THE COST OF OPERATION OF STATE-LEVEL BOARDS FOR HIGHER EDUCATION AND THE COST OF ADMINISTRATION IN PUBLIC, FOUR-YEAR INSTITUTIONS OF HIGHER EDUCATION

by

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(ABSTRACT)

Forty-seven of the fifty states had some form of state-level board for higher education in 1981. Critics have expressed concern that the level of those boards' involvement in institutional affairs has steadily increased, while others have observed that administrative costs at the institutional level have gradually risen. It is not known if there is a relationship between the cost of operation of state-level boards and their level of involvement in the affairs of the institutions under their purview; nor, is it known if there is a relationship between the cost of operation of state-level boards and the cost of administration at the institutional level. The purpose of this study was to investigate these relationships.

The population for the study consisted of twenty state-level boards for higher education, eleven governing boards and nine coordinating boards. The population further consisted of 216 public, four-year bachelor degree and higher degree granting institutions located in twenty-three states, including Delaware, Vermont, and Wyoming which had no state-level board for higher education in 1980-1981.

Seven variables were hypothesized as factors either influencing the cost of administration in public, four-year institutions, the cost of operation of state-level boards for higher education, or the rela-

tionship between the two. These variables were formulated with data obtained from a survey of State Higher Education Executive Officers (SHEEO) member agencies and from Higher Education General Information Survey (HEGIS) financial and enrollment tapes.

Pearson product-moment correlation and one-way analysis of variance were used to test for significance of relationships between pairs of variables. An analysis of each of the research questions was presented in textural and tabular form.

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Information obtained from state-level higher education board personnel permitted this study to be done. I am grateful to Dr. Gordon Davies, Director of the State Council on Higher Education of Virginia, for his assistance in requesting this information. Special thanks is due to for the hours she spent typing a seemingly endless succession of drafts, and to and for preparation of the final draft of the manuscript.

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Chapter 1

> "In general, the greater the central demand for statistics, returns, and reports, the larger must be the staff needed if only for filing them. If they are to be digested and analyzed, that means more staff and any consequent action will mean more staff again. As collection, analysis, action, and follow-up all represent successive degrees of control, the size and cost of the head office staff would seem to indicate, roughly how much control there is. Where there is too much, it will probably cost too much."
>
> C. Northcote Parkinson (1962, p. 163)

INTRODUCTION

Parkinson observed that where there is too much central control, it will probably cost too much. Although he was not specifically referring to state-level agencies for higher education, others have expressed concern about the growing involvement of these agencies in institutional affairs and about the cost of this involvement. Over a decade ago, the Carnegie Commission on Higher Education (1971, p. 2) cautioned the higher education community about the development of "heavy-handed regulatory councils" and noted that these agencies added yet another bureaucracy on top of existing bureaucracies. Cheit (1975, p. 30), commenting on the bureaucratization of American higher education, stated:

> The new regime in higher education is one of review procedures, regulation, litigation, and demands for information. Together these now account for so much of the energies and attention of college and university officials that the whole House of Intellect could soon be buried in an avalanche of paper.

The Carnegie Foundation for the Advancement of teaching (1976, p. 12) noted the increase of coordination and consolidation at the state level and expressed regret about this centralization of authority:

> The governance processes are worse. They are more costly, more cumbersome, more time-consuming, more frustrating, and place more power in the hands of those who are the furtherest removed and who know the least.

A more recent Carnegie Foundation report on academic governance indicated that intervention by state governments into higher education has continued to increase (Carnegie Foundation for the Advancement of Teaching, 1982, p. 44). The report described the stepped-up requirements from state agencies as being "suffocating" for institutions and criticized their demand for greater accountability from public colleges and universities. Overregulation of institutional affairs, according to the report, is inappropriate in a period of retrenchment and institutions would respond more positively to incentives to enhance the efficiency of their operations.

BACKGROUND FOR THE STUDY

State-level agencies for higher education are not a new phenomenon in higher education. The University of the State of New York has had a coordinating board since 1874. Michigan, Wisconsin, Montana, and Nevada established boards during the nineteenth century (Williams, 1980, p. 17). By the end of World War II, seventeen states had established some form of central higher education agency, twenty-three states had them by 1960 (Millard, 1976, p. 1), and forty-eight of the fifty states had such agencies by 1969 (Glenny, Berdahl, Palola, and

Paltridge, 1971, p. viii). In 1981, forty-seven states had some form of state-level board for their systems of higher education. Only Delaware, Vermont, and Wyoming had no state-level coordinating or governing boards (Education Commission of the States, 1981b).

The amount and range of power given to coordinating and governing boards appears to vary widely from state to state and is hard to define. Berdahl (1971, pp. 18-19), in an attempt to delineate the power of statewide boards, developed a typology of states based on the degree of centralized coordinating authority that these boards exercised over all senior public institutions within the states. States were divided into four broad classifications. The first encompassed states which had neither a single coordinating agency nor a voluntary association performing a statewide coordinating function. The second was states in which voluntary coordination was performed by the institutions themselves. States which had a statewide coordinating board not superseding institutional or segmental governing boards was the third classification. The final classification included states which had a single governing board.

Berdahl observed that generalization about a particular board's powers was difficult because a variety of subtle historical, educational, and political factors determine what set of powers actually operate at a given time. His classification system was based primarily on research which generally described the powers granted state-level boards in terms of laws and executive orders (pp. 25-26). Halstead (1974), who refined Berdahl's typology, also relied on descriptive assessments of boards' powers.

The popularity of the types of state-level boards described by Berdahl has continued to change. Voluntary agencies were often formed but were usually only temporary despite their advantage of allowing for maximum institutional freedom while providing the minimum coordination necessary for obtaining state funds (Glenny and Hurst, 1971, p. 22). These voluntary agencies were characterized as being informal arrangements with no legal status (Pliner, 1966, p. 16). The oldest and most persistent type of state-level board, the single board for governing all public institutions in a state, has also been the most problematic because to create a single governing board, all existing public institutional boards usually had to be abolished. Such action has at times been traumatic for state governments and institutions alike. The most popular type of state-level board subsequent to World War II, the coordinating board, provides general coordination by a state-level board and allows governing boards to continue to control individual institutions or groups of institutions (Glenny and Hurst, 1971, pp. 22-23). Thus, coordinating boards have steadily gained favor because they are relatively more acceptable to institutions.

In 1981, twenty-five states had state-level coordinating boards and seventeen states had state-level governing boards. Three states had state-level boards designated as advisory, one state had a regulatory board, and another had a voluntary board. Seventeen of the states with either state-level coordinating or governing boards for the four-year institutions also had separate state-level coordinating or governing boards for the two-year institutions. Three states, Delaware, Vermont, and Wyoming, did not have state-level boards for higher

education in 1981 (Anderson, 1983). The classification of states by type of state-level board for higher education is shown in Table 1. Schematics of the organization patterns for higher education are shown in Figure 1.

Although the amount and range of power of state-level boards seems to vary widely, there are three major areas, noted by Millard (1976, pp. 11-15), for which boards have some responsibility either prescribed by law or developed as policy. These areas are planning, program approval, and budget development. State-level boards have been given authority in these areas, according to Millard, to control expansion and insure the "orderly growth" of public higher education.

Through boards' response to the rapid expansion of higher education, proponents contend that state-level boards have helped avoid duplication of effort and prevent wasteful competition among institutions, have encouraged wiser expenditures of public monies with net savings to taxpayers, and have streamlined government by centralizing staff and services (Harris, 1974, p. 39). The bottom line, according to proponents, is that state-level boards for higher education have been responsible for significant savings of tax dollars.

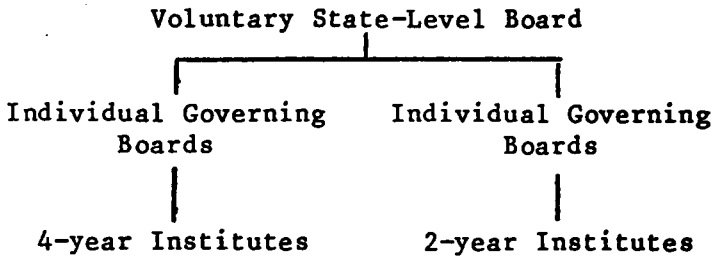
However, not all observers of higher education are concerned solely with the larger state financial picture; there are those who also are cognizant of the financial situation at the institutional level. Bowen (1980, pp. 8-10) noted that the ratio of front-line expenditures to backup expenditures at the institutional level may be "an important barometer of the progress and health of higher education."

Pattern A

No State-Level Board
for Higher Education

Delaware, Vermont,
Wyoming

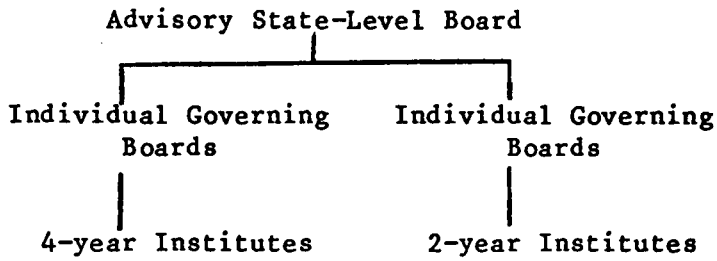
Pattern B



Iowa

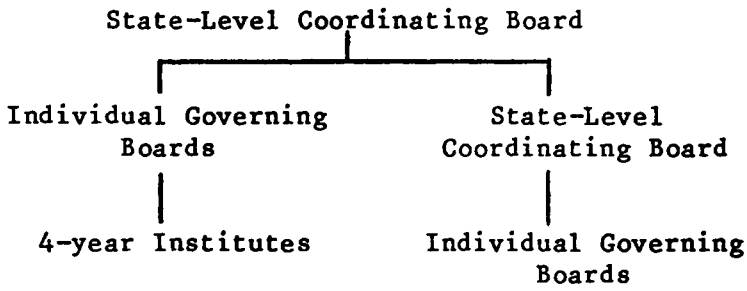
Figure 1. Schematics of organization patterns for higher educatin in the fifty states for selected year, 1981.

