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HIGHER EDUCATION.

THE UNIVERSITY OF ARIZONA, PH.D., 1979

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CAPITAL FACILITY FINANCING ALTERNATIVES
IN HIGHER EDUCATION

by

Frank Javier Felix

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND ADMINISTRATION
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF PHILOSOPHY
WITH A MAJOR IN EDUCATIONAL ADMINISTRATION
In The Graduate College
THE UNIVERSITY OF ARIZONA

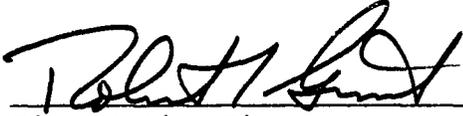
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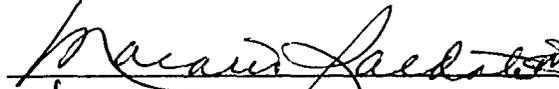

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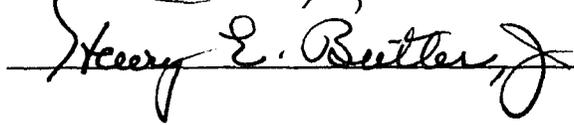
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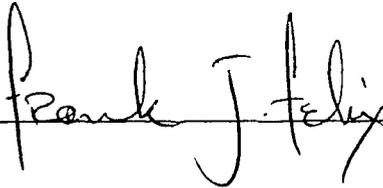
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A handwritten signature in cursive script, reading "Paul J. Felix", is written over a horizontal line.

ACKNOWLEDGMENT

To those whose assistance, cooperation, and patience made this dissertation possible, a special acknowledgment is made.

To my committee chairman, Dr. Robert T. Grant, along with Drs. Henry E. Butler and Macario Saldate IV, for their cooperation, time, and advisement.

To the persistent 'but welcomed', encouragement of Dr. Richard Edwards and A. "Casey" Stengel.

To my wife Diana, for her encouragement, love, devotion, and understanding in connection with this dissertation.

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ABSTRACT

A review was conducted of the statutory provisions of each state relative to the financing alternatives for higher education. The following methods were identified: (1) state appropriations; (2) general obligation bonding; (3) revenue bonding; (4) special tax revenue bonding; (5) state authorities; and (6) industrial development authorities.

Three types of tax and expenditure limitation measures were also noted:

- (1) Jarvis types, property tax reduction or rollbacks;
- (2) State and/or local spending limits; and
- (3) Strengthened fiscal accountability.

Enrollment and migration patterns of traditional-age freshmen (18 year olds), were also examined to determine future capital facility needs of higher education. On the basis of the data developed, it was found that ten states can anticipate an increase in the pool of traditional-age freshmen ranging from a 2% figure for Colorado, to a high of 36% for the state of Alaska. The data for the anticipated levels of participation of traditional-age freshmen also established that these same ten states can anticipate higher participation levels.

The data also identified four of the ten states as importers of traditional-age freshmen students. This combined effect will contribute to increased enrollments for the states of Alaska, Arizona, Colorado, Florida, Hawaii, Idaho, Nevada, New Mexico, Wyoming, and Utah.

It is also evident that the ten states identified as having continued enrollment increases, contrary to the national declining enrollment trends, will continue to be confronted with a diverse and substantial list of capital facility needs for higher education. Constitutional and statutory constraint do not allow the use of general obligation bonding in the ten states listed. Therefore, should these states desire to utilize general obligation bonds, some modification of the constraint would be necessary.

General obligation bonding presents the most viable financing alternative, inasmuch as general obligation bonds are the most cost effective and secure of debt instruments, because they generate the required capital at the lowest interest rates and the lowest possible net cost.

CHAPTER 1

INTRODUCTION

Financing capital facility construction needs for institutions of Higher Education has historically presented a challenge for higher education's budget planners. The current trend toward proposed tax cuts and/or expenditure limitations will undoubtedly compound that challenge.

Newly imposed tax or expenditure limitations along with existing levels of commitment of the state's revenues among the various state agencies will force higher education into severe competition for their share of the state revenues upon which they rely so heavily.

Taxpayers nationwide continue to campaign for stronger curbs on government expenditures, inspired by the successful "Tax Revolt" in California with the adoption of the referendum called Proposition "13", in which the electorate imposed substantial reductions in the property tax rates.

Ironically, taxing and expenditure limitations have been a major part of intergovernmental fiscal systems for some time. Virtually all states impose these limits on local governmental units (e.g., Arizona's county and

city government ten percent yearly, school districts seven percent yearly, limitation).

Proposition One, drafted by economist Milton Friedman, relating to state government expenditure limitation was first presented to the California electorate in 1973, with strong support from then Governor Ronald Reagan. This state limitation effort was defeated by a fifty-four to forty-six percent vote ratio, but the efforts continued and led to the formation of the "National Tax Limitation Committee". Its principal organizer was again Milton Friedman. The group has encouraged and successfully helped in assuring that similar measures are presented to the voters in other states. The victory as evident with Proposition "13" demonstrated the credibility and viability necessary for a true tax revolt and subsequent momentum of public support. Feeling the mood of the public, several state legislatures initiated their own tax-cutting measures. Several other state legislatures convened into special sessions to develop their own tax-cutting or expenditure limiting measures. These states' actions were in anticipation that such action by the legislatures would forestall campaigns by taxpayer groups to successfully get more restrictive measures on the ballot by petition.

What must be kept in mind is that any reduction in tax revenues or expenditure limitations necessitates a

reduction in programs and services to the public. What has to be recognized is that even maintaining the prior years' level of services will require increases in appropriation due to inflation alone. And, to insist that another level of government be responsible for providing specific funds ignores the fact that they already have expenditure limitations, and that the same public pays taxes at all three levels (federal, state, and local) of government (Marcelli, 1978).

Public institutions of higher education have depended upon government appropriations to meet their requirements for capital facility expansion needs. The expectation has been that when capital facility financing either for new, replacement of obsolescent facilities, or expansion of facilities, these same sources could be depended upon to provide the required funding. Whether this continues to be a reasonable assumption will be discussed later.

Purpose of the Study

The problem to be addressed by this study is resolution of the following questions:

1. Identification and description of the financing alternatives currently operational on a nationwide basis to meet the capital facility needs for higher education.

2. Identification and description of the tax and expenditure limitation measures that have been adopted or are being proposed for adoption on a nationwide basis.
3. Identification of enrollment and migration patterns of traditional-age-freshmen (18 year olds) on a nationwide basis.

Significance

The literature clearly establishes that capital facility needs of higher education have been financed by the federal and state governments in varying degrees. And, that anticipated enrollment increases has been the prime justification for financing capital facility expansion projects. The current national enrollment trends are anticipated to decrease in the years to come, thus eliminating the major argument for justification of continued capital facility expansion for higher education.

What appears to be needed is an examination of the financing alternatives operational on a nationwide basis, tax and expenditure limitations being adopted or proposed for adoption nationally, and an examination of the state-by-state enrollment and migration patterns to determine if capital facility expansion needs of higher education will continue to be a problem, contrary to the national trend of declining enrollment.

This could provide insight to state government decision-makers and higher education administrators seeking solutions to the problem of continued financing of higher education capital facility needs.

Summary

The exhaustion of sources of taxable income along with the public demand for tax and expenditure limitation measures on a nationwide basis are the issues that encourage identification of financing techniques historically used by state government in meeting the capital facility needs of higher education. Emphasis will be placed on identification of financing alternatives operational on a nationwide basis for the financing of capital facility needs of higher education; identification of tax and expenditure limitation measures that have either been adopted or are being proposed for adoption on a nationwide basis; and identification of enrollment and migration patterns of traditional-age freshmen (18 year olds) on a nationwide basis, to determine if capital facility expansion needs will be prevalent.

In considering the mood of the taxpayers, and the financial position different states may find themselves in, what will be the future for higher education capital facility needs?

This study shows that contrary to the national trend of declining enrollments anticipated in higher education,

several states can expect increases. The identification of the financing alternatives and tax or expenditure limitation measures found within these states will help determine the extent to which those states are prepared to facilitate continued capital facility needs of higher education.

Limitations

This study was limited to the identification and description of:

1. Financing alternatives or techniques specifically related to the capital facility expansion needs of four-year state-supported institutions of higher education.
2. Enrollment patterns and projections and the anticipated impact on future capital facility needs and requests from higher education.
3. Fiscal constraints, either electorally or self-imposed facing state government and the ramifications for future capital facility requests.

Definition of Terms

The following terms are used consistently throughout the study:

1. Institutions of higher education: four-year colleges or universities created by constitutional or statutory provisions and supported, in the main, by appropriations from state tax revenues.

2. Capital facilities: buildings designed to house the academic and administrative programs of institutions of higher education, including income or revenue producing facilities such as dormitories or stadiums.
3. "Pay-as-you-go": restricting expenditures to the funds available from current revenues and past accumulations.
4. General obligation bonds: an unconditional pledge to use the power to tax to insure repayment of the debt incurred. It carries with it a pledge of the jurisdictions "full faith, credit and taxing power".
5. Revenue bonds: secured only by the revenue from a specific facility which charges users for the service it provides. Legal debt limits found in most states do not apply to debts of this type. Restrictions are largely those imposed by the market and the authorizing agent itself.
6. Special tax bond: all or a fixed percentage of the revenues occurring from a specific tax are pledged as security for a loan. These types of bonds have been employed, for the most part, as a means of escaping legal restrictions which limit the use of general obligation bonds.

7. Lease purchase agreements: legally a long-term lease is not a debt, but a lease obligates to a series of fixed payments over a period of years in order to acquire the immediate use of a capital facility. The lessee is given the option to buy the facility at a predetermined price and conditions at times stated during the lease period.
8. State authority: an instrument of the state established to construct public facilities through the issuances of revenue bonds secured by long-term lease agreements, fees, or tuitions. (Shirley, DeGennaro, and McDonald, 1971, pp. 12-20).

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The literature with regard to financing of capital facility projects for higher education is very limited. It is principally directed toward the impact which World War II and the 1960's "baby boom" has had on enrollment and assessment of the projected needs for capital facility developments.

Immediately after the Second World War the physical plants of higher education in this country were not sufficient to accommodate an enrollment seventy percent greater than any previous high. The federal government helped ease the situation with makeshift arrangements, by making barracks, quonset huts, and other structures available for conversion into classroom buildings, laboratories, dormitories, faculty housing, and apartments for married students (Millett, 1952, p. 258).

The more recent literature concentrates on how those capital facility needs were met by the federal and state governments and the institutions themselves. The literature review for this study encompasses: (1) the participation of the federal and state governments and their role in meeting the capital facility needs of higher education; (2) the tax and expenditure limitation measures that have been adopted or are being proposed nationally; (3) the enrollment and migration patterns of traditional-age freshmen (18 year olds).

Federal Government

Grants and Loans

During the 1930's, the federal government made substantial GRANTS and LOANS to state government for public work purposes. This federal effort as described in America Builds: The 1939 Record of the Works Progress Administration, was initiated to combat unemployment and was administered through the emergency agency commonly known as the Public Works Administration. State government agencies inclusive of public institutions of higher education could apply for funds designated for construction of capital facilities projects. The projects that were funded were given outright grants of forty-five percent of the total estimated cost. State governments were required to provide the remaining cost. States could also borrow all or part of the remaining fifty-five percent, through loan funds that were also available (U. S. Federal Work Agency, 1939).

This financial incentive, coupled with a desire on the part of most state legislatures to help provide employment within the state, induced state legislatures to appropriate more funds for capital construction projects (U. S. Federal Work Agency, 1939, p. 288).

Relief Labor

Another federal program that proved useful to many public institutions of higher education to a lesser degree than the W. P. A. was the Federal Relief Program. The

W. P. A. existed from 1935 to 1942 and was administered by the Works Project Administration.

The W. P. A. was concerned primarily to employ large numbers of persons at a minimum direct cost; it expected the state and local government sponsoring agencies to provide most of the material for any construction which might be undertaken (U. S. Federal Work Agency, 1939, p. 388).

RELIEF LABOR was used to a considerable extent by higher education in rebuilding and remodeling campus facilities. The rapidly increasing enrollment in higher educational institutions in the post-war years and accumulation of capital facility needs deferred during the war were the significant factors in accounting for the large receipts from the federal government.

As indicated in Table 1, institutions of higher education received approximately sixty-five percent of the receipts for plant expansion distributed among the 285 state controlled higher education institutions from 1934 to 1948.

The major premise for the distribution of these funds was an effort to stimulate the economy with new construction and jobs, as well as to contribute in some manner to the overcrowding problems confronting higher education in the postwar period. The enrollment of returning veterans of war and of those Americans that had postponed their education due to the war created a priority within higher education to investigate whatever financial sources were available for the development of the much needed facilities.

Table 1. Receipts for Plant Expansion of 285 State-controlled Institutions of Higher Education (by thousand dollars) (Allen and Axt, 1952).

Type of Institution	1934	%	1940	%	1948	%
Universities	11,420	81.8	18,453	50.3	140,424	65.0
Complex Lib. Art Colleges	373	2.7	2,710	7.4	13,005	6.0
Simple Lib. Art Colleges	252	1.8	770	2.1	6,120	2.8
Teacher Colleges	1,244	8.9	7,689	21.0	36,755	17.1
Other Professional Schools	653	4.7	6,877	18.7	17,249	8.0
Junior Colleges	23	0.2	184	0.5	1,472	0.1
Totals	13,965		36,684		215,033	

In mobilizing the national economic resources for the war, the federal government efforts substantially restricted the materials which might have been available for state governments' capital expansion projects. As a result, building activities during the war years were confined to projects essential to the war effort. At the same time, state revenue collections remained at the same

levels, which was part of the federal government's effort to maintain high levels of federal, state, and local taxation, and of voluntary savings.

With state governments maintaining the existing levels of revenue collections and the declining of state expenditure, the federal government's objective to set up state reserve funds to be used for post-construction projects was met. At the end of the war, most reserves were actually used for construction purposes. And, in some instances, part of the funds were spent for operating expenditure, since rising prices and accumulated needs resulted in steadily mounting state budgets (Millett, 1952).

Housing and Home Financing Agency

The Housing Act of 1950 authorized the federal government to make long-term loans to higher education for the construction of faculty and student housing, including dormitories, apartments, single family units, and improvements to existing residential buildings. The original legislation authorized the Housing and Home Finance Agency to lend up to 300 million dollars, but while the Korean War was in progress, only part of the money was released. During this time all loans were defense-related; all had to go to institutions of higher education that had special

housing needs arising from the expansion of R.O.T.C. Units, defense contracts, and the like.

An amendment to the Housing Act of 1950 passed in 1955 which gave authorization for an increase of 500 million dollars for loans, and it further expanded the definition of eligible projects to include cafeterias, dining halls, student unions, infirmaries and other service facilities. The most important change was with reference to the lowering of the interest rate applied to the loans. This change brought a reduction from three and one-fourth percent in fiscal 1955 to two and three-fourths percent for fiscal year 1956. The lower rate made it more advantageous for institutions of higher education to borrow from the federal government rather than the state and/or bond market.

Congress continued to increase the authorization amounts to 750 million in 1957; 1.175 million in 1959; and 1.675 million in 1960. In 1961, further amendments to the Housing Act authorized further increases of 300 million a year for four years which would bring the COLLEGE HOUSING LOAN REVOLVING FUND to 2.875 million by 1964 (Rivlin, 1961). The data compiled by the Department of Health, Education and Welfare--Office of Education (Table 2) clearly establishes a heavy reliance for STATE FUNDS for funding of

Table 2. Sources of Funds to Finance Capital Facilities (1951 - 1959)(Department of Health, Education and Welfare, 1961).

Sources	Instructional and Research			
	1951 - 55	%	1958 - 59	%
Gov't appropriation	123,914,000	47.7	278,801,000	47.5
Bonds:				
A - State	18,964,000	7.3	40,500,000	6.9
D - Institution	4,156,000	1.6	8,217,000	1.4
C - Rev. non-HHFA*	6,494,000	2.5	15,261,000	2.6
D - Rev. HHFA*			326,000	.1
Gifts & Grants	66,243,000	25.5	146,150,000	24.9
Others	21,563,000	8.3	75,390,000	12.8
Current	18,444,000	7.1	22,304,000	3.8
	Residential Auxilliary			
	1951 - 55	%	1958 - 59	%
Gov't appropriation	17,747,000	13.1	51,039,000	11.0
Bonds:				
A - State	3,116,000	2.3	36,457,000	7.9
D - Institution	1,084,000	.8	5,048,000	1.1
C - Rev. non-HHFA*	42,809,000	31.6	57,721,000	11.4
D - Rev. HHFA*	18,183,000	13.4	200,038,000	43.2
Gifts & Grants	28,178,000	20.8	40,383,000	8.7
Others	14,495,000	10.7	61,101,000	13.2
Current	9,889,000	7.3	16,263,000	3.5

*HHFA = Housing and Home Finance Agency.

capital facility projects for research and instructional construction.

Gifts and Grants

The next revenue source which constitutes twenty-five percent were GIFTS and GRANTS. As is obvious, reliance on bonds and loan sources were minimal. However, where residential and auxiliary construction projects were concerned, dependents on REVENUE BONDING sources dropped substantially from 1951-55 to 1958-59 from thirty-one and six-tenths percent to eleven and four-tenths percent. And, requests for federal assistance via the Housing Act went from a thirteen and four-tenths percent level to forty-three and two-tenths percent (Rivlin, 1961).

Rivlin further reports that there existed "considerable support in Congress for extending the coverage of the housing loan program to include instructional building as well as college housing". An amendment to this effect passed the U. S. Senate chambers in 1958 only to be defeated in the U. S. House of Representatives. Loans for classroom buildings and other instructional facilities were also included in an omnibus housing bill which both the U. S. House and Senate passed in 1959, only to be vetoed by then President Eisenhower. The Eisenhower Administration opposed not only the loan program for instructional facilities, but also opposed federal lending for college housing (Rivlin, 1961).

The alternative mechanism offered by the Eisenhower Administration would have guaranteed payments of interest and principal on bonds sold by institutions of higher education to private investors for the purpose of financing housing or instructional buildings. Senate Bill S. 1017, 86th Congress, would have authorized the federal government to pay twenty-five percent of the principal on such loans in equal installments over twenty years. This DEBT RETIREMENT ASSISTANCES was supposed to compensate higher education for the higher interest rates they would have to pay private lenders. This "debt retirement assistance" would have applied to both public and private non-profit institutions. Senate Bill S. 1017 did not receive enough support on Capitol Hill to reach a floor vote (Rivlin, 1961).

The Kennedy Administration favored federal loans for instructional buildings, but recommended a separate program from the college housing loan program. The administration sponsored H. R. 5266, 87th Congress, proposed up to 300 million a year for five years (1.5 billion in all) be made available for loans to both private and public institutions of higher education for the construction of academic facilities--including classrooms, laboratories, libraries and administrative and service buildings. The loans would be for fifty-year periods at the same rate as the housing loans. The institutions, however, would need to finance one-quarter

of the cost of each project. The House Committee on Education and Labor rejected the administration bill on May 25, 1961, reporting favorably on a substitute bill (H.R. 7215). H.R. 7215 would have authorized 120 million a year for five years for loans, in addition to 180 million in outright grants to higher education for academic facilities. These grants would have been distributed to states on the basis of enrollments, and could not be used to finance more than one-third the cost of any single project. However, no further action was taken (Rivlin, 1961).

The State

Public institutions of higher education ultimate reliance for capital facility funds lies with the fifty state legislatures. Some institutions have had to obtain a part of the capital facilities monies through private GIFTS and GRANTS. Other states have set up SEPARATE CONSTRUCTION FUNDS to which revenue sources are channeled. Louisiana, Texas, and California state legislatures earmarked certain taxes and other higher education revenues for the redemption of improvement bonds that do not require electoral approval.

State Appropriations

This approach is generally recognized as the "pay-as-you-go" financing method. This method requires legislative action for each capital facility funding request.

Funds are distributed annually for specific facility requests based on adequate substantiation of need and availability of funds.

This method has had popular appeal because

- (1) accountability for capital facility expending is enhanced primarily because of the required legislative scrutiny;
- (2) no interest charges are incurred, insofar as funding is based on direct payment for each project.

Revenue Bonding

To supplement the funds provided by both the federal and state political governmental systems, according to Allen and Axt (1952), institutions of higher education typically

resorted on an extensive scale to REVENUE BONDING for the purpose of financing self-liquidating projects. Revenue bond projects included buildings such as dormitories, stadiums, field houses, and student unions. Revenue bonds placed the burden of the debt service upon those who used and presumably derived direct benefit from such facilities, rather than the taxpayer (Allen and Axt, 1952, p. 136).

The elements essential for revenue bonding has been fiscal and legal ability and the willingness to set aside or designate current operating income for debt service. The extensive use of revenue bonds by institutions of higher education were predominately for auxiliary enterprises that produced sufficient income to provide adequately for operating expenses and amortization of the debt. Facilities such as

classrooms, laboratories, libraries, and administrative office space would also be financed only if monies were set aside for debt service, such as student fees, endowments, and gifts. Most of the states which allow revenue bonds for higher education also allow the Board of Regents the authority to pledge all or part of the revenues and tuition fees paid into the school as may be needed to meet the requirements of any revenue bond issue. Of the other states which allow capital construction through the issuance of revenue bonds, approximately one-half allow the Board of Regents the freedom to issue bonds on any project that can be supported in the bond market.

State Authorities

A current method for financing university capital construction is the creation of a state authority. Pennsylvania, Tennessee and Alabama are three states which have established "State School Bond Authorities". An authority is an instrument of the state, but is not legally a state agency. Most state housing finance agencies have been organized as state authorities in order to secure tax-exempt bond financing but at the same time denying the liability of the state in the case of default on the revenue bonds. University bond authorities have been successful in

those states where they have been held constitutional and have been a good source of revenue for capital construction. These state authorities issue revenue bonds which are secured by long-term lease agreements, fees, or tuitions. At the end of the lease, usually forty years, the university owns the building and the debt has been paid to the bondholders and any profits have been used for administration costs of new loans. A state authority would be able to issue revenue bonds at only a slightly higher rate than G. O. bonds; however, the state will not be liable for repayment of the bonds. Another advantage of a state authority is that it can contract with the universities for the buildings and use student fees specially earmarked to pay off the bonds. However, there seems to be a strong resistance to the establishment of the authority concept because state officials believe they would lose control over the amount and purpose for which the bonds are to be issued.

Building Use Fee

Another method of providing funds for university capital construction is to issue revenue bonds which are backed by building use fees or rents. Pennsylvania uses this form of leasing arrangement. The authority and the university agree on the type and size of the buildings to be constructed. The authority then constructs the building

for the higher education institution under prior agreed-upon terms and conditions. The state maintains some control over the project but does not have the construction problem or liability for the repayment of the bond (Shirley et al.1971).

Several states have the constitutional authority to create a state debt through the sale of state bonds for higher education. New York and South Carolina are states with a separate authority which is allowed to create state debt to finance higher education. In 1962, New York also established a state university construction fund which is responsible for the construction, acquisition and rehabilitation of university facilities. The construction fund receives money from the state bond authority for higher education and is responsible for the investment of this money. Rentals from the use of the public buildings go to the fund for repayments of the loans or grants.

Industrial Development Authorities

In the past twenty years nearly all states have established industrial development authorities which can issue revenue bonds for certain projects. The Internal Revenue Service requires that these projects be "public projects" in order to achieve tax-exempt status. The list of approved projects includes streets, parks, water and sewage systems, pollution control and EDUCATIONAL FACILITIES.

Many state cities and counties have established industrial development corporations to construct educational facilities. These facilities are either leased to the university with a final option to buy or just leased under a simple lease agreement. The government agency can also create a "non-profit corporation" to issue the bonds or the government entity can issue the bonds themselves. Kentucky, West Virginia, and Minnesota are three states which have used industrial development authorities for educational purposes.

Summary

"The prevailing practice has been to issue revenue bonds that pledge the use of receipts from the operation of a particular enterprise for debt service" (Taylor, 1949, p. 328). States cannot print money and constitutional provisions in thirty-nine states require a balanced budget, five other states allow constitutional debt limits of insignificant amounts (e.g., Arizona--350,000), and one state limits its deficit to one year. And, only four states can legally spend more money than they receive. Other states do permit the legislature to authorize indebtedness only after submission of such a proposition to the electorate within the state and a resulting positive vote on the question. The remaining states permit the state legislatures to authorize borrowing as it sees fit (Marcelli, 1978).

These circumstances have merely made it more difficult if not impossible for most institutions of higher education to obtain capital facility funding via the borrowing method, and, have had to obtain capital facility monies from ANNUAL APPROPRIATIONS by the state legislature sufficient to build the necessary academic facilities.

States differ in many fundamental factors, relating to capital facility financing specifically. Some of these factors are constitutionality, statutory provision, organization of state government, organization of higher education, political philosophy, financial resources, and the level of demand for state government service. Adoption of financing strategies are then dependent on the conditions that exist in the state of which they are a part.

Tax and Expenditure Limitation Measures

The people in the state of California had considered and rejected three proposals to reduce taxes or limit spending over the past thirteen years. The most recent attempt sponsored by then Governor Ronald Reagan, came the closest to enactment, garnering some forty-six percent of the vote. Four years later, Proposition 13, a more restrictive measure than the 1974 Governor Reagan 8.5% yearly expenditure limitation measure was adopted by an overwhelming two-to-one margin.

One of the reasons leading to the adoption of Proposition "13" in California was the Legislature's and the Governor's office failing to reach agreement over the best way to use the ever-growing \$5 billion surplus in two years of trying. Ironically, this inaction could be attributed in part to a previous California reform designed to slow spending that called for a two-thirds vote of the Legislature for enactment of expenditure bills.

Another problem related to the accuracy in forecasting the amount of revenue surplus which was consistently underestimated, coupled with the fact that California had a well above average property tax burden, an unusually rapid escalation in residential values and property taxes, and a high and rising combined state and local tax burden.

A nationwide poll, conducted in late June for the New York Times and CBS News, found that Americans, by a two-to-one margin, supported a similar measure for their own jurisdiction. The same poll found that a resounding 80% of those polled felt that government wasted "a lot of tax money" (New York Times, June 14, p. 25, 1978).

In the November 1978 general election ballot, there were tax or expenditure limitation measures in thirteen states. These thirteen states differ in many ways from each other and from California.

Citizens in only two of the thirteen (Arizona and Hawaii) were heavily taxed, considering state-local tax revenue as a percent of state personal income. Only two, Michigan and Nebraska, were very heavy users of the property tax. Six are considered low and falling in terms of what the Advisory Commission on Intergovernmental Relations calls "fiscal blood pressure", another measure of state-local tax burden. None of the thirteen states, not even Texas, with its relatively large surplus, came to the \$5 billion surplus of California. The only thing in common was the direct initiative process. Of the seventeen states where citizens can initiate such constitutional amendments, nine placed them on the ballot in November of 1978.

The tax and expenditure measures ranged from the Proposition 13 Jarvis-type of property tax reduction or rollbacks; state and local spending limits; and measures calling for strengthened fiscal accountability (Intergovernmental Perspective, 1979).

Summary

Federal fiscal restraints are also being prompted by state legislatures throughout the country. Twenty-three state legislatures have adopted resolutions calling for a constitutional convention for the purpose of adopting a balance-budget amendment to the United States Constitution.

The remaining eleven states needed to call the convention could act shortly.

All three levels of government (federal, state, and local) seem determined to rein in public sector spending. Also, politicians are ready and eager to embrace the idea of fiscal limits, thus this cycle of retrenchment seems destined to last for a good while.

Enrollment and Migration

The trend toward larger enrollments during the first half of this century was interrupted by the Second World War. The third week of October, 1939, total enrollment for higher education was reported as 1,364,815. That number declined to 733,190 in the autumn of 1942, a reduction of 46% below the 1939 enrollment level. After the war, the veteran's educational benefits program of the federal government encouraged students whose educational programs were interrupted by the war, to continue, and enabled some to attend institutions of higher education who might not have done so otherwise. The result was greatly swollen enrollments, with a peak of 2,650,000 total student enrollment for 1950. This total was thirty percent of the age group between 18 to 21 years of age.

Thus the first half of the century the proportion of students enrolled in higher education went from 4% to 20%.

As of 1910, approximately 81% of children age six to thirteen years of age attended schools; by 1950 this proportion had grown to 98%. Again, in 1910, about 60% of young people fourteen to seventeen years of age attended school, by 1950 it was 83%. Thus continued increases in school attendance undoubtedly influenced higher education enrollment increases as well.

Summary

Approximately 20% of traditional-age freshmen went on to enroll in institutions of higher education in the 1950's, today that proportion runs approximately 26%. The problem facing higher education is the impending decline in the number of traditional-age freshmen. That decline will slow until 1982 and then accelerate. Around 1990, the number of traditional-age freshmen is anticipated to rise again. At the low point in the 1980's the number of 18 year olds will be approximately 73% of the number in 1978 or 1979. On the basis of these figures, observers are anticipating average enrollment declines of about 25% nationwide (Policy Analysis Service, 1970).

CHAPTER 3

METHODS AND PROCEDURES

Introduction

This study was designed to identify and describe the financing alternatives currently operational on a nationwide basis to meet the capital facility needs of institutions of higher education. Secondly, to identify and describe the tax and expenditure limitation measures that have been adopted or are being proposed for adoption on a nationwide basis. In addition, an examination of enrollment and migration patterns used to determine whether capital facility expansion needs for higher education will be evident given anticipated national declining enrollment trends for higher education.

Design of the Study and Data Collection Process

The collection of the data relating to the identification of financing alternatives currently in operation on a nationwide basis required a review of the related literature and an examination of the sections of each of the fifty state statutes that specify the powers and duties of the governing boards for higher education, pertinent to capital facility financing authority.

Where it was found that governing boards had little or no authority or responsibilities regarding capital facility financing, a further examination was required of those sections of state statutes designating the powers and duties and the political entity of primary responsibility for capital facility financing for higher education, to determine the type of financing mechanism operational in each state. (Appendix A details the 50 states Bonding Authorities powers and duties.)

As a result of the survey of the literature and the examination of state statutes within the fifty states, six financing alternatives were identified as those currently operational for the purpose of financing capital facility needs in higher education.

The financing alternatives identified were:

(1) State Appropriations; (2) General Obligation Bonding; (3) Revenue Bonding; (4) Special Tax Bonding; (5) Special Authorities; and (6) Industrial Development Authorities.

Tax and Expenditure Limitation Measures

Data was compiled utilizing the Education Finance Center's publication entitled School District Expenditures and Tax Controls, 1978, and Update on State Activity on Tax and Expenditure Limitations for The Coalition of America Public Employees (Rabin, 1978). These clearly establish that tax and expenditure limitations vary in many ways from

each other, but do allow a scheme of classification. The tax and expenditure limitation measures were categorized into three groups:

1. Jarvis-type property tax reduction or rollback: these types of expenditure limitations can be best epitomized by California's Proposition 13, which significantly reduced property taxes and made it difficult to increase or enact new taxes in the future.
2. State and/or local spending limits; spending limits impose a ceiling on state and/or local spending which the jurisdiction cannot exceed except through specified means.
3. Measures calling for "strengthened fiscal accountability"; these types of measures focus the spotlight on elected officials and the decisions they make through such means as full disclosure measures requiring public notification and hearings to accompany increases in tax revenues and state-imposed mandates on local governments.

Enrollment and Migration Patterns

The data required to determine state enrollment levels by 1985 at institutions of higher education was extracted from information compiled by the U. S. Bureau of

Census: Current Population Reports, The National Center for Educational Statistics and the Policy Analysis Service: American Council on Education (1975).

In order to determine the state enrollment levels by 1985, the following factors were examined:

1. Regional shifts in the traditional-age freshmen (18 year olds) population.
2. The anticipated enrollments of traditional-age freshmen (18 year olds) at institutions of higher education within their home state.
3. The historical migration patterns of students between states.

Analysis of the Data

After the data was compiled, the following tables were formulated that:

1. Identify the types of financing alternatives found to be operational within each of the fifty states.
2. Identify the tax and expenditure limitation measures introduced within each state and the state response to date.
3. Identify the enrollment and migration patterns of traditional-age freshmen (18 year olds).

Summary

The fifty U. S. states were examined and an identification of six financing alternatives for funding capital facility requests from higher education were developed. The various tax and expenditure limitation measures were examined and were placed into three categories.

Data pertinent to enrollment and migration patterns was examined and three factors were selected for consideration in determining the states' anticipated enrollment levels for 1985.

The findings and analyses of the data developed are reported in the following chapter.

CHAPTER 4

FINDINGS

This chapter reports the findings and interpretation of the data organized in the following three categories:

1. Financing alternatives. Six financing alternatives operational on a nationwide basis for the funding of capital facility needs from institutions of higher education are categorized as follows:
 - (a) State appropriations or "pay-as-you-go".
 - (b) General obligation bonding.
 - (c) Revenue bonding.
 - (d) Special tax revenue bonding.
 - (e) State bonding authorities.
 - (f) Industrial development authorities.
2. Expenditure limitations. The identification of the types of tax or expenditure limitation measures that have been adopted or are being proposed for adoption on a nationwide basis are:
 - (a) Jarvis-types, property tax reductions or rollbacks.
 - (b) State and/or local spending limits.
 - (c) "Strengthened fiscal accountability".

3. Enrollment or Migration Patterns. The identification of enrollment and migration patterns of traditional-age freshmen (18 year olds) on a nationwide basis take into account the following three factors:

- (a) Regional shifts in the 18 year old population.
- (b) The expected level of participation of 18 year olds at institutions of higher education within their home states.
- (c) Historical migration patterns of students between states.

The results are summarized separately for each subject area for the sake of convenience in Tables 3 through 7. Sources of information for Table 3 are shown in Appendix A.

An Evaluation of Obtained Findings

Financing Alternatives

The state appropriations path, as indicated in Table 3, remains the primary strategy for funding capital facility needs of institutions of higher education. Thirty-nine states require a balanced budget. Five of these states have established a constitutional debt limit of insignificant amounts, thus limiting the state's ability to contract debts, except that the states may borrow "to repel invasions, suppress insurrection, or defend the state in time of war"

Table 3. Identification of Financing Alternatives for the States.

State	Financing Alternatives					
	State Approp.	Gen. Oblg. Bonding	Rev. Bonding	Spec. Tax Revenue	State Authority	Ind. Devel. Authority
Alabama	x	x	x		x	x
Alaska	x					x
Arizona	x		x			x
Arkansas	x	x				x
California	x	x		x		
Colorado	x					x
Connecticut	x					x
Delaware	x	x	x			x
Florida	x		x			x
Georgia	x	x	x			
Hawaii	x		x			
Idaho	x		x			
Illinois	x		x			
Indiana	x				x	x
Iowa	x					
Kansas	x	x	x			x
Kentucky	x				x	x
Louisiana	x		x			
Maine	x					
Maryland	x					x
Massachusetts	x					x
Michigan	x		x			x
Minnesota	x					x
Mississippi	x					
Missouri	x	x	x			

Table 3. Identification of Financing Alternatives for the States,
Continued.

State	State Approp.	Gen. Oblg. Bonding	Financing Alternatives			Ind. Devel. Authority
			Rev. Bonding	Spec. Tax Revenue	State Authority	
Montana	x		x			
Nebraska	x		x			x
Nevada	x	x				x
New Hampshire	x		x			
New Jersey	x					
New Mexico	x	x	x			x
New York	x	x	x		x	x
North Carolina	x					
North Dakota	x		x			
Ohio	x	x	x			x
Oklahoma	x	x	x			x
Oregon	x	x	x			x
Pennsylvania	x		x		x	
Rhode Island	x	x	x			
South Carolina	x	x	x			x
South Dakota	x		x			
Tennessee	x	x	x		x	x
Texas	x		x	x		x
Utah	x	x	x			x
Vermont	x					
Virginia	x	x	x			x
Washington	x	x	x			x
West Virginia	x		x			
Wisconsin	x	x				
Wyoming	x	x				x

Table 4. Tax and Expenditure Limitations for the States.

State	Consti- tution	Stat- ute	Nov. 78 Ballot (Passed-Failed)	State Activity (-) (+)	Type
Alabama	x		Passed		1
Alaska				*N.T.L.C. Priority	
Arizona	x		Passed		2
Arkansas					
California	x		Passed		1
Colorado	x		Failed	(Leg. enacted 7% limitation (Leg. debate')	2
Connecticut	x				2
Delaware		x	Passed by Legislature		2
Florida	x		(Failed to gain required		2
Georgia			signatures)	Activity at Local Level	2
Hawaii	x		Passed		2
Idaho		x	Passed		1
Illinois	x		Passed	(Advisory referendum)	2
Indiana				(Tax group organizing for 1980)	1 or 2
Iowa				(-)	
Kansas				(Gov. appointed Citizen Advisory Committee)	1
Kentucky				Leg. debate	1 or 2
Louisiana				(-)	
Maine		x	Failed in Legislature		1
Maryland			(Not an initiative state, petitions being circulated to pressure leg.)		1

Table 4. Tax and Expenditure Limitations for the States, Continued.

State	Consti- tution	Stat- ute	Nov. 78 Ballot (Passed-Failed)	State Activity (-) (+)	Type
Massachusetts	x		Passed	(Advisory referendum)	2
Michigan	x		Passed		2
Minnesota		x		Leg. debate	1 or 2
Mississippi				(-)	
Missouri	x		Passed		2
Montana					
Nebraska	x		Failed		1
Nevada	x		Passed	(Needs to be voted on again in 1980 to take effect)	1
New Hampshire	x			Leg. debate	1
New Jersey		x	1976	Leg. enacted	2
New Mexico		x	1977		1
New York		x		*N.T.L.C. priority	2
				Leg. debate	
North Carolina		x		Leg. debate	1-2
North Dakota	x		Passed		1
Ohio	x			1979 effort	1
Oklahoma				(-)	
Oregon	x		Failed		1
Pennsylvania				(Gov. appointed Tax Reform Task Force)	1 or 2
Rhode Island		x		Leg. debate	1
South Carolina		x		Leg. debate	1,2,3
South Dakota	x		Passed		3
Tennessee	x		Passed Mar. 78		2
Texas	x		Passed		1 & 2
Utah	x			Failed to gain signatures	1

Table 4. Tax and Expenditure Limitations for the States, Continued.

State	Consti- tution	Stat- ute	Nov. 78 Ballot (Passed-Failed)	State Activity (-) (+)	Type
Vermont				(-)	
Virginia		x		Leg. debate	2
Washington	x			Failed to gain signatures	1
West Virginia		x		Leg. debate	1,2,3
Wisconsin		x		Leg. debate	2
Wyoming		x		Leg. debate	2

*N.T.L.C. = National Tax Limitation Committee.

Table 5. Demographic Analysis of Traditional
Age Freshmen (18 year olds) 1975-85.

State	18 yr. olds No. 1975	18 yr. olds No. 1985	Percentage Change in Absolute Nos.
Alabama	69,960	68,063	-17%
Alaska	9,240	12,531	+36%
Arizona	42,900	48,754	+14%
Arkansas	37,620	33,363	-11%
California	412,500	377,392	-8%
Colorado	54,450	55,816	+2%
Connecticut	56,100	52,704	-6%
Delaware	12,210	13,223	+8%
Florida	144,540	165,527	+14%
Georgia	98,340	86,042	-12%
Hawaii	20,130	23,446	+16%
Idaho	16,500	17,537	+6%
Illinois	207,570	173,071	-17%
Indiana	103,950	86,611	-17%
Iowa	53,130	39,805	-25%
Kansas	46,530	37,479	-19%
Kentucky	65,670	49,182	-25%
Louisiana	77,550	62,589	-19%
Maine	20,130	17,893	-11%
Maryland	81,510	82,927	+2%
Massachusetts	114,180	97,511	-15%
Michigan	184,470	169,139	-8%
Minnesota	78,210	70,472	-10%
Mississippi	46,860	36,809	-21%
Missouri	91,080	77,843	-14%
Montana	14,520	13,997	-4%

Table 5. Demographic Analysis of Traditional Age Freshmen (18 year olds) 1975-85, Continued.

State	18 yr. olds No. 1975	18 yr. olds No. 1985	Percentage Change in Absolute Nos.
Nebraska	30,360	25,473	-16%
Nevada	10,890	14,375	+32%
New Hampshire	14,850	12,395	-16%
New Jersey	123,750	111,260	-10%
New Mexico	24,420	27,526	+13%
New York	317,130	245,869	-22%
North Carolina	111,870	82,261	-26%
North Dakota	13,200	11,051	-16%
Ohio	211,200	185,851	-12%
Oklahoma	52,140	45,387	-13%
Oregon	42,570	39,251	-8%
Pennsylvania	213,840	172,736	-19%
Rhode Island	17,490	8,808	-50%
South Carolina	60,390	47,252	-22%
South Dakota	14,520	12,722	-12%
Tennessee	72,210	60,108	-23%
Texas	245,520	229,243	-7%
Utah	27,720	29,719	+7%
Vermont	9,570	7,231	-24%
Virginia	105,930	100,371	-5%
Washington	69,960	56,716	-19%
West Virginia	31,350	19,388	-38%
Wisconsin	91,080	79,485	-13%
Wyoming	7,590	8,473	+12%

NOTE: Sources for this table were U. S. Bureau of Census: Current Population Reports, The National Center for Educational Statistics and the Policy Analysis Service: American Council on Education (1975), and National Center for Educational Statistics, unpublished data from Residence and Migration Study (1975).

Table 6. Participation of 18 Year Old
Freshmen in Higher Education.

State	18 Year-olds in 1970		Percent of 18 Yr. Olds Projected to Enroll as Freshmen With- in State in 1975 and 1985
	Number	Percent	
Alabama	65,734	11,173	17.0%
Alaska	4,871	418	8.6%
Arizona	33,128	8,698	26.3%
Arkansas	34,598	7,143	20.6%
California	355,200	95,054	26.8%
Colorado	44,171	13,785	31.2%
Connecticut	50,670	15,582	30.8%
Delaware	10,297	3,003	29.2%
District of Columbia	14,358	4,384	30.5%
Florida	111,191	25,539	23.0%
Georgia	86,108	16,058	18.5%
Hawaii	13,755	3,665	26.6%
Idaho	14,598	3,696	25.3%
Illinois	196,447	55,026	28.0%
Indiana	98,955	23,589	23.8%
Iowa	55,670	15,102	27.1%
Kansas	44,134	14,644	33.2%
Kentucky	62,611	12,100	19.3%
Louisiana	73,069	14,574	19.9%
Maine	18,261	3,952	21.6%
Maryland	67,882	15,015	22.1%
Massachusetts	105,521	37,083	35.1%
Michigan	171,350	43,398	25.3%
Minnesota	73,436	22,022	30.0%
Mississippi	44,703	9,030	20.2%
Missouri	85,134	21,620	25.4%

Table 6. Participation of 18 Year Old Freshmen
in Higher Education, Continued.

State	18 Year-olds in 1970		Percent of 18 Yr. Olds Projected to Enroll as Freshmen With- in State in 1975 and 1985	
	Number	Number Enrolled as Freshmen within State		Percent Enrolled as Freshmen within State
Montana	13,509	3,432	25.4%	28%
Nebraska	27,891	7,603	27.3%	30%
Nevada	7,463	1,144	15.3%	22%
New Hampshire	13,531	4,331	32.1%	34%
New Jersey	114,493	28,048	24.5%	28%
New Mexico	19,769	4,241	21.4%	24%
New York	305,221	86,704	28.4%	31%
North Carolina	104,779	19,908	19.0%	22%
North Dakota	12,983	4,831	37.2%	34%
Ohio	199,076	45,278	22.7%	26%
Oklahoma	46,342	10,991	23.7%	27%
Oregon	38,856	10,814	27.8%	31%
Pennsylvania	213,921	61,561	28.8%	32%
Rhode Island	17,648	5,231	29.6%	33%
South Carolina	56,222	9,131	16.2%	22%
South Dakota	13,963	4,165	29.8%	33%
Tennessee	75,785	16,140	21.3%	24%
Texas	211,568	36,869	17.4%	22%
Utah	23,468	7,246	30.9%	34%
Vermont	9,382	3,209	34.2%	34%
Virginia	87,752	16,541	18.8%	22%
Washington	64,496	15,185	23.5%	26%
West Virginia	34,006	8,868	26.1%	29%

Table 6. Participation of 18 Year Old Freshmen
in Higher Education, Continued.

State	18 Year-olds in 1970		Percent of 18 Yr. Olds Enrolled as Freshmen within State	Percent of 18 Yr. Olds Enrolled as Freshmen within State	Projected to Enroll as Freshmen With- in State in 1975 and 1985
	Number	Percent			
Wisconsin	88,032	25,524	29.0%		32%
Wyoming	6,392	1,474	23.1%		26%

NOTE: Sources: Policy Analysis Service, American Council on Education based on U. S. Bureau of the Census, Census of Population: 1970, "Detailed Characteristics: Final Report" PC(1)D Series, Table 146 and Current Population Reports, "Social and Economic Characteristics of Students", P-21 annual issues (1970).

Table 7. Impact of Projected Population Shifts and Migration Trends of Students on Enrollment of Traditional-age Freshmen: 1975-85, Between States.

GROUP I. Six states are likely to increase the number of 18-year-olds and to serve as net importers of freshmen students; this combined effect should increase enrollment.

Arizona
Colorado
Delaware
Florida
Idaho
Utah

GROUP II. Trade-offs between changes in the projected number of 18-year-olds and migration patterns are not projected to significantly affect freshman enrollment levels in 32 states and the District of Columbia.

Alabama	Nevada
Alaska	New Hampshire
California	New Mexico
Dist. of Columbia	North Carolina
Georgia	Oklahoma
Hawaii	Oregon
Indiana	Rhode Island
Kansas	South Carolina
Louisiana	South Dakota
Maine	Tennessee
Maryland	Texas
Massachusetts	Virginia
Michigan	Washington
Mississippi	West Virginia
Missouri	Wisconsin
Montana	Wyoming
Nebraska	

GROUP III. The decrease in the number of 18-year-olds should be offset by substantial in-migration of freshman students in one state.

Vermont

Table 7. Impact of Projected Population Shifts and Migration Trends of Students on Enrollment of Traditional-age Freshmen: 1975-85, Between States, Continued.

GROUP IV. The decrease in the number of 18-year-olds is not expected to be offset by the in-migration of freshman students in two states.

Iowa
Kentucky

GROUP V. Nine states are likely to experience a decrease in the number of 18-year-olds and also to continue to serve as net exporters of freshman students; this combined effect should decrease enrollment.

Arkansas
Connecticut
Illinois
Minnesota
New Jersey
New York
North Dakota
Ohio
Pennsylvania

(Arizona Constitution, Art. 9, Sec. 5). Therefore, general obligation bonding in those states is not probable. Capital facility construction then fluctuates between state appropriations "pay-as-you-go", and specific authorization to issue revenue bonds.

Approximately thirty states construct capital facility projects, through the use of revenue bonds which are an instrument of indebtedness legally secured only by income from the facility constructed, with the proceeds of the bond use. Of the states which allow capital facility construction through the issuance of revenue bonds, approximately one-half permit the governing boards for higher education the freedom to issue bonds on any project that can be supported in the bond market. The remaining states issuing revenue bonds require direct legislative authority for each specific bond proposal. The use of revenue bonds is limited in effectiveness primarily because of the necessity of having to rely on revenue producing facilities for security of the bonds. The financing of the non-revenue producing capital facilities relies heavily on direct state appropriations.

Two states, California and Texas, use special tax bonds where revenue sources are dedicated to higher education for capital facility purposes. The security is based on a given tax levy rather than the income of a particular facility.

Six states have established "State School or Higher Education Bond Authorities". An authority is an instrument of the state, but not legally a state agency. They have been organized as state authorities in order to secure tax-exempt financing but at the same time denying the liability of the state in case of default on the revenue bonds. These authorities issue revenue bonds which are secured by long-term lease agreements, fees, or tuition. At the end of the lease, usually 40 years, the higher education institutions own the building and the debt has been paid to the bondholder and any profits have been used for administrative costs of new bonds. There seems to be a strong resistance to the establishment of authorities primarily because state decision-makers anticipate the loss of control over the amount and purpose for which bonds are to be issued.

Approximately twenty-nine states have established industrial development authorities which can issue revenue bonds for "public projects" in order to achieve tax exempt status. Six of the twenty-nine states established State Industrial Development Authorities, the remaining twenty-three states allow the political subdivisions of the state, county, and city governments to form industrial development authorities.

The list of Internal Revenue Service approved projects include streets, parks, water and sewage systems, pollution control, and educational facilities. Kentucky and Minnesota are two states which have used industrial development authorities for educational purposes.

The following six financing alternatives were identified as currently operational on a nationwide basis to meet the capital facility needs of higher education.

State Appropriations. The financing of capital facility needs of higher education are restricted to funds available from current and surplus revenues only. A strict pay-as-you-go policy demands that each legislative session take formal action on the issue of costs involved for capital facility needs of higher education since all expenditures must be from current tax levies.

This financing alternative is countered along two arguments by those who see borrowing as a reasonable alternative for capital facility financing. First, there is a definite inequity in requiring today's taxpayer to pay in full for a capital facility project that will benefit a long line of future taxpayers, secondly, interest cost plus current cost of land acquisition and construction of the capital facility project are much less than the probable higher costs of acquisition and construction at some future date.

General Obligation Bonding. A general obligation bond is an instrument of indebtedness secured by the "full faith and credit" of the political subdivision issuing the bonds. Potentially, General Obligation bonds could be maximally effective in generating large amounts of resources for widely divergent capital facility needs. Government Obligation bonds generate necessary capital at the lowest possible interest rates and at the lowest possible net cost, due to the fact that Government Obligation bonds are the most secure of the debt instruments. The problem is that thirty-nine states require a balanced budget and five of these states have constitution debt limitations, thus rendering general obligation bond financing not an option in meeting the capital facility needs of higher education.

As a result of the unqualified nature of this pledge, general obligation debts are subject to the most detailed legal restriction.

Revenue Bonding. This financing alternative requires that the payment of interest and repayment of principal on revenue bond be secured only by the revenues from a specific facility that charges users for the services it provides. Legal debt limits found in most states do not apply to this form of debt, and restrictions are largely those imposed by the market and the authorizing agent. General obligation

bonds that are backed by a taxing power usually cost issuers less in interest than revenue bonds backed only by the earnings of the specific project being constructed. (In January, 1978, new revenue bonds carried interest "coupons" averaging 0.1% higher than new "G.O." bonds; by July, the spread was up to 0.7%.) The market also makes judgments on the safety of the loan and the quality of the management that seeks it. These judgments are usually encapsulated with complete simplicity into a bond "rating" by "Moodys" or Standard and Poor's.

Revenue bonding as traditionally conceived would be limited in effectiveness primarily because of the small number of higher education capital facility needs capable of generating conventional revenues.

Special Tax Revenue Bonding. Special tax bonds are a second widely used form of non-general obligation debt, where all or a fixed percentage of the revenues occurring from a specific tax are pledged as security for a loan. The lender does not have the security of the jurisdiction's complete taxing power, but the lender's security is based on a given tax levy rather than the income of a particular facility as is the case in revenue bonds. Interest rates on this type of borrowing have been relatively high because of the political subdivision rarely, if ever, tied this type of

borrowing to a major tax source. Rather it has been utilized with a variety of minor and less stable revenue sources.

State Bonding Authorities. Another method of financing capital facility needs of higher education is the creation of a state authority. An authority is an instrument of the state, but not legally a state agency, and has been established as a state authority in order to secure tax-exempt bond financing but at the same time denying the liability of the state in the case of default on the revenue bonds. These state authorities issue revenue bonds which are secured by long-term lease agreements, fees, or tuitions. At the end of the lease, usually 40 years, the higher education institution owns the building and the debt has been paid to the bondholder and any profits have been used for administration cost of new loans. There seems to be a strong resistance to the establishment of authorities primarily because state decision-makers anticipate the loss of control over the amount and purpose for which bonds are to be issued.

Industrial Development Authority. Twenty-nine states have established industrial development authorities that can use revenue bonds for certain capital facility projects. The Internal Revenue Service does require that these projects be "public projects" in order to acquire tax-exempt status. Several states have issued industrial development authorities

for educational purposes. These facilities are either leased to higher education with an option to buy or just leased under a simple lease agreement.

Tax and Expenditure Limitation Measures

California's Proposition "13" was responsible for the appearance of fifteen tax or expenditure measures on the November 1978 general election ballot. Spending limits were the topic of numerous sessions of State Legislatures in 1978, and continue to be the focus of state legislative meetings in regular sessions in 1979. Table 4 shows the type and activity levels of the tax and expenditure limitation measures on a nationwide basis.

Jarvis-type. Propositions similar to California's "13" were before the voters in three states, Idaho, Nevada, and Oregon.

The Idaho measure is identical to "13" except that its one percent ceiling on assessed value is based on 1978 rather than the 1975 values: it provides for the same two percent limit on assessment increases and requires a two-thirds vote of the Legislature to adopt new taxes; any special local taxes need a two-thirds vote of the people. The measure is statutory rather than constitutional.

The Nevada measure is identical to Proposition 13, and is a constitutional amendment. It must be voted on in

1980 before it can take effect. The Oregon voters rejected a proposal to put a 1.5% ceiling on property taxes.

Three states adopted measures calling for tax reduction or limiting tax increases. They were:

Alabama - a constitutional amendment limiting increases in property taxes;

Missouri - allowing the legislature to enact laws requiring local governments to reduce rates of property tax levies;

South Dakota - an amendment requiring two-thirds vote of the Legislature or of the people to increase state taxes.

The electorate of Michigan turned down a measure to reduce the current assessment ratio and limit.

State and Local Spending Limits. Of the eight measures that established a ceiling on state and/or local spending, five were adopted: Arizona, Hawaii, Michigan, Tennessee and Texas. The spending ceilings vary considerably, with the most important difference being the basis of the ceiling and the means by which it can be exceeded.

The Tennessee and Texas measures restrict growth in state spending to the rate of growth in the state's economy as determined by law. Tennessee's limit may be exceeded by a simple majority vote of the Legislature. In Texas, the Legislature, by a constitutional majority, can exceed the limits by declaring an emergency.

The Arizona and Hawaii spending limits require a two-thirds vote of both houses of the Legislature to lift the ceiling. Arizona's ceiling is a seven percent of personal income in the state; in Hawaii, it is the rate of growth in the state's economy.

Michigan's measure comprises the tightest spending limitation enacted in 1978. It applies to state and local government and can be lifted only when the majority of qualified voters approve.

Stringent measures to limit local spending in Nebraska, state and local spending in Colorado, and state spending in Oregon, were turned down by the voters in the November 1978 general election.

Strengthened Fiscal Accountability. The most moderate approach to limiting spending involved measures to strengthen the fiscal accountability of state and local officials. These measures ranged from adopting variations of the full disclosure theme, whereby increases in public revenues above a set figure are preceded by wide dissemination of information and public hearings. Other measures also call for state reimbursement to localities for all new state-imposed mandates, thereby introducing greater fiscal discipline into the legislative process.

The Texas disclosure law now requires notice and public hearings on local tax increases exceeding three percent a year. A provision in the law also requires a listing in the public notice of the elected officials who voted for and against the proposal to raise taxes. Written notice must also be provided to property owners whose property value has been increased by more than \$100 above the value of the preceding year.

Tennessee, Hawaii, and Michigan enacted constitutional reimbursement measures to apply on proposed new mandates. Florida provided for reimbursement by statute.

Tennessee - The constitution now provides that no law of general application shall impose increased expenditures requirements on cities or counties unless the General Assembly shall provide that the state share in the cost (Rabin, 1978).

Hawaii - the constitution now provides that the state must "share in the cost of any new programs or increased services which the Legislature requires that counties provide" (Rabin, 1978).

Michigan - the state is now prohibited from "requiring any new or expanded activities by local government, reducing the proportion of state spending in the form of aid to local governments or shifting the tax burden to local government" without full state financing (Rabin, 1978).

Enrollment and Migration Patterns. The current national trend of declining enrollments attributed in the main to a diminishing traditional-age freshmen (18 year olds) population. Table 5 shows the projected changes in 18 year olds state-by-state for the years 1978-1985. This data indicates the trend decline will not hold true in twelve of the fifty U. S. states. The states of Alaska and Nevada can expect an increase in their pool of traditional-age freshmen 36 and 32% respectively. Hawaii can anticipate a 16% increase. The four states of Wyoming, New Mexico, Florida, and Arizona increases will range from 12% to 14%, while Idaho and Utah can still anticipate modest increases of 6 and 7% respectively. The states of Colorado and Maryland, in spite of a low 2% anticipated increase in the pool of 18 year olds, clearly establish that the decline of the 18 year old population varies from state to state. If the population shifts toward the South and West continue, these

states can expect to have a larger 18 year old population in 1985 than in 1975. The remaining states are expected to have fewer 18 year olds by 1985.

These ten states will continue to have capital facility needs for their institutions of higher education. Tax and expenditure limitations as is obvious are a reality within the majority of the ten states, thus dictating the necessity of extensive scrutiny of the economic viability of each financing alternative that will allow the maximum use of limited resources if the capital facility needs of higher education are to be met.

Table 6 details the participation of 18 year olds in higher education by the year 1970, and projected for 1975 and 1985. The national average for the level of participation in institutions of higher education among the pool of traditional age freshmen is at approximately 26%. Of those southern and western states that can anticipate increases in the number of traditional age freshmen, seven states will have a level of participation at the national average, and three of those states can anticipate participation levels above 30% and as high as 34%. Two states, Alaska and Nevada, have been below the 26% national participation levels for 18 year olds, but also show the most significant growth from 8.6% in 1970 to 22% in 1975, an increase of 13.4% in the levels of participation within the pool of 18 year olds

attending higher education in Alaska. Nevada's participation average for 1970 was 15.3% and went to 22% in 1978, a 6.7% increase. The remaining eight states averaged an approximate average increase of 3% from 1970 to 1975. With the pool of 18 year olds anticipated within these states, the assumption can be made that the increase in the level of participation in institutions of higher education in these ten southern and western states will continue to increase as well.

Table 7 details the impact of projected population shifts and migration trends of students or enrollment of traditional-age freshmen 1975-85, between states. Six states are expected to increase their enrollment because they are likely to gain in the 18 year old population and because they have in the past served as importers of freshmen (see Group I, Table 7). These states collectively account for less than 8% of the total enrollment at the national levels, but still should encourage planning. According to the projections, thirty-three states will experience "trade-offs", this is, shifts in the pool of 18 year olds and expected migration practices (Group II, Table 7).

Trade-off between, migration patterns, and population shifts are also significant to three other states (Groups III and IV, Table 7). Although Vermont is predicted

to experience a decline in the 18 year old population, the in-migration of students should more than compensate, and consequently the state's enrollment should gain. Iowa and Kentucky are states that are likely to lose 18 year olds, and possible will not attract sufficient numbers of immigrants to offset the decline. Nine other states (Group V, Table 7), accounting for twenty-eight percent of the total enrollment, are predicted to lose traditional-age freshmen in 1985 due both to loss of population base, and to out-migration of students.

Chapter 5 summarizes the findings of this chapter and suggests possibilities for future financing needs of higher education.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS FOR FUTURE STUDY

Summary of Findings

Chapter 4 identified six financing alternatives, operational on a nationwide basis for the funding of capital facility needs of higher education; three types of tax or expenditure limitation measures that have been adopted or are being proposed for adoption on a nationwide basis; and enrollment and migration patterns of traditional-age freshmen.

The major conclusions relative to financing alternatives show that:

1. The financing of capital facilities via the state appropriations process carries with it a definite inequity in requiring today's taxpayer to pay in full for capital facility expansion projects that will benefit a long line of future taxpayers. Secondly, interest cost plus the current cost of construction and land acquisition for capital facility projects will be less than the probable higher costs of acquisition of property and construction at some future date.

2. General obligation bonds are instruments of indebtedness secured by the "full faith and credit" of the political entity issuing the bonds. General obligation bonds generate necessary capital at the lowest rate of interest because they are the most secure type of debt instrument. However, general obligation bonding is really a non-option because thirty-nine states require a balanced budget, and five of them have constitutional debt limitations making indebtedness impossible.
3. Revenue bonding requires that security for repayment must come from a specific facility that charges users for the service it provides. Debt limits do not apply to revenue bonds and restrictions, if any, are for the most part imposed by the market, or the authorizing agent. Revenue bonding, therefore, is limited in effectiveness due to the necessity of having to concentrate on revenue producing capital facilities.
4. Special tax bonding interest rates are relatively high because security for repayment is not tied to a major revenue source, but instead to a variety of minor less stable revenue sources.

5. State bonding authorities have been established in order to secure tax-exempt bond financing yet at the same time denying liability to the state. Repayment for these types of bonds are secured by long-term leases. The opposition to this type of funding stems from decision-makers who anticipate loss of control over the amount to be spent and the purpose for which capital facility bonds would be issued.
6. Industrial development authorities have been established that issue revenue bonds for certain projects and under the Internal Revenue Service's definition of projects are included educational facilities. These facilities are either leased to higher education under a simple lease agreement or with a final option to buy. However, the majority of these authorities are established within county or city governmental units. The marketing of bond issues are at infrequent intervals, and involve only a limited number of bonds of relative small total dollar amounts. As a consequence, interest rates and marketing costs per bond are higher.

The findings of the study in the area of tax and expenditure limitation measures show that: tax and expenditure limitation measures appeared in fifteen states during

the November 1978 general election, and can be attributed directly to California's Proposition "13". Similar measures were on the ballots of three states (Idaho, Nevada, and Oregon) with Oregon being the only state in which the electorate rejected adoption of the Jarvis-type measure.

Three states (Alabama, Missouri, and South Dakota) adopted measures calling for tax reduction or limitations on tax increases. The electorate in Michigan, on the other hand, rejected a measure to reduce the current assessment ratio and limit.

State and local spending limit measures appeared in eight states with adoption taking place in five states: Arizona, Hawaii, Michigan, Tennessee, and Texas. These measures varied from restriction of growth in spending to the growth rate of the states economy, to percentage limitations, based on the state's personal income levels. Nebraska, Colorado, and Oregon were states in which the electorate voted not to adopt limitation measures.

Strengthened fiscal accountability measures, the most moderate of measures, ranged from adoption of variations of disclosure themes, where future increases in tax revenues would be preceded by a wide dissimulation of information and public hearings to state reimbursement for all new state imposed mandates. Texas, Tennessee, Hawaii, and Michigan

enacted reimbursement measures for new state-imposed programs. Florida's measure provided for reimbursement by state statute.

An examination of enrollment and migration patterns show that: (1) the current trend of declining enrollments attributed in the main to a diminishing traditional-age freshmen population can be expected not to hold true within the following ten states, Alaska, Arizona, Colorado, Florida, Hawaii, Idaho, Nevada, New Mexico, Wyoming, and Utah. These states can anticipate that the pool of traditional-age freshmen will increase contrary to national trends. Two states, Alaska and Nevada, can expect more than a thirty percent increase, while five other states, Arizona, Hawaii, Florida, New Mexico, and Wyoming, can expect increases ranging from twelve to sixteen percent. The three other states of Colorado, Idaho, and Utah, can anticipate a two to seven percent increase in their pool of traditional-age freshmen; (2) the level of participation of traditional-age freshmen within higher education runs at approximately 26%. Those states identified as having continued growths in their pool of traditional-age freshmen, seven (Arizona, Colorado, Florida, Hawaii, Idaho, Wyoming, and Utah) will have participation at the national level (26%) and above. The level of participation for Idaho is anticipated to be 28%, Arizona 29%,

Hawaii 30%, and Colorado and Utah 34%. well above the national average.

Alaska and Nevada rank below the national average in the level of participation for traditional-age freshmen. However, these two states have had the most growth in participation levels using the time period 1970 to 1975. Alaska went from 8.6% to 22%, an increase of 13.4%, while Nevada's average level of participation for traditional-age freshmen was 15.3% in 1970 and 22% in 1975, a 6.7% increase. The remaining states increased the level of participation among their population of traditional-age freshmen approximately 3% for the same period.

The states of Arizona, Colorado, Florida, and Utah are also identified as states likely to increase the number of traditional-age freshmen and to serve as importers of freshmen students. This combined effect will contribute to increased enrollments.

Table 8 summarizes the relationship between financing alternatives, tax and expenditure limitation measures, growth of the pool of traditional-age freshmen and their level of participation in higher education. It should be noted that the ten states rely heavily on state appropriations for non-revenue producing capital facility needs of higher education. Five states have adopted some form of limitation measures and state activity indicates the

Table 8. Summary of Findings.

State	Financing Alternatives	Tax or Expenditure Limitations	Level of Participation 18 Yr. Olds in Higher Education 1975-85	Pool of 18 Yr. Olds 1985 % Increase
Alaska	State Approp. Ind. Develop. Authority	Nat. Tax Limitation Committee priority	22%	+36%
Arizona	State Approp. Revenue Bonding Ind. Develop. Authority	7% spending based on limit based on personal income	29%	+14%
Colorado	State Approp. Ind. Develop. Authority	7% spending limit	34%	+2%
Florida	State Approp. Revenue Bonding	Measure failed to gain sufficient signatures in 78	26%	+14%
Hawaii	State Approp. Rev. Bonding	Spending limited to growth of economy	30%	+16%
Idaho	State Approp. Rev. Bonding	Jarvis-type	28%	+6%
Nevada	State Approp. Gen. Oblig. Bonding, Ind. Develop Auth.	Jarvis-type, need to be voted on in 1980 to take effect	22%	+32%

Table 8. Summary of Findings, Continued.

State	Financing Alternatives	Tax or Expenditure Limitations	Level of Participation 18 Yr. Olds in Higher Education 1975-85	Pool of 18 Yr. Olds 1985 % Increase
New Mexico	State Approp. Rev. Bonding Gen. Oblig. Bonding Indus. Develop. Authority	Legislative debates in progress	26%	+12%
Wyoming	State Approp. Rev. Bonding Ind. Develop. Authority	Legislative debate in progress	26%	+12%
Utah	State Approp. Gen. Oblig. Bond	Legislative debate in progress Jarvis-type failed to gain signatures in 1978	34%	+7%

remaining states will soon follow. All ten states identified can expect both the level of participation and pool of traditional-age freshmen to increase contrary to the national declining enrollment trend.

Conclusions

State government, especially the ten states identified as having continued enrollment increases, will continue to be confronted with a diverse and substantial list of capital facility priorities from higher education.

General obligation bonding presents the most viable financing alternative available to state government because general obligation bonds are the most secure of the debt instruments. Thus general obligation bonds would generate the necessary capital at the lowest possible interest rate and at the lowest possible net cost. Potentially, general obligation bonds would be maximally effective in generating large amounts of resources for widely divergent capital facility needs of these states.

Those ten states that can expect increases in enrollment levels might want to further investigate the probability of using general obligation bonding as the mechanism for future financing of capital facility needs.

Suggested Recommendation for Further Research

Studies should be conducted to provide a greater insight into financing alternatives identified that would include a determination of the economic viability of the financing alternatives. This would benefit state decision-makers responsible for financing capital facility needs and higher education administrators seeking to encourage continued financing for their institutional capital facility requirements.

Given the fiscal conservative mood of today's taxpayer, the establishment of more appropriate and economical financing alternatives would obviously be of benefit.

APPENDIX A

AUTHORITY TO ISSUE BONDS BY STATE

Board of Regents or State Boards

Alabama	-	Code of Alabama 16-15-1
Arizona	-	Arizona Revised Statutes 17.771 - 15.781
Arkansas	-	Arkansas Statutes Annotated 80-2890.3
California	-	Chapter 8 - 66606 pursuant to Chapter 3, Sec. 66.102
Delaware	-	Delaware Codes Annotated 14-5115
Florida	-	Florida Statutes Annotated 243.18, 243.22, 243.27, 243.29
Georgia	-	Code of Georgia Annotated 32-132A
Hawaii	-	Hawaii Revised Statutes 306-2
Idaho	-	Idaho Code 33-3804
Illinois	-	Illinois Annotated Statutes 144-1011
Kansas	-	Kansas Statutes Annotated 76-6a.13.et seq.
Louisiana	-	Louisiana Statutes Annotated 17.2182 et seq.
Michigan	-	Michigan Code Law 390-926
Mississippi	-	Mississippi Code Annotated 37-101-91 to 37-101-103
Missouri	-	Annotated Missouri Statutes 176.030
Montana	-	Revised Code Montana 75-8504
Nebraska	-	Revised Statutes of Nebraska 85-403 to 85-411

Nevada - Nevada Revised Statutes 396.801-875

New Hampshire- 195-D, 12D-24

New Jersey - New Jersey Statutes Annotated 18A-72A-1

New Mexico - New Mexico Statutes 21-7-14

New York - Code of Laws of New York Loc. Fin. 104

North
Carolina - Statutes of North Carolina SS 116-41.4

North
Dakota - North Dakota Century Code 15,55-02

Ohio - Ohio Revised Code 3377.05

Oklahoma - Oklahoma Statutes Annotated 70 SS 628.15

Oregon - Oregon Revised Statutes 351.345-350-420

Pennsylvania - Pennsylvania Statutes Annotated 24-5506.1

South
Carolina - Code of Law of South Carolina 59-105-40

South
Dakota - South Dakota Compiled Laws 13-51-82

Tennessee - Tennessee Code 49-3325

Texas - Constitution Article 7, §17.

Utah - Utah Code 11-17-3

Virginia - Code of Virginia 23-30.39 and 23-14

Washington - Revised Code of Washington 28-76.180-210

West
Virginia - West Virginia Code 18-121-1

Wyoming - Wyoming Statutes Annotated 21-17.402

Industrial Development Authority--State

- Connecticut - Title 32, Chapter 579, Connecticut General Statutes
- Delaware - Delaware Revised Statutes, 6, 7001, Iv, Delaware Code, 1953
- Alaska - Alaska Statutes 44-61.020
- New Hampshire - New Hampshire Revised Statutes 162 - I:1 through 162 - I:16
- New Jersey - Chapter 80, P. L. 1974
- Vermont - Vermont Statutes Annotated 10 § 2,3
- Oklahoma - Article X, Section 34, Constitution of the State of Oklahoma/Title 74, Oklahoma Statutes 851-878

Industrial Development Authority--
Municipality/County

- Alabama - Code of Alabama 10-4-130
- Arkansas - Constitution Amendment 49, 2. Also: Arkansas Statutes 13-1601 through 13-1615
- Colorado - Colorado Revised Statutes 31-21-104
- Florida - Florida Statutes Annotated 159.25 et seq. and 159.44 et seq.
- Indiana - Indiana Revised Statutes 19-8-4-22
- Kentucky - Kentucky Revised Statutes 152.810 through 152.930
- Kansas - Kansas Statutes Annotated 12-1740:1749
- Maryland - Annotated Code of Maryland 41-266A to 266I
- Massachusetts- Annotated Laws of Massachusetts 40D-1 through 40D-23

Michigan - Michigan Compiled Laws 125.1251

Minnesota - Minnesota Statutes Annotated 474.01

Nebraska - Nebraska Revised Statutes 18-1614 to
18-1623

Nevada - Nevada Revised Statutes 244.919

New Mexico - New Mexico Statutes 14-31-1 through 14-31-13

New York - Consolidated Laws of New York Gen. Mun. 854

North
Dakota - North Dakota Century Code 40-57-01 through
40-57-20

Ohio - Ohio Constitution, Section 13 of Section
VIII and Ohio Revised Code 761
(THE GREAT STATE OF OHIO!!!!!!!!!!!!!!!!!!!!)

Oklahoma - Oklahoma Statutes 62, 651-664

Oregon - Oregon Revised Statutes 280.310 to 280.390

South
Carolina - Code of Laws of South Carolina 4-29-10

Tennessee - Tennessee Code 6-2801

Texas - Constitution Article 3, §52a

Utah - Utah Code 11-17-3

Virginia - Code of Virginia 15.1-1373 through
15.1-1399

Washington - Revised Code of Washington 43.31.040

Wyoming - Wyoming Statutes Annotated 15.1-92 through
15.1-100

State Bonding Authorities at State Level

- Kentucky - Kentucky Revised Statutes 154.001
- Indiana - Indiana Statutes Annotated 15-20-1-15
- Tennessee - Tennessee Code 13-1605
- Alabama - Code of Alabama 41-10-20 through 41-10-32
- Pennsylvania - Pennsylvania Statutes Annotated 73 § 333
also 16 § 1999g
- New York - Consolidated Laws of New York 8-A
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