,000.[34]

## Non-Personnel Expenditure Trends

Non-personnel expenditures represent about one-fifth of all community college administrative and student services costs. Because of data constraints, we analyzed growth in community college non-personnel expenditures for a different time period than our analysis of personnel costs. The community college system office maintains non-personnel expenditure information in a database separate from personnel information. Computerized data on non-personnel expenditures for years prior to fiscal year 1984 are not available, and fiscal year 1991 data were not very complete at the time of our analysis.[35]

To determine which cost codes represented administrative and student services costs in 1984 and 1990, we obtained colleges' charts of accounts and talked to college business managers. Because of variations in the way colleges recorded instructional administration costs, we have not included them in our analysis.[36]

Overall, we found that:

- **As a percent of total community college expenditures, non-personnel expenditures for administrative and student services increased from 6.0 percent in 1984 to 6.6 percent in 1990.**[37]

Table 3.3 shows that, adjusted for inflation, non-personnel expenditures increased 17 percent per FYE student between fiscal years 1984 and 1990. Central office non-personnel expenditures increased substantially more than campus expenditures.[38] Some of the central office increase reflects services that this office has assumed in recent years on behalf of campuses. For example, in 1990 the central office had $320,000 in non-personnel expenditures (about $10 per FYE) to help campuses assess students' need for remedial education. Also, the central office spent more than $70,000 to help several campuses hire new presidents.

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*34* Community college board policies give colleges the option of having their financial aid officers represented by faculty or other bargaining units. Several college administrators told us that they intend to hire non-faculty financial aid administrators when the incumbents in these positions retire.

*35* Hard copies of summary data before 1984 were available, but not in as much detail as subsequent data.

*36* Some colleges recorded these administrative expenses in the same accounts used for instructional expenditures. We excluded developmental education and continuing education costs for the same reason. Also, we did not review non-personnel costs for curriculum development because there was not a separate code for this category.

*37* Although detailed data for 1981 are not available, we used assumptions discussed earlier in this section to estimate that non-personnel expenditures for administrative and student services were about 5.1 percent of total community college spending in 1981.

*38* The constant dollar changes in campus non-personnel expenditures per FYE ranged from a decrease of 23 percent at Austin to an increase of 37 percent at Rochester.

## Table 3.3: Community College Non-Personnel Expenditures Per FYE Student, FY 1984 and 1990 (in Constant 1991 Dollars)

| | 1984 System Spending Per FYE | 1990 System Spending Per FYE | Percent Change | Percent Change in Central Office Spending per FYE 1984-1990 | Percent Change in Campus Spending per FYE 1984-1990 |
|---|---|---|---|---|---|
| Rent (non-building) | $8.78 | $2.31 | -74% | -95% | -31% |
| Advertising | 8.35 | 9.83 | 18 | 439 | 8 |
| Repairs, Alterations and Maintenance | 9.47 | 16.63 | 76 | 118 | 52 |
| Printing | 38.26 | 29.15 | -24 | 86 | -32 |
| Professional/Technical/ Consultant Services | 16.90 | 11.51 | -32 | -63 | 83 |
| Data Processing | 8.97 | 13.97 | 56 | 66 | -81 |
| Purchased Services | 10.34 | 12.83 | 24 | 52 | 5 |
| Communications | 53.18 | 54.77 | 3 | 63 | -2 |
| In-State Travel | 13.55 | 14.50 | 7 | 8 | 7 |
| Out-of-State Travel | 4.34 | 5.71 | 32 | 20 | 35 |
| Fees, Other Fixed Charges | 4.72 | 7.71 | 63 | 138 | 38 |
| Supplies | 31.10 | 52.02 | 67 | 217 | 48 |
| Equipment | 34.01 | 51.01 | 50 | 169 | -2 |
| Other | 0.21 | 1.79 | 752 | 34 | 3,877 |
| Total | $242.17 | $283.85 | 17% | 55% | 3% |

Source: Program Evaluation Division analysis of community college data.

Note: Totals include institutional services, executive management, and student services costs, but not instructional administration costs.

**Spending for computer services increased substantially.**

There was particular growth in supplies and equipment costs, which accounted for more than one-third of community college non-personnel expenditures in 1990.[39] Together, expenditures per FYE in these categories grew 58 percent in constant dollars between 1984 and 1990. In the system office alone, supplies and equipment costs per FYE increased 180 percent, with central computer services accounting for most of this increase.[40] As we note later in this chapter, the system office started to upgrade its central computer services in 1984.

There is evidence of the recent investment in centralized computer services in categories other than supplies and equipment. There was a 56 percent increase in data processing costs per FYE between 1984 and 1990, and expenditures by the system office accounted for virtually all of this increase. Expenditures per FYE for non-building repairs, alterations, and maintenance increased 76 percent during this period, mostly for the system office's computer services.[41]

*39* It is difficult to assess the trends in the supplies and equipment categories separately because there was a change in the state's definition of supplies and equipment during this time period. In 1984, the definition of supplies included equipment with a value under $100. In 1990, supplies included equipment with a value under $500.

*40* However, central office supply and equipment expenditures per FYE for activities besides central computer operations also increased rapidly--161 percent in constant dollars.

*41* Systemwide, there was a $315,000 constant dollar increase in this category, and system office computer spending accounted for $159,000 of the increase.

Earlier, we noted that community colleges substantially increased the number of marketing and public information staff in the past decade. We also found that, adjusted for inflation, community college advertising expenditures per FYE increased 18 percent between 1984 and 1990. At campuses, the growth in advertising costs reflected greater efforts to publicize courses and programs. In the central office, advertising was used mainly to publicize job openings. It is worth noting that community college printing costs per FYE (which are not included in the advertising category) decreased by 24 percent during this time, adjusted for inflation. Campus spending per FYE for postage--which is part of the "communications" category in Table 3.3--increased from $21.08 in 1984 to $24.16 in 1990, a 15 percent increase.

Finally, in response to questions from legislators, we looked at the extent of contracting for community college administrative services. In part, legislative concerns resulted from a financial audit that disclosed instances in which the system office hired back former employees on a contractual basis.[42] We found that:

- **Systemwide, expenditures per FYE for contracted services increased 11 percent between 1984 and 1990. The amount of contracting per FYE by the central office decreased 35 percent.**[43]

We reviewed contracts for fiscal years 1990 and 1991 and found one additional instance where a central office administrator who had received early retirement incentives several years earlier was hired on contract by the system office. In this case, the person was hired to help administer the legislatively-mandated transfer of retirement programs from the Teachers Retirement Association to the central office. System administrators noted that this person's financial expertise from his previous position with the central office made him uniquely qualified to provide advice on retirement programs.[44]

# ECONOMIES OF SCALE

As discussed in Chapter 1, national research has found evidence of significant economies of scale in two-year colleges, at least those with enrollments below 1,500. As colleges grow in size, they are able to spread some of their fixed costs over a larger student population, thus reducing their cost per student.

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*42* Office of the Legislative Auditor, Financial Audit Division, "Community College System Office Financial Audit For the Two Years Ended June 30, 1989" (St. Paul, August 9, 1990). This audit discussed several instances in which administrators received early retirement payments and later were hired as consultants by the system office.

*43* Our analysis included spending in object codes for purchased services, professional and technical services, and consultant services.

*44* As noted in a later section, there have also been two recent instances in which former college presidents have been employed on a limited-term basis (not a contract) by the system office, although neither of the presidents received early retirement incentives before joining the office.

To evaluate 1991 costs at each community college campus, we combined personnel and other costs. We excluded central office costs from this analysis, but allocated the costs of regional offices to the campuses they serve. We also excluded the three centers that do not have status as independent colleges.

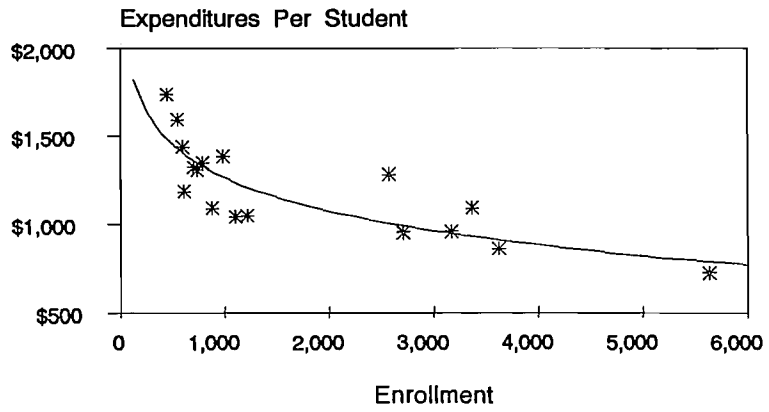
We found that:

- **Total administrative and student services costs per student tend to decline as campus size increases.**

As shown in Figure 3.14, costs per FYE ranged from a low of $724 at the system's largest campus (Normandale) to a high of $1,736 at the system's smallest campus (Rainy River). Among the seven largest colleges--all with enrollments over 2,300 FYE--the cost per FYE was $967. Among the other 11 colleges--all with enrollments under 1,300--the cost per FYE was $1,296. The line plotted in Figure 3.14 indicates that as enrollments at community colleges double, costs decline by about 15 percent.[45]

**Smaller campuses tend to have higher costs.**

Figure 3.14: Community College Administrative and Student Services Expenditures by College Size, FY 1991




Source: Program Evaluation Division analysis of community college expenditure data.

There are some exceptions to the high correlation we found between college enrollment and cost. For example, Minneapolis Community College (MCC) has relatively high enrollment (2,575 FYE), but its costs ($1,279 per FYE) were higher than those of many small colleges. One reason for MCC's high costs are its student services expenditures per FYE, which are about 70 percent higher than the average of the other six large colleges. Due to its diverse

*45* Based on a logarithmic regression of student enrollment on college expenditures per student, using the equation ln(expenditures per student) = a + b * ln(enrollment). The relationship is statistically significant at the .001 level, with R squared = 0.71.

student population, the college has hired more support staff to assist minorities and disabled students.[46]

We also examined the relationship between college size and various categories of costs. We found:

- **As college size increases, costs per student decrease in the chief administrator's office, financial aid administration, institutional services, and student services.**

- **There are no clear relationships between college size and the costs of instructional administration and marketing/development/public information.**

Figure 3.15 shows the services for which we found significant relationships between college size and cost.[47] Although the research literature indicates that colleges can take advantage of economies of scale up to enrollments of 1,500, our analysis indicates that unit costs for some functions continue to decrease at even higher enrollments.

**Allocation policies affect campus spending levels.**

The relationship we found between administrative expenditures and enrollment may reflect not only economies of scale, but also the community college state board's allocation of revenues among the colleges. The formulas used by the board to allocate state funds are based on the assumption that large institutions will operate more efficiently than smaller ones. For example, a college with 1,400 students would receive funding for 6 administrative positions, a college with 2,800 students would receive funding for 10, and a college with 5,600 students would receive funding for 15.[48] Likewise, the allocation formulas grant large colleges less funding per student for materials, supplies, and the cost of producing course catalogs. Colleges are free to spend their allocations as they choose, but the allocation process creates incentives for colleges to spend less per student as enrollments increase.

# CENTRAL OFFICE STAFFING

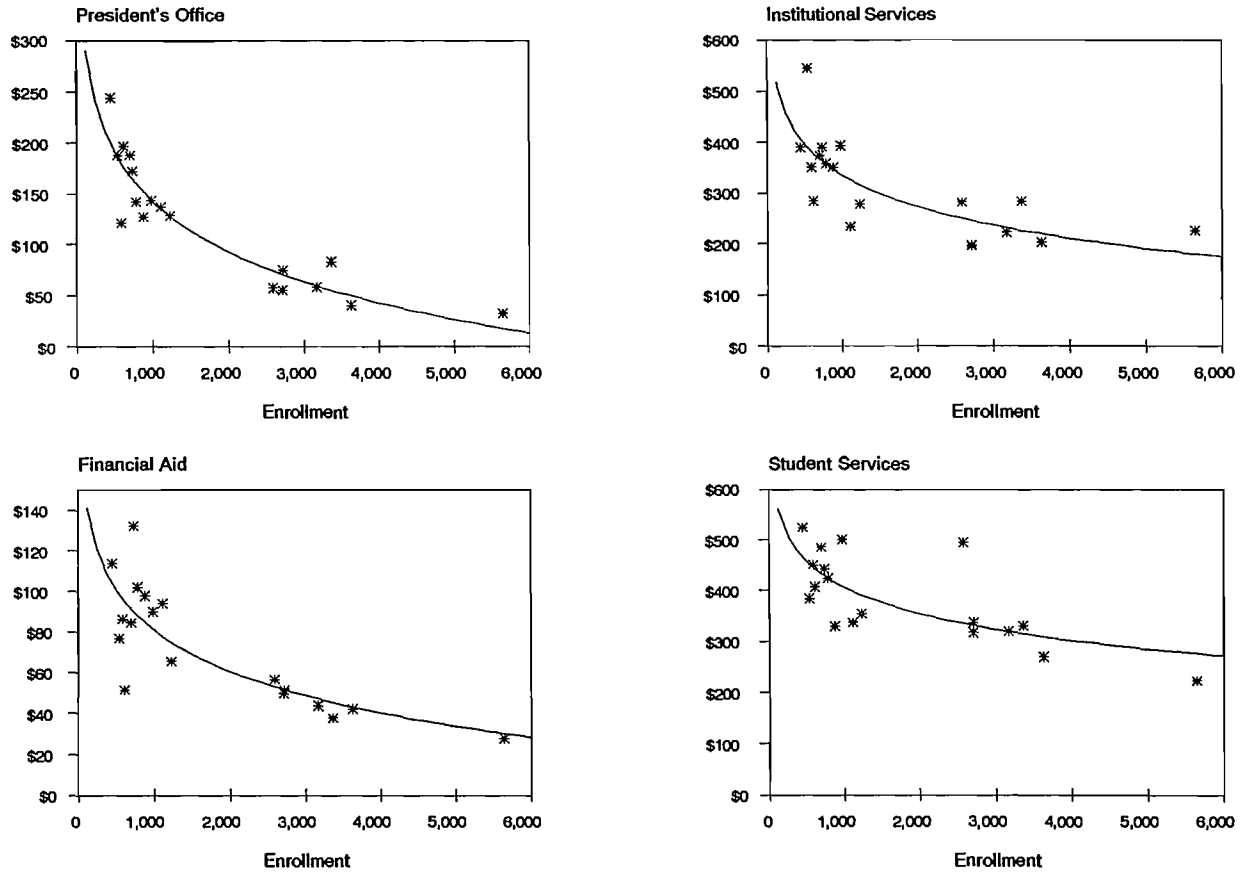
At the outset of our study, some legislators expressed concern about growth in the size of the central offices of Minnesota's higher education systems, particularly the community college system. Central office size was a topic of discussion during hearings in the House of Representatives in 1991. This section discusses the functions of the community college central office and recent changes in central office staffing. Central office expenditures were 5.1 percent

*46* MCC also has unusually high costs for marketing and development, institutional services, extension administration (due to special programs for prison inmates), and developmental education. In addition, MCC's average annual salary for its counselors (more than $50,000) was among the highest in the community college system.

*47* The "student services" chart includes counseling and other student services.

*48* These are unclassified administrative, professional, and supervisory support positions.

**Figure 3.15: Community College Expenditures Per FYE Student, By Category and College Size, FY 1991**



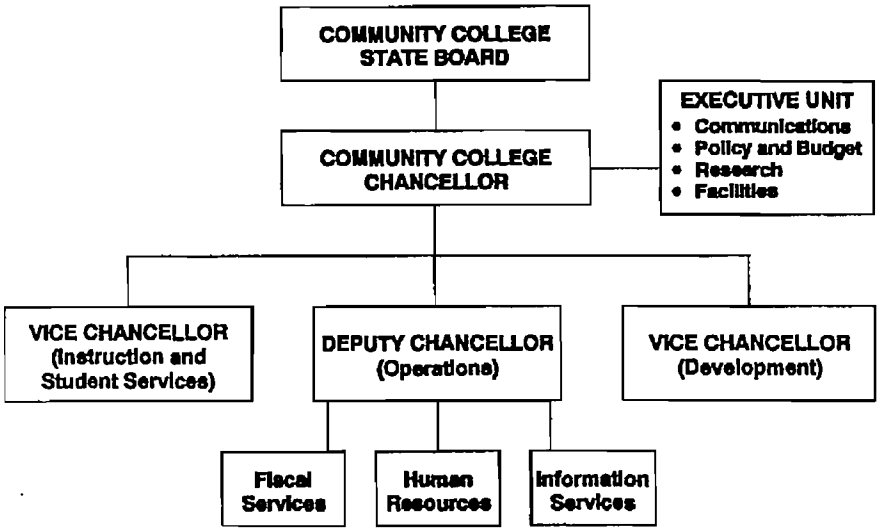

of total community college expenditures in 1991, compared to 3.2 percent in 1981.[50]

# Functions

As shown in Figure 3.16, the community college system office operates under the direction of a chancellor, a deputy chancellor, and two vice chancellors. Each directs a unit of the central office, although the units headed by vice chancellors are small (a combined total of six staff report to the vice chancellors). Figure 3.17 lists the central office staff. More than half of the staff in the central office provide fiscal, personnel, or computer services directly to campuses. Community college system administrators believe that centralization of these services has been more cost-effective than fully staffing these functions at each campus.

*50* In contrast, campus expenditures for administrative and student services increased from 22.9 percent to 23.1 percent of total community college expenditures between 1981 and 1991.

**Figure 3.16: Organization of Community College System Office**




**The community college central office has 81 state-funded staff.**

The system office's centralized fiscal services include payroll and disbursement processing, budget tracking, systemwide accounting, grant supervision, and student loan collection. The primary financial responsibilities left to campuses are collecting revenues, such as tuition, fees, and book revenues, and awarding student financial aid. In contrast, individual campuses of state universities and technical colleges provide most of their own fiscal services, either in-house or by contract with a local school district. In general, campus staff we talked with expressed satisfaction with the fiscal services provided by the community college central office.

Campuses have authority to hire staff with system office approval. The central office staff process and review colleges' personnel information before submitting it to the state departments of Employee Relations and Finance.[50] A recent analysis by the Department of Employee Relations indicated that the number of full-time community college staff grew 23 percent between 1982 and 1991. The total number of community college employees doubled during this period.[51] The central office administers seven labor agreements, and provides assistance to the Department of Employee Relations on arbitration cases and faculty contract negotiation. Since 1989, the central office has also administered retirement plans for community college employees, which involves

*50* The central office approves new positions and posts minimum qualifications for unclassified positions. It also approves colleges' proposals to reclassify "unclassified" positions, and plays a lead role in college presidential searches.

*51* Memo from Commissioner Linda M. Barton to state agency heads, May 8, 1991. Community college full-time unlimited staff increased from 1,470 to 1,811 during this time, and total employees increased from 1,989 to 3,866.

## Figure 3.17: Community College Central Office Staffing, February 1992

**Executive Unit**
- 1 Chancellor
- 1 Executive assistant
- 1 Director of communications
- 1 Director of policy and budget
- 1 Research associate
- 2 Facilities staff (director, assistant director)
- 2 Secretaries
- 1 Data specialist

**Operations Unit**
- 1 Deputy chancellor
- 1 Secretary
- 1 Affirmative action officer

**Fiscal Services**
- 1 Director of fiscal services
- 1 Assistant director of fiscal services
- 1 Internal auditor
- 1 Accounting officer
- 1 Retirement account supervisor
- 1 General accounting supervisor
- 2 Accounting technicians
- 3 Invoice clerks
- 4 Payroll staff (1 officer, 3 clerks)
- 1 Revenue analyst
- 3 Student loan staff (1 loan officer, 2 collection representatives)
- 1 Account clerk[1]
- 1 Grant account supervisor (for federal, private grants)
- 1 Stores clerk (central office mailroom, duplicating, supplies)
- 3 Secretaries
- 1 Central office receptionist

**Human Resources**
- 1 Director of human resources
- 1 Director of executive and staff services
- 1 Labor relations representative
- 1 Management analyst
- 1 Personnel officer
- 3 Secretaries

**Information Services**
- 1 Director of information services
- 1 Associate director
- 3 Technical specialists (2 program the central office's mainframe computer, 1 works with the campus network of computers)
- 1 Supervisor of computer operations (oversees 3 operators)
- 3 Mainframe computer operators (the computer runs 120 hours a week)
- 4 Production control staff (1 supervisor, 2 "help desk" staff, 1 technician; campuses with information requests deal most directly with these staff)
- 1 Supervisor of systems applications (oversees 7 programmers and systems analysts)
- 1 Systems analyst (works on enhancements to existing information systems)
- 6 Programmers and programmer analysts (develop programs to respond to customer requests; 1 programmer works exclusively for systems office research staff)
- 3 Microcomputer staff (1 specialist, 2 technicians; help campuses develop their own microcomputer capabilities)
- 1 Secretary

**Instruction/Student Services Unit**
- 1 Vice chancellor for instruction and student services
- 1 Director of instruction
- 1 Student services officer
- 1 Director of staff development
- 1 System coordinator of developmental education
- 2 Secretaries

**Development Unit**
- 1 Vice chancellor for development
- 1 Administrative assistant

81 Total positions

[1]Two other central office account clerks are funded by federal indirect cost recovery funds.

notifying employees of eligibility, deducting contributions from paychecks, and sending funds to the appropriate retirement plans.

**Many users have been dissatisfied with central computer services.**

The community college system office also provides central computerized information services to campus staff. The principal computerized systems maintained by the central office are the student information, personnel expenditure, and non-personnel expenditure systems. These systems have been a source of frustration for staff on some campuses. In a recent survey of 300 community college computer system users, about half expressed overall dissatisfaction with central computer services.[52] First, it has taken the central office a long time to develop some computerized systems, such as the student information and human resources systems.[53] Second, users perceive that information is easier to put into the central systems than to extract in a usable way. During 1990 and 1991, the central office re-evaluated the way it provides computer services. Among other activities, the central office hired three consultants and established a committee of system users to review existing services and future needs. As a result, the chancellor hopes to decentralize more computer services.

The Instruction and Student Services Unit provides leadership to campus academic and student services deans. For example, it organizes workshops within each academic discipline to help faculty understand current issues in their fields. For the past seven years, the unit has administered a private grant aimed at integrating computers into instruction, writing multi-disciplinary curricula, and encouraging critical thinking by students. The unit tries to resolve credit transfer difficulties, sets academic policies, and coordinates student assessment and research on student outcomes. The central office reviews each campus' student life plan to ensure compliance with board policy. The unit handles a variety of other academic and student services issues, often establishing task forces of campus staff to develop consensus on needed actions.

In late 1990, the chancellor assigned one of the vice chancellors to coordinate development and grant-writing for the community college system. During the past year, this vice chancellor also worked with metropolitan colleges to recruit more minority students, and conducted a survey of campus equipment needs.

In addition to the staff shown in Figure 3.17, the central office employs some staff for limited assignments. The most noteworthy examples during 1990-92 have been two former community college presidents. One president resigned from his college and went to work for the chancellor conducting studies of the

52 Dr. Steven R. Wallace and Jon G. Brimacomb, "Minnesota Community College System Information Services User Satisfaction: Survey Results," February 1991. The authors are Austin Community College administrators who conducted this survey on behalf of the chancellor's information services committee.

53 Campuses use the student information system for registration, scheduling, student records, and many other functions. The central office started developing this system in-house in 1983, then hired a contractor in 1984 to purchase software that could be adapted to community college needs. The modifications to the software proved too costly to make, and the central office discontinued the contract in 1987. Since that time, in-house staff have made system enhancements.

Clearwater Region, Cambridge Center, and outstate campuses that are not part of regions. He worked for the systems office for about 10 months at his previous president's salary.[54] The other president resigned from his position as part of a grievance settlement. Under the settlement, this person is working for about 10 months on tasks assigned by the chancellor.[55]

## Changes in Staffing

We examined central office personnel costs for the past decade, as shown in Figure 3.18. We found that:

- **Adjusted for inflation, central office salary expenditures increased 148 percent between 1981 and 1991, or 70 percent in expenditures per FYE. As a proportion of total community college costs, central office salary expenditures increased from 2.1 percent in 1981 to 2.9 percent in 1991.**

Central office staffing increased from 44 FTE in 1981 to 90 in 1990, as shown in Table 3.4.[56] The table also shows a current staff of 81, reflecting reductions in central office staff made by the chancellor in Summer 1991.[57]

Between 1981 and the present, most of the staffing increases were in executive management, computer services, and clerical positions. In contrast, there was little increase from 1981 to 1992 in the number of staff administering instruction and student services, and a modest increase in fiscal services staff. System office administrators told us that the recent staff cuts reduced the central office's responsiveness to campuses and placed unreasonable expectations on some remaining staff. Administrators noted that it has been particularly difficult to fulfill tasks such as employee retirement planning, legislative reporting, and external relations with advisory groups and Minnesota's other higher education systems.

**Central provision of many fiscal and personnel services makes sense.**

## Conclusions about Centralized Services

We did not conduct a detailed review of staff productivity, which would be required for a conclusive evaluation of central office staffing and efficiency. In general, however, we think that the community college system's approach of centrally providing many fiscal and personnel services makes sense, given the small size of most colleges. This approach has enabled colleges to maintain

*54* The chancellor told us that outside consultants would have lacked the knowledge of the community college system needed to complete these studies.

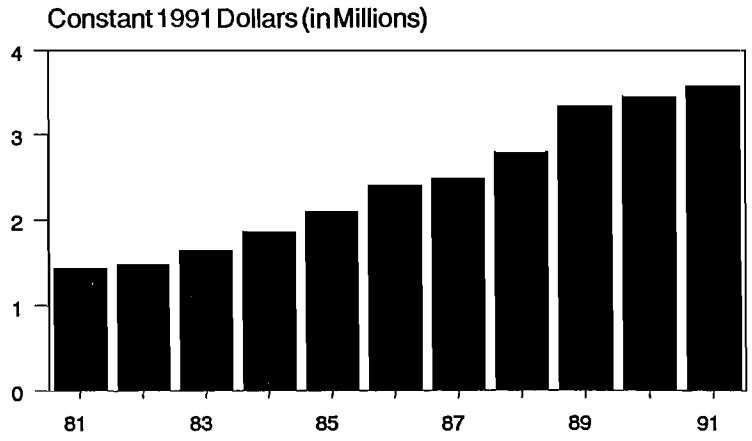
*55* The nature of this person's duties and the terms of the settlement are confidential.

*56* Our review of community college personnel system records indicates that staffing peaked at about 93 FTE in fiscal year 1991.

*57* In mid-1991, the system office eliminated 12 filled positions (two student services clerk typists, one executive management clerk typist, one assistant to the deputy chancellor, one public relations assistant, one director of planning, and six computer services staff) and six vacant positions (two personnel, two fiscal services, and two computer services staff).

**Central office salaries increased 148 percent over 10 years.**

Figure 3.18: Community College Central Office Salary Costs, FY 1981-91




Source: Program Evaluation Division analysis of community college expenditure data.

## Table 3.4: Changes in Community College System Office Staff Levels, FY 1981-92

| | 1981 | 1990 | 1992 |
|---|---|---|---|
| Executive Management[1] | 3 | 11 | 9 |
| Fiscal Services[2] | 18 | 23 | 22 |
| Information Services | 9 | 27 | 24 |
| Personnel | 3 | 7 | 6 |
| Instructional Support, Student Services, and Staff Development | 4 | 6 | 5 |
| Development | 0 | 0 | 1 |
| Support and Clerical Staff | 7 | 16 | 14 |
| | 44 | 90 | 81 |

Source: Community College personnel information system, interviews with central office staff.

[1]Includes chancellor, deputy chancellor, and professional staff from the executive unit (Figure 3.17).

[2]Does not include staff funded by federal indirect cost recovery.

modest staffing in their business offices.[58] The growth in central office fiscal and personnel staffing appears to be reasonable, in light of increases in enrollment, staffing, and retirement planning responsibilities.

Judging the appropriate size of the central office's computer operations is more difficult. It is still early to fully assess the impact of 1991 central office

*58* Chapter 5 indicates that community colleges' institutional services costs per student are higher than technical colleges' and lower than state universities' costs. However, without closer study of workloads and tasks performed, these data do not necessarily indicate the relative efficiency of the systems.

staff reductions and ongoing changes being made in computer service delivery. Ultimately, the central office staffing levels should be determined by workload and user satisfaction, and these may change as computer services are decentralized.

# COST IMPACT OF REGIONAL ADMINISTRATIVE STRUCTURES

The community college system has regional administrative structures in two parts of the state. In northeastern Minnesota, five colleges operate under a single president, and the regional office provides certain fiscal, personnel, and development services to these colleges. In northwestern Minnesota, three colleges operate under a single president, but there are no other regional administrative staff. As discussed in Chapter 2, regional administrative structures provide opportunities for cooperation and economies of scale in a system of small colleges. We found that:

- **Regional administrative structures have provided benefits to member colleges and enabled consolidation of some administrative positions, but they have not resulted in significantly lower total administrative and student services costs.**

## Arrowhead Region

Because of concerns about declining enrollments, the 1979 Legislature asked the Higher Education Coordinating Board to study the need for community college closings or mergers. A preliminary report in mid-1980 suggested several alternatives, including closing colleges with fewer than 400 FYE students. This raised particular concerns in northeastern Minnesota, where there were five colleges with enrollments less than 650 FYE. In July 1980, the state community college board approved having a single president for the colleges in Hibbing and Virginia.[60] In 1981, the presidents of colleges in International Falls and Ely resigned, and the Hibbing-Virginia president was nearing retirement. The state board decided that this presented a unique opportunity for establishing a regional administrative structure with a single president. "Arrowhead Community College" officially started July 1, 1982, although several top administrators were appointed in the preceding months.

**Several administrative positions were consolidated in the Arrowhead Region.**

The reorganization resulted in many staffing changes. The new region had one president (rather than five) and no deans (there were 10 dean positions previously). Each campus was headed by a provost and vice provost, which were newly created positions. Previously, each campus had an accounting officer and recorder, but these were merged into the position of "director of campus services" under the reorganization. The community college system office estimated that the changes would yield annual salary and fringe savings of

*60* There was a vacancy in the Hibbing president's position at the time.

$289,750. The community college board decided to give the regional office 70 percent of these savings for its operations, adjusted in succeeding years for inflation. Today, the regional office continues to receive annual funding based on this original estimate of savings, adjusted for inflation.[60]

Community college staff also told us about efficiencies that were not part of the initial estimate of cost savings. For example, the central office estimates annual savings of $14,000 from sending one Arrowhead president to monthly presidents meetings, rather than five. Also, the regional office works with vendors and submits bids for services on behalf of all campuses.[61] One of the colleges (Hibbing) requests and receives federal funds on behalf of all the campuses.

Based on our discussions with Arrowhead staff and review of materials related to the merger, it is apparent that cost savings were an important goal of the merger.[62] We were interested in seeing whether actual costs for administration and student services at the Arrowhead colleges declined in the years following creation of the region. We identified administrative and student services staff in the community college personnel databases and found that:

- **Adjusted for inflation, there was a decline in total salary expenditures for administrative and student services in the first full year of the merger (1983), but costs in subsequent years were higher than costs in the years before the merger.**

Table 3.5 shows costs in the years before and after the merger.[63] To some extent, the pre-merger costs were unusually low due to staff vacancies, such as those caused by resignations of college presidents. In addition, total community college revenues per FYE were at a low level in the early 1980s, and increased following legislative approval of average cost funding in 1983.

As noted earlier, the merger resulted in elimination of four presidents and consolidation of several other administrative positions. If the Arrowhead colleges operated as independent colleges today (rather than as part of a region), they would be entitled to more administrative staff than they now receive under the community college system's allocation formula. However, even with any efficiencies that the merger may have caused, the Arrowhead colleges still have higher costs than small colleges elsewhere in the state. In 1991, staff costs per FYE for administrative and student services were $1,173 at the five Arrowhead colleges, compared to $940 at the other six colleges with enrollments below 1,300. Between 1981 and 1991, these costs per FYE increased by 32

*60* In 1991, the region received a cost savings allocation of $277,458. The region also receives funding for certain staff, such as the president and personnel officer.

*61* For example, the region handles contracts for college catalogs, vending, building maintenance, and hazardous material training. By having single contracts, the region sometimes gets volume discounts.

*62* In addition, community college administrators wanted to preserve the existing institutions and improve services through cooperation.

*63* We analyzed costs using standard codes for the IPEDS data system, described in Chapter 1.

## Table 3.5: Administrative and Student Services Salary Costs Before and After Creation of the Arrowhead Region, In Constant FY 1991 Dollars

| Fiscal Year | Total Expenditures for Administrative and Student Services[a] | Percent of Total Region Expenditures | Cost Per FYE Student |
|---|---|---|---|
| 1980 | $1,942,172 | 15.4% | $816 |
| 1981 | 1,888,576 | 15.7 | 720 |
| 1982 | 1,915,480 | 14.3 | 713 |
| **1983** | **1,834,956** | **14.0** | **684** |
| 1984 | 2,065,747 | 14.2 | 717 |
| 1985 | 2,193,566 | 14.7 | 767 |
| 1986 | 2,638,115 | 16.3 | 843 |

[a]Expenditures shown are for the five colleges in northeast Minnesota and the regional office. The Arrowhead region formally started in fiscal year 1983. Costs exclude severance pay, early retirement, student activities, and physical plant costs.

Source: Program Evaluation Division analysis of community college system personnel database.

**Arrowhead's cost "savings" have been used to improve student services.**

percent in constant dollars at the Arrowhead colleges, compared to 8 percent at the other six colleges.[64] Arrowhead staff attribute these higher costs to differences in the services provided. For example, the region has added eight staff since 1982 to serve American Indian students, largely with grants from the state board. Several staff have been added to help recruit and retain students, and enrollment at the five colleges grew from 2,622 in 1981 to 3,419 in 1991.[65] Thus, the Arrowhead cost "savings" have been used to improve student services in this region.

We talked to administrative staff at the regional office and several campuses about their views on the regional structure. For the most part, staff told us that the merger has been beneficial. The region enables colleges to seek federal grants with more success because (1) staff in the regional office can seek grants on behalf of colleges, who could not afford to devote much time to this individually, and (2) by pooling demographic information (particularly total enrollment and minority enrollment), the colleges have been able to develop more favorable grant applications than they could individually. The region has received nearly two million dollars in federal and private grants since its creation.

In addition, campus staff told us that regional supervision of personnel and fiscal services has resulted in greater consistency and accountability. Regional

*64* The Arrowhead costs per FYE do not include the costs of staff at the two community college centers in the Arrowhead region.

*65* Arrowhead staff also told us they have added financial aid, continuing education, and public information staff during this time.

coordination has also enabled colleges to do joint planning and institutional research, and develop more specialized programs.

According to staff, the main disadvantage of the region is that campuses have less direct contact with the central office. Sometimes this results in poorer service from central office staff, or less visibility with the community college board. A regional structure also creates some additional paperwork for campuses.

## Clearwater Region

The Clearwater Region consists of community colleges in Brainerd, Fergus Falls, and Thief River Falls. Geographically, these campuses are more dispersed than the Arrowhead campuses--as much as 187 miles apart.[66]

Staff resignations helped to enable creation of the Clearwater Region, as they did in the Arrowhead Region. Two deans resigned from colleges in this geographic area in 1981 and 1982, and their positions were not filled.[67] In addition, the president of Fergus Falls decided to retire as of mid-1983. The state community college board approved creation of the Clearwater Region with a single president, effective July 1, 1983.

**Creation of the Clearwater Region resulted in elimination of two positions.**

Aside from having a single president for three colleges, administrative and student services functions were not merged.[68] Staff at the colleges believed that an Arrowhead-type regional structure would threaten the campuses' autonomy and identity, and create an unnecessary layer of bureaucracy. Instead of sharing staff, the campuses informally share expertise in grant writing, marketing, business functions, and curriculum. Each Clearwater school eliminated its deans of instruction and students in 1983, and created new positions of provost and vice provost. The system office allocates the region funding for its one position (president), plus it annually provides 70 percent of the cost savings--adjusted for inflation--that were estimated to have occurred when the region was created.

To assess the impact of the Clearwater Region on administrative costs, we examined total annual salary costs in constant dollars for staff in four positions: president, provost, vice provost, and dean. These were the positions directly affected by creation of the region. We found that:

- **Creation of the Clearwater Region resulted in a net reduction of two positions and some initial cost reductions, but total administrative salary costs for the region since 1989 have been as high as they were in the early 1980s.**

66 The greatest distance between two Arrowhead campuses is 116 miles.

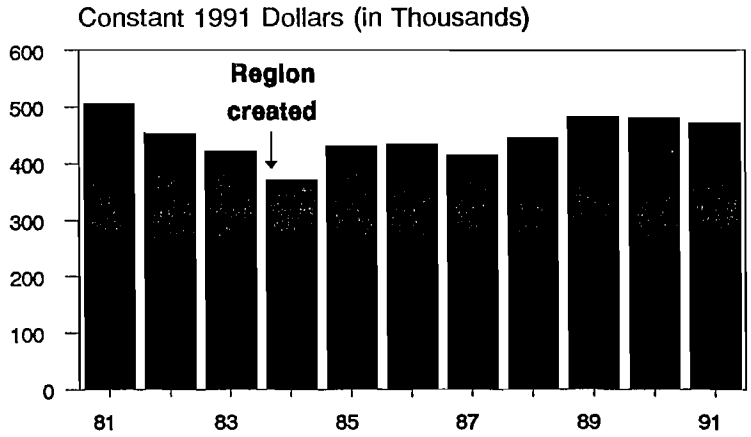
67 In anticipation of reorganization, the community college chancellor had asked colleges to fill vacant administrative positions with temporary replacements.

68 Originally, business office and personnel functions were supposed to be centralized, according to former chancellor Phillip Helland, in *Establishment of Public Junior and Community Colleges in Minnesota*, 1914-1983 (St. Paul, 1987), 655-6.

Figure 3.19 shows administrative costs in constant dollars between 1981 and 1991. Since the first year following the merger (1984), administrative costs have increased despite the fact that staffing levels have remained virtually the same. Thus, the cost increases appear to reflect an increase in administrator salaries that was faster than inflation. The salary increases generally reflect systemwide increases in the salary ranges of community college administrators.

**Salary increases have caused costs to rise since 1984.**

Figure 3.19: Salary Costs for Clearwater Region Administrators, FY 1981-91




Source: Program Evaluation Division analysis of community college expenditure data.

If the Clearwater colleges still had the same number of administrative staff today that they had before the merger, total costs would be even higher than they are now. In this sense, creation of the region resulted in cost "savings." In 1991, the salary and fringe benefits saved from the two eliminated positions would have been about $170,000.[69]

In 1991, Minnesota's community college chancellor requested a study of the Clearwater Region's effectiveness. Based on staff interviews at the Clearwater campuses, the study found that:

> There was general agreement that the structure for the Clearwater Region was initiated for good reasons and that there have been positive outcomes including appropriate leadership; strong enrollment; joint staff development; program exchanges; expanded outreach and the initiation of joint programs with the technical colleges. There was also general agreement that conditions have changed and the regional structure should be changed because, other than similar size, the communities served have

*69* After subtracting the $61,000 cost savings allocation provided to the region in 1991 by the state board, the savings from these positions was about 3.5 percent of the region's total administrative and student services costs.

> little in common; the travel distance is an overwhelming burden; and it is difficult for a regional president to establish needed community identity and visibility. In addition, it is felt that autonomous colleges with the chief administrative officer living and working in the community have a greater potential to develop support because of the feeling of local ownership and pride.[70]

The author recommended eliminating the Clearwater Region as of July 1992. The chancellor told us that he believes that the benefits from Clearwater are not as strong as those from Arrowhead, but that Clearwater is worth continuing because it (1) simplifies reporting relationships to the chancellor, (2) reduces costs by eliminating some administrative positions, and (3) fosters improved instruction and administration through cooperation.

# SUMMARY

Community colleges experienced significant enrollment growth during the past decade, but they had even greater growth in administrative and student services expenditures. After adjusting for inflation, community college administrative and student services expenditures per FYE increased by 32 percent between 1981 and 1991, and they now account for about 28 percent of community college spending. In contrast to the technical college and state university systems, community college increases in student services expenditures per student were relatively small, while other administrative expenditures increased more rapidly. There was a particularly large increase in the size of the central office, and much of this increase went toward upgrading a computer system that was deficient in the early 1980s. The centralized computer services developed during the past decade have not been as useful as some campus administrators would like, but the system office has initiated actions that begin to address this problem.

The merger of the state universities, community colleges, and technical colleges might provide an opportunity to address some community college staffing issues. For example, some community colleges have used members of the faculty bargaining unit to administer financial aid, and all use faculty members for counseling positions. Using faculty in these positions is probably more expensive than using other professional staff, and is not always necessary for the type of services provided.

The community college central office provides centralized fiscal services for colleges, in contrast to the decentralized approach historically used by technical colleges. For the most part, college staff told us that they receive adequate services from the central office, and we think this arrangement has enabled colleges to maintain modest staffing levels in their business offices. The regional

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*70* Dale A. Lorenz, "Recommendations on the Organizational Structure and Administrative Functions for the Clearwater Region and for Austin, Willmar and Worthington Community Colleges" (St. Paul, March 1991), 2-3. The author is former president of Normandale Community College.

offices established by the community college system in the early 1980s have provided benefits to member colleges and enabled consolidation of some administrative positions. However, total administrative and student services costs per student in these regions are not less than they were before the regions were created.

# STATE UNIVERSITY SYSTEM

## Chapter 4

Like the community college system, the state university system experienced rapid enrollment growth during the decade of the 1980s. Full-year-equivalent enrollment rose 31 percent between 1981 and 1991. In this chapter we consider what effect this enrollment increase has had on spending for administrative and student support services. Specifically, we asked:

- **How have administrative and student services expenditures for campuses and the state university board office changed since 1981?**
- **How does administrative and student services spending vary by the size of the university? Is there evidence of economies of scale?**
- **How do the state universities' administrative and student services expenditures compare to those of similar institutions in other states?**

**Administrative and student services spending increased rapidly between 1981 and 1985.**

Overall, we found that, after adjusting for inflation, spending on administrative and student services increased 30.9 percent since 1981. Almost all of the increase occured between 1981 and 1985, however spending for several functional categories, such as development and student services, continued to grow between 1985 and 1991. Over the course of the decade, a higher proportion of total spending has gone for non-instructional categories of expenditure.

Although state university spending has grown over the decade, in 1989 Minnesota state universities, except Southwest, spent less on administrative and student service functions than comparable institutions in other states.

This chapter is organized into six sections. First, we briefly review the history and mission of the state university system. Second, we explain our methods of examining expenditures more fully. Third, we examine how administrative and support services expenditures have changed since 1981. Fourth, we examine the relationship of administrative and student services spending to total expenditures, how the relationship has changed over time, and, fifth, how Minnesota universities' compare to those in other states. Finally, we look in detail at the organization and expenditures of the state university board office.

# INTRODUCTION

## History and Organization

The Minnesota State University System consists of seven four-year baccalaureate institutions, enrolling almost 55,000 full-year-equivalent students in 1991. The state universities, listed in the box at the right, are currently governed by a nine-member board appointed by the Governor and confirmed by the state Senate. The board hires a Chancellor to oversee the long range direction of the system and to conduct policy development and other initiatives. This governance arrangement will change by 1995, as a result of the 1991 creation of a "superboard" to oversee the state universities, technical and community colleges.

| Campus | 1991 Full-Year Equivalent Enrollment |
|---|---|
| Bemidji | 4,800 |
| Mankato | 14,502 |
| Metro | 2,870 |
| Moorhead | 8,207 |
| St. Cloud | 14,873 |
| Southwest | 2,648 |
| Winona | 6,832 |
| | 54,732 |

**State universities began as teacher education schools but the mission became broader over time.**

Minnesota's first Legislature enacted provisions for state normal schools that are the predecessors of Minnesota's state universities. The first state normal school opened in Winona in 1860, followed by Mankato (1868), St. Cloud (1869), Moorhead (1888), and Bemidji (1919). Normal schools were established explicitly to train teachers. In their early years normal schools were similar to high schools that also taught the technical skills of teaching. Not until 1917 were students required to have a high school degree. At this point the normal schools became more like colleges, and in 1921 the Legislature authorized the name change to state teacher colleges.

Over time the colleges' mission became broader than teacher education. After World War II, the Legislature broadened the role of the colleges to include the education of students other than teachers. By the mid-fifties the colleges had become much more comprehensive and in 1957 the Legislature dropped "teacher" from the colleges' names. Beginning in 1963, the colleges began to offer masters degrees in fields other than education. By 1975, the institutions offered a variety of graduate programs, and the Legislature authorized the name change to state universities.

Southwest State University in Marshall was authorized by the Legislature in 1963 and enrolled its first students in 1967. Southwest State is the only state university that does not offer any graduate programs.

In 1972 Metropolitan State University began enrolling students in the Twin Cities area for the final two years of a four year degree. Metro State is unique in a number of ways. First, it does not enroll freshmen. Second, until recently it has operated in leased space around the Twin Cities without a traditional campus. Third, it has focused on serving adult students. Finally, until recently

Metro has not offered traditional letter grades for evaluation of students' mastery of coursework. Instead Metro has focused exclusively on competency-based individualized educational programs for transfer students.

In 1990, classes began at an adjunct state university campus in Akita Japan. In 1991, Akita had an enrollment of 59 full-year-equivalent students.

# Mission

The state universities' mission is to "offer undergraduate and graduate instruction through the master's degree, including specialist certificates, in the liberal arts and sciences and professional education."[1] The state universities fulfill this mandate by offering 400 baccalaureate programs, 173 masters degrees in a variety of fields, and 25 two-year degree programs.[2] The state universities have traditionally served regional areas, providing public service, serving as cultural and resource centers, conducting applied research, and providing technical assistance.

Along with the University of Minnesota, the state universities provide the opportunity for students to pursue four-year degrees by entering as freshmen or through transfer. Most state university students enter as freshmen (52.1 percent of fall 1990 students) although many (33.9 percent) transfer from another institution.[3] In the fall of 1990, transfers from Minnesota community colleges accounted for 40 percent of the 5,712 transfers into the system.

The state university system, like the University of Minnesota, has recently undergone an assessment of its future direction. In 1990, a Blue Ribbon Commission on Access and Quality considered the future of the system and made a number of recommendations. These recommendations, adopted by the state university board, are known collectively as the "Q-7" initiative. The Q-7 blueprint sets forth seven indicators of quality that a student should possess to have received a quality education. The Q-7 indicators of quality are:

- College Preparation: Students must complete a college preparatory curriculum before attending.
- Higher Order Thinking: Students must complete a senior thesis.
- Global Understanding: Students must demonstrate a global perspective through international study and foreign language study.
- Multicultural Perspective: Students must study America's diverse cultures.

1 *Laws of Minnesota* (1991), Ch. 356, Article 2, subd. 1 (3).

2 The state universities are in the process of reviewing the continuation of two-year programs. State universities dropped seven two-year programs in the fall of 1991, two programs in 1990, and four programs in 1989.

3 About 6.1 percent of new students enter as graduate students and 7.9 percent are classified as "other new undergraduates", which includes all of the admissions to Metro State and other students who, for a variety of reasons, do not meet the definition of a transfer student.

- Scientific and Quantitative Literacy: Students must demonstrate an ability to understand math, science, and technology's role in the world.
- Work-Career Readiness: Students will complete a supervised field experience.
- Responsible Citizenship: Students will complete a community service project and be able to articulate standards of ethical behavior.

**Admission standards will become stiffer in 1994.**

A major change in admission standards for high school students will occur beginning in 1994. Students will be required to have completed four years of english, three years of math, three years of science, three years of social studies, and three electives (at least two of which must be a language, world culture, or visual and performing arts course).

The state university board has expressed a commitment to increase resources on a per student basis. In particular, the board intends to manage enrollment so that more students will be fully funded by the average cost funding formula and so that enrollment in 1993 will not exceed that of 1991.[4]

A 1988 board initiative to promote cultural diversity was another major change in priorities. The board's five goals are to double minority enrollment, increase minority faculty and administrators, improve minority student retention and graduation rates, incorporate cultural diversity into the curriculum, and create a positive environment for cultural diversity on campus. As we shall see, this initiative has had some implications for student services expenditures.

## Student Enrollment and Demographics

Like the community colleges, state university enrollments rose dramatically during the 1980s. Figure 4.1 shows that the system as a whole had a 30.5 percent rise in FYE enrollment during the decade. Each of the universities had enrollment gains, as shown in Figure 4.2.

The state universities tend to attract younger and more traditional students than the technical or community colleges. In 1990, state university students' average age was 24.1 years old and 73 percent attended full-time.[5] Over 85 percent of new entering freshmen in fall 1990 graduated from high school the previous spring.

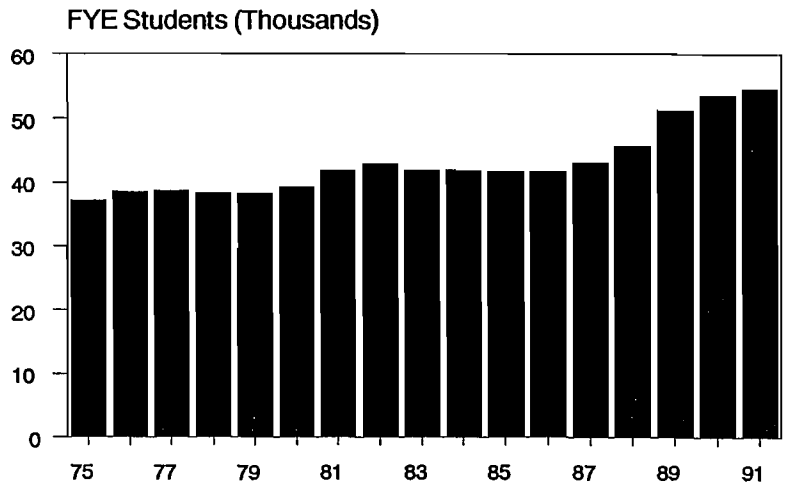
Although students are generally younger and more traditional than in the other systems, the state universities have also been affected by the general trends experienced in the other systems. There are about the same number of part-time

*4* The state universities estimate that 2,793 students were unfunded and 1,236 were partially funded by the average cost funding formula in 1991 because of the two-year funding lag.

*5* If secondary and graduate students are excluded, 77.3 percent of students attend full-time. It should be noted that Metro State University does tend to attract older and part-time students. Over 85 percent of Metro's students attend part-time and their average age is 35.3 years. If Metro is excluded from system totals, almost 78 percent of students attend full-time.

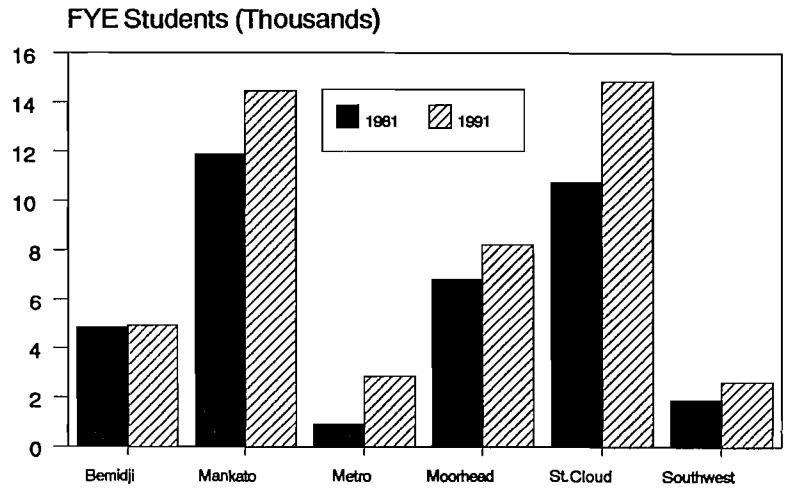
**Enrollment increased rapidly from 1986 to 1991.**

Figure 4.1: State University System FYE Enrollment, FY 1975-91




Source: State University System.

Figure 4.2: State University FYE, FY 1981-91




Source: State University System.

students (22.6 percent of regular students in 1985 compared to 22.2 percent in 1991); however, the students are older (average 24.2 years compared to 23.5 years in 1985), and over 60 percent receive financial aid.[6]

# METHODS

We used three major sources of data to analyze state university expenditures. First, we used information from the state university accounting system. Second, we used information from the state universities' financial statements from 1981 to 1990. And third, we used a national database of information on categories of higher education spending. The data from financial statements and the national database use broader categories that allow us to examine changes in the proportion of resources devoted to administration over time, and to compare Minnesota state universities with those in other states. We describe each of these data sources more fully below.

We examined the changes in administrative and student services costs from 1981 to 1991 using data from the accounting system. The accounting data allowed us to examine spending in more detailed categories that could be compared to the community and technical colleges. The state universities all use the same general ledger system although there are differences in their assignment of accounts. Each university is free to establish as many or as few accounts as it wishes. We examined all of the universities' accounts and visited with each university's staff about their unique account structure. We inquired about what types of expenses were paid from each account and then assigned the accounts to one of 13 functional areas (listed at right). We then reviewed our account listing with each university for accuracy. We obtained and analyzed computer files detailing the expenditures of each university for 1981 through 1991. We did not analyze expenditures from Metro State because the organization of their account structure made the reliability of the results questionable.[7]

**State University Expenditure Categories**

**INSTITUTIONAL SUPPORT**
- President's Office
- Finance Related
- Logistical
- Development
- Computer
- Personnel
- Other

**STUDENT SERVICES**
- Student Services/Counseling
- Registrar
- Admissions
- Financial Aid Administration
- Placement

**ACADEMIC AFFAIRS ADMINISTRATION**

6 These numbers are from state university institutional research and differ slightly from those reported to HECB because of differing definitions and a more complete count of students.

7 As we explained earlier, Metro State is different than the other state universities. Most of its faculty are community faculty many of whom, in the past, have been paid from administrative accounts that were included in our analysis for the other universities. We had no way to separate reliably all of the salary and non-salary costs associated with these community faculty. Analyzing costs by function, given the data's questionable reliability, would have given misleading results both for Metro State and for system averages. We were able with the help of Metro State personnel to determine the number of personnel assigned to functional categories in both 1981 and 1991.

As we described in Chapter 1, we excluded expenditures for direct academic purposes from the scope of our study. We also excluded expenditures for libraries, academic computing, media and audio-visual support, the operation and maintenance of plant, and the operations of all auxiliary enterprises.[8] We looked only at current expenditures from the Maintenance and Equipment Fund, the state universities equivalent of the state's General Fund. We did not examine campus expenditures from the Revenue Bond Fund or any expenditures financed through student activity fees.[9]

The state university system pays for some university expenses centrally. Primarily, these are costs associated with operating the state university computer system. The state universities have a central computer system that links the campuses, an administrative computer system run from St. Cloud State, and an academic computer system that is run from Mankato State. The state university board office pays centrally for acquisition and maintenance of computers and software licensing on all of the campuses. Where possible, we transferred these costs directly to the university they benefited. We allocated the remainder of the centrally-paid administrative computing expenses to each of the universities based on their use of computer resources in each year. We also reallocated a portion of the expenses incurred by St. Cloud State and Moorhead State for systemwide administrative computing expenses to the other universities' computer accounts based on computer usage.

We report most of the findings in constant dollars per full-year-equivalent student enrolled.[10] We use the state and local government GNP price deflator for making constant dollar adjustments in this report.

Our other two data sources provide information that is less detailed than that collected from the accounting system. The information from the financial statements shows expenditures by categories that correspond to those that are used by the Integrated Post-Secondary Educational Data System (IPEDS)[11] The third data source we used was compiled by Kent Halstead, a higher education researcher. It combines the IPEDS data with other information on institution type for fiscal year 1989.

In the next section we describe the findings using the state university accounting data. In the following sections we examine how broader categories of administrative and student service spending have changed since 1981 and how Minnesota compares with other states.

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*8* In the state university system this would include bookstores, dormitories, food service, and other self supporting enterprises.

*9* We did include the costs of five unclassified and two classified positions in the central office that are paid for by the Revenue Bond Fund. In 1991, salaries and benefits for these positions totaled $466,000. The Revenue Fund also pays for a portion of the operational costs of the chancellor's office. In 1991 this was $193,000.

*10* For the state university system, 45 undergraduate credit hours and 30 graduate credit hours equals one full-year-equivalent student. Most studies of instructional costs have found that graduate students consume more resources than undergraduates. We did not distinguish between graduate students and undergraduates because we felt they were likely to consume roughly proportionate shares of administrative and support services.

*11* The Integrated Post-Secondary Educational Data System is an integrated series of surveys, administered by the U.S. Department of Education, to collect institution level data on enrollments, program completions, faculty and staff, and financing. It is the successor to the Higher Education General Information Survey (HEGIS).

# ADMINISTRATIVE AND STUDENT SERVICE COSTS

## Campus Organizational Structure

**Each university is organized differently.**

Expenditures for administrative and student service costs are affected by how a campus organizes administratively. The state universities historically have operated fairly autonomously. State appropriations are allocated from the central state board office but decisions on organization, structure, and local spending priorities are almost all made at the campus level. As a result there is no single model of organizational structure for the universities. However, there are some similarities in the state universities' organizational approaches. Each is headed by a president, and has a vice president for administration (or fiscal affairs), and a vice president for academic affairs. Southwest has only two vice presidents. Metro, Bemidji, and Moorhead have three, Winona and St. Cloud have four, and Mankato has five vice presidents.

The functions of the vice president for administration are similar in each institution. Generally the administrative vice president supervises the business, administrative computer, personnel, logistical, and physical plant functions. Mankato, an exception, has a vice president to oversee fiscal affairs and another vice president to supervise university operations (facilities management and coordination, physical plant, security, and logistical functions).

Each university has a vice president for academic affairs. Academic deans, and department chairs and faculty, report to the academic affairs vice president.

The larger universities -- St. Cloud, Mankato, Moorhead, and Winona -- also have a vice president for student affairs. These vice-presidents oversee admissions, placement, financial aid, student activities and organizations, counseling, campus residence halls, and food service. Bemidji and Southwest have consolidated the positions of vice presidents for student affairs and administration. Bemidji consolidated these positions in 1986-87, instead establishing a vice president for development. Southwest reorganized its administrative services in 1991, consolidating four vice president positions into two. Metro has split the supervision of student affairs functions between its vice presidents for university relations and academic affairs.

Bemidji, St. Cloud, Mankato, Metro and Winona have a vice president for development or university relations. Moorhead has a director for public affairs who supervises development, alumni relations, and public information. Metro has also assigned responsibility for admissions, financial aid, and institutional research to its vice president for university relations. The vice president for development generally supervises alumni relations, planned giving, public information and other development activities.

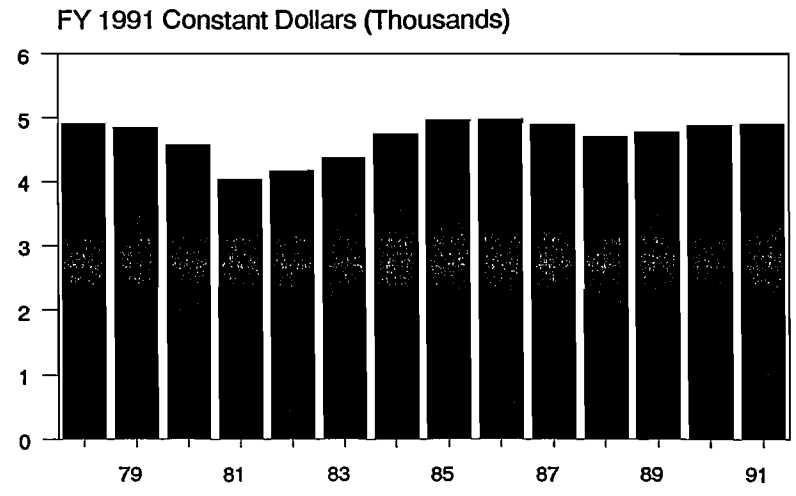
# Expenditure Trends 1981 to 1991

How have administrative and student service costs changed over time? In this section we will answer that question for the state university system using the data we gathered from the state university accounting system.

Expenditure trend comparisions are sensitive to the relative level of spending in the base year. For a variety of reasons, when examined in constant dollars, 1981 was a year with low resources available for spending on a per student basis. Figure 4.3 shows the relative level of appropriations plus tuition in the state university system as a whole (in 1991 constant dollars) since 1978. The figure shows the effects of a recession and the consequent state fiscal crisis, of double digit inflation in the early 1980s, and of the Legislature not providing financing for new enrollment growth between 1978 and 1983. The figure shows that 1981 was the low point in terms of constant dollar funding per student, and 1985 and 1986 were the highest points in funding per student. As a result, we report our analysis using both 1981 and 1985 as base years.

**1981 was a low point in funding per student.**

Figure 4.3: State University Total Spending Per FYE, FY 1978-91




Source: State University System.

Administrative and student services expenditures for the central office and all six campuses increased in nominal dollars from $21.1 million in 1981 to $55.8 million in 1991. We found that:

- **In constant 1991 dollars, expenditures on administration and student services have increased 66 percent since 1981. Constant dollar expenditures per full-year-equivalent (FYE) student have increased 30.9 percent, or about $254 per student since 1981.**

Expenditures for administrative and student service increased from 20.2 percent of total spending in 1981 to 22.3 percent in 1991.

**Total administrative spending has remained constant since 1985.**

Table 4.1 shows the changes between 1981 and 1985, 1985 and 1991, and 1981 to 1991 for the functional categories we analyzed. The table shows that:

- **Total expenditures for administrative and student services have gone up only .2 percent in constant dollars per FYE student since 1985. Almost all of the spending increase occurred between 1981 and 1985.**

As the table shows, over the course of the decade every category of expenditures increased in constant dollars. The largest percentage increases were in the categories of development and other institutional support. The development category includes the functions of public information, publications, alumni affairs, and fundraising. Development was a major effort of the system during the decade, with each university adding staff in this area. The state board office also added 3.5 positions to support "system advancement," or state-wide fundraising efforts. Other institutional support includes miscellaneous support functions such as special projects and events, institutional research, institutional memberships, and court settlements and legal costs.

**Spending for student services has continued to rise since 1985.**

Expenditures per FYE for student services and counseling increased 44 percent over the 11-year period. Unlike most categories of expenditure, spending on student services continued to rise another 15 percent after 1985. Expenditures in this category include university counselors and numerous programs to support minority, handicapped, non-traditional students, women, and other groups. Many of these special purpose support programs were started during the 1980s. This is consistent with the initiative of the state university board to recruit and encourage greater "cultural diversity" on the state university campuses. Expenditures for admissions also rose almost 55 percent, probably reflecting increased efforts for student recruitment following the institution of average cost funding.

One of the largest dollar increases was in the category of academic administration. This is a larger category because it includes all of the college deans as well as the vice president for academic affairs, administration of international programs, academic accreditation, and other academic administration programs. Expenditures in this category rose from $156 per FYE in 1981 to $217 in 1991. There were several new deans established during the decade, including a new engineering dean at Mankato, and a new dean of nursing at Winona.

In contrast, some categories of spending went up very little in constant dollars. Spending on computers by the central office and the universities rose only 1.0 percent in constant dollars per FYE student despite a large rise in computing time used and quality of computing services. This is in contrast to the community college system where computer services represented one of the largest areas of increase.

## Table 4.1: State University Administrative and Student Service Expenditures, by Functional Category, 1981-91

| | Constant Dollar Expenditures (Dollars in Millions) | | | Percent Change Constant Dollar Expenditures | | | Constant Dollar Expenditures Per FYE | | | Percent Change Expenditures Per FYE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | 1981 | 1985 | 1991 | 1981-85 | 1985-91 | 1981-91 | 1981 | 1985 | 1991 | 1981-85 | 1985-91 | 1981-91 |
| Institutional Support | | | | | | | | | | | | |
| President's Office | $1.472 | $1.491 | $1.932 | 1.3% | 29.6% | 31.3% | $35.88 | $36.81 | $37.21 | 2.6% | 1.1% | 3.7% |
| Finance-Related | 5.125 | 6.773 | 6.720 | 32.1 | -0.8 | 31.1 | 124.97 | 167.28 | 129.43 | 33.9 | -22.6 | 3.6 |
| Logistical | 3.747 | 4.090 | 5.800 | 9.2 | 41.8 | 54.7 | 91.36 | 101.02 | 111.71 | 10.6 | 10.6 | 22.3 |
| Development | 1.938 | 3.435 | 5.159 | 77.2 | 50.2 | 166.2 | 47.25 | 84.83 | 99.36 | 79.5 | 17.1 | 110.3 |
| Computer | 3.689 | 5.405 | 4.717 | 46.5 | -12.7 | 27.8 | 89.94 | 133.49 | 90.84 | 48.4 | -32.0 | 1.0 |
| Personnel | 1.130 | 1.654 | 2.224 | 46.3 | 34.4 | 96.8 | 27.56 | 40.86 | 42.83 | 46.3 | 34.4 | 55.4 |
| Other | 1.408 | 1.847 | 3.240 | 45.3 | 75.5 | 154.9 | 30.99 | 45.61 | 62.41 | 47.2 | 36.8 | 101.4 |
| Student Services | | | | | | | | | | | | |
| Student Services/Counseling | 2.843 | 3.521 | 5.178 | 23.8 | 47.1 | 82.1 | 69.33 | 86.97 | 99.73 | 25.4 | 14.7 | 43.9 |
| Registrar | 2.177 | 2.253 | 3.011 | 3.5 | 33.6 | 38.3 | 53.09 | 55.64 | 57.98 | 4.8 | 4.2 | 9.2 |
| Admissions | 1.479 | 2.176 | 2.898 | 47.1 | 33.2 | 95.9 | 36.06 | 53.75 | 55.82 | 49.1 | 3.9 | 54.8 |
| Financial Aid Administration | 1.233 | 1.458 | 2.062 | 18.3 | 41.4 | 67.2 | 30.07 | 36.02 | 39.72 | 19.8 | 10.3 | 32.1 |
| Placement | 1.165 | 1.261 | 1.581 | 8.2 | 25.4 | 35.7 | 28.41 | 31.14 | 30.45 | 9.6 | -2.2 | 7.2 |
| Academic Affairs/Administration | 6.395 | 8.052 | 11.277 | 25.9 | 40.0 | 76.3 | 155.92 | 198.90 | 217.20 | 27.6 | 9.2 | 39.3 |
| Total | $33.663 | $43.414 | $55.799 | 29.0% | 28.5% | 65.8% | $820.81 | $1,072.32 | $1,074.69 | 30.6% | 0.2% | 30.9% |

Source: Legislative Auditor analysis of state university accounting data.

Likewise, spending on finance related activities rose only 3.6 percent in constant dollars per FYE student, and actually fell almost 23 percent in constant dollars per student since 1985. This is a reflection of the costs of providing finance related services not going up as quickly as the rise in enrollment since 1985.

The state university board office expenditures for administrative and student service functions (not including computers) increased from about $2.2 million in 1991 constant dollars in 1981 to over $4.8 million in 1991. The central office staff grew about 40 percent over this period and there were large increases in spending on development ($124,000 to $767,000) and logistics ($342,000 to $794,000 in constant dollars). These changes are discussed in more detail in a later section.

## Changes in Staffing

**Full-time-equivalent staff increased 17 percent since 1981.**

Personnel costs are the largest object of expenditure for the state university system. In 1991, salary and fringe benefits accounted for approximately 69.9 percent of total spending compared with 68.6 percent in 1981.

Changes in the number of administrative and student service personnel largely mirrors the changes in expenditures. As Table 4.2 shows, the total number of administrative and student service personnel increased 17 percent from 843 full-time equivalent (FTE) staff to 986 FTE staff in 1991. Figure 4.4 shows that administrative staff increased at each university except St. Cloud. As

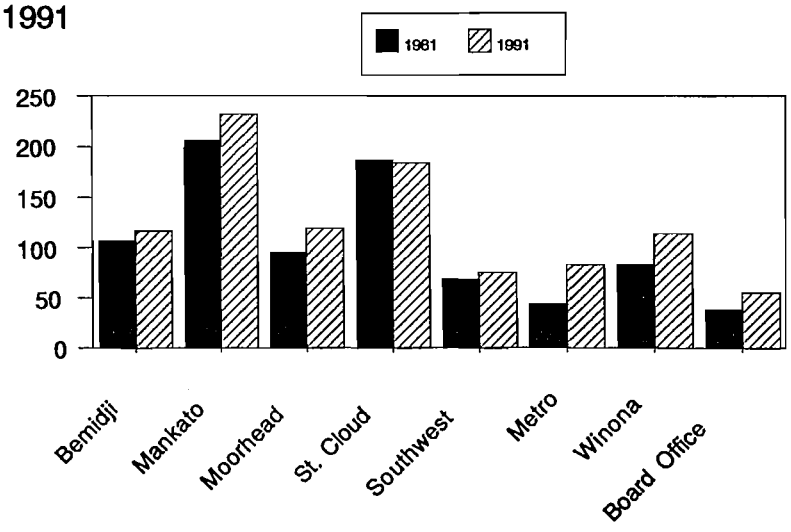
### Table 4.2: State University Staffing Changes by Category, 1981-91

| Category | FTE Staff 1981 | FTE Staff 1991 | Percent Change 1981-91 |
|---|---|---|---|
| President's Office | 26.8 | 25.6 | - 4.2% |
| Registrar | 76.5 | 74.7 | - 2.4 |
| Admissions | 43.1 | 65.3 | 51.6 |
| Placement | 28.3 | 30.0 | 6.0 |
| Financial Aid Administration | 33.9 | 45.7 | 34.8 |
| Finance Related | 169.4 | 160.1 | - 5.5 |
| Student Services | 76.5 | 96.4 | 26.1 |
| Logistical | 82.8 | 96.7 | 18.3 |
| Academic Affairs | 120.8 | 159.2 | 31.8 |
| Development | 60.3 | 86.4 | 43.3 |
| Computer | 71.7 | 82.8 | 15.5 |
| Personnel | 41.4 | 41.6 | 0.4 |
| Other Institutional Support | 12.0 | 21.4 | 78.3 |
| Total FTE | 843.2 | 985.9 | 17.1% |

Note: Total does not sum due to rounding.

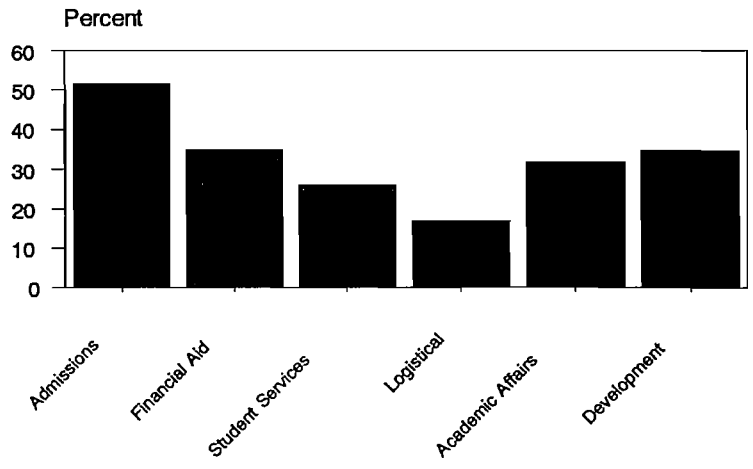
Figure 4.5 shows, the largest increases were in the categories of admissions (51.6 percent), development (43.3 percent), financial aid administration (34.8 percent), academic administration (31.8 percent), and student services/counseling (26.1 percent).

Figure 4.4: Administrative and Student Services Personnel by University, FY 1981 and 1991




Source: State University Personnel System.

Figure 4.5: Percent Change in Staffing for Selected Functions, FY 1981 to 1991




Source: State University Personnel System data.

# Economies of Scale

Economies of scale refers to the concept of declining unit costs of production that occur as the scale or size of operations increase. There has been some national research done on the economies of scale in comprehensive four-year institutions comparable to Minnesota's state universities. In 1969, a study of California's four-year state universities showed that total education expenditures per student declined as the scale of operations increased.[12] This study was replicated by Halstead in 1988 who found similar results:

- **In both 1969 and 1988 a doubling of enrollments from 3,000 to 6,000 students resulted in approximately 20 percent savings; doubling enrollments again to 12,000 students provided an additional 10 to 15 percent savings.**[13]

According to Halstead, California represents a near maximum savings potential due to economies of scale because of the detailed guidance given the universities on many programmatic and fiscal aspects of their operations. Halstead notes that most cost studies measure "practiced economies" rather than the maximum costs savings possible from taking full advantage of scale economies. This is because institutions are not prone to economize as much as possible as they grow; rather institutions tend to expand their responsibilities and alter their operations as they grow.

**Economies of scale are evident in state university administrative spending.**

The authors of both of the studies cited above are careful to point out that there are many factors that contribute to operational efficiency other than size. Institutional diversity in a variety of factors including institutional type, student characteristics, and program mix make it difficult to sort out the independent effect that enrollment has on costs. Nonetheless, enrollment size is still regarded as by far the most important variable in explaining differences in higher education unit costs.

As Figure 4.6 shows, Minnesota's state universities exhibit economies of scale in the administrative and student service categories we studied. Overall campus costs for administrative and student service functions ranged from $797 per FYE at the largest university (St. Cloud) to $1,754 at the smallest university (Southwest).[14] Our analysis indicates that a doubling of university size is associated with a decline of 25 percent in administrative and student service

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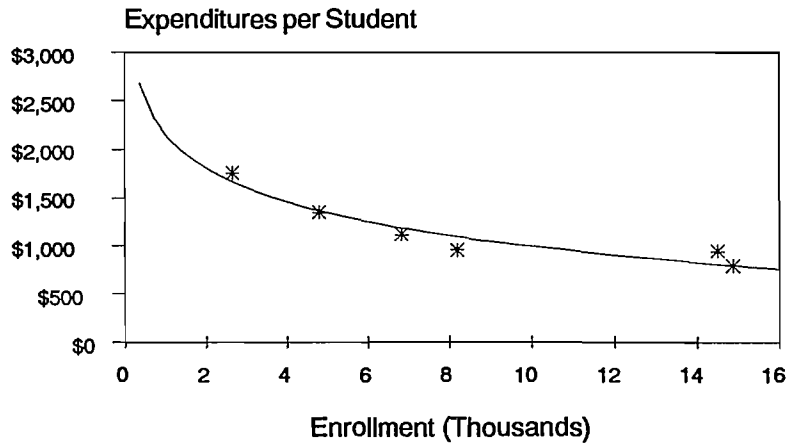
*12* California Coordinating Council for Higher Education, *Meeting Enrollment Demand for Public Education in California through 1977 -- The Need for Additional Colleges and University Campuses* (Sacramento, California, 1969)

*13* Kent Halstead, *Higher Education Revenues and Expenditures: A Study of Institutional Costs* (Research Associates of Washington: Washington D.C., 1990), 130.

*14* The state university board allocates money to each campus using an enrollment-based formula that awards more funding for administrative staff and faculty for the first 2,200 FYE students at each campus. Universities are free to spend the funds according to their own internal budget processes. The funding formula informally recognizes some of the effect of scale economies (particularly for Southwest State, with an 1991 enrollment of 2,648) by providing a higher level of resources for smaller institutions.

Figure 4.6: State University Administrative and Student Services Expenditures Per Student by University Size, FY 1991




Source: State University accounting data.

spending per student.[15] Some categories of expenditure showed a high correlation with enrollment size and others showed no relationship. We found:

- **Larger universities tend to spend significantly less per student for finance-related functions, development, student services and counseling, president's office, admissions, and personnel/ affirmative action.**

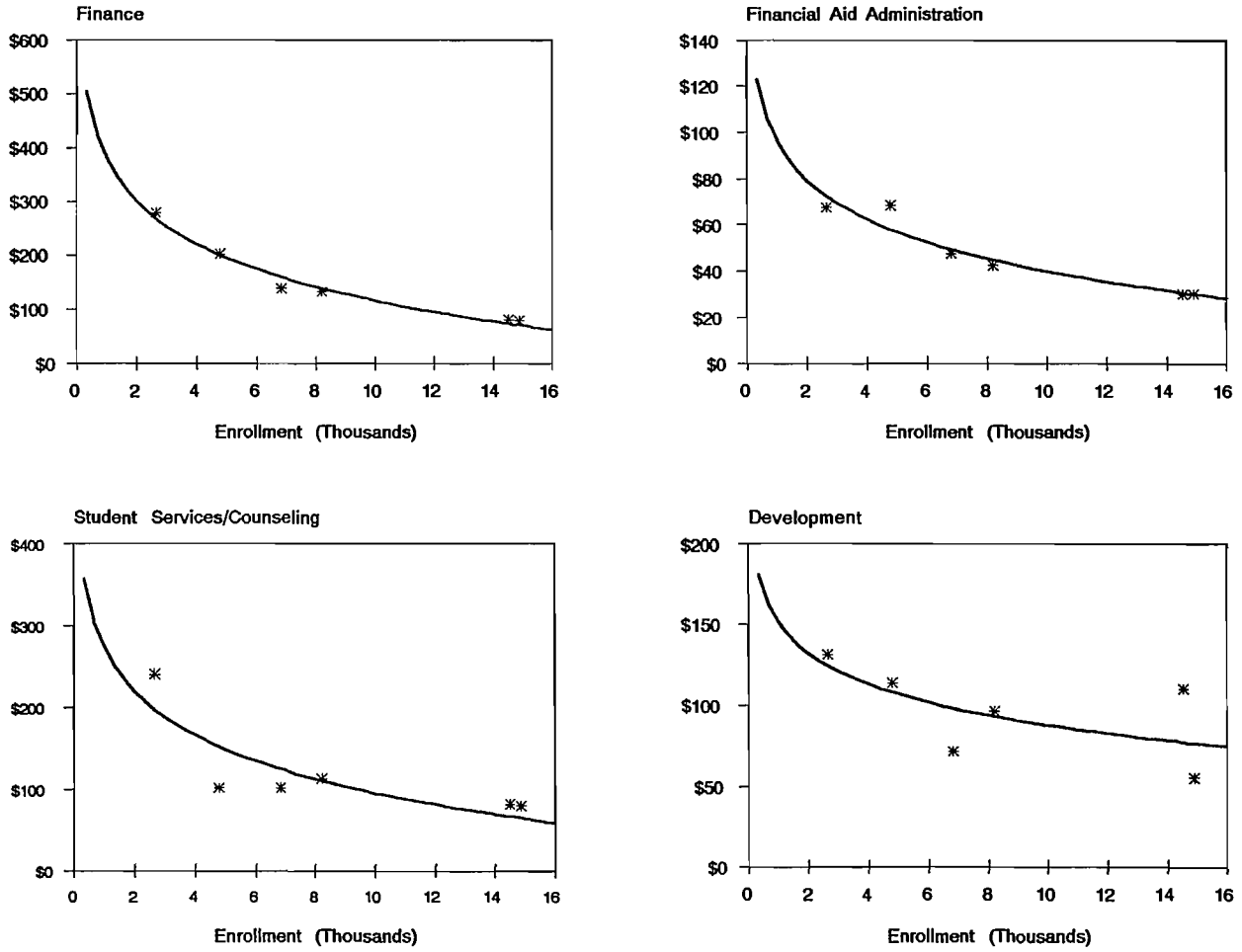
Figure 4.7 shows the relationships between spending and university size for four functional areas. Spending per student in other functional categories is not statistically related to size, or other factors obscure the effects of size. For example, academic administration spending is more likely related to the complexity and program mix at an institution than it is to size. Spending for administrative computing is also unrelated to size. Universities have differing levels of computer usage that result in different expenditure levels.

# TRENDS IN ADMINISTRATIVE COSTS

In this section we examine Minnesota state university financial statements to determine how major categories of expenditure have changed since 1981. Minnesota's state universities use the expenditure categories defined in the Integrated Post-Secondary Educational Data System for their financial state-

*15* This analysis is based on a logarithmic regression of student enrollment on 1991 expenditures per student, using the equation ln(expenditures per student) = a + b * ln (enrollment). Results were statistically significant at the .001 level, with a R squared equal to .92.

## Figure 4.7: State University Expenditures Per FYE Student, by Category and College Size, FY 1991




ment reporting. We examined the state universities expenditures reported in their financial statements for fiscal years 1981 to 1990.[16]

Between fiscal years 1981 and 1990, total nominal dollar expenditures by state universities increased 140 percent from $106.8 to $256.5 million.[17] Expenditures increased 56 percent when adjusted for inflation. Since enrollment in the state universities has risen 30 percent over this time period, one would expect expenditures to go up, even when looked at in constant dollars. When examined on a spending per student basis, total state university expenditures per FYE student rose 22.2 percent over the 1981-90 period.[18]

*16* Fiscal Year 1990 was the latest year available.

*17* These figures are system totals, including Metro State, but excluding the chancellor's office and financial aid expenditures reported on state university current fund financial statements.

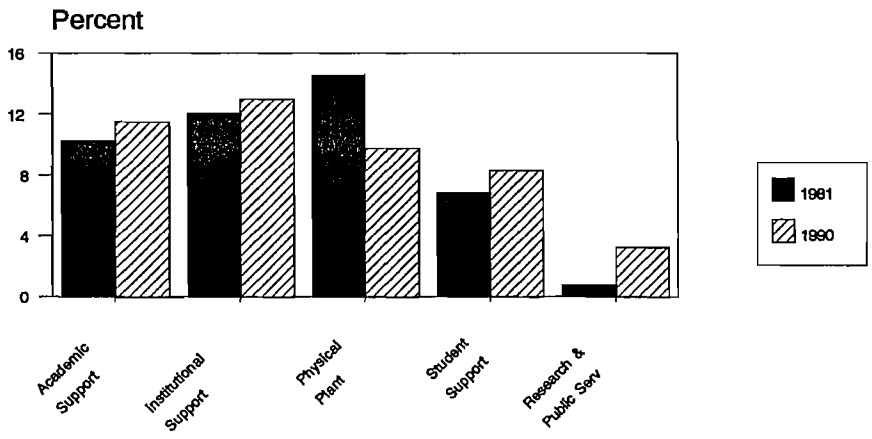
*18* As mentioned earlier, different adjustments for inflation are appropriate depending on what questions one is trying to answer. The change in spending per student using the HEPI index was 14.3 percent.

**Spending for student services, academic support, and institutional support increased more than instructional spending.**

Table 4.3 shows the major categories of expenditure at the state universities between fiscal years 1981 and 1985 and fiscal years 1985 and 1990.[19] Although overall total spending per full-year-equivalent student went up 22.2 percent in constant dollars (or 26.3 percent not including Metro State), this is partly because 1981 was a low point in constant dollar expenditures per student. What is of more interest is the change in the components of spending and their relative levels of change over the period. Although instructional spending went up 23.6 percent in constant dollars per FYE student, the instructional share of total expenditures declined from 55.3 percent in 1981 to 54.1 percent in 1990.

Several other categories of expenditure increased more than instructional spending. Figure 4.8 shows the change in the percent of total expenditures spent on categories other than instruction. The largest changes between 1981 and 1990 were in the areas of student services (51.5 percent increase) and academic support (40.2 percent). As Figure 4.9 shows, institutional support also increased 35.6 percent between 1981 and 1990. Research and public service expenditures increased 453 percent, but still only accounted for 3.3 percent of total expenditures.

Figure 4.8: State University Percent of Total Expenditures by Category, FY 1981 and 1990




Source: State University financial statements.

Table 4.3 also shows the effects of chosing a base year for comparision. Total expenditures have actually decreased 1.4 percent in constant dollars per student since 1985. Despite this overall decline, expenditures continued to rise

*19* The table does not include Metro State expenditures or expenditures of the State University Board Office.

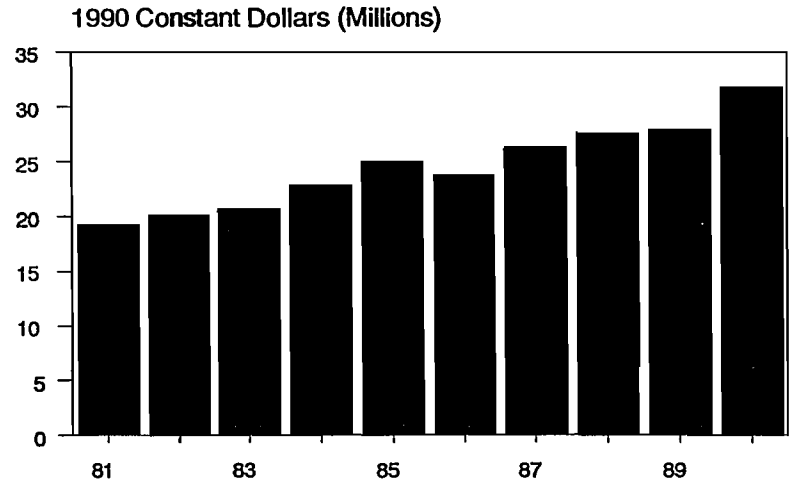
# Table 4.3: State University Constant Dollar Expenditures, Fiscal Years 1981, 1985, and 1990[a]

| | 1981 Expenditures (Millions) | 1981 Percent of Total Expenditures | 1981 Expenditures Per FYE | 1985 Expenditures (Millions) | 1985 Percent of Total Expenditures | 1985 Expenditures Per FYE | 1990 Expenditures (Millions) | 1990 Percent of Total | 1990 Expenditures Per FYE | Percent Change 1981-85 | Expenditures Per FYE: Percent Change 1985-90 | Expenditures Per FYE: Percent Change 1981-90 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Instruction | $88.1 | 55.3% | $2,100 | $111.5 | 56.5% | $2,753 | $132.8 | 54.1% | $2,596 | 31.1% | -5.7% | 23.6% |
| Academic Support | 16.5 | 10.3 | 393 | 20.1 | 10.2 | 497 | 28.2 | 11.5 | 551 | 26.5 | 10.9 | 40.2 |
| Institutional Support | 19.3 | 12.1 | 459 | 25.0 | 12.7 | 619 | 31.8 | 13.0 | 622 | 34.9 | 0.5 | 35.6 |
| Physical Plant | 23.3 | 14.6 | 555 | 23.9 | 12.1 | 589 | 24.1 | 9.8 | 472 | 6.3 | -19.9 | -15.0 |
| Student Services | 11.1 | 6.9 | 114 | 14.4 | 7.3 | 355 | 20.5 | 8.3 | 400 | 34.5 | 12.7 | 51.5 |
| Research/Public Service | 1.2 | .8 | 29 | 2.3 | 1.1 | 56 | 8.2 | 3.3 | 160 | 93.4 | 186.3 | 453.6 |
| Total Expenditures | $159.5 | 100.0% | $4,062 | $197.1 | 99.9% | $4,868 | $245.6 | 100.0% | $4,800 | 28.2% | -1.4% | 26.3% |
| Total Students (FYE) | 41,014 | | | 40,487 | | | 51,177 | | | | | |

Source: University financial statements.

[a]Does not include Metro State expenditures or enrollment or State University board office expenditures. Expenditures are reported in 1991 constant dollars. Totals may not sum due to rounding.

Figure 4.9: State University Expenditures for Institutional Support, FY 1981-90




Source: State University financial statements.

**Academic support and student services spending continued to rise since 1985.**

between 1985 and 1990 for the academic support (10.9 percent) and student services (12.7 percent) categories.

The other noteworthy trend is the decrease in spending on physical plant. Physical plant expenditures decreased 15 percent in constant dollars per student and also decreased from 14.8 percent of total spending to 9.8 percent. This decrease reflects the investments that have been made in energy savings as well as lower fuel costs. It also reflects the fact that spending per student for physical plant continues to decrease as enrollments increase. The increase in physical plant spending has not matched the large increases in state university enrollment since 1985.

These trends are consistent with the changes that we found in looking at our more detailed categories earlier in this chapter. In short:

- **Expenditures for student services, academic support, and institutional services have risen faster than those for instruction since 1981.**

In the next section we examine how Minnesota compares with other states in spending on these broader categories of expenditure.

# HOW DO MINNESOTA ADMINISTRATIVE EXPENDITURES COMPARE?

Comparisons of higher education expenditures between states are fraught with difficulty.[20] The best central data source for comparing state universities is the data gathered by the U.S. Department of Education in the Integrated Post-Secondary Data System discussed above. There are some problems in using this data to compare interstate spending at state universities, including the possibility that expenditures are classified inconsistently between states, and the exclusion of systemwide costs from the data set.[21] In Minnesota, this means that approximately $5 million in computer expenditures (or about 2 percent of total expenditures) that are paid for centrally, but that should be allocated to the individual universities, are not included in the IPEDS data. Nonetheless, Minnesota's state universities are more like their counterparts in other states than the community or technical colleges. We judged that the IPEDS data was appropriate to use as a rough gauge of how Minnesota institutions compared with their counterparts in other states.

We used the data compiled by Kent Halstead of Research Associates in Washington D.C. for our comparisons. Halstead has combined information on type of institution, expenditures and enrollment into one database. The most recent data available was for fiscal year 1989. Halstead uses the Carnegie classification of institutions to adjust for the different types of universities.[22]

Minnesota's five traditional state universities are classified as "Comprehensive I" -- four-year institutions with enrollments greater than 2,500 full-time students that offer masters but not doctoral degrees. "Comprehensive II" universities, like Southwest State, award more than half of their degrees in two or more disciplines, may offer graduate degrees, and enroll between 1,500 and 2,500 full-time students. Metro State has been classified as a 4-year Liberal Arts institution because its enrollment size made it too small to be considered comprehensive. Halstead uses fall 10th day headcount of full and part-time students collected by the U.S. Department of Education to arrive at his measure of full-time enrollment.

Tables 4.4 to 4.6 show how six Minnesota state universities compare with schools in other states with the same Carnegie classifications on three measures.[23] National studies have examined interstate administrative expenditures

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*20* See for example, Halstead (1990) 72-86, and Paul T. Brinkman, ed., *Conducting Interinstitutional Comparisons, New Directions for Institutional Research*, Number 53 (San Francisco: Jossey-Bass) Spring 1987.

*21* The IPEDS finance survey is quite detailed and sets out exactly what categories of expenditures are to be reported on each line of the survey. However, in practice, we found that there were minor inconsistencies in the way Minnesota institutions categorized some sorts of expenditures. We believe these inconsistencies do not materially affect the results for any university except Metro State. As we discussed previously, before 1991 Metro State reported numerous expenditures in the wrong categories.

*22* The Carnegie classification was developed by the Carnegie Commission for use in compiling information on similar higher education institutions. Institutions are grouped on a variety of factors including amount of research, type of degrees granted, and size.

*23* Metro State is not included because of the previously mentioned problems with the data it reported to the U.S. Department of Education.

## Table 4.4: State Universities' Expenditures for Institutional Support, Fiscal Year 1989

| State University | FTE Enrollment | National Rank | Institutional Support Expenditures/FTE | National Rank | Institutional Support Expenditures as a Percent of Total Instructional Expenditures | National Rank |
|---|---|---|---|---|---|---|
| **COMPREHENSIVE I** (n = 258) | | | | | | |
| Bemidji | 4,234 | 133 | $896 | 158 | 16.5% | 188 |
| Mankato | 13,002 | 20 | 398 | 18 | 9.1 | 15 |
| Moorhead | 7,324 | 85 | 518 | 39 | 11.7 | 60 |
| St. Cloud | 13,727 | 17 | 418 | 20 | 10.1 | 34 |
| Winona | 5,898 | 117 | 650 | 81 | 14.0 | 126 |
| National Median | 5,842 | -- | 799 | -- | 14.1 | -- |
| **COMPREHENSIVE II** (n = 44) | | | | | | |
| Southwest | 2,158 | 9 | $1,333 | 33 | 20.7% | 35 |
| National Median | 1,760 | -- | 946 | -- | 15.6 | -- |

Source: Program Evaluation Division analysis of Research Associates database.

Note: A national rank of 1 indicates the smallest amount of spending per student.

## Table 4.5: State Universities' Expenditures for Institutional Support Plus Student Support, Fiscal Year 1989

| State University | FTE Enrollment | National Rank | Institutional Support Plus Student Support Expenditures/FTE | National Rank | Institutional Support Plus Student Support Expenditures as a Percent of Total Instructional Expenditures | National Rank |
|---|---|---|---|---|---|---|
| **COMPREHENSIVE I** (n = 258) | | | | | | |
| Bemidji | 4,234 | 133 | $1,269 | 118 | 23.4% | 137 |
| Mankato | 13,002 | 20 | 900 | 39 | 20.6 | 74 |
| Moorhead | 7,324 | 85 | 880 | 36 | 19.8 | 56 |
| St. Cloud | 13,727 | 17 | 792 | 26 | 19.1 | 46 |
| Winona | 5,898 | 117 | 1,067 | 74 | 22.9 | 128 |
| National Median | 5,842 | -- | $1,317 | -- | 22.9% | -- |
| **COMPREHENSIVE II** (n = 44) | | | | | | |
| Southwest | 2,158 | 9 | $2,170 | 35 | 33.7% | 37 |
| National Median | 1,760 | -- | 1,666 | -- | 27.3% | -- |

Source: Program Evaluation Division analysis of Research Associates database.

Note: A national rank of 1 indicates the smallest amount of spending per student.

## Table 4.6: State Universities' Expenditures for Institutional Support Plus Student Services Plus Academic Support Minus Libraries, Fiscal Year 1989

| State University | FTE Enrollment | National Rank | Institutional Support Plus Student Services Plus Academic Support Minus Libraries Expenditures/FTE | National Rank | Institutional Support Plus Student Services Plus Academic Support Minus Libraries as a Percent of Total Instructional Expenditures | National Rank |
|---|---|---|---|---|---|---|
| **COMPREHENSIVE I** ( n = 258) | | | | | | |
| Bemidji | 4,234 | 133 | $1,613 | 107 | 29.6% | 119 |
| Mankato | 13,002 | 20 | 1,209 | 39 | 27.6 | 79 |
| Moorhead | 7,324 | 85 | 1,037 | 25 | 23.3 | 32 |
| St. Cloud | 13,727 | 17 | 978 | 21 | 23.6 | 37 |
| Winona | 5,898 | 117 | 1,396 | 71 | 30.0 | 125 |
| National Median | 5,842 | -- | 1,746 | -- | 30.2% | -- |
| **COMPREHENSIVE II** (n = 44) | | | | | | |
| Southwest | 2,158 | 9 | $2,764 | 35 | 42.9% | 42 |
| National Median | 1,760 | -- | 1,964 | -- | 33.1% | -- |

Source: Program Evaluation Division analysis of Research Associates database.

Note: A national rank of 1 indicates the smallest amount of spending per student.

using various combinations of three categories of expenditure: institutional support, student services, and academic support minus library expenditures.[24] These are the same categories of expenditure for which we examined trends over time in the previous section.

The first measure, institutional support, is the narrowest. As table 4.4 shows, Minnesota's two largest universities, Mankato and St.Cloud, ranked near the lowest in institutional support expenditures per student at 18th and 20th lowest out of 258 comprehensive I universities. Moorhead was 39th lowest followed by Winona (81st) and Bemidji (158th). Southwest State expenditures for institutional support ranked 12th highest of 44 comprehensive II institutions.

Table 4.5 shows a similar pattern and rankings for expenditures on the second measure: institutional support plus student support services expenditures. The largest Comprehensive I university (St. Cloud) spends the least on these functions and the smallest (Bemidji) spends the most. Mankato, the second largest institution spends more than average on student services ($602 per FTE compared to the $518 national average), consequently its national rank falls somewhat from 18th lowest to 39th lowest. Moorhead spends less than the national average on student services ($362 compared to the national average of $518), consequently its rank changes from 39th to 36th lowest. Southwest spends more than the national median in the second measure, ranking slightly lower

24 See for example, *Higher Education Administrative Costs: Continuing the Study*, Office of Educational Research and Improvement, U.S. Department of Education. 1986.

nationally (from the 12th highest of 44 schools to the 10th highest). Southwest spent $837 per FTE on student services compared to the national average for Comprehensive II institutions of $695.

The broadest measure of non-instructional expenditures is institutional support spending plus student services plus all academic affairs spending except libraries.[25] Again on this broadest measure, all Minnesota institutions spend less than the national median. All Minnesota institutions spend less than the national average of $404 per student for the additional spending component -- academic affairs minus library spending. St. Cloud and Moorhead both spend less than $200 per student with Bemidji, Winona, and Mankato spending between $300 and $350 per student for academic affairs functions. As a result, Minnesota's relative national ranking improves (becomes slightly lower).

**Most Minnesota state universities spend less than comparable institutions for administration.**

What can one conclude from these national data? In comparision to similar universities in other states, Minnesota state universities, except for Southwest, spend less on administrative and student service functions. Southwest has the highest level of expenditures per student of Minnesota institutions, largely because it is the smallest. However, in 1989, Southwest also appeared to have relatively high levels of expenditures compared to similar institutions in other states. This may change as the impact of a 1991 administrative consolidation is felt. As we noted in Chapter 1, the national literature on economies of scale suggests that for most functions the costs per student in four-year comprehensive institutions declines until enrollment reaches around 4,000 students. Expenditures for some sorts of functions, such as physical plant, continue to decline up to 20,000 students.

# UNIVERSITY BOARD OFFICE EXPENDITURES

The state university system chancellor's office exists to provide policy leadership and coordination for the system as a whole and to support the State University Board. According to several state university officials, the state universities have historically operated fairly autonomously. However, during the 1980s, the chancellor's office began to exercise more coordinated policy leadership and centralized decisionmaking on several issues. In this section we discuss the board office's changing role as well as the change in expenditures and personnel during the 1980s.

## Organization

The state university board office is organized into a chancellor's office and three sections each headed by a vice-chancellor. Table 4.7 shows the staffing

25 This measure is similar to, but somewhat broader than, the definition of administrative and student service spending that we examined using the state university accounting data. For example, in examining the accounting data, we included most academic support expenditures, but not academic computing or audiovisual services. We included most student service expenditures, but not expenditures for social and cultural activities such as intercollegiate athletics, housing services, and health and infirmary services.

## Table 4.7: State University Central Office Staffing, 1981 and 1991

| | Full-Time Equivalent Staff | |
|---|---|---|
| | 1981 | 1991 |
| **CHANCELLOR'S OFFICE** | | |
| Chancellor, Administrative Assistant, Executive Assistant, Director of Government Relations, Director of International Programs, 3 Support Staff, and Affirmative Action Officer | 3 | 9 |
| **SYSTEM ADVANCEMENT** | | |
| Vice Chancellor, Associate Vice Chancellor Development, Assistant Vice Chancellor Student Affairs, Administrative Assistant System Advancement, Director Public Information, Director System Research, 3 Support Staff | 4.5 | 9 |
| **ACADEMIC AFFAIRS** | | |
| Vice Chancellor, Associate Vice Chancellor, Assistant Vice Chancellor, Assistant to Vice Chancellor, Secretary | 4 | 6 |
| **FINANCE** | | |
| Vice Chancellor, 2 Associate Vice Chancellors Finance, Associate Vice Chancellor Human Resources, Personnel Officer, 2 Labor/Employee Relations Secretaries, 1 Accounting Supervisor, 5 Accounting Support, 1 Coordinator Financial and Program Analysis, 1 Automation Support, 1 Internal Auditor, 1 Accounting and Auditing, 1 Retirement Plan Administrator, 1 Secretary, 1 Director Contract Management, 1 Coordinator Facilities Management, 1 Investment Manager, 1 Director Revenue Bond Fund, 1 Assistant Director Facilities Management, 6 Facilities Management Support Staff, 1 Computer Services Coordinator | 27.5 | 31.5 |
| System Total | 39 | 55.5 |

Source: State University System.

of the board office in 1991 and the number of positions in each section during 1981. The board office has added a net total of 16.5 positions since 1981.

The organizational structure is similar to what it was at the beginning of the 1980s. The major change was the addition of a vice-chancellor for system advancement and the downgrading of the position dealing with student affairs to an assistant chancellor level.

During the 1980s the state university board office added a number of positions that report directly to the **chancellor.** Like the community college and technical college systems, the state university added a director of government relations. This position represents the university system before legislative committees and other higher education forums. An executive assistant to the

chancellor was added to assist the chancellor with research, preparation of written materials, and other tasks.

A secretary was added to support the government relations director and executive assistant. Finally, the affirmative action officer position was upgraded from .5 FTE to 1.00 FTE at the insistence of the Department of Employee Relations. Each university also has an affirmative action officer.

Another new position, the director of international programs, reports directly to the chancellor. This position had been filled with a former university president serving as a distinguished service professor. This position, along with a new secretarial position, is responsible for the campus in Akita, Japan. In the future this position will be filled at a lower salary level and will report through the vice-chancellor for academic affairs rather than directly to the chancellor.

The largest section (31.5 FTE staff compared with 27.5 FTE in 1981) is headed by the vice-chancellor for finance. The **finance** section coordinates accounting, financial reporting, budget allocations, purchasing, labor and employment relations, internal auditing, retirement plan administration, investments, and contract and facilities management.

The state university board office also administers the Revenue Bond Fund. Unlike the other two systems, the state universities, except for Metro State, all have residence halls, dining services, student unions, and other self-supporting activities. The Revenue Fund is used to finance these activities. The central office directly administers debt service and bond sales, food contracts, insurance programs, repair and replacement programs, and the investment program.

**The Legislature has added responsibilities to the system office.**

The Legislature added a number of functional responsibilities to the finance section's workload during the 1980s. First, in 1984 the Legislature transferred responsibility for managing the system's capital improvement program from the Department of Administration to the system office. This function is now managed centrally for the system by the board office, although several of the universities also have construction coordinators. Since 1984, the Legislature has appropriated over $162 million for system capital improvements. The system office has added an Assistant Director of Facilities Management and two secretaries to support this function. However, most of the additional on-site inspection work is contracted out to a construction inspection and management firm.

In 1981, the Department of Employee Relations delegated responsibility for negotiating and administering labor agreements to the state university system. This has required the increased participation of a number of senior managers in the system's office in the negotiation process. An additional .5 FTE clerical position has been allocated to meet the increased labor negotiation workload.

The Legislature also expanded the universities' role in retirement plan administration. Effective in fiscal year 1989, the faculty retirement program was switched to an Individual Retirement Account Plan administered by the sys-

tem office. In 1991, the system office took over responsibility for the college supplemental retirement from the Teachers Retirement Association. The system office added a retirement plan administrator to support this function. In addition, the design and implementation of the new retirement plans required the participation of a number of other system officials. The system office has contracted the actual administration of the retirement plans to Norwest Bank, but still transmits the information on additions, investment option choices, and contributions to the administrator.

The system also added an internal auditor in 1989 as part of a statewide effort to increase the activity of internal auditing in state government.

Finance unit personnel noted, as did university campus officials, a large increase in information requests from internal and external groups interested in the state university system.

The **Academic Affairs** Unit is headed by the vice-chancellor for academic affairs. This unit consists of five professional staff supported by a secretary. One professional and one secretarial position have been added since 1981.

The academic affairs unit performs a large number of the tasks necessary to coordinate academic programs at the seven universities. The vice-chancellor estimated that almost 50 percent of the unit's time is spent in responding to HECB studies and legislative initiatives. This section also performs the preliminary reviews of new academic programs before they are proposed to the HECB. It is also starting to get more involved in reviewing existing programs for effectiveness and reasonableness. An example of this "gatekeeping" function is a review of Mankato State's education programs. According to system office personnel, Mankato's teacher education programs have experienced large enrollment increases at a time when there is an oversupply of new teachers in Minnesota. The academic affairs unit has also been reviewing the system's two-year occupational programs.

In addition, the academic affairs unit supports board projects and initiatives (such as Q-7), conducts presidential searches, and conducts leadership training for deans, vice presidents, and department chairs. They are usually involved with one or more taskforces exploring the development of academic policies. For example, there is currently a taskforce developing criteria for high school courses required for admission. The new secretarial position is primarily responsible for the support of taskforces. The new professional position fills in for the vice chancellor when presidential searches are ongoing and has managed several grants for one-time projects that the system has had over the last few years. For example, this person supervised a study on the academic library of the future, developed a report on indicators of quality education, and works on leadership development including a special minority leadership project.

**Demands for information from external and internal interest groups have increased.**

Like the finance section, the major change in the academic affairs unit's workload since the mid-1980s has been the increasing demand for information from external and internal interest groups about the state universities' activities.

The unit currently headed by the vice-chancellor for **system advancement** is responsible for fundraising and development projects for the system as a whole, as well as public information and student affairs issues. Development at the system level is a new function since 1981. All of the universities also have a development unit that independently works on alumni relations and fund raising. Personnel at several universities told us that they regarded the central office development effort as largely duplicative of their own efforts. The new chancellor has determined not to fill the, currently vacant, vice chancellor position, and to phase out a second development position. Funds will be shifted to upgrading the student services position.

In 1981, this unit was headed by a vice-chancellor for student affairs who focused almost exclusively on financial aid and other student affairs issues. In 1981 there were 3.5 FTE positions in this unit and in 1991 there were 9 FTE positions. One position is the director of public information who reported to the academic affairs unit in 1991. Of the 4.5 new positions, three are associated with "system advancement": the vice-chancellor, an associate vice-chancellor for system advancement, and an administrative assistant. The other 1.5 new positions are an increase of .5 in secretarial support and a support services coordinator who supervises 3-6 student workers and supports the chancellor's office as a whole. The other two positions in the unit, which existed in 1981, are an assistant chancellor for student affairs who works on financial aid, admissions, and placement policies and a position for system research which has been vacant since 1981. Most of the state university system's institutional research is conducted at Moorhead State, although the central office academic affairs unit also compiles some research data for special projects.[26]

## Change in System Office Expenditures

The State University Board office spent $10.7 million in fiscal year 1991 compared with $3.2 million in 1981. In 1991, the board office paid centrally for just over $5.3 million in computer rental, lease, and maintenance costs that directly benefited the individual universities. In 1991, for the first time, most of these costs ($5.0 million) were transferred to the individual universities. Of the remaining $5.7 million in expenditures, almost $3.2 million (55.5%) were for the salaries and benefits of the central office staff.

In 1981, the state board office spent $3.2 million, including $1.8 million for computer expenses. Salary and benefits for the 39 staff made up 62.5 percent of the non-computer expenditures.

One of the major increases in expenditures has come in the area of facilities and construction management. In 1981, facilities management expenses were

26 Each university also conducts some institutional research activities.

$123,617 compared with $772,753 in 1991. Most of the increased expenditures were for the construction inspection and management functions that the state universities assumed from the State Architect's Office in 1984. In 1991, the state university board office spent approximately $460,000 for architectural and engineering professional services.

# SUMMARY

After adjusting for inflation, state university administrative and student service expenditures per student increased 30.9 percent since 1981. Expenditures rose the greatest amount in the development, personnel, student services/counseling, admissions, and logistical functional categories.

Almost all of the constant dollar spending increase occurred between 1981 and 1985. Since 1985, total administrative spending has not gone up, but spending in some categories has continued to increase. In particular, spending on student services, development, and logistical functions continued to rise between 1985 and 1991.

We found that economies of scale are evident in the state university system's administrative expenditures. Larger universities tend to spend significantly less per student for finance-related functions, development, student services and counseling, president's office, admissions, and personnel/affirmative action. Our analysis indicates that a doubling of full-year-equivalent enrollment is associated with a 25 percent decrease in administrative and student service expenditures.

We also found that, since 1981, an increasing share of total spending is devoted to non-instructional categories of spending. As a percent of total spending, institutional support functions increased from 12.7 to 13.0 percent, academic support from 10.2 to 11.5 percent, and student services from 7.3 to 8.3 percent of the total. Instructional spending decreased from 55.3 percent of total spending in 1981 to 54.1 percent in 1990. Spending on physical plant decreased from 14.6 percent of total expenditures in 1981 to 9.8 percent of expenditures in 1990.

Although state university spending has grown over the decade, in 1989 Minnesota state universities, except Southwest, spent less on administrative and student service functions than comparable institutions in other states.

Total staffing for administrative and student support functions increased about 17 percent for the system as a whole, from 829 full-time-equivalent staff in 1981 to 978 in 1991. The state university board office staff increased 16.5 positions from 39 to 55.5 FTE. Central office staff increased largely because of expanded responsibilities in finance and construction management, and an increase in demands for information from internal and external bodies, such as the Legislature.

# INTER-SYSTEM COST COMPARISONS

## Chapter 5

In this chapter we compare administrative and student services costs in the state university, community college, and technical college systems. We compare costs for the systems as a whole, as well as for central offices separately. For central offices, we also compare staffing levels in various functional categories. We asked:

- **How do administrative costs vary among the three systems?**
- **What explains the variation?**
- **How do the three systems differ in the way they provide administrative services?**

We found that administrative and student services costs are highest in the technical colleges, averaging $1,487 per full-year-equivalent student (FYE), and lowest, at $1,181, in state universities. However, because the three higher education systems differ in mission, size, student demographics, and administrative structure, conclusions must be drawn carefully. We found that economies of scale and differences in mission explain most of the difference in costs in the three systems.

This chapter is organized into four sections. First, we explain the data and methods we used to compare expenditures. Second, we describe the variation in administrative and student services costs between the three systems, and provide some explanations for the variation. Third, we compare costs and functions of the central offices. And fourth, we reach some general conclusions.

## METHODS

To compare administrative costs we started with the cost categories described in the three previous chapters. To improve comparability across systems, we included both campus and central office expenditures because the same functions are performed in different locations in each system. Because each system accounts for expenditures differently, we aggregated spending into six

categories that can be compared across systems. The six categories we use in this chapter are described in Figure 5.1.

**Costs are not perfectly comparable among systems.**

Aggregating costs in this way improves comparability across systems in most categories, but there are still some differences. First, technical college staff development costs are included in the instructional administration category because it was not possible to separate these costs from other costs in that category. For the same reason, some institutional services costs may be included in the instructional administration category for technical colleges. For state universities and community colleges, staff development costs are excluded.[1]

## Figure 5.1: Administrative and Student Services Cost Categories

- **Chief Administrator's Office.** This category includes the president or provost and immediate support staff. For technical colleges, the extension director is included. In central offices, this category includes the chancellors, deputy chancellors, and their support staff. Special assistants and their staff are included for the technical college system.
- **Institutional Services.** This category includes fiscal services, personnel, administrative computing, logistical services (such as telephones and duplicating), facilities management, institutional research, planning, government relations, and budgeting.
- **Public Relations and Development.** This includes college publications, media relations, community relations, alumni relations, and fund-raising.
- **Financial Aid Administration.**
- **Student Services.** This category includes admissions, enrollment, registration, student records, placement, administration of services to disadvantaged groups, and counseling and guidance.
- **Instructional Administration.** This includes administration and coordination of academic areas, curriculum development, continuing education and extension administration, accreditation, program review, and developmental education administration.

Second, the technical colleges include extension directors and several vice presidents in the chief administrators' offices, unlike the other two systems. This causes costs to appear higher in this category for technical colleges.

Third, the institutional services category includes district service charges for technical colleges. These are fees paid to local school districts for fiscal, personnel, and other services. Unlike the other two systems' costs in this

*1* Also, we have not included community college non-personnel expenditures for instructional administration due to inconsistencies in the way colleges account for these costs. However, our best estimate is that these costs are relatively minor, probably less than $10 per FYE.

category, district service fees do not always reflect direct services provided by districts. Thus, costs in this category may also not be directly comparable.

Fourth, we have included continuing education administrative costs for community colleges, but continuing education students are not included in community college FYE student counts. Continuing education administration costs are a relatively small portion (less than four percent) of total administrative and student services costs. In the technical college system, extension students are counted in the same way as other students when FYE is calculated.

Finally, the development and public relations category is comprised mostly of development costs for state universities. For technical and community colleges, the category includes mostly marketing costs.

**Costs per student ranged from $1,181 in state universities, to $1,487 in technical colleges.**

# ADMINISTRATIVE AND STUDENT SERVICES COST COMPARISONS

## Variations in Cost

Figure 5.2 shows how 1991 administrative and student services costs per student varied among the three systems. Figure 5.3 shows how the percent of total costs spent for administrative and student services varied. In 1991, the technical college system spent $1,487 per student for administrative and student services, compared with $1,247 for community colleges and $1,181 for state universities.[2] As shown in Table 5.1, state universities had the highest cost per student in the institutional services category. Community colleges fall

**Figures 5.2 - 5.3: Comparison of Administrative and Student Services Expenditures, FY 1991**

Figure 5.2

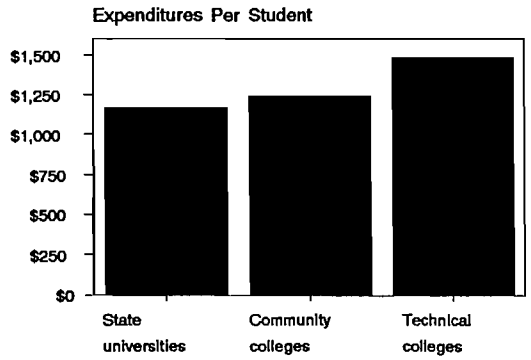
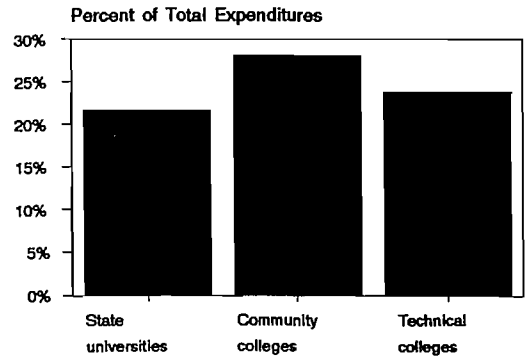



Figure 5.3




Source: Program Evaluation Division analysis of higher education systems data.

2 The community college cost per student of $1,247 includes only state-funded staff. We estimate that federally funded staff in institutional and student services represent another $40 per student.

## Table 5.1: Total Administrative and Student Services Costs per FYE, FY 1991

| Function | State University | Community College | Technical College |
|---|---|---|---|
| Chief Administrator's Office | $37 | $108 | $239 |
| Institutional Services | 437 | 429 | 356 |
| Development and Public Relations | 99 | 77 | 97 |
| Subtotal | 573 | 614 | 692 |
| Financial Aid Administration | 40 | 54 | 81 |
| Student Services | 244 | 300 | 325 |
| Subtotal | 284 | 354 | 406 |
| Instructional Administration | 324 | 279 | 389 |
| Total | $1,181 | $1,247 | $1,487 |

Source: Program Evaluation Division analysis of systems' data.

**As a percent of total spending, administrative costs ranged from 22 percent in state universities to 28 percent in community colleges.**

between the other two systems in every category except instructional administration and development and public relations, where their expenditures per student are lowest.

A second way of comparing administrative and student services costs among higher education systems is to consider these costs as a percent of total costs. As Figure 5.3 shows, the community college system spent the highest percentage on administrative and student services (28 percent). The state university system spent the lowest (22 percent).

Nationally, administrative costs are a smaller percentage of total costs at four-year than at two-year institutions. The differences among Minnesota's higher education systems are consistent with national figures.[3] At state universities, the percentage of total expenditures spent on administrative and student services may be lower due to the economies of scale available to the larger institutions. Economies of scale are discussed further in the next section.

The community college system also spent a larger percent on administrative and student services than the technical college system. The different types of education provided by each system may explain this difference. Technical instruction is generally more expensive than general education because classes are often smaller and more equipment is needed in many programs. Thus, although technical colleges spent more per student on administrative and student services, this represented a smaller percentage of total expenditures.

3 U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics: 1991* (Washington D.C., 1991), 320-321. Nationally, administrative and student services costs averaged 24.6 percent in public 4-year colleges, and 31.2 percent in public 2-year colleges. The national percentages are higher than those we found for Minnesota schools because the Department of Education measure of administrative and student services expenditures was somewhat broader than that used in our study.

# Reasons for Variation in Per Student Costs

We think there are two primary explanations for the variations in cost among the three systems. First, economies of scale would suggest that the state university system, with the largest institutions, should be the least expensive system to administer and technical colleges should be the most expensive. However, complexity of mission, the second explanatory factor, would suggest that community colleges, with a relatively less complex mission, should be the least expensive and state universities should be the most expensive. In addition to these two factors, several others of less importance may explain some additional part of the variation in costs. In this section we discuss each of these factors and the role each may play in explaining variation in administrative and student services costs.

## Economies of Scale

**Economies of scale explain much of the variation in costs.**

Our analysis indicates that economies of scale explain much of the difference in costs between state universities and the other two systems. A significant amount of the difference between community and technical colleges also appears to be explained by economies of scale. Our analysis of the relationship between college costs and enrollment, described in earlier chapters, indicated that doubling enrollment was associated with a decrease in per FYE costs of 12 percent in technical colleges, 15 percent in community colleges, and 25 percent in state universities. Within each system, these numbers suggest that smaller campuses are less efficient than larger campuses. This is especially true of state universities, which need to be fairly large before they achieve efficiency.

The highest-cost system, technical colleges, has the smallest average enrollment per college (1,365 FYE in 1991). Each small campus requires some minimum number of administrative staff, including a president and support staff. The state university system, which had the lowest costs, is made up of seven campuses averaging almost 8,000 FYE in 1991. While each state university campus has a greater number of administrative staff than the technical college or community college campuses, the costs of those staff are spread over a larger number of students.

It is important to note that our analysis focused only on expenditures. In order to determine whether one school was more efficient than another, we would need much more information about the services that are provided by each. That is, a school spending less per student may be providing less service, or service of less quality, than a more expensive school, and thus not be more efficient. These cautions are even more important when attempting to compare one system to another. As we describe in the next section, missions differ greatly among systems, and the differences often affect costs in the opposite way that scale economies do.

### Differences in Missions

**Differences in missions also explain some variation in costs.**

The second main explanation for variation in the costs of administrative and student services is the different missions of the three higher education systems, and the different levels of administrative complexity that result. Nationally, administrative and student services costs are about 23 percent higher at four-year institutions than at comparably sized two-year institutions, when costs are adjusted for size.[4]

In Minnesota, state universities are four-year residential institutions with a wide array of programs, student services, research, public service, and ancillary activities that tend to make them more expensive than two-year colleges. State universities incur a number of costs that have no counterparts in the other two systems. Our analysis has left out most of the direct costs of these activities, but indirect administrative costs remain.

Another indicator of the complexity of state universities is the physical size of the campuses. Even the smallest state universities have larger campuses with more buildings than community or technical colleges with similar enrollment. As a result, they require different services than smaller, single building campuses. For example, each of the state universities (except for Metro State) has a security department, a motor pool, and a vehicle services division. These are services that most community and technical colleges do not have.

There are also differences between the technical and community college systems that affect administrative costs, especially for instructional administration. Technical colleges generally have more programs and lower teacher-student ratios, requiring greater administrative effort. In addition, the technical colleges' extension programs require administrators to make ongoing contacts with businesses. Most community colleges have more limited extension programs than technical colleges. If the costs of extension administration, which are about half of instructional administration for technical colleges, were excluded, then overall administrative and student services costs would be much closer for technical and community colleges in the same size range.

Finally, community and technical colleges do more curriculum development than state universities, which is reflected in the instructional administration category. The two-year colleges have more programs related to the current needs of employers, and sometimes develop programs in conjunction with specific companies.[5]

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*4* Kent Halstead, *Higher Education Revenues & Expenditures, A Study of Institutional Costs* (Washington, D.C.: Research Associates of Washington, 1990)--accompanying data volume. The measure of administrative and student services spending used by Halstead is similar, but not identical, to the one we have used.

*5* In FY 1990, HECB reported that the state university system offered 38 non-baccalaurate programs, the community college system offered 246, and the technical college system offered 1,095 programs. In addition, state universities offered 400 baccalaureate and 173 master's level programs.

### Other Factors

**Some variation in costs may be explained by student demographics.**

Some additional variation in costs may be explained by a number of other factors. One factor is differences in student demographics. About half of community and technical college students attend school part-time. Officials who we interviewed disagreed about the administrative and student service costs associated with part-time students. State university officials and some technical college presidents felt that many part-time students were less costly than full-time students. Community college officials felt that part-time students required the same amount of services as full-time students, and that calculating student services costs per student based on the number of full-year equivalent (FYE) students may overstate true costs.

We calculated financial aid administration and student services costs on a headcount basis, as shown in Table 5.2. Because community colleges have the largest proportion of part-time students, their costs per student declined the most when calculated on the basis of a headcount, rather than on FYE. Based on costs per headcount, community colleges had the lowest student services costs per student, while technical colleges still had the highest costs, as Table 5.2 shows.

## Table 5.2: Cost per Headcount Enrollment for Financial Aid and Student Services

| | State University | Community College | Technical College |
|---|---|---|---|
| Fall Headcount Enrollment | 63,173 | 54,986 | 47,707 |
| Function | | | |
| Financial Aid Administration | $35 | $32 | $70 |
| Student Services | 212 | 185 | 279 |
| Total | $247 | $217 | $349 |

Source: Program Evaluation Division analysis of systems' data.

In addition to the difference between full-time and part-time students, students at community and technical colleges are probably, on average, less prepared than state university students for post-secondary education. As a result, both systems may do more testing, counseling, and remedial education than the state universities do.[6]

Differences in pay scales among the systems explain another part of the variation in costs. During our reviews of comparable staff at technical and community colleges located in the same cities, we observed that community college salaries were almost always higher. For example, it is not unusual for community colleges to pay their chief administrators at least $10,000 more than comparably-sized technical colleges.

6 Our data include the costs of administering remedial education, but not instructional costs.

**Administrative and student services are provided differently by each system.**

The way services are provided in each of the systems may also explain some of the variation in costs. For example, the community college system provides many administrative services centrally, while in the technical college system, many administrative services are purchased from local school districts. Community colleges have higher costs than technical colleges in the institutional services category. This may in part reflect the costs of the community college system's more sophisticated student and financial information systems, but it could also reflect differences in services provided, salaries paid, or efficiency. The only major function that is centrally provided in the state university system is facilities management. In the next section we look at central office staffing and costs for each system, and assess the degree to which each system is centralized.

# CENTRAL OFFICE COSTS AND FUNCTIONS

Table 5.3 shows administrative costs for the central office of each system. As the table shows,

- **Community colleges have the highest central office costs per student.**

## Table 5.3: Central Office Expenditures per FYE, FY 1991

| Function | State University | Community College | Technical College |
|---|---|---|---|
| Chancellor's Office | $6 | $22 | $8 |
| Institutional Services | 51 | 166 | 89 |
| Development and Public Relations | 14 | 9 | 4 |
| Financial Aid Administration | 0 | 0 | 2 |
| Student Services | 2 | 6 | 28 |
| Instructional Administration | 14 | 27 | 53 |
| Total | $87 | $230 | $184 |

Source: Program Evaluation Division analysis of systems' data.

To understand why central office costs vary, we looked at the functions performed in the central office of each system, as shown in Table 5.4. The institutional services category is further disaggregated, to show more specifically how staffing varies within that broad category.

The community college system has particularly high central office costs and the largest number of staff in the institutional services category. As described in Chapter 3, the community college central office provides personnel, fiscal, and computer services to campuses. Central office staff approve campus personnel decisions, maintain computerized systems for student and fiscal

## Table 5.4: Central Office Personnel

| Function | State University | Community College | Technical College |
|---|---|---|---|
| Chancellor's Office | 3.5 | 4.0 | 7.0 |
| Institutional Services | | | |
| Personnel | 5.0 | 9.0 | 2.75 |
| Fiscal Services | 18.0 | 27.0[c] | 18.0 |
| Computer | 2.0 | 25.0 | 1.75 |
| Facilities | 8.0 | 2.2[d] | 5.0 |
| Government Relations | 1.5 | 1.8 | 3.0 |
| Licensure | 0.0 | 0.0 | 5.0 |
| Other | 3.0[a] | 4.0[e] | 14.0[f] |
| Total Institutional Services | 37.5[b] | 69.0 | 49.5 |
| Development and Public Relations | 5.0 | 3.0 | 1.5 |
| Financial Aid Administration | 0.5 | - | 1.0 |
| Student Services | 0.5 | 2.0 | 14.0 |
| Instructional Administration | 8.0 | 5.0 | 21.5 |
| Total | 55.0 | 83.0 | 94.5[g] |

Source: Program Evaluation Division analysis of systems' data. Table includes only permanent staff.

[a]Includes receptionist, Support Services Coordinator, institutional research.

[b]Includes seven staff funded by the Revenue Bond Fund.

[c]Includes two federally-funded staff.

[d]The equivalent of three full-time Department of Administration staff perform facilities management functions for the community college system, in addition to the 2.2 central office staff.

[e]Includes receptionist, data specialist, research associate, and one secretary.

[f]Includes nine system improvement staff, five capacity development staff.

[g]Total includes twenty-four federally-funded staff, primarily in student services, planning and research.

**Administrative and student services are most centralized in the community college system and most decentralized in the state university system.**

information, and provide budget tracking and systemwide accounting, among other services. The large number of staff in the personnel, fiscal services, and computer subcategories reflects the centralization of these functions. Of total institutional services costs, the portion attributable to the central office is 39 percent for the community college system, compared to 25 percent for technical colleges and 12 percent for state universities.

In the state university system, labor negotiations are conducted in the central office. Some centralized administrative computer services are performed at St. Cloud, but only the administrator of those services is counted as central office staff. The state university system has the lowest central office costs per FYE and the fewest central office staff. The only category in which state university system office expenditures are higher than the other two systems is development and public relations. The system's recent move to systemwide

fundraising, in addition to that done at the campus level, accounts for the relatively high expenditures in that category.[7]

Both fiscal and personnel services are decentralized in the technical college system. Most colleges purchase some of these services from the local school districts, although the amount of service provided varies considerably. The technical college system, while not highest in central office expenditures per FYE, does have the largest number of central office staff. This reflects a wider variety of central office functions, rather than centralized provision of campus services. For example, the technical college central office performs accreditation reviews of each college every five years, a requirement for technical college students to be eligible for federal financial aid. Community colleges and state universities are accredited by regional organizations. Technical college central office staff also perform some administrative functions for the air traffic control school.

In the institutional services category, the technical college system has 14 staff in the "other" category, reflecting again the fact that some functions performed by that system are not duplicated in the other two systems. Included in the "other" category are staff who perform planning, research, and data collection functions, some of which are required by federal programs.

In addition, the technical college central office has higher expenditures and more staff than the other two systems in the student services and instructional administration categories. For example, the technical college system central office has over 20 staff working in instructional administration, compared to 8 staff in the state university central office and 5 in the community college central office.[8] The technical college system office provides extensive curriculum development services to campuses, in part because of the need for technical colleges to provide specialized business training. Central office costs are about 14 percent of total instructional administration costs in the technical college system, compared to 10 percent in community colleges and 4 percent in state universities.

# SUMMARY

In this chapter, we have examined the administrative and student services expenditures of the three higher education systems, but we have not drawn conclusions about the relative efficiency of each system. We have not drawn conclusions because (1) we have not examined outputs of the systems and, (2) we could not control for other factors that affect costs.

Our analysis of expenditure data for the three higher education systems shows that the technical colleges are, overall, the most expensive to administer, and

7 The state university system has decided not to fill a vacant vice chancellor for development position, and to phase out a second position.

8 This comparison reflects the recent staff reduction in curriculum development by the technical college system office.

state universities are the least expensive. This result is consistent with our economies of scale analysis, which suggested that the system with the smallest campuses should be the most expensive to operate. However, because we did not examine outputs, which vary from one higher education system to another, we cannot conclude that the state university system is the most efficient, or that it could not operate more efficiently.

In addition, as we have described, there are numerous, and sometimes countervailing, factors that affect costs. Because we cannot quantify the effects of such factors as mission, we are not able to conclude that one system is more efficient than another. That is, while we know that the technical college system is the most expensive of the three to administer, we cannot conclude that it is too expensive.

Nevertheless, we think the information provided in this chapter will give the Legislature and higher education superboard a stronger foundation for exploring questions of efficiency and organization.

# POTENTIAL ADMINISTRATIVE COST SAVINGS

## Chapter 6

In each of the three higher education systems we examined, administrative costs increased faster than other categories of spending during the past decade. This reflects expanded student services, higher salaries, investment in computers, and many other factors. The Legislative Audit Commission asked us to examine the potential for administrative cost savings in the higher education systems. We asked:

- **What alternatives are there for structuring the governance of individual colleges and higher education systems, and what are their cost implications?**
- **Could administrative costs be reduced by having co-located colleges share or merge services?**
- **What other cost savings in administrative and student services might be possible?**

In general, we think there is potential for administrative cost savings under a merged system of state universities, community colleges, and technical colleges, but these savings should be just one part of the cost equation that the Legislature considers. The administrative cost savings are relatively small compared to (1) the higher faculty salaries and one-time costs that most observers believe would result from a merger, and (2) the savings from eliminating duplicative programs and using existing facilities more efficiently.

Merging administrative structures at co-located technical and community colleges could result in some cost savings--perhaps $3.0 to 4.0 million a year.[1] However, technical colleges have recently started merging on a regional basis to take advantage of economies of scale, and this will reduce the savings possible from subsequent mergers of community and technical colleges. We think the Legislature and higher education superboard should consider factors in addition to cost when determining whether to merge the co-located sites. We outline these factors in this chapter and recommend that the superboard consider them for each of the co-located college sites.

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*1* Our estimate of savings assumes that the combined institutions report to a single board that provides unified direction and priorities. These savings would be possible regardless of whether state universities were included in the merger. The estimate does not include one-time costs for developing a merged system.

# ALTERNATIVE ADMINISTRATIVE STRUCTURES

Although the 1991 Legislature mandated important changes in the governance structure for the higher education systems, we think it is useful to consider alternative structures. If the Legislature decides to proceed with the newly-created higher education superboard, there remain important choices about how to structure college governance and bargaining units. These choices could significantly affect costs, both in administration and instruction. In addition, the Legislature created the superboard despite strong objections from some members of the House of Representatives, and it is possible that the issue of higher education governance will be revisited in future legislative sessions.

At least four issues should be considered when debating alternative structures for Minnesota's higher education systems: (1) the number of state governing boards, (2) the number of collective bargaining units for campus staff, (3) the role of multi-campus administrative structures, and (4) the status of the technical colleges as state facilities. These issues will affect both the costs and effectiveness of alternative structural arrangements.

This section provides a framework for considering these issues and discusses possible cost implications. The cost estimates presented here were developed by the Higher Education Coordinating Board. They are tentative, not definitive, estimates because many decisions regarding higher education organization have not yet been made by the Legislature and higher education superboard.

## Number of State Governing Boards

The state universities, community colleges, and technical colleges each have a state board, plus a system office that supports the board and individual colleges. The system offices operate independently, without common information systems for financial, personnel, and student data. For more than 20 years, there has been legislative discussion about consolidating the community and technical colleges under a single state board. Actions by the 1991 Legislature consolidated all three state boards into a single governing board, effective in 1995.

**There were several reasons for the 1991 merger.**

Advocates of the superboard offered several reasons for the merger. First, they suggested that a single board could more effectively set and implement higher education priorities for the state, without favoring the interests of one system over another. The board could eliminate program duplication and target funds to priority programs with more objectivity than the boards of particular systems. A 1991 study by the Higher Education Coordinating Board reported that **program** duplication is common among Minnesota's higher

education systems in liberal arts, general studies, and occupational programs.[2] There is little information on the extent of duplication of individual courses.[3] In 1991, the Legislature granted HECB authority to reduce duplication in existing programs. However, some legislators believe that a higher education superboard could reduce curriculum duplication more effectively than HECB.

Second, legislators hoped that the merger would enable the state to limit its investment in new facilities. They suggested that a superboard would be more willing to consider enrollment limits at growing campuses. They also believed that the superboard could reduce the time that students spend pursuing degrees, thus making room for more students in existing facilities. The board could reduce the time required for degrees by facilitating transfers of credits between institutions.

Third, legislators thought that having a single state board and system office would reduce administrative costs. Duplicative positions in the three existing central offices could be eliminated, and the higher education systems could develop common information systems.[4] We think that consolidating information systems could result in long-term cost savings, but there have been no studies documenting either these savings or the initial costs of developing common systems. A rough estimate by HECB suggested that the cost of developing common information systems might involve a one-time expenditure of $1.0 to $5.0 million, but this estimate seems conservative in light of the recent cost of developing one information system at the University of Minnesota.[5]

Opponents of the superboard expressed two main objections to the proposal. They suggested that the unique missions of the three systems might be diluted under a single board. There was particular fear that the board might eliminate important technical education programs simply because they have higher costs. In addition, as discussed in the next section, opponents suggested that any benefits of merger would be outweighed by higher costs.

## Number of Collective Bargaining Units

Faculty at state universities and community colleges each have their own statewide bargaining units. The state universities also have a separate bargaining unit for their administrative staff. Other non-faculty staff in the two systems--except for top administrators--are part of statewide bargaining units.

There is no statewide bargaining unit for technical college faculty. Technical college staff have been represented by bargaining units for the individual school districts in which the colleges were located.[6] Thus, technical college

2 HECB, *Program Inventory and Off-Campus Activities of Minnesota Post-Secondary Education Institutions* (St. Paul, February 21, 1991), 1-2.

3 HECB does not have statutory authority to eliminate duplicate courses.

4 HECB has estimated that consolidating the three systems would save $1.0 million in central administrative costs. We think this is a conservative estimate of annual savings once the fiscal and personnel systems are merged.

5 The University's financial information system was budgeted to cost $11.5 million, and is likely to cost more than $17 million when completed.

salaries and benefits vary throughout the state. Many states, including Washington and California, have comprehensive two-year colleges--offering **both** technical and general education--in which the staff belong to local, rather than statewide, bargaining units.

The 1991 Legislature required Minnesota's technical college faculty to be assigned to a new statewide bargaining unit after June 1993. According to estimates by the Higher Education Coordinating Board (HECB), making technical college faculty part of a single bargaining unit would cost from $2.3 to $9.1 million per year.[7]

**Putting faculty from the three systems in a single bargaining unit would significantly raise costs.**

Some people have suggested having a single bargaining unit represent all of Minnesota's higher education faculty. However, when bargaining units are consolidated, it is typical for salaries of lower paid units to increase toward the salaries of other units, either immediately or over time. According to HECB, average faculty salaries in 1990 were $32,595 at technical colleges, $36,496 at community colleges, and $37,941 at state universities. Raising average technical college salaries to the level of community college faculty would cost nearly $10 million per year. Proponents of salary equalization suggest that faculty working under a single board should have comparable pay, but others believe that differences in faculty training and educational mission justify salary differences.[8] HECB estimated that the cost of equalizing administrative salaries among the three systems could be as high as $2.4 million.[9]

There would be even greater costs if the Legislature or superboard decided to make the classroom time of higher education faculty more equal. State universities require their faculty to teach 12 credit hours a week, community colleges require 15 hours, and technical colleges require 25 to 30 hours.[10] Equalizing faculty instruction time between the technical colleges and community colleges could cost as much as $34 million per year, according to a rough estimate by HECB. It also estimated that equalizing state university and community college classroom time could cost as much as $25 million.[11]

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*6* In past years, most technical college staff were employees of individual districts. With the formation of regional technical colleges, many faculty are now employees of joint districts.

*7* The low estimate assumed that colleges with low salaries are brought up to the system average of $32,595. The high estimate assumed that all colleges would be brought up to the highest average salaries paid by a college ($36,202).

*8* Some states with comprehensive two-year colleges, such as North Dakota, have retained separate bargaining units for technical and general education faculty. To allow for differential faculty contracts under a single state governing board in Minnesota, it is possible that the state's Public Employee Labor Relations Act would have to be amended.

*9* The $2.4 million estimate assumes that technical and community college salaries increase to the average salaries paid to state university administrators. Technical college non-faculty staff will be assigned to existing state bargaining units in June 1993.

*10* Expectations for non-instructional time also vary. For example, state university faculty are expected to engage in research, public service activities, and committee work.

*11* HECB did not estimate the cost of equalizing technical college and state university workloads.

Overall, HECB's estimates suggest that the costs of the merger will be much lower if the three systems maintain distinct faculty bargaining units. The Legislature and the higher education superboard have not yet decided how to structure bargaining arrangements.

**Cities With Both a Technical and Community College**

- Austin
- Brainerd
- Brooklyn Park
- Eveleth-Virginia
- Hibbing
- Minneapolis
- Rochester
- Thief River Falls
- White Bear Lake
- Willmar

**Cities With Both a State University Campus and a Technical College**

- Bemidji
- Mankato
- Moorhead
- Rochester
- St. Cloud
- St. Paul
- Winona

## The Role of Multi-Campus Administrative Structures

Potentially, higher education administrative costs can be reduced by managing multiple campuses with single administrative units. The state university, community college, and technical college systems have 62 campuses, and just over half of these sites are part of multi-campus administrative structures, or plan to be in the near future. Many of the technical colleges are making plans to form regional colleges, as mandated by the 1991 Legislature. The Governor's Commission on Post-Secondary Education recently recommended creation of "regional districts" throughout Minnesota to manage and serve institutions in those regions.[12]

There are some forms of multi-campus administration that have not been tried. First, there are no instances in which technical and community colleges have jointly created multi-campus administrative structures.[13] There are 10 locations in Minnesota (shown in the box) where technical and community college campuses are located close together, or "co-located." However, many technical colleges have started merging into regional technical colleges to reduce administrative costs, thus diminishing the cost savings that could occur from merging technical and community colleges.[14] Figure 6.1 lists factors besides administrative cost savings that should be considered to determine whether merging co-located technical and community colleges makes sense.

A second administrative arrangement that has not been implemented in many locations is shared services between two- and four-year colleges in the same cities. There are few cooperative arrangements in the seven Minnesota cities that have both a technical college and a state university campus, shown at the left. Staff from these campuses told us that mission differences are the main reason for the lack of shared services. Several community colleges and state universities that offer "two plus two" programs share building space.[15] In Rochester, the community college shares a campus with portions of a state

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*12* Commission on Post-Secondary Education, *At the Crossroads: Higher Education in Minnesota* (St. Paul, January 1992), vi. The report recommends that each region have a board of providers, composed of chief administrators at the campuses. There would also be a board of advisors to represent the needs and interests of customers.

*13* The 1991 Legislature mandated the creation of two demonstration sites for this form of organization. However, administrators for the technical and community college systems believe that it would be difficult to establish such structures before the merger of the state governance structures in 1995, and they intend to ask the Legislature to repeal this requirement.

*14* We were able to obtain estimates of cost savings for only one of the new regional colleges, as discussed in Chapter 2. The three campuses merging in southeastern Minnesota project administrative savings of about ten percent.

*15* "Two plus two" programs enable students to take upper division courses toward a baccalaureate degree at a community college campus.

## Figure 6.1: Factors to Consider When Deciding Whether to Merge Co-Located Technical and Community Colleges

### 1. ADMINISTRATIVE COST SAVINGS

A merger should enable any pair of small two-year colleges--regardless of type--to reduce administrative costs by taking advantage of economies of scale. For example, Willmar Technical College intends to merge with Hutchinson Technical College during the coming year, but it could probably achieve similar administrative savings by consolidating certain positions with Willmar Community College. In some cases, positions can be consolidated in campuses that are next door that could not be consolidated if the campuses are miles apart.

### 2. COST SAVINGS FROM SHARED FACILITIES

Merging co-located technical and community colleges would likely result in more sharing of facilities and certain services. Examples include shared food service, libraries, bookstores, gymnasiums, and custodial services. Campuses that are next door obviously have more potential to share these facilities and services than campuses that are further apart. It is possible to share facilities and services without a formal merger of co-located sites, but not all of the co-located colleges have maximized these opportunities.

### 3. ABILITY OF STAFF TO WORK TOGETHER AND DEFINE COMMON MISSIONS

In some cities, administrators from the co-located technical and community colleges work well together. This is more the exception than the rule, and there are probably better working relationships among the technical colleges that are now forming regional colleges. Many administrators cited "cultural" or personality differences as an impediment to mergers between co-located technical and community colleges. For mergers of co-located colleges to succeed, it will be necessary for administrators to appreciate the unique contributions of general and technical education, while defining common goals for the college and staff.

### 4. BENEFITS TO STUDENTS AND COMMUNITIES

Merging co-located community and technical colleges might result in better student services and instruction, according to some community college staff we talked with. Students would not have to re-apply for admission and financial aid if they changed from one college to the other, as they do now. Community college students could take advantage of more of the "real world" learning provided by technical colleges, and technical college students could benefit from the critical thinking skills that community colleges teach.

Some administrators told us that co-located colleges under common administration would be more likely to develop joint or coordinated programs, and less likely to compete for students and private funding. This would work to the advantages of the communities served.

### 5. EFFECT ON OTHER CAMPUSES

In many cases, merging a co-located community and technical college would disrupt an existing multi-campus administrative structure. For example, Brainerd Technical College is currently part of a regional college with Staples Technical College. If the co-located community and technical colleges in Brainerd merged, Staples could (1) merge with the Brainerd colleges, (2) merge with other technical colleges in northwestern Minnesota, or (3) be independent. The status of Staples would have implications for administrative costs and student services that should be considered. In some cases, there might be little efficiency gain, and perhaps an efficiency loss, from disrupting an existing multi-campus structure.

### 6. SIMILARITY OF THE MERGING COLLEGES

It is easier to merge two similar institutions than two different ones. Although there are many differences in the administrative procedures used by technical colleges around the state, there are greater differences between the technical and community colleges.

There will be limited potential for administrative cost savings at co-located sites unless the superboard develops common administrative systems and procedures. Until this happens, however, a technical college's operations are likely to be more compatible with another technical college than with a community college.

### 7. EXTENT OF PROGRAM AND COURSE DUPLICATION

Some co-located colleges offer duplicative programs and courses. While it would be possible for the colleges to reduce duplication and remain separate entitites, having a single administrator and unified direction might encourage curriculum streamlining.

university and the University of Minnesota. The community college provides certain building maintenance, library, health care, bookstore, and student services for the four-year institutions.

A third type of multi-campus administrative arrangement that has not been tried is regional administration of Twin Cities area colleges. Of the 13 technical and community college campuses in the Twin Cities area, only two are part of a multi-campus administrative structure.[16] In part, this reflects the fact that many Twin Cities colleges are already large enough to take advantage of available economies of scale. However, college administrators told us that combining some of the metropolitan colleges would save money by reducing program duplication.

## State Ownership of the Technical College System

In contrast to two-year colleges in most other states, Minnesota's technical colleges are managed by individual or joint school districts. Bringing the technical colleges entirely under state administration, as envisioned by the 1991 merger bill, will have significant cost implications:

**Bringing the technical colleges under state administration would increase costs.**

- The state will have to begin paying all costs for new technical college facilities. Currently, school districts pay 15 percent.

- The state might also have to purchase the portions of technical college facilities that school districts bonded for in the past. HECB estimates that school districts have spent $60 million for capital bonding.[17]

- There would be a one-time state cost of $24 million to bring the technical colleges under state accounting practices.[18] Currently, school districts receive only 85 percent of their state aid in the fiscal year for which that aid was designated. Districts receive the remaining aid in the first month of the subsequent fiscal year. If the technical colleges become state entities, one payment of the deferred funding will have to be advanced to the fiscal year for which it was designated.

- Technical colleges have retirement and fringe benefit packages different from those offered by the state, and there might be additional costs to make these plans more comparable. HECB and technical college staff have not examined the differences between retirement plans in detail, but HECB estimates the annual cost of increasing retirement benefits to state levels at $3.7 million.[19]

*16* Hennepin Technical College's north and south campuses operate under one administrative office.

*17* This estimate is not adjusted for inflation.

*18* HECB estimate.

*19* This includes regular retirement plans, supplemental plans, and FICA. Most technical colleges do not have supplemental plans.

# Implications

**The merger's costs depend heavily on decisions yet to be made.**

There are a variety of governance structures that could be implemented for Minnesota's higher education systems, even if the Legislature proceeds with the higher education superboard it created in 1991. The costs of the structure will depend on decisions not yet made by the Legislature and superboard. As shown in Table 6.1, HECB has estimated that the net costs of the merger could be as high as $18.3 million a year, and this does not include one-time costs.[20]

## Table 6.1: Estimates of Fiscal Implications of Merging the State University, Community College, and Technical College Systems

| | (Millions of Dollars) | |
|---|---|---|
| | Low Estimate | High Estimate |
| ANNUAL COSTS, FISCAL YEARS 1994-5 | | |
| Administration | $0.0 | $2.4 |
| Instructional | | |
| Salary | 2.3 | 9.1[a] |
| FICA | 0.2 | 0.7 |
| Retirement | 0.2 | 0.7 |
| Supplemental retirement | 0.0 | 2.3 |
| Clerical | 0.0 | 3.1 |
| Real property | 0.0 | 6.0[b] |
| | $2.7 | $24.3 |
| ONE-TIME COSTS | | |
| Information systems, legal fees | $1.0 | $5.0 |
| Accounting changes | 24.0 | 24.0 |
| | $25.0 | $29.0 |
| ANNUAL SAVINGS, FISCAL YEARS 1994-5 | | |
| State agency administration | $0.0 | $1.0 |
| Merged campus administration | 0.0 | 4.0 |
| Campus maintenance and equipment | 0.0 | 1.0 |
| | $0.0 | $6.0 |

Source: Higher Education Coordinating Board, April 1991 estimate. Estimates are not adjusted for inflation.

[a]More recent estimates by HECB suggest that this number could be about $13 million.

[b]Based on $60 million value of technical college property, paid for over 10 years. Some people have suggested that the $60 million should be paid immediately, not over time. Others have questioned whether any property payments are necessary.

These estimates assume that the state university, community college, and technical college systems retain separate faculty bargaining units, and costs would likely be higher if faculty bargaining units were consolidated. For example, rough HECB estimates suggest that the annual cost of equalizing instruction time between technical and community college faculty could be as much as

*20* HECB assumed that there would be no cost of bringing technical college plant operation staff into state bargaining units. However, we observed that technical college plant staff had lower salaries than community college staff at several co-located sites.

$34 million, and the cost of equalizing community college and state university instructional time could be $25 million.

The HECB estimates do not include estimates of possible long-term cost savings due to less instructional duplication, faster degree completion, and better use of existing facilities. Without a rough estimate of long-term savings, and until more decisions have been made about the governance structure and bargaining units, it is impossible to conclusively judge the cost-effectiveness of the superboard.

**Administrative cost savings appear to be small compared to other costs and benefits of the merger.**

Nevertheless, it appears to us that the **administrative** cost savings in a merger would be relatively small. These savings are important, but governance changes would likely have significant one-time costs and large, countervailing effects on non-administrative costs. Also, the cost savings in instructional and facilities costs envisioned by advocates of the superboard are larger than the administrative savings.

# POTENTIAL COST SAVINGS AT CO-LOCATED SITES

Most states have comprehensive two-year colleges, offering an array of technical and general education programs. In Minnesota, the technical and community college systems operate in separate facilities under different governance structures. There are 10 locations--listed in Figure 6.2--where community and technical colleges are located in close proximity. Most people we talked with believe that the proximity of these schools enables sharing of staff and facilities that would be more difficult in other sites further apart.

We visited the colleges in each co-located site and talked with administrators about (1) existing cooperative efforts, and (2) the potential for merging or sharing positions. We also reviewed staffing and salary data for each of these colleges in an effort to estimate cost savings that might be possible under different administrative arrangements. Overall, we found that:

- **It is possible to reduce administrative and student services costs by merging colleges at co-located sites, but the potential savings will decline as more technical colleges become part of regional colleges. Most of the savings would be in supervisory and clerical positions.**

In general, the community college staff we talked with expressed strong interest in merging administrative functions at co-located sites. Without a formal merger, they believe that it would be difficult to share staff with technical colleges because pay scales and work requirements would differ, and there would be accountability to two different state boards. There would also be different systems for registering students, processing financial aid, reporting financial information to the state, and hiring staff. Such differences would make it difficult to reduce costs.

## Figure 6.2: Co-located Community and Technical Colleges

| Co-located Campuses | 1991 Enrollment | Currently Part of a Multi-Campus Administrative Structure? | Distance Apart | Number of Joint Programs | Number of Duplicate Programs[a] |
|---|---|---|---|---|---|
| Austin Community College | 787 | No | Adjoining | | |
| Austin Technical College | 1,026 | Yes | Property | 10 | 0 |
| Brainerd Community College | 1,220 | Yes[b] | Several | | |
| Brainerd Technical College | 905 | Yes | Blocks | 10 | 0 |
| Northland Community College | 596 | Yes[b] | Same | | |
| Thief River Falls Technical College | 1,232 | Will Be | Building | 5 | 0 |
| Mesabi Community College | 739 | Yes | 4 Miles | | |
| Eveleth Technical College | 435 | Will Be | | 1 | 1 |
| Hibbing Community College | 702 | Yes | Several | | |
| Hibbing Technical College | 781 | Will Be | Blocks | 6 | 0 |
| Willmar Community College | 1,107 | No | Adjacent | | |
| Willmar Technical College | 1,544 | Will Be | Buildings | 9 | 0 |
| Rochester Community College | 2,708 | No | 1/2 Mile | | |
| Rochester Technical College | 1,177 | Yes | | 1 | 5 |
| Minneapolis Community College | 2,575 | No | Connected | | |
| Minneapolis Technical College | 1,982 | No | Buildings | 2 | 1 |
| Lakewood Community College | 3,365 | No | Across the | | |
| Northeast Metro Technical College[c] | 1,862 | No | Street | 5 | 3 |
| North Hennepin Community College | 3,623 | No | 2 Miles | | |
| Hennepin Technical College[c] (north campus) | 2,188 | Yes | | 7 | 2 |

Source: Data on the number of joint programs is from the State Board of Technical Colleges and interviews with college staff. Data on the number of duplicate programs is from the Higher Education Coordinating Board.

[a]Includes only duplicate programs; does not reflect the broader problem of individual courses that compete with each other.

[b]Multi-campus administrative structure consists only of a regional president.

[c]College is part of an intermediate school district.

Most of the technical college administrators we talked with expressed little interest in mergers with nearby community colleges. They feared that technical programs would be diluted or eliminated in merged colleges. Technical programs tend to be more expensive than general education programs, and administrators of comprehensive two-year institutions might be tempted to cut these programs first in times of dimininished resources.

# Existing Cooperation and Overlap

As shown in Figure 6.2, all of the co-located sites offer some cooperative degree programs. In these programs, students seeking Associate in Applied Science (A.A.S.) degrees take general education courses taught by community college instructors, and other courses from technical college instructors.

Some co-located colleges have cooperated in other ways, such as:

- sending just one staff person to recruiting fairs to represent both campuses;
- producing joint radio ads;
- issuing publications and catalogs jointly, or sharing a print shop;
- conducting joint fund drives, so that local businesses are not approached by each college separately;
- preparing joint grant applications;
- sharing student activities programs, such as athletics and theatre, as well as facilities;
- sharing classrooms, libraries, and cafeterias;
- sharing counselors; and
- sharing child care services.

**Co-located colleges have cooperated in many ways, but many instances of program and course duplication remain.**

There are also many examples of **lack** of cooperation between co-located colleges, particularly duplicative programs and courses. Table 6.2 shows HECB's record of duplicative programs at co-located sites. A 1991 HECB report found that:

> Despite (cooperative degrees at co-located sites), occupational program duplication continues, especially in secretarial and accounting programs. A review of the program inventory indicates that 30 secretarial programs are available through community colleges paired with technical colleges. This occurs because most of these programs were established early in the development of both systems, before the agreement establishing primary responsibility for occupational curricula was established.[21]

For example, Rochester's community and technical colleges are located within one mile of each other, but both offer their own programs for electronic technology, chemical laboratory technology, and legal, medical, and executive secretaries.

Table 6.1 shows duplicative degree **programs** at each of the co-located sites, but does not indicate the extensive **course** duplication that some college staff mentioned to us. For example, even in cases where co-located colleges have joint programs, it is not unusual for both colleges to offer competing courses

21 HECB, *Program Inventory and Off-Campus Activities of Minnesota Post-Secondary Education Institutions* (St. Paul, February 21, 1991), 8-9. The "paired" community and technical colleges include co-located colleges as well as some pairs of colleges that are located further apart.

for the technical portion of the joint degree.[22] In addition to duplication in regular instructional programs, co-located technical and community colleges around the state have been developing their own remedial education courses.

At some co-located sites, lack of cooperation results from distrust between technical and community college staff. Administrators told us about the difference in "cultures" between staff in these systems and said this would be an impediment to merger in some cities.[23]

## Estimated Cost Savings From Merger

We used two methods to estimate the potential administrative cost savings from merging colleges at nine of the co-located sites.[24] Neither of our estimates assumed any changes to equalize the salaries and workloads of technical and community college administrators, although it is likely that joint salary schedules would be necessary. We assumed that the merged colleges would have common information systems and procedures, which would enable more efficient staffing arrangements.[25]

We also based our estimates on staffing data that pre-dated the mergers of technical colleges that have been proposed or initiated in several parts of the state. To the extent that the technical college mergers result in administrative cost savings, our estimates of savings at co-located sites will be reduced.[26]

Our first approach to estimating cost savings used our analyses of the relationships between college enrollment and expenditures. As reported in earlier chapters, we found that administrative and student services expenditures declined by about 12 percent at technical colleges and 15 percent at community colleges as enrollment doubled. To determine cost savings at the nine co-located sites, we applied these relationships to the enrollment increases that would result from these mergers. Using this approach, we estimated that merging co-located sites would save about $3.9 million. This estimate is probably high, because (1) a merged college would likely administer technical and general instruction with staffing arrangements similar to what existed in the separate colleges, and (2) some positions that could be consolidated at adjacent colleges could not be consolidated at colleges several miles apart.[27]

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*22* For example, many community colleges did not discontinue their accounting and secretarial courses after developing joint degree programs with a co-located technical college. Also, many co-located colleges without joint degrees in accounting and secretarial programs offer competing courses in these fields.

*23* However, differences in outlook have also impeded mergers under current governance structures. For example, some technical colleges within 25 miles of each other (such as Albert Lea and Austin, or Wadena and Staples) have not been able to establish cooperative administrative relationships or shared services.

*24* We excluded the tenth site (North Hennepin Community College and the north campus of Hennepin Technical College) because the technical college campus is large and already part of both an intermediate school district and a multi-campus technical college.

*25* However, we made no assumptions about the cost of implementing common systems or other start-up costs.

*26* Only one merger of technical colleges occurred before 1991, so it is difficult to estimate cost savings.

*27* The cost savings would probably occur over time as administrators retired or moved.

**Merging co-located colleges could yield some administrative cost savings.**

Our second approach was to estimate cost savings for each co-located site based on interviews with campus staff and reviews of each college's 1991 staff rosters and salaries. We identified costs that could be reduced or eliminated under a merger. For example, we assumed that:

- The merged colleges would need only one president, director of student services, financial aid director, extension coordinator, and physical plant supervisor;
- The merged colleges would retain separate administrators for technical and general education programs;
- Technical college payments to school districts for portions of the superintendent's and school board's costs could be eliminated;
- One to four clerical staff could be eliminated, depending on the size of the colleges.

We made other judgments about possible cost and staff reductions on a case-by-case basis.[28] We made few assumptions about changes in supervisory relationships or staff assignments that would likely accompany a merger, although we sometimes assumed that positions would be downgraded rather than eliminated. We did not assume reductions in non-personnel costs such as printing and mailing, although savings would be possible at some locations.[29] In cases where a person from each college held the same position, we assumed elimination of the position with the lower salary. Using this second approach, we estimated that merging co-located campuses would save about $3.5 million.

Overall, we concluded that:

- **A merger of co-located technical and community colleges could save $3.0 to $4.0 million in administrative costs annually, or at least 10 percent of total administrative costs at these colleges. However, savings would be lower if technical colleges reduced their costs through regional mergers, or if mergers of co-located colleges were accompanied by equalization of administrative salaries.**[30]

If, as noted earlier in the chapter, a merger of the higher education systems results in some equalization of faculty salaries within the technical college system, or between the technical and community college systems, the additional costs of these salary adjustments could easily exceed the administrative cost savings.

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*28* Staff at the community and technical colleges often did not agree on areas of possible savings. We focused our attention on duplicative positions and those functions mentioned by several administrators as possible areas for reduction. Obviously, decisions about actual reductions would require a more complete review of staff workloads and performance.

*29* For example, there is considerable duplication in the mailing lists used by the community and technical colleges in Minneapolis--perhaps 50 percent.

*30* For example, if we assume that salaries for remaining staff at these technical colleges increased by 10 percent to more closely approximate community college salaries, this would cost $700,000.

**Cost savings should also be possible with regional administrative structures.**

In this section, we have discussed the co-located sites because they offer the most obvious potential for staff consolidation. However, cost savings should be possible with other types of multi-campus administrative arrangements, such as the regional service centers recently suggested by the Commission on Post-Secondary Higher Education. For example, it might be possible to have regional supervisors for functions such as financial aid, payroll processing, public information, and personnel. To maximize savings, it would be best for regional centers to serve campuses of different types, not just the campuses of a single higher education system. As with the mergers of co-located campuses, savings from regional administrative structures would depend on the development of common administrative procedures and information systems.

# OTHER ADMINISTRATIVE COST SAVINGS

As we noted in Chapter 1, it is difficult to find good benchmarks for evaluating administrative spending levels. In this report, we have tried to compare spending levels over time, between institutions, and between systems. Because we looked primarily at costs and not administrative output, we were unable to draw firm conclusions about efficiency. We were able to make only limited comparisons between Minnesota institutions and those in other states due to problems with national data on higher education spending.[31]

At the Legislature's direction, we have tried to identify administrative areas in which cost savings are possible. We found little opportunity for significant short-term cost savings, but long-term savings might be possible. The following suggestions require more in-depth review by the individual systems, the higher education superboard, and the Legislature.

## Consolidation of Financial Information Systems

Currently, the state university, community college, and technical college systems each operate their own internal financial information systems. The 1991 Legislature instructed the Commissioner of Finance to develop a single accounting system to serve the systems governed by the superboard. A consultant's report on the need for a revised statewide accounting system is due to the 1992 Legislature.

With or without a merger, we think that a single financial information system that meets the needs of the systems, the Finance Department, and the individual institutions has potential to save money in the long-term, although there could be significant short-run development costs. With common financial information, the higher education systems could more efficiently respond to legislative and executive branch information requests. If the new financial information system is integrated with the state's accounting system, the

*31* In the one system for which we were able to make inter-state comparisons, we found that administrative costs at most of Minnesota's state universities compared favorably with those of similar institutions in other states.

community college system would no longer have to enter the same information into two separate accounting systems, which now requires additional staff.

## Consolidation of Other Information Systems

**Integrated information systems should result in cost savings in the long run.**

The technical colleges do not have a centralized student information system, but 22 of the 34 campuses are using (or expect to soon be using) a system developed under contract with the state board office. The community colleges have a centralized student information system, but there are plans to move toward a system in which campuses have more direct access to student data. Each state university has its own student information system. Before the various higher education systems invest more money in changes to these separate computer systems, we think it makes sense to explore the potential for consolidated computer software.

It is difficult to design information systems that meet the needs of all users, but a uniform student information system for the higher education systems might enable the systems to respond to information requests more efficiently and consistently. Perhaps an existing system, such as the community college student information system or commercially-available software, could be efficiently tailored to meet the needs of the three systems. Likewise, there are other information systems, such as those for financial aid and personnel, that might be able to use common software. Consolidation of information systems would likely entail short-run investments to obtain long-term savings.

We recommend that:

- **Before the higher education systems proceed with significant revisions to their fiscal, student, personnel, financial aid, and other information systems, the superboard should investigate ways to consolidate these information systems.**

If there is no efficient way to fully consolidate an information system among all three systems, each of the three higher education systems should consider ways to standardize its information systems internally. This is particularly true for the state university and technical college systems, which have less centralized computer services than the community colleges.

## Consolidated Administration of State Retirement Programs

During the past three years, the state university and community college systems have been administering state retirement plans, as mandated by the Legislature. Previously, these plans were administered by the Teachers Retirement Association. For various reasons, the community colleges and state universities have decided not to administer these programs jointly. However, state

university and community college staff told us that these retirement programs could be jointly operated in the future.

## Centralized or Regional Delivery of Certain Administrative Services

**Minnesota has a large number of higher education campuses, and should consider ways to provide certain administrative services centrally or regionally.**

Compared to other states, Minnesota has a larger than average number of higher education institutions. To ensure greater access by Minnesotans to colleges, the Legislature has invested in an extensive network of relatively small institutions. While these institutions have indeed made higher education more accessible, there has also been a cost. Small institutions cost more than large ones, particularly for administrative services.

There are ways to take advantage of economies of scale in a system of small campuses. First, the central office can provide services that would be too expensive to provide separately on each campus. The community college system has tried this approach for some institutional support functions, which has enabled the campuses to keep staffing in their business offices at relatively modest levels.[32] In contrast, the state universities and technical colleges have a stronger tradition of institutional autonomy. Both of these systems could probably reduce administrative costs by providing more services centrally, but such a change might also entail some loss of campus autonomy.

Second, colleges can take advantage of economies of scale by having multi-campus administrative structures provide institutional services. We found little evidence of significant cost savings in the technical and community colleges where this has been tried, but we think savings should be possible. Community college administrators believe that creating new multi-campus administrative structures makes most sense in locations where technical and community colleges are co-located. In contrast, administrators in the technical college system have encouraged development of multi-campus technical colleges, but have little interest in joint administration with community colleges.

Earlier in this chapter, we listed several factors to consider when determining whether a merger of technical and community colleges makes sense. We recommend that:

- **If the Legislature proceeds with merger of the state university, community college, and technical college systems in 1995, it should require the superboard chancellor to review the merits of merging co-located technical and community colleges. In early 1994, the chancellor should present the Legislature with a plan for multi-campus administrative structures that indicates (1) which, if any, co-located colleges should be merged, and (2) any realignment**

32 Campus satisfaction with central services is mixed. For example, community college administrators expressed satisfaction with central fiscal services, but frustration with some of the centrally-provided computer services.

**of current multi-campus administrative structures necessary to provide services in the most cost-effective manner possible.**

In general, we think that merging or sharing a significant portion of administrative services at co-located technical and community colleges is workable only if the campus administrators report to a single state board. For this reason, it would be difficult to merge co-located sites until the state boards merge in 1995.

## Other Possible Cost Savings

If the merger of state universities, community colleges, and technical colleges takes effect in 1995, it should be possible to consolidate the three existing central offices with some reduction in positions. For example, the superboard would only need a single affirmative action officer, not two or three. The superboard will need just one chancellor and fewer top executives, supervisors, and clerical staff. Overall, we think there are opportunities for one to two million dollars of savings from merging the central offices, although specific reductions and organizational arrangements should be left to the superboard chancellor.

In addition, some campus-level staffing practices should be reviewed with or without the merger. For example:

**Some staffing practices should be reviewed with or without the merger.**

- The state technical college board requires many college professional staff, such as financial aid officers, to obtain licenses from the board office. Some administrators told us that licensing serves little practical purpose and inflates staffing costs unnecessarily. We think the technical college board and higher education superboard should re-examine the need for staff licensure.

- The community colleges use faculty for most of their student counseling services, and some counselors receive annual salaries exceeding $50,000 despite having contracts that require no more than 25 hours of student contact time per week. In our view, colleges should have the flexibility to hire counselors without master's degrees, at least for certain types of academic and career advising. The community college board and superboard should examine the duties of counselors and determine if there are more cost-effective ways to staff counseling services.[33]

- Several community colleges have members of the faculty bargaining unit administering financial aid programs. It would be more cost-effective for a professional administrator to manage financial aid,

*33* For example, the boards might distinguish between duties requiring master's degrees and those that do not, and create non-faculty positions for types of counseling that do not require staff with advanced degrees. In 1980, the Legislative Commission on Employee Relations assigned counselors to the faculty bargaining unit, and changing this assignment for staff doing more limited types of counseling would require action by the Legislature or the Bureau of Mediation Services.

and some colleges have been making this change as the incumbent managers have retired.

Finally, we think that each campus should periodically review the way it provides administrative and student services. Several of the technical and community colleges have used the approach known as "total quality management" to assess their services. Such a customer-based service review can highlight efficiencies and improvements that are not apparent in the type of broad expenditure study that we conducted.

# SUMMARY

The 1991 Legislature created a higher education superboard to manage the state university, community college, and technical college systems. However, many decisions about the governance structure remain to be made, and these will significantly affect costs. Although the net costs of the new structure are not yet clear, we think it is likely that administrative cost savings will be small relative to the merger's other fiscal impacts.

Merging co-located technical and community colleges could save three to four million dollars in administrative costs, but the magnitude of possible savings will diminish as more technical colleges form regional colleges. For this reason, we suggest that the superboard consider factors in addition to cost when deciding whether to merge the co-located technical and community colleges. In our view, a merger of the technical and community colleges would not be workable until the state governing boards merge in 1995. With or without a merger of the governing boards and colleges, we think that the higher education systems should consolidate their financial and other information systems to achieve long-term cost savings and more consistent reporting practices.

# Minnesota Technical College System

**State Board of Technical Colleges**
**Capitol Square Building 550 Cedar Street St. Paul, MN 55101**




February 24, 1992

Roger Brooks
Deputy Legislative Auditor
Office of the Legislative Auditor
Centennial Building
St. Paul, Minnesota 55155

Dear Mr. Brooks:

I have reviewed the study conducted by your office of Administrative and Student Services Spending at State Universities, Community Colleges, and Technical Colleges. The study design and ensuing report treat the complex data in a fair and accurate manner. The design of the study has appropriately addressed differences in mission among the three systems. The Technical Colleges, because of their historical ties to the local school boards and highly focused mission, make them particularly complex to analyze. We appreciate the diligence exerted by your staff in pursing a thorough understanding of the Technical College System and in reflecting that understanding in meetings held with us.

As the report indicates, the Technical Colleges are in the initial stages of forming regional colleges. Our vision of these institutions is that they be single colleges with multiple campuses and, as a result, will both improve educational services and opportunities to students and substantially reduce administrative costs. Clearly, accomplishment of this vision requires constant effort and strong ability to deal with change while increasing community and staff participation and accountability. We do expect initial cost savings, but we also expect administrative and student services efficiencies to increase over time.

Finally, the task of consolidation, while not quick or simple, is made viable by the united focus of the colleges on our mission.

Sincerely,

Carole M. Johnson

Carole M. Johnson
Chancellor
296-3995

Minnesota
Community Colleges

Office of the Chancellor
203 Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101
612/296-3990

February 24, 1992

Mr. James R. Nobles
Legislative Auditor
Centennial Office Building
St. Paul, Minnesota 55155

Dear Mr. Nobles:

Given the complexity of your assignment, the report on administrative and student services costs in the Community College, Technical College and State University Systems, taken in its entirety, is fair and balanced.

It shows that Minnesota's Community Colleges, operating as an "open door" system on 21 campuses of widely varying size, serving students who vary widely by age, ability and goals, operate at the lowest cost per student in Minnesota higher education.

To avoid misinterpretations based on only pieces of the report, we would urge readers to keep the following in mind:

1. Most comparisons in the report are based on full-year-equivalent (FYE) enrollment. While you accurately report that FYE enrollment increased by 46% in the Community College System between 1981 and 1991, the actual number of students has increased even more. Fifty-seven percent of all community college students now attend on a part-time basis, taking less than a full credit load. They need and deserve the same services and attention as full-time students. We believe it should be clear that in the area of administrative and student services, it takes more staff to serve two or three part-time students than it does to serve one full-time student. Our allocations to the colleges have reflected that since the allocation process was established.

2. Minnesota is among only a handful of states that has a "true" state system of community colleges. In most states, community colleges are organized and funded (at least in part) from local taxes, while the state office provides only coordination of legislative relations, research and similar support. Minnesota operates a true state system and has found it more cost efficient to provide some services on a centralized basis rather than duplicating them on each campus. These operations include fiscal services, human resources and computer services. Your report notes that this approach "makes sense."

3. As you note repeatedly in the report, the period from 1981 to 1991 saw great changes in Minnesota's Community Colleges. Today, more than 60% of our students are women, 45% are aged 25 or over and 57% attend part-time. The number of minority students has tripled; the system has expanded its services to students with disabilities. With the sharp decline in the number of high school graduates ("traditional" students), Minnesota's Community Colleges are serving a far more disparate student body and the colleges' services must expand to serve these students.

   The Minnesota State Board for Community Colleges has adopted new initiatives to meet the changing needs of students. Many of the staff labeled as "middle managers" or "lower managers" are in reality specialized professional or technical staff carrying out these Board initiatives. Examples are outreach to underserved populations and the Student Success Program, a pledge to provide the help necessary for every student to reach his or her full potential. Administrative and student services personnel now deal with evening and weekend classes, child care, more complex admissions and financial aid, building construction, special services to women, minorities and students with disabilities.

4. The report uses 1981 as the base year for comparisons. You noted that this was the lowest year in recent history for comparative costs and staff in the Minnesota Community College System. Readers should note that this low point is then compared with a period containing large enrollment growth. In some cases where percentages are used, a more accurate picture could have been portrayed by using actual numbers.

The overall issue is whether Minnesota's Community Colleges are operating in the most efficient way possible. Your data shows that, over time, we are operating efficiently. The chart in Chapter 3, page 62, shows that community colleges are spending less per FYE than they did in 1985 and only 2% more than they did in 1979. When data are arrayed on a per-student basis, it also shows we are operating efficiently. The chart in the Executive Summary, page xvi, shows community colleges in the middle range for administrative and student service costs per FYE. If data from this report is computed on a per-student basis, to account for the growth in part-time students, administrative and student services expenditures per student become:

| | |
|---|---|
| **Community Colleges** | **$ 770** |
| **State Universities** | **$1,023** |
| **Technical Colleges** | **$1,277** |

We thank you for the opportunity of providing information for this report and for inclusion of our response. Along with the information on each system, we believe that in Chapter 6 of this report you have done a good job of identifying the issues and concerns regarding the pending merger of these three systems.

Sincerely,

Gerald W. Christenson/ec

GERALD W. CHRISTENSON
Chancellor

MINNESOTA STATE UNIVERSITY SYSTEM

230 Park Office Building/555 Park Street, St. Paul, Minnesota 55103 (612) 296-2844
FAX (612) 296-3214

AKITA CAMPUS, JAPAN
BEMIDJI
MANKATO
METROPOLITAN
MOORHEAD
ST. CLOUD
SOUTHWEST
WINONA

February 24, 1992

Mr. James R. Nobles
Legislative Auditor
1st Floor Centennial Office Building
St. Paul, MN 55155

Dear Mr. Nobles:

We have reviewed the study your office recently completed on spending for administrative and student services by the State Universities, Community Colleges and Technical Colleges. Overall we believe it was competently conducted, thorough and objective. This is in part a result of the quality and professionalism of the members of the audit team, who in the course of the study gained an impressive understanding of the dynamics of the higher education systems. As with such projects, there are a number of perceived oversights and misinterpretations, but in our judgment these are minor and do not materially affect the findings.

The study confirms the data presented at hearings before the Higher Education Division of the House Appropriations Committee last Spring. The Technical Colleges have the highest administrative per student cost, the State Universities the lowest with the Community Colleges in between.

The decision to exclude the University of Minnesota from the study was unfortunate. It prevents making a comprehensive analysis of spending by all the public higher education systems which was one of the primary issues before the legislature when the study was first considered. The omission takes on new importance as proposals for merging the State Universities and the University of Minnesota are being brought forward.

The report correctly advises the legislature that the organizational structure developed for merging the State Universities and the Community and Technical Colleges will be a major factor in determining how much it will cost. Creating large statewide employee bargaining units will clearly have very high ongoing cost implications. The result would be that students and taxpayers would have to pay substantially more for the same services that are now available at a lower cost. We are concerned that organizational decisions and commitments will be made prior to having a full understanding of their economic implications.

While the study identifies opportunities for further economies, it seems clear that major savings cannot be achieved through reductions in administrative and student services. If it is major cost savings that are wanted, the state at some point will have to take the admittedly unpopular step and examine the cost of maintaining such a large number of small redundant and duplicative programs and facilities.

We appreciate having an opportunity to review and comment on the study.

Sincerely,

Edward R. McMahon
Vice Chancellor-Finance

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Evaluation reports can be obtained free of charge from the Program Evaluation Division, Centennial Office Building, First Floor South, Saint Paul, Minnesota 55155, 612/296-4708.