Pattern C



California, Michigan,
New Hampshire

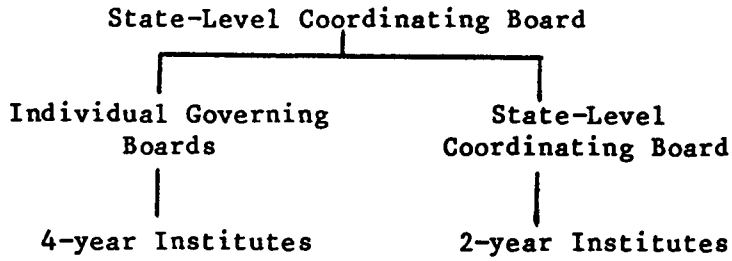
Pattern D



Illinois, Maryland,
New Jersey, Oregon

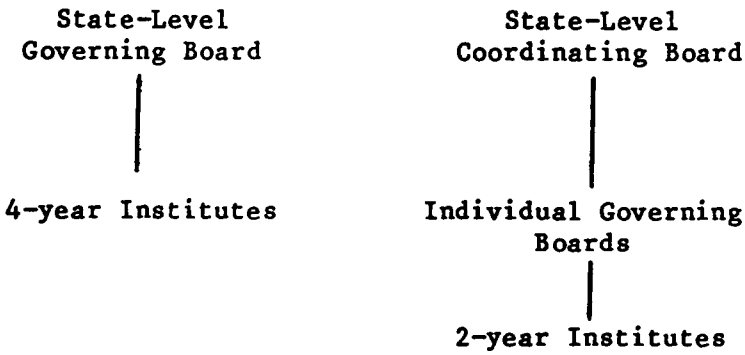
Figure 1. Continued.

Pattern E



Alabama, Colorado, Connecticut, Minnesota, South Carolina, Texas, Virginia, Washington

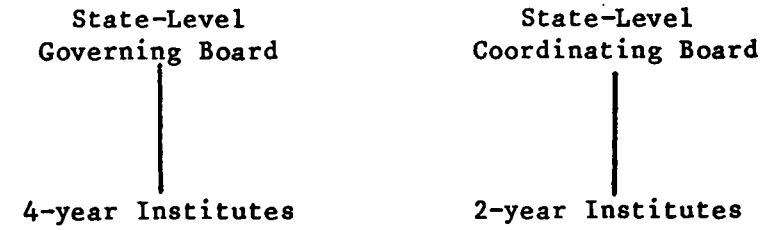
Pattern F



Arizona, Florida, Mississippi

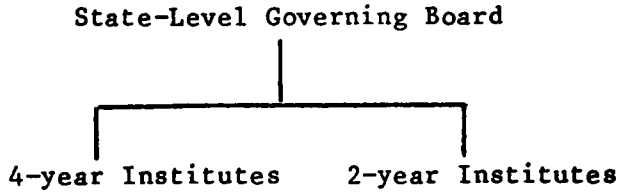
Figure 1. Continued.

Pattern G



Kansas, North Carolina

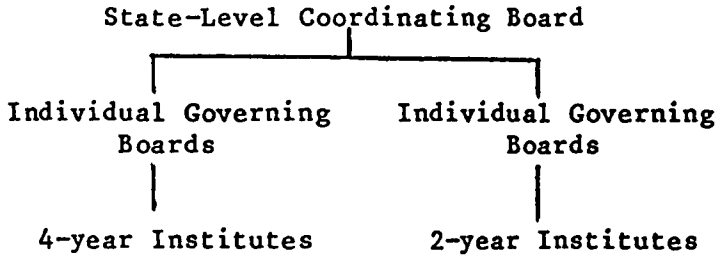
Pattern H



Georgia, Hawaii, Idaho,
Maine, Massachusetts,
Montana, Nevada, North Dakota,
Rhode Island, Utah,
West Virginia, Wisconsin

Figure 1. Continued.

Pattern I



Alaska, Arkansas, Indiana, Kentucky, Louisianna, Missouri, Nebraska, New Mexico, Ohio, Oklahoma, South Dakota, Tennessee

Other

New York, Pennsylvania

Figure 1. Continued.

(Anderson, 1983)

Table 1

States Classified by Type of State-Level Board for Coordination or Governance of Higher Education for Selected Year, 1981

Single State-level Governing Board -All Public Institutions	State-level Governing Board for 4-yr Institutions-Separate Board for 2-yr Institutions	Single State-level Coordinating Board -All Public Institutions	State-level Coordinating Board for 4-yr Institutions-Separate Board for 2-yr Institutions	State-level Advisory Board	State-level Voluntary Board	State-level Regulatory Board	No State-level Board
Georgia	Arizona[b]	Alaska	Alabama[c]	California	Iowa[f]	Pennsylvania	Delaware
Hawaii	Florida[b]	Arkansas	Colorado[c]	Michigan			Vermont
Idaho	Kansas[c]	Indiana	Connecticut[c]	New Hampshire			Wyoming
Maine	Mississippi[b]	Kentucky	Illinois[b]				
Massachusetts	North Carolina[c]	Louisiana	Maryland[b]				
Montana[a]		Missouri	Minnesota[c]				
Nevada		Nebraska	New Jersey[b]				
North Dakota		New Mexico	Oregon[b]				
Rhode Island		New York	South Carolina[c]				
Utah		Ohio	Virginia[c]				
West Virginia		Oklahoma	Washington[c]				
Wisconsin		South Dakota[e]					
		Tennessee					
		Texas					

[a] Governing board for 4-year institutions, coordinating board for 2-year institutions
[b] Separate coordinating board for 2-year institutions
[c] Separate governing board for 2-year institutions
[d] Coordinating board for all education, public and private
[e] Coordinating board for all public education
[f] In addition, one governing board for all 4-year institutions

(Anderson, 1983)

Front-line expenditures are for instruction, the basic service of colleges and universities. Backup expenditures are for supportive services and, according to Bowen, are intended to create the general institutional environment in which the basic service can flourish. Bowen emphasized the importance of front-line functions to the fulfillment of an institution's basic purpose and expressed concern that the proportion of institutional resources expended for front-line functions has been decreasing over recent decades.

Other observers of higher education have expressed more specific concerns about changes in the expenditures of academic resources. Cheit (1975, p. 30) noted a trend toward increased administrative costs beginning as early as 1959-1960. In a presentation for the Southern Regional Education Board Legislative Work Conference he said, "Aggregated data for all institutions confirm what a look around campus, or at the telephone directory, suggest - relatively more money is going into administration." His analysis showed that from 1959-1960 to 1971-1972, the total current fund income of colleges and universities rose about fivefold, from 5.6 to 25.6 billion dollars. The portion of that income spent for educational and general purposes declined about six percent, from 80.5% to 75.1%, while the share given to general administration rose by thirty percent.

In a more recent analysis, Minter and Bowen (1982b) reported a decrease in the percentage of expenditures for instruction and a slow increase in the percentage of expenditures for general administration. They believe that this expansion has occurred not because academic leaders desired it, but because of the imposition of new functions and

obligations on the institutions (1982a). One of the sources of these new functions and obligations may be state agencies' stepped-up requirements in the pursuit of greater accountability from public colleges and universities as described by the Carnegie Foundation for the Advancement of Teaching (1982) report on academic governance.

For over a decade, it has been noted in the literature that the level of state board involvement in institutional affairs has steadily increased, but the cost of that involvement in terms of staff and monies at the state-level has not been determined. The gradual increase of administrative costs at the institutional level has been documented, but the reasons for these increases have not been fully explored. It is not known if there is a relationship between the cost of operation of state-level boards and their level of involvement in the affairs of the institutions under their purview; nor, is it known if there is a relationship between the cost of operation of state-level boards and the cost of administration at the institutional level. The purpose of this study was to investigate these relationships.

PURPOSE OF THE STUDY

The purpose of the study was two-fold: first, to examine the relationship between the operating costs of state-level boards, along with other selected factors, and expenditures for administration at the public, four-year bachelor degree and higher degree granting institutions governed or coordinated by those boards; and second, to examine

the relationship between the operating costs of state-level boards and the level of board involvement in institutional affairs, along with other selected factors.

The following research questions governed the study:

1. What is the relationship between expenditures for the administration of public, four-year institutions and expenditures for the operation of state-level boards?

2. What is the relationship between expenditures for the administration of public, four-year institutions and the type of state-level board?

3. What is the relationship between expenditures for the administration of public, four-year institutions and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

4. What is the relationship between expenditures for the operation of state-level boards and the type of state-level board?

5. What is the relationship between expenditures for the operation of state-level boards and the level of those boards' involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

6. What is the relationship between expenditures for the operation of state-level boards and the total number of board staff?

7. What is the relationship between expenditures for the operation of state-level boards and the total number of public, four-year institutions governed or coordinated by those boards?

8. In states with no state-level board for higher education, what is the proportion of total educational expenditures used for administration in public, four-year institutions; and what is the administrative cost per full-time equivalent student in public, four-year institutions?

Three additional research questions, not directly related to boards' operating costs or institutions' administrative costs but still of value in examining the nature of state-level boards, were:

9. What is the relationship between the type of state-level board and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

10. What is the relationship between the total number of board staff and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

11. What is the relationship between the total number of board staff and the type of state-level board?

SIGNIFICANCE OF THE STUDY

The study was significant because of its analysis of the operating costs of state-level boards for higher education in selected states in fiscal year 1980-1981. Specifically, a data base was developed which allowed comparison of the level of expenditures for board operation with board type, staffing, and functions. The findings provided additional information, which was obtained using quantitative methods, about the nature of state-level boards.

Concern has been expressed about the trend toward increased board involvement in institutional affairs and the cost of this involvement. The study provided a means, using quantitative methods, for examining the relationship between the level of board involvement in various areas at the institutional level and the cost of that involvement in terms of board operating costs and institutional administrative costs.

The study had further significance through information which was obtained in conjunction with the primary purpose of the study. Because of conflicting or inaccurate information found in several sources, it was necessary to clarify the organizational patterns for higher education in each of the fifty states prior to selecting the population for the study. A more accurate classification of state-level boards in the fifty states in 1981, was the result.

Finally, the study had heuristic value in that it established a basis for studying one aspect of the relationship between state-level boards for higher education and the institutions under their purview, and raised questions about other aspects of the relationship. Thus, the study can serve as a starting point for subsequent investigations.

DELIMITATIONS AND LIMITATIONS OF THE STUDY

There is great diversity in higher education governance structures across the fifty states. Some states have only one state-level board for all higher education institutions while others have two separate boards, one for four-year institutions and one for two-year institutions. Still other states have a state-level board and one or more

multi-campus boards at the institutional level. It was not always possible to determine the amount of money which a single state-level board expended for the governance or coordination of the four-year institutions and the two-year institutions respectively. Therefore, the study was delimited to those twenty states in which the state-level board expenditures for the governance or coordination of the institutions under their purview could be differentiated between four-year and two-year institutions. The study was further delimited to four-year bachelor degree and higher degree granting institutions. Community colleges, vocational-technical schools, and any other two-year institutions were excluded.

The major thrust of state-level boards is toward public institutions of higher education. There is much difference between state-level boards in the degree of authority which they exercise over private institutions. In those systems where private institutions do operate under the purview of state-level boards, it is difficult to determine the amount of the boards' operating budgets expended for supervision of the public sector and of the private sector. Therefore, private institutions of higher education were excluded from the data used in answering the research questions.

State-level board expenditures for the governance or coordination of public, four-year institutions included expenditures for the operation and staffing of the board. Expenditures for capital outlay, student financial aid, and any other expenditures not directly related to board operation were excluded.

The study was further delimited to the academic and fiscal year, 1980-1981.

One of the limitations of the study was one that is inherent in any financial analysis; that is, qualitative results are often obfuscated. The study did not attempt to measure the positive contributions of state-level boards in improving higher education, nor did it attempt to measure the value of or to evaluate these boards for any purpose.

A high degree of heterogenity existed within the population. Each state was unique in terms of number of higher education institutions, number of full-time-equivalent students, amount of state allocations for higher education, and so forth. Not all of these differences could be reconciled. However, the purpose of the study was not to make comparisons between states. The purpose of the study was to determine whether certain relationships existed between state-level boards and the public, four-year institutions under their purview within each selected state, and whether certain relationships existed between state-level boards and various other factors. Therefore, no specific procedures to minimize the effect of these differences were deemed necessary.

The wide variation in size (i.e. student number, institution number, and institution size) was accounted for to some extent by use of per full-time equivalent student cost. However, there remained some question about the effect of size. Delaware, Vermont, and Wyoming, the three states with no state-level board, were very small in terms of enrollment, institutional number, and institutional size. In fact, Wyoming had only one public, four-year institution. Any findings about institutional administrative costs in these states may be a function of their small size.

Another limitation of the study was the inability to control for the effects various state and federal legislative offices, and in some cases state departments of education, may have on the administrative costs of institutions of higher education. No specific attempt was made to control for these effects, neither was there any attempt to determine services, such as personnel and purchasing, which might be provided for institutions by state agencies outside the higher education sector.

In part, the study used data derived from the 1980-81 Higher Education General Information Survey (HEGIS), specifically the financial survey and the enrollment survey. Generally, the accuracy of HEGIS data has been found acceptable (Andrew, Fortune, and McCluskey, 1980). It should also be noted that the financial data collected through HEGIS represent the only on-going source of financial information about all higher education institutions in the United States (McCoy, 1980), and Bowen (1980) used HEGIS data in part to prepare his comprehensive report on the costs of higher education. However, despite general statements to the contrary, HEGIS data may include variations in accuracy.

DEFINITIONS OF TERMS

The following is a list of definitions of general terms used in the study.

Administration Expenditures. Administration expenditures are reported as expenditures for institutional support on the Financial Statistics Survey of the Higher Education General Information Survey,

Part B-line 7. These include expenditures for the day-to-day operational support of the institution, general administrative services, executive direction and planning, legal and fiscal operations, and community relations, but not expenditures for physical plant operations (National Center for Education Statistics, 1980).

Advisory Board/Agency. An advisory board or agency is neither a regulatory coordinating agency nor a governing board. Rather, it serves as an advisor to the legislature, governor, and institutions of higher education concerning major educational policies.

State-Level Coordinating Board/Agency. A coordinating board or agency provides coordination for all public institutions, and in some cases private institutions, in a state. Institutional governing boards control individual institutions or specific groups/types of institutions.

State-Level Governing Board/Agency. A governing board or agency is the single governing board for all public institutions or specific groups/types of public institutions in a state, and there are no local or segmental governing bodies.

State-Level Board for Higher Education. State-level board is an all-inclusive term for any board, commission, department, council, or other agency which has authority over public institutions of higher education. These boards are listed in the 1981 edition of the State Post-secondary Education Profiles Handbook published by the Education Commission of the States.

Total Educational Expenditures. For the purpose of this study, total educational expenditures include expenditures for instruction, academic support, student services, institutional support, operation and maintenance of plant, and scholarships and fellowships. Expenditures for research and public service are excluded. Total educational expenditures are reported on the Financial Statistics Survey of the Higher Education General Information Survey, Part B - lines 1, 4, 6, 7, 8, 9, and 10 (National Center for Education Statistics, 1980).

Voluntary Board/Agency. A voluntary board or agency is composed of institutional officers, and coordination is performed by the institutions themselves operating with some degree of formality.

Chapter 2

REVIEW OF THE LITERATURE

Voluminous best describes the literature on state-level boards for higher education. As these boards have grown in number, prominence, and influence, writers and scholars in the field of higher education have been compelled to describe, survey, and analyze the phenomenon. The result has been an enormous amount of qualitative data about state-level coordination or governance as a whole and about individual boards in particular states. Descriptive surveys and case studies, usually in dissertation form, have been the primary sources for these data. The descriptive surveys were concerned primarily with the status of state-level coordination or governance, and the case studies described the evolution of particular boards or the pattern of academic governance in certain states. Only a handful of theoretical studies have been undertaken, and even fewer quantitative or statistical studies have been done.

In addition, another body of literature addresses topics generic to coordination or governance. Concern about the loss of institutional autonomy with the advent of statewide boards is a recurring theme in this literature. A second dominant theme involves views expressed by various authors about the proper role of statewide boards in academic governance and about the boards' areas of responsibility.

TOPICAL AREA LITERATURE

An early publication edited by Minter in 1966, contained seven contributions on the subject of higher education and the state with the general theme of concern for institutional autonomy. This same concern was echoed by Chambers (1970) in his book of state-by-state sketches of state tax fund appropriations for the annual operating expenses of higher education. His main point was that state colleges and universities should be freed from overcentralized statewide structures of governance or coordination. In a subsequent report, Chambers (1974) again commented on the trend toward the overcentralization of higher education in the statehouse.

The Carnegie Commission on Higher Education issued two consecutive reports with the same major theme of loss of institutional autonomy. In the 1971 report, the Commission expressed concern about the development of "heavy-handed regulatory councils" over higher education. They recommended that states resist giving coordinating agencies administrative authority or establishing single governing boards. Instead, the Commission believed that what was needed was coordination in the form of high level planning and not bureaucratic regulation. The 1973 report also warned that external authorities were exercising more and more control over higher education and that the greatest shift in power had occurred in the transfer of authority from the campus to outside agencies.

In his treatise on the governance of colleges and universities, Corson (1975) observed that colleges have been held together more by

the shared beliefs of those inside them than by structure and authority. He went on to say that when decision making was centralized with individuals far removed form the collegial organization, it became susceptible to disintegration. Corson listed several guidelines designed to provide freedom for those concerned with higher education to exercise their professional judgement. He also maintained that institutions needed insulation from interference by state bureaucracies and identified the needs which must be met if bureaucratization was to be held back.

A 1976 report by the Carnegie Foundation for the Advancement of Teaching examined the interrelations between the states and higher education and expressed regret about the overall tendency toward the centralization of authority over higher education. The report also claimed that centralization had no measurable impacts on policies or on practices and that no provable case could be made that higher education was any better as a result of centralization. A more recent report by the Carnegie Foundation for the Advancement of Teaching (1982) indicated that intervention by state governments into higher education had continued to increase. It described the overregulation of institutional affairs as inappropriate in a period of retrenchment and urged universities to reassert their right to govern themselves. The Carnegie Council on Policy Studies in Higher Education (1980) cautioned against plans to place systems of higher education under increased state control and overeager promises to save money on higher education.

An initial work containing the theme of the coordinating board's proper role and areas of responsibility was published by Millet (1968).

He offered certain guidelines for what were and were not appropriate subjects for centralized and decentralized decision-making. Master plans for higher education development and governmental budgeting decisions were two subjects he viewed as being appropriate.

In a 1971 publication, Glenny et al. presented guidelines for board membership, organization, and operation. They also recommended that the areas of a board's responsibility include planning, program review, budgeting, data systems, aid programs, and private education. Another 1971 publication edited by Glenny and Weathersby contained contributions on the relationship between institutions and states. The underlying theme was the definition and delineation of state agency powers as the key to successful interaction between institutions and state agencies.

The Education Commission of the States issued a report in 1973 which was generally supportive of state agency authority and responsibility for higher education. The report outlined the basic characteristics which an effective coordinating or governing agency should have and also delineated the levels of decision-making for state governments, state agencies, and institutional boards.

Harcleroad (1973) listed four major responsibilities of state boards or commissions, emphasizing that planning was their foremost responsibility. He felt that central staff should remain small and concentrate on planning while allowing campus operations to remain the responsibility of campus personnel. In an interesting parallel with Parkinson's (1962) observation that too much central control probably

costs too much, Harcleroad (1973, p. 8) presented his own "law." He said, "Local autonomy and effectiveness are inversely proportional to the size of the central office staff." Martorana (1974) also considered sound statewide planning and coordination of postsecondary education to be one of the most important board functions, but he said that there should be a clear distinction made between statewide planning and coordination of educational institutions and their control and governance.

Corson's (1974) view of the role of state coordinating agencies was that it was an important but limited role of interpreting higher education to others, not running it. Furman (1979, p. 100) offered the similar view that state coordinating boards should function as a third party, a useful mechanism for maintaining a productive dialogue between government and higher education. Specifically, he felt that the role of a coordinating board ought to be that of "a subtle advocate for higher education." Hines and Hartman (1980) examined the state and federal governments' role in higher education and concluded that coordinating agencies occupied a critical position in the relationship between government and higher education.

One publication examined statewide boards entirely from the perspective of evaluation. Berdahl (1975) edited a book containing several writers' views on the evaluation of statewide boards. All concurred that the time had come for state boards to be evaluated formally, but offered different ideas on the criteria and procedures to be used. Mortimer and McConnell (1979) argued that the nature, intensity, and potential impact of the conflicting demands for participation in governance of colleges and universities were not well understood by the academic community, yet needed to be understood if institutions were to

be governed effectively. They examined claims for legitimate governance from various sources, one of these being statewide coordinating agencies. The type of agencies were classified and discussed in detail, and the observation was made that there had been no intensive studies of the relative effectiveness of the various types of coordinating agencies.

Five dissertations have been written concerning the role, functions, and/or responsibilities of state-level boards for higher education. Walton (1967) identified and analyzed the methods state boards used in distributing state funds to institutions under their control. Pullar (1972) ascertained that the planning of higher education facilities and all of the functions which went with planning were more often performed by the statewide board alone than in cooperation with the institutions. In a 1973 study, Lueck analyzed statewide plans for higher education produced by statewide boards in order to determine the problems and issues addressed and the content of the plans. Rivera's (1976) study of the perceptions of the role of state coordinating agencies held by college presidents, agency directors, and board members indicated the agencies importance as a statewide planner and coordinator of educational resources. Finally, Birch (1979) determined the responsibility of state higher education boards for the accreditation and evaluation of institutions.

DESCRIPTIVE SURVEYS

Glenny's (1959) field study was the first attempt to describe patterns of coordination in higher education. The study was designed to examine the effect of state coordination on institutional autonomy.

Twelve states were selected for the study and extensive personal interviews of governors, college presidents, legislators, state officials, and college administrators were conducted. Glenny concluded that state agency coordination was generally beneficial and that centralized decisions did not significantly affect institutions in negative ways. In fact, he said that coordinating boards actually benefitted institutions by absorbing some of the need for direct control by various government offices. However, he warned that state agency coordination should not be allowed to overshadow institutional identity and determine educational policy. Finally, Glenny examined the strengths and weaknesses of both voluntary associations and formal coordination and concluded that formal coordinating agencies were more effective in promoting diversity and quality.

Another study by Moos and Rourke (1959) identified a movement which began in 1917 to regroup state administrative units into a more centralized focus and to bring them under tighter executive control. The study encompassed 344 institutions and data were gathered in personal interviews, letters, written statements, and questionnaires. The central concern of the study was with the impact of state administrative controls upon the management of state colleges and universities. There were no general conclusions, but comments throughout the book indicated the authors' concern that institutional autonomy would suffer from the expansion of state coordination.

One of the most definitive and valuable studies on state agency coordination was reported by Martorana and Hollis (1960). The purpose of the report was to provide a complete and current picture of the

structures and organizations established in the fifty states to discharge their responsibilities for higher education. A state-by-state attempt was made to identify and characterize all boards responsible for public higher education, to state their legal responsibilities, and to list the institutions under their jurisdiction. One of the opinions offered by the authors - as relevant today as it was over twenty years ago - was that a standard classification could not be devised which would be recognized in each of the fifty states because each board came into existence under unique circumstances and evolved over the years to its present status.

Chambers (1961) selected California, Colorado, Indiana, Michigan, and Ohio as the subjects of his analysis of voluntary coordination. He echoed Moos and Rourke's general theme of institutional autonomy and favored voluntary coordination over compulsory state coordination, his contention being that compulsory state coordination was foreign to the spirit of the university.

Brumbaugh (1963) examined fifteen Southern region states with agencies for planning and coordination. His purpose was to identify the functions performed in planning and coordination, how they were affected, and what problems arose in the process. The result was an outline for the organization of an effective state coordinating agency or to improve the effectiveness of existing agencies.

Another comprehensive study of the coordination of higher education in the fifty states was done by Pliner (1966) in conjunction with an assessment of the direction Louisiana should take. Detailed questionnaires were sent to all states to obtain information on their

organizations and operations for coordinating higher education. The result was a report containing information on the average size of boards, terms of members, use of committees, functions of boards, titles of boards, and institutions under the boards. The study revealed the trend toward establishment of statewide coordinating boards and away from statewide governing boards.

In a different vein, Williams (1967) identified the fundamental responsibilities assigned by legislative or constitutional authority to state agencies. He summarized and quoted from actual legislative enactments or state constitutions for the thirty-nine states with single state coordinating boards. In part, he found that ten boards were classified as having advisory authority. In a subsequent study, expanded to all fifty states, Williams (1971) eliminated the word coordinating because of the difficulty in identifying boards as coordinating, management, or advisory. He found that some boards were advisory boards in certain areas, management boards in other areas, and coordinating boards in still other areas.

A report describing the status of planning for and coordination of higher education in each of the fifty states and the District of Columbia was prepared by Abrahams (1969). He found that although most individual institutions were responsible for developing their own plans, most state governments recognized the need for systematic planning for higher education as evidenced by the interposition of special agencies between individual institutions and other state agencies. Also of interest was the identification of more than three hundred

agencies with some responsibility for higher education, indicating the difficulty of coordinating the multiple activities of state agencies involved in higher education.

Berdahl (1971) made a major contribution to the body of information on coordination with his comprehensive field study of thirteen selected states supplemented by data from six independent case studies. His study provided insight into the relationship between the state agency and the institution and emphasized the part played by the state agency as intermediary between the institution and state government. He also developed the theme of public interest in distinguishing between academic freedom and university autonomy. A detailed classification of statewide boards was devised, and the major functions performed by boards were examined. The report concluded with recommendations based on descriptive data about the requirements of an effective coordinating agency. These requirements included a strong independent staff, strong membership, and strong academic advisory committees. In addition, broad powers in planning, program review, budget review, and capital outlay review were cited.

In the same year Wattenbarger and Sakauchi (1971) issued a report on a status survey of state-level boards responsible for community junior colleges. A decisive trend toward more state-level concern for these college was indicated. One of the conclusions was that the governing or governing-coordinating role was most favored by state-level boards solely responsible for community colleges.

The first comprehensive study of state public higher education since Martorana and Hollis' study in 1960 was conducted under the auspices of the Department of Health, Education, and Welfare by Zwingle

and Rogers and reported in 1972. The publication was designed to provide a description of the arrangements which existed in 1970 for governing and coordinating higher education programs. It was found that 289 state boards were operating in the fifty states, District of Columbia, and outlying areas, and that the vast majority of these were governing boards. A trend away from granting the state board of education responsibility for higher education was also discovered.

Glenny and Dalglish (1973), in an attempt to determine the substantive and procedural ways in which states relate to their constitutionally-based and statutory universities, placed coordinating boards in the context of the larger statewide picture, vis-à-vis the boards' relative positions of influence over universities compared to several state agencies. Their findings revealed the growing influence of the relatively new agencies, the coordinating boards, in state government. Budget offices followed by coordinating boards held the most influence over state higher education affairs. Legislative staffs had less influence. The authors noted that the legal role of a coordinating board was important, but ultimately it gained its position by being useful to the arms of government and to the institutions. Of particular interest was the tendency for coordinating boards to affiliate most closely with the governor and his offices.

Another concise outline of the background and status of state agencies for higher education was published in 1976 by Millard. He stated that there was no simple typology by which boards could be grouped to indicate statutory functions and powers. Instead, a series of variables was necessary to provide a framework for discussion; these being the distinction between governing and coordinating boards, the

type or range of institutions governed, and the three major functions of planning, program approval, and budget development. He also listed a series of factors about board functions which were relevant in assessing the scope and power of a board. Millard's overall summation of state boards was that they were ultimately in the best interest of the higher education community.

Glenny (1976) conducted a fifty state study of the processes used by state agencies to formulate the budgets of colleges and universities. The study was undertaken for the purpose of advancing budgetary theory and giving state and institutional budget professionals a broader understanding. The focus was on the cooperation, redundancy, and duplication among state agencies reviewing budgets. One relevant observation was that the interjection of a coordinating agency between the institutions and the state political arms had a decided impact on budget review procedures and on state budget organization. However, Glenny favored coordinating boards over consolidated governing boards because the latter had stronger executives, larger staffs, and higher costs. He also contended that states benefitted more from coordinating boards' broader perspectives on policy analysis and recommendations than they did from the more narrow perspective of statewide governing boards. In fact, evidence from the study validated his contention that coordinating boards provided a long-range perspective to both the governor and legislature for evaluating and acting on budget policy for higher education.

CASE STUDIES

Many single case studies have been written in dissertation form. The majority of these have been studies of the evolution of a particular board or historical reviews of the higher education system in a certain state. Some studies have analyzed a board's approach to coordination while others have analyzed selected administrative functions performed by a board. Much valuable data on statewide coordination have been gained through these studies; however, they had little relevance to this study.

One dissertation of interest was a case study done by Helton (1978) of different types of institutions in Kentucky. The information demands of state and federal government agencies on these institutions were examined and the administrative burden of government information demands was assessed. The population was comprised of six institutions: two two-year colleges, two four-year colleges, a regional university, and a state university. It was found that public institutions cited more state agencies than federal agencies as sources of administrative burden, while private institutions reported an equal or greater number of federal agencies imposing a burden. Professional and clerical staff at the six institutions were more likely to be involved in responding to state agencies, but institutions tended to spend more manhours on federal agency requests than on state agency requests. The associated costs of both state and federal agency information requests were estimated at five percent or less of the administrative budget,

and the observation was made that administrators were becoming more concerned with information demand and the related burden as the state coordinating agency's functions increased.

THEORETICAL PERSPECTIVES

Three case studies and three dissertations, each approached from a theoretical perspective, were written in the late sixties and early seventies. Two of the case studies were conducted by Paltridge and incorporated a partial theoretical framework along with pertinent research from the discipline of sociology and political science. In the California study, Paltridge (1966) analyzed changes and new developments in the organizational form and operating procedures of the California Coordinating Council. His general findings were that there was an increased involvement with state and federal governments. He maintained that the causes for many of these changes found their rationale in contemporary theories relating to organization. Paltridge's (1968) second study, an in-depth examination of the Wisconsin Coordination Committee for Higher Education, was undertaken to determine if the factors which contributed to effective coordination could be identified and whether the assumptions based on these factors might apply to the coordination efforts in other agencies. However, his main conclusion was that politics and conflict were two facts of life facing higher education coordination organizations.

Palola, Lehmann, and Blisehke (1970) conducted case studies in California, Florida, Illinois, and New York and compiled the results into a comprehensive study of statewide coordination. They approached the topic within the theoretical framework of higher education inter-organizational networks and described these networks with the concepts of differentiation, authority distribution, and type of planning. Each of these concepts was related to the concept of institutional autonomy and it was concluded that maximum autonomy was gained with high differentiation, decentralization, and fragmented planning.

A dissertation written by West (1970) was primarily a descriptive conceptual framework. He identified within a theoretical framework three types of coordination based on environmental situation, strategy, and structure of the coordinating agency. The three types identified along with their organizational characteristics were mechanistic, synthetic, and organic. His conclusion was that operating coordinating agencies tended to be either mechanistic or synthetic systems.

Binford (1970) proposed to place the different forms of coordination of higher education on a continuum of modes of decision making ranging from hierarchy on one extreme to mutual adjustment at the other extreme, with bargaining being located in the middle. His purpose was to measure the effectiveness of the different forms of coordination and decision-making modes based on the perceptions of state officials. He found that the functions located in several levels of state government were perceived as being most effectively performed by the governing board using the bargaining decision making mode. The functions located

in the higher education sector were not perceived as being most effectively performed by any particular form of coordination, but the hierarchial decision making mode was perceived as being favored by the higher education sector.

North (1974) developed a theoretical system for an interorganizational network of statewide higher education to help explain and predict relationships among structure, process, and performance variables. The structure variables were centralization, formalization, and complexity. Cooperation, adaptability, and communication comprised the process variables; efficiency, resource acquisition, and membership satisfaction comprised the performance variables. Several propositions were made based on these variables. Two ideal types of organizations were revealed through examination of the interorganizational characteristics and propositions: the organic model which emphasized flexibility and adaptability and the efficiency model which emphasized structure and control. The observations were made that the history of statewide coordination indicates that public higher education is moving from the organic model to the efficiency model; and that the efficiency model could have adverse implications for the system's complexity, membership satisfaction, resource acquisition, communication, and adaptability.

QUANTITATIVE STUDIES

Compared to the wide array of qualitative literature which has been written about state-level coordination as a whole and about individual boards or states, a relatively small number of statistical studies

have been attempted. Despite their paucity, these studies have provided another source of empirical information about state-level coordination.

Halstead (1974) compiled an exhaustive study of the theories, analyses, and procedures involved in planning for a statewide system of higher education. His intention was to provide a handbook for individuals responsible for higher education planning. Extensive data were collected in a number of areas ranging from student financial aid to state budgeting for higher education. One of the book's major contributions was a system for analyzing conditions within a state based on interstate comparisons. The system consisted of state data and rankings for twenty-six measurements covering the four areas of socioeconomic climate for support of education, and public higher education organization, emphasis and achievement. The measurements were in the form of indexes which showed the relation of one dimension to another. Halstead asserted that the reason for comparisons was the necessity for any serious planning for higher education to begin with an assessment of the existing socioeconomic conditions. However, he remarked that although interstate comparisons were a useful research instrument, the technique was not likely to provide definitive answers.

Harcleroad, Lepchenske, and Wetterlind (1975) made an attempt to determine whether state-level boards for higher education had measurable effects on institutional effectiveness or efficiency. An extensive survey was made of the member institutions of the American Association of State Colleges and Universities and case examples were requested which would illustrate increased or decreased efficiency in the

management of the institutions. Unfortunately, only limited and scattered replies were received and were insufficient to provide definitive, cost-based evidence of increased or decreased efficiency.

A study by Snyder (1983) presented to the State Higher Education Executive Officers (SHEEO) Executive Committee was undertaken to develop a unified data base by which state-level boards could be compared. Comparable data were collected on structure, responsibilities and duties, state appropriations, and staffing through a survey of the SHEEO membership agencies. Although valuable statistical data were received, it was determined that too much diversity existed in the SHEEO membership to obtain comparable data. It was also determined that there were inconsistencies in the categorization of boards between the SHEEO membership lists and two other published sources. The most important conclusion reached was that there were few significant relationships among board characteristics. These agencies had evolved to meet the unique needs of each state and no "blueprint" existed for their responsibilities and duties. For all practical purposes, they were not comparable.

SUMMARY

A review of the literature revealed that a large quantity of quantitative information about state-level boards for higher education has been gathered. Descriptive surveys and case studies have been the primary methods for gathering this information. Another distinct body

of literature was located which addressed two major topics generic to coordination: the loss of institutional autonomy and the proper role of statewide boards in academic governance.

Few studies were found which provided qualitative information about state-level boards for higher education. No study has been undertaken using statistical procedures to examine any aspect of the relationship between individual boards and the institutions under their purview. General concern has been expressed about the increased board involvement in the affairs of colleges and universities and the related costs of that involvement, but no studies to actually determine the costs have been done. Nor has there been any attempt to determine whether there is a relationship between the cost of board operation and the cost of institution administration.

Chapter 3

METHODOLOGY

An introduction to the problem and a review of the literature were presented in Chapters 1 and 2. In this chapter, the research design, the population studied, a description of the research instrument, the procedures for collection of data, and the methods of data analysis are considered.

PURPOSE STATEMENT

The purpose of the study was two-fold: first, to examine the relationship between the operating costs of state-level boards, along with other selected factors, and expenditures for administration at the public, four-year bachelor degree and higher degree granting institutions governed or coordinated by those boards; and second, to examine the relationship between the operating costs of state-level boards and the level of board involvement in institutional affairs along with other selected factors.

RESEARCH QUESTIONS

The research was designed to provide answers to the following questions:

1) What is the relationship between expenditures for the administration of public, four-year institutions and expenditures for the operation of state-level boards?

2) What is the relationship between expenditures for the administration of public, four-year institutions and the type of state-level board?

3) What is the relationship between expenditures for the administration of public, four-year institutions and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

4) What is the relationship between expenditures for the operation of state-level boards and the type of state-level board?

5) What is the relationship between expenditures for the operation of state-level boards and the level of those boards' involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

6) What is the relationship between expenditures for the operation of state-level boards and the total number of board staff?

7) What is the relationship between expenditures for the operation of state-level boards and the total number of public, four-year institutions governed or coordinated by the boards?

8) In states with no state-level board for higher education, what is the proportion of total educational expenditures used for administration in public, four-year institutions; and what is the administrative cost per full-time-equivalent student enrolled in public, four-year institutions?

In addition to these nine primary research questions, three secondary research questions were posed:

9) What is the relationship between the type of state-level board and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

10) What is the relationship between the total number of board staff and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

11) What is the relationship between the total number of board staff and the type of state-level board?

POPULATION

The initial population for this study consisted of all of the state higher education agencies and boards in the fifty states as listed in the State Postsecondary Education Profiles Handbook (Education Commission of the States, 1981). However, because of conflicting information in various publications, there was some uncertainty about the exact governance structure for higher education and the type of state-level board in each of the fifty states. Consequently, a survey was conducted among the fifty State Higher Education Executive Officers (SHEEO) member agencies listed in the Directory of Professional Personnel State Higher Education Agencies and Boards (Education Commission of the States, 1981a). The response rate was eighty-eight percent with forty-four of the surveys returned. No survey was received from California, Delaware, Montana, North Dakota, Tennessee, and Wyoming. A second survey and cover letter were mailed, and responses were received only from Tennessee and Wyoming. Wyoming declined to participate in

the study. Budget documents and an organizational chart were received from Tennessee; however, the survey was not returned. It was decided that for the purpose of the study, the higher education governance structure of the six non-responding states would be determined from the state profiles published in the State Postsecondary Education Profiles Handbook (Education Commission of the States, 1981). Based on information obtained from the survey and the non-respondent methodology, each state higher education board was classified by type (i.e., advisory, voluntary, regulatory, coordinating, or governing) and by jurisdiction over postsecondary education institutions (i.e., two-year institutions only, four-year institutions only, or both two-year and four-year institutions). Schematics of the higher education governance structures in the fifty states are contained in Appendix A.

A decision was made to exclude state higher education boards with jurisdiction only over two-year institutions because, in many cases, those boards were supervised by other state-level boards which also had jurisdiction over four-year institutions. For these institutions it would have been difficult to determine accurately the amount spent by the respective boards to govern or coordinate the institutions under their purview. Single boards with jurisdiction over both two-year and four-year institutions were included if data on board expenditures for the governance or coordination of four-year institutions could be obtained separately from that of the two-year institutions. State-level boards coordinating or governing only four-year institutions were included if data on board expenditures for the governance or coordination of those institutions could also be obtained.

The exclusions resulted in a final redefined population of twenty state-level boards for higher education; eleven of these were governing boards and nine were coordinating boards. The exact board titles, addresses, and contact persons are listed in Appendix B. The boards used in this study were located in the following twenty states:

Arizona
Delaware
Florida
Idaho
Iowa
Kansas
Kentucky
Mississippi
Missouri
New Jersey
New Mexico
North Carolina
North Dakota
Okalahoma
South Carolina
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

The three states which did not have state-level boards for higher education in 1980-1981 but were used in this study were Delaware, Vermont, and Wyoming.

Within the states studied there were 216 public, four-year bachelor degree and higher degree granting institutions in the Education Directory, Colleges and Universities 1980-81 (Smith and Davis, 1981). Of these 216 institutions, 209 were located in the twenty states which had either state-level governing or coordinating boards. The remaining seven were located in the three states which did not have state-level boards for higher education. The FICE identification numbers and names

of the 216 institutions are listed in Appendix C. Institutions excluded from this study were community colleges, vocational-technical schools, and any other two-year institutions.

VARIABLE SELECTION

Seven variables were hypothesized as factors either influencing the cost of administration in public, four-year institutions, the cost of operation of state-level boards for higher education, or the relationship between the two. The variables are shown in Figure 2.

INSTRUMENTATION

Data for this study were obtained from two primary sources: a survey instrument and Higher Education General Information Survey (HEGIS) tapes. The data source for each of the variables used in the study is shown in Figure 3. Additional data were obtained from the 1980-1981 appropriation act for each of the states used in this study.

Financial and enrollment data on the public, four-year institutions were collected from HEGIS tapes on Financial Statistics of Institutions of Higher Education for Fiscal Year Ending 1981 (NCES Form 2300-4, HEGIS Series 16) and Fall Enrollment in Institutions of Higher Education - 1980 (NCES Form 2300-2.3, HEGIS Series 15). Tapes were provided by the State Council on Higher Education of Virginia (SCHEV). The State Council also provided the tape number data description, data set number and labels for accessing the tapes, and data base documentation. The National Center for Education Statistics (NCES) provided the HEGIS survey forms. In Appendix D, the lines and columns for each HEGIS form from which data were taken are listed.

A. Variables

1. Proportion of Total Educational Expenditures Used for Administration in Public, 4-Year Institutions (Ratio 1)
2. Administrative Cost per FTE Student in Public, 4-Year Institutions (Ratio 2)
3. Board Cost for Governance/Coordination per FTE Student (Ratio 3)
4. Board Type
5. Total Number of Public, 4-Year Institutions Under Board's Purview
6. Total Number of Board Staff
7. Functions/Responsibilities of Board and Level of Involvement

B. Ratios

Ratio 1. $$\frac{\text{Cost of Administration in Public, 4-Year Institutions}}{\text{Total Educational Expenditures of Public, 4-Year Institutions}}$$

Ratio 2. $$\frac{\text{Cost of Administration in Public, 4-Year Institutions}}{\text{Total Number of FTE Students Enrolled in Public, 4-Year Institutions}}$$

Ratio 3. $$\frac{\text{Board Cost for Governance/Coordination of Public, 4-Year Institutions}}{\text{Total Number of FTE Students Enrolled in Public, 4-Year Institutions}}$$

Figure 2. Selected variables used in examining the relationship between the cost of operation of state-level boards for higher education and the cost of administration in public, four-year institutions of higher education.

1.	Ratio 1 (Numerator)	Cost of Administration in Public, 4-Year Institutions	HEGIS Financial Tape
	Ratio 1 (Denominator)	Total Educational Expenditures of Public, 4-Year Institutions	HEGIS Financial Tape
2.	Ratio 2 (Numerator)	Cost of Administration in Public, 4-Year Institutions	HEGIS Financial Tape
	Ratio 2 (Denominator)	Total Number of FTE Students Enrolled in Public, 4-Year Institutions	HEGIS Enrollment Tape
3.	Ratio 3 (Numerator)	Board Cost for Governance/ Coordination of Public, 4-Year Institutions	Survey Instrument, Item 7
	Ratio 3 (Denominator)	Total Number of FTE Students Enrolled in Pubic, 4-Year Institutions	HEGIS Enrollment Tape
4.	Board Type		Survey Instrument, Item 1 (Schematic Check) Item 2 (Classification)
5.	Total Number of Public, 4-Year Institutions Under Board's Purview		Survey Instrument, Item 3
6.	Total Number of Board Staff		Survey Instrument, Item 9
7.	Functions/Responsibilities of Board and Level of Involvement		Survey Instrument, Item 11

Figure 3. Data source for selected variables used in examining the relationship between the cost of operation of state-level boards for higher education and the cost of administration in public, four-year institutions of higher education.

Descriptive data on the state-level boards for higher education were obtained from a survey instrument designed by the author. A copy of the survey instrument is included in Appendix E, and a listing of individuals responding to the survey is contained in Appendix B.

Additional data on state funding of state-level boards were obtained from the appropriation act for fiscal year 1980-1981 for each of the twenty state-level boards for higher education used in the study. The appropriation acts were contained in the session laws passed by the state legislatures in 1980-1981. These session laws were located in storage on microfiche housed in the law library at the University of Virginia, Charlottesville, Virginia. Appendix F contains a listing of the appropriation acts and other fiscal documents.

DATA COLLECTION PROCEDURES

The survey instrument was mailed to each of the fifty State Higher Education Executive Officers (SHEEO) member agencies listed in the State Higher Education Directory (Education Commission of the States, 1981), and forty-four surveys were returned. Although a second survey and cover letter were mailed, no survey was received from California, Delaware, Montana, North Dakota, Tennessee, and Wyoming. Twenty of the forty-four surveys received were valid because item seven was completed along with the remaining ten items. The information requested in item seven (i.e., the approximate amount expended for performing centralized governance/coordination functions for the four-year bachelor degree granting and higher institutions for the fiscal year 1980-1981) was crucial to the study.

The twenty surveys were further validated by comparing figures given in item six (i.e., the amount of money allocated by the state legislature for the fiscal year 1980-1981 for the operation and staffing of the board) with figures obtained independently by the author from the appropriation acts and other fiscal documents. Any discrepancies were resolved by telephone calls to the respondents or the agency fiscal officers (Appendix G).

Data on the institutions included in the study were taken from the HEGIS tapes using the Statistical Analysis System (SAS) format. Descriptive data on the state-level boards for higher education obtained from the survey instrument were merged with the HEGIS data to create an operational file.

METHOD OF ANALYSIS

Since several of the research questions required sequential applications of two or more statistical procedures, the analysis used to address each research question is listed with the respective question. The Statistical Package for the Social Sciences supplied the computer applications for these procedures.

Research Question 1. The correlation between expenditures per full-time equivalent student for the operation of state-level boards and expenditures for administration per full-time equivalent student in public, four-year institutions was determined using Pearson *r*. Specifically, the correlation between the following variables was determined.

Administrative Cost per FTE Student in Public, 4-year Institutions - Board Cost for Governance/ Coordination per FTE Student

Research Question 2. One-way analysis of variance was used to examine the relationship between expenditures for administration in public, four-year institutions and state-level board type. The following pairs of selected variables were used:

Proportion of Total Education Expenditures Used for Administration in Public, 4-year Institutions - Board Type

Administrative Cost per FTE Student in Public, 4-year Institutions - Board Type

Research Question 3. The level of board involvement in each of the areas of budget, planning, curriculum, student affairs, and faculty was determined from information obtained in item eleven on the survey instrument (Appendix E). An involvement score was computed using the formula:

Primary Responsibility x Time and Effort + (Approves or Reviews x Time and Effort ÷ 2) = Involvement

Time and effort were assigned a value on a scale from one to four as follows:

Maximum Time/Effort = 4

Median Time/Effort = 3

Minimum Time/Effort = 2

None = 1

The items within each functional area were summed to get a total involvement score for budget, planning, curriculum, student affairs, and faculty. Actual involvement scores were used rather than designating a particular score as high involvement, medium involvement, or low involvement. The actual scores for each state are shown in Appendix H. Pearson r was used to determine the correlation between expenditures for administration in public, four-year institutions and the functions/responsibilities of the board and the level of involvement. Two pairs of selected variables were used:

Proportion of Total Education Expenditures Used for Administration in Public, 4-year Institutions	-	Board Involvement Scores
Administrative Cost per FTE Student in Public, 4-year Institutions	-	Board Involvement Scores

Research Question 4. The differences between state-level board expenditures for operation across board types were examined using one-way analysis of variance and the following pair of selected variables:

Board Cost for Governance/ Coordination per FTE Student	-	Board Type

Research Question 5. Pearson r was used to determine the correlation between state-level board expenditures for operation and board involvement in the areas of budget, planning, curriculum, student affairs, and faculty. The following variables were used:

Board Cost for Governance/ Coordination per FTE Student	-	Board Involvement Scores

Research Question 6. Pearson r was used to determine the correlation between state-level board expenditures for operation and the total number of board staff. The pair of selected variables was:

Board Cost for Governance/ Coordination per FTE Student	-	Total Number of Board Staff

Research Question 7. The correlation between state-level board expenditures for operation and the total number of public, four-year institutions was determined using Pearson r and one pair of selected variables:

Board Cost for Governance/ Coordination per FTE Student	-	Total Number of Public, 4-year Institutions Under Board's Purview

Research Question 8. The following ratios were computed for Delaware, Vermont, and Wyoming:

$$\frac{\text{Cost of Administration in Public, 4-year Institutions}}{\text{Total Educational Expenditures of Public, 4-year Institutions}}$$

$$\frac{\text{Cost of Administration in Public, 4-year Institutions}}{\text{Total Number of FTE Students Enrolled in Public, 4-year Institutions}}$$

Descriptive statistics were used to report the distributions of these ratios.

Research Question 9. One-way analysis of variance was used to examine the relationship between the dependent variables, board involvement scores for each of the areas of budget, planning, curriculum, student affairs and faculty and the independent variable, board type.

Research Question 10. Pearson r was used to ascertain the correlation between the two selected variables:

Total Number of Board Staff - Board Involvement Scores

Research Question 11. One-way analysis of variance was used to examine differences in the number of board staff across the board types.

Chapter 4

PRESENTATION, ANALYSIS, AND INTERPRETATION OF THE DATA

INTRODUCTION

Analysis of the data and interpretation of the findings are presented in this chapter. The data are assembled according to the eleven research questions listed in the statement of problem section of Chapter 1. An analysis of each of the eight principal research questions and the three secondary research questions are presented in textural and tabular form.

The population for the study consisted of twenty state-level boards for higher education, eleven governing boards and nine coordinating boards. These boards were selected on the basis of one criterion, whether data on board expenditures for the governance or coordination of four-year institutions could be obtained. All other state-level boards for higher education were excluded because of the difficulty in obtaining accurate figures on the cost of governing or coordinating four-year institutions. The final, redefined population of twenty boards were located in the following states:

Arizona	Mississippi
Florida	Missouri
Idaho	New Jersey
Iowa	New Mexico
Kansas	North Carolina
Kentucky	North Dakota

Oklahoma	Virginia
South Carolina	Washington
Texas	West Virginia
Utah	Wisconsin

In addition, three states which did not have state-level boards for higher education in 1980-1981, but were used in this study were Delaware, Vermont, and Wyoming.

Within the twenty-three states, there were 216 public, four-year baccalaureate and higher degree granting institutions. Of these 216 institutions, 209 were located in the twenty states which had either state-level governing or coordinating boards. The remaining seven institutions were located in Delaware (2), Vermont (4), and Wyoming (1), the three states which did not have state-level boards for higher education.

ANALYSIS AND INTERPRETATION OF THE DATA

Research Question 1. What is the relationship between expenditures for the administration of public, four-year institutions and expenditures for the operation of state-level boards?

Data collected included the board cost for governance or coordination of public, four-year institutions and the cost of administration in public, four-year institutions in each of the twenty states partially comprising the population. From these data, the board cost per full-time equivalent student and institutional cost per full-time equivalent student were calculated.

Pearson product-moment correlations were used to test for significance of relationships between per capita board operational costs and institutional administrative costs. Table 2 includes per full-time equivalent student costs for board operation and for institutional administrative costs in each of the twenty states.

There was a low correlation of 0.14 (n = 20) between board cost for governance/coordination per FTE student and administrative cost per FTE student in public, four-year institutions. No significant relationship was found to exist between expenditures for the operation of state-level boards and expenditures for administration of public, four-year institutions when controlling for size.

Research Question 2. What is the relationship between expenditures for the administration of public, four-year institutions and the type of state-level board?

Data collected on board type and institutional expenditures for administration in each of the twenty-three states comprising the population are also shown in Table 2. The proportion of total educational expenditures used for administration in public, four-year institutions was calculated because this ratio more accurately reflected the administrative costs of 216 diverse institutions than would be reflected by simply examining the total administrative costs.

One-way analysis of variance was used to test for significance of relationships between institutional expenditures for administration and board type. The ANOVA summary tables are shown in Table 3 and Table 4.

The results showed a significant difference in the administrative cost per full-time equivalent student across board type. However, no

Table 2

Operating Cost per Full-Time Equivalent Student for State-Level Boards, Administrative Cost per Full-Time Equivalent Student for Public, Four-Year Institutions, and Proportion of Total Educational Expenditures for Administration in Public, Four-Year Institutions by State and by Board Type

State	Board Type[a]	Board Cost for Governance/Coordination per FTE Student[b]	Administrative Cost per FTE Student in Public, 4-Year Institutions[c]	Proportion of Total/Educational Expenditures for Administration in Public, 4-Year Institutions[c]
Arizona	Governing	$17.26	$442.83	.090554
Delaware	No Board	-	$612.10	.11537
Florida	Governing	$56.80	$743.34	.139435
Idaho	Governing	$13.16	$418.41	.097775
Iowa	Governing	$ 6.86	$340.88	.064569
Kansas	Governing	$ 8.91	$390.40	.085198
Kentucky	Coordinating	$ 7.78	$610.43	.123421
Mississippi	Governing	$12.32	$497.98	.094438
Missouri	Coordinating	$ 4.45	$503.43	.12017
New Jersey	Coordinating	$17.69	$574.96	.120361
New Mexico	Governing	$13.00	$501.78	.116575
North Carolina	Governing	$42.83	$469.71	.091841
North Dakota	Governing	$18.79	$429.62	.091481
Oklahoma	Coordinating	$ 8.62	$365.10	.103101
South Carolina	Coordinating	$11.47	$701.32	.130718
Texas	Coordinating	$ 3.31	$572.04	.114329
Utah	Governing	$18.33	$501.42	.105547
Vermont	No Board	-	$732.54	.125713
Virginia	Coordinating	$16.75	$585.35	.122382
Washington	Coordinating	$ 6.24	$685.18	.115022
West Virginia	Governing	$11.52	$343.32	.095338
Wisconsin	Governing	$45.04	$359.06	.081276
Wyoming	No Board	-	$442.38	.056036

[a]Taken from survey instrument

[b]Calculated using data obtained from 1980-81 HEGIS tapes and survey instrument

[c]Calculated using data obtained from 1980-81 HEGIS tapes

Table 3

One-Way Analysis of Variance Summary Table for Research Question 2, What is the Relationship Between Expenditures for the Administration of Public, Four-Year Institutions and the Type of State-Level Board?

Analysis of Variance of Administrative Cost per FTE Student in Public, Four-Year Institutions across Board Type

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	91541.1392	2	45770.5696	3.61*
Within Groups	253809.4644	20	12690.4732	
Total	345350.6036	22		

*For $p < .05$, $F(2, 20) > 3.49$

Table 4

One-Way Analysis of Variance Summary Table For Research Question 2, What is the Relationship Between Expenditures for the Administration of Public, Four-Year Institutions and the Type of State-Level Board?

Analysis of Variance of Proportion of Total Educational Expenditures for Administration in Public, Four-Year Institutions across Board Type

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	0.0138	2	0.0069	0.29*
Within Groups	0.4749	20	0.0237	
Total	0.4887	22		

*For $p < .05$, $F(2, 20) < 3.49$.

significant difference in the proportion of total educational expenditures for administration was found across board type.

The average cost of administration per full-time equivalent student was higher in the three states with no state-level board than in states with either governing or coordinating boards. The average administrative cost per FTE student in Delaware, Vermont, and Wyoming was $595.67, while the average cost in states with coordinating boards was $566.62, and the average cost in states with governing boards was $448.82. Table 5 contains the administrative costs per full-time equivalent student by state and board type, and in rank order.

Research Question 3. What is the relationship between the expenditures for administration of public, four-year institutions and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

Budgeting, planning, curriculum, student affairs, and faculty were cited as the areas for which state-level boards most commonly had responsibility (Brumbaugh, 1963; Pliner, 1966; Millard, 1976). Data on the level of involvement of each of twenty state-level boards in each of the five areas were obtained from item eleven on the survey instrument (Appendix E). Each area encompassed four to nine functions and an involvement score was calculated for each area based on the amount of board time and effort and responsibility indicated for each function. The formula used to compute the involvement scores is explained in Chapter 3, Methodology.

Pearson product-moment correlations were used to test for significance of relationships between institutional administrative costs per

Table 5

Rank Order Administrative Cost per Full-Time Equivalent Student by State and by Board Type

State	Board Type[a]	Administrative Cost per FTE Student in Public, 4-Year Institutions[b]	Rank Order by Board Type
Arizona	Governing	$442.83	G4[c]
Delaware	No State-Level Board	$612.10*	NB2[d]
Florida	Governing	$743.34	G1
Idaho	Governing	$418.41	G10
Iowa	Governing	$340.88	G8
Kansas	Governing	$390.40	G5
Kentucky	Coordinating	$610.43	C6[e]
Mississippi	Governing	$497.98	G6
Missouri	Coordinating	$503.43	C5
New Jersey	Coordinating	$574.96**	C3
New Mexico	Coordinating	$501.78	C9
North Carolina	Governing	$469.71	G2
North Dakota	Governing	$429.62***	G11
Oklahoma	Coordinating	$365.10	C8
South Carolina	Coordinating	$701.32	C7
Texas	Coordinating	$572.04	C1
Utah	Governing	$501.42	G7
Vermont	No State-Level Board	$732.54	NB1
Virginia	Coordinating	$585.35	C2
Washington	Coordinating	$685.18	C4
West Virginia	Governing	$343.32	G9
Wisconsin	Governing	$359.06	G3
Wyoming	No State-Level Board	$442.38	NB3

[a] [b] Taken from survey instrument
Calculated using data obtained from 1980-1981 HEGIS tapes
[c] G-Governing Board
[d] NB - No Board
[e] C-Coordinating Board

*Median for states with no state-level board
**Median for states with coordinating boards
***Median for states with governing boards

FTE student and the level of board involvement in each of the five areas. Table 6 includes the board involvement scores and administrative costs.

The results of the correlations between administrative cost per full-time equivalent student enrolled in public, four-year institutions and the level of board involvement in each of the various areas are shown in Table 7. Correlations between the level of board involvement in each of the five areas and the proportion of total educational expenditures for administration in public institutions are also shown in Table 7.

Relatively high negative correlations of -0.46 and -0.51 suggested a direct relationship between institutional administrative cost per FTE student and the board involvement score on the two areas of budget and curriculum. None of the correlations between the level of board involvement and the proportion of total educational expenditures for administration were significant.

Research Question 4. What is the relationship between expenditures for the operation of state-level boards and the type of state-level board?

Table 8 includes the board cost for governance/coordination of public, four-year institutions per full-time equivalent student by board type. One-way analysis of variance was used to test for significance of the relationship between board type and board cost for governance/coordination. The ANOVA summary table is shown in Table 9. The F Ratio of 4.82 was significant at the .05 level, indicating that there was a statistically significant difference between governing boards and coordinating boards in terms of board operating cost per FTE student.

Table 6

Administrative Cost per Full-Time Equivalent Student, and Proportion of Total Educational Expenditures for Administration in Public, Four-Year Institutions by State and by Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Affairs, and Faculty

State	Level of Board Involvement[c]					Administrative Cost per FTE Student in Public, 4-Year Institutions[d]	Proportion of Total Educational Expenditures for Administration in Public, 4-Year Institutions[d]
	Budget	Planning	Curriculum	Student Affairs	Faculty		
Arizona G[a]	18	11	20	9	9	$442.83	.090554
Florida G	17	30	8	10	7	$743.34	.139435
Idaho G	14	13.5	8	5.5	4.5	$418.41	.097775
Iowa G	16.5	19.5	7.5	9	5.5	$340.88	.064569
Kansas G	18	27	15	12	12	$390.40	.085198
Kentucky C[b]	15	21	6	8	0	$610.43	.123421
Mississippi G	17	10.5	8	8	7	$497.98	.094438
Missouri C	12.5	12	4.5	2	0	$503.43	.12017
New Jersey C	21.5	21	8	6	3	$574.96	.120361
New Mexico C	11	14	0	1	0	$501.78	.116575
North Carolina G	22	24	14	7.5	16	$469.71	.091841
North Dakota G	23	25	17	12	13.5	$429.62	.091481
Oklahoma C	21.5	20.5	17.5	13	2.5	$365.10	.103101
South Carolina C	17	16	8	2.5	1	$701.32	.130718
Texas C	4	9	6	0	0	$572.04	.114329
Utah G	15	19	10	6	4	$501.42	.105547
Virginia C	13.5	13	8	4	3	$585.35	.122382
Washington C	1.5	10	5.5	9.5	0	$685.18	.115022
West Virginia G	18	31	12	8	0	$343.32	.095338
Wisconsin G	24	22	14	7	4	$359.06	.081276

[a] G - Governing Board
[b] C - Coordinating Board
[c] Calculated using data taken from survey instrument
[d] Calculated using data taken from 1980-1981 HEGIS tapes

Table 7

Pearson Product-Moment Correlations for Research Question 3, What Is the Relationship Between Expenditures for the Administration of Public, Four-Year Institutions and the Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Affairs, and Faculty?

Area of Board Involvement	Correlation with Administrative Cost per FTE Student (n = 20)	Correlation with Proportion of Total Educational Expenditures for Administration (n = 20)
Budget	$r = -0.46$*	$r = 0.29$
Planning	$r = -0.23$	$r = 0.11$
Curriculum	$r = -0.51$*	$r = 0.14$
Student Affairs	$r = -0.31$	$r = -0.05$
Faculty	$r = -0.29$	$r = -0.09$

*For $p < .05$, $r > .05$

Table 8

Board Cost for Governance/Coordination per Full-Time Equivalent Student by State and by Board Type

State	Board Type[a]	Board Cost for Governance/ Coordination per FTE Student[b]
Arizona	Governing	$17.26
Florida	Governing	$56.80
Idaho	Governing	$13.16
Iowa	Governing	$ 6.86
Kansas	Governing	$ 8.91
Kentucky	Coordinating	$ 7.78
Mississippi	Governing	$12.32
Missouri	Coordinating	$ 4.45
New Jersey	Coordinating	$17.69
New Mexico	Coordinating	$13.00
North Carolina	Governing	$42.83
North Dakota	Governing	$18.79
Oklahoma	Coordinating	$ 8.62
South Carolina	Coordinating	$11.47
Texas	Coordinating	$ 3.31
Utah	Governing	$18.33
Virginia	Coordinating	$16.75
Washington	Coordinating	$ 6.24
West Virginia	Governing	$11.52
Wisconsin	Governing	$45.04

[a]Taken from survey instrument
[b]Calculated using data obtained from 1980-81 HEGIS tapes and survey instrument

Table 9

One-Way Analysis of Variance Summary Table For Research Question 4, What Is the Relationship Between Expenditures for the Operation of State-Level Boards and the Type of State-Level Board?

Analysis of Variance of Board Cost for Governance/Coordination per Full-Time Equivalent Student and Board Type

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	832.6156	1	832.6156	4.82*
Within Groups	3107.8262	18	172.6570	
Total	3940.4418	19		

*For $p < .05$, $F(1, 18) > 4.41$

Scrutiny of the data contained in Table 10 revealed that the average cost for state-level governance/coordination of four-year institutions per FTE student was larger for states with governing boards, as a group, than for states with coordinating boards. The mean cost per FTE student for governing boards was $22.89, while the mean cost per FTE student for coordinating boards was $9.92.

Research Question 5. What is the relationship between expenditures for the operation of state-level boards and the level of those boards' involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

Pearson product-moment correlations were again used to test for significance of relationships between boards' operating costs per FTE student and the level of boards' involvement in each of the five areas. The data used to compute the correlations and the results of the correlations appear in Table 11 and Table 12.

Three of the five correlations between board cost for governance/coordination per FTE student and the level of board involvement in each of the areas were significant: $\underline{r} = 0.48$, $\underline{r} = 0.49$, and $\underline{r} = -0.45$. A positive relationship was found between board cost for governance/coordination per FTE student and board involvement scores for budget and planning. A negative relationship was found between board cost for governance/coordination per FTE student and the board involvement score for faculty.

Research Question 6. What is the relationship between expenditures for the operation of state-level boards and the total number of board staff?

Table 10

Rank Order Board Cost for Governance/Coordination of Public, Four-Year Institutions per Full-Time Equivalent Student by State and by Board Type

State	Board Type[a]	Board Cost for Governance/Coordination per FTE Student[b]	Rank Order by Board Type
Arizona	Governing	$17.26*	G6[c]
Florida	Governing	$56.80	G1
Idaho	Governing	$13.16	G7
Iowa	Governing	$ 6.86	G11
Kansas	Governing	$ 8.91	G10
Kentucky	Coordinating	$ 7.78	C6[d]
Mississippi	Governing	$12.32	G8
Missouri	Coordinating	$ 4.45	C8
New Jersey	Coordinating	$17.69	C1
New Mexico	Coordinating	$13.00	C3
North Carolina	Governing	$42.83	G3
North Dakota	Governing	$18.79	G4
Oklahoma	Coordinating	$ 8.62**	C5
South Carolina	Coordinating	$11.47	C4
Texas	Coordinating	$ 3.31	C9
Utah	Governing	$18.33	G5
Virginia	Coordinating	$16.75	C2
Washington	Coordinating	$ 6.24	C7
West Virginia	Governing	$11.52	G9
Wisconsin	Governing	$45.04	G2

[a] Taken from survey instrument

[b] Calculated using data obtained from 1980-1981 HEGIS tapes and survey instrument

[c] G-Governing Board

[d] C-Coordinating Board

*Median for states with governing boards

**Median for states with coordinating boards

Table 11

Board Cost for Governance/Coordination of Public, Four-Year Institutions per Full-Time Equivalent Student by State and by Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Affairs, and Faculty

State	Level of Board Involvement[a]					Board Cost for Governance/ Coordination[b] per FTE Student
	Budget	Planning	Curriculum	Student Affairs	Faculty	
Arizona	18	11	20	9	9	$17.26
Florida	17	30	8	10	7	$56.80
Idaho	14	13.5	8	5.5	4.5	$13.16
Iowa	16.5	19.5	7.5	9	5.5	$ 6.86
Kansas	18	27	15	12	12	$ 8.91
Kentucky	15	21	6	8	0	$ 7.78
Mississippi	17	10.5	8	8	7	$12.32
Missouri	12.5	12	4.5	2	0	$ 4.45
New Jersey	21.5	21	8	6	3	$17.69
New Mexico	11	14	0	1	0	$13.00
North Carolina	22	24	14	7.5	16	$42.83
North Dakota	23	25	17	12	13.5	$18.79
Oklahoma	21.5	20.5	17.5	13	2.5	$ 8.62
South Carolina	17	16	8	2.5	1	$11.47
Texas	4	9	6	0	0	$ 3.31
Utah	15	19	10	6	4	$18.33
Virginia	13.5	13	8	4	3	$16.75
Washington	1.5	10	5.5	9.5	0	$ 6.24
West Virginia	18	31	12	8	0	$11.52
Wisconsin	24	22	14	7	4	$45.04

[a]Calculated using data taken from survey instrument

[b]Calculated using data obtained from 1980-1981 HEGIS tapes and survey instrument

Table 12

Pearson Product-Moment Correlations for Research Question 5, What Is the Relationship Between Expenditures for the Operation of State-Level Boards and the Level of Those Boards' Involvement in the Areas of Budget, Planning, Curriculum, Student Affairs, and Faculty?

Area of Board Involvement	Correlation with Board Operating Cost per FTE Student (n = 20)
Budget	$r = 0.48$*
Planning	$r = 0.49$*
Curriculum	$r = 0.25$
Student Affairs	$r = 0.20$
Faculty	$r = -0.45$*

*For $p < .05$, $r > .05$

Pearson product-moment correlations were used to test for significance of relationships between board operating costs per FTE student and the number of board staff. Data collected for each of twenty states are presented in Table 13.

A low positive correlation of 0.17 (n = 20) existed between board cost for governance/coordination per full-time equivalent student and the total number of board staff. However, the relationship was not significant.

Research Question 7. What is the relationship between expenditures for the operation of state-level boards and the total number of public, four-year institutions governed or coordinated by the boards?

Pearson product-moment correlation was used to test for the significance of the relationship between boards' operating costs per FTE student and the number of public, four-year institutions under the boards' purview. Table 13 includes board cost for governance/coordination per FTE student and number of public, four-year institutions.

There was a low negative (but significant) correlation of -0.02 (n = 20) between board cost for governance/coordination per full-time equivalent student and the number of institutions. No significant relationship was found to exist.

Research Question 8. In states with no state-level board for higher education, what is the proportion of total educational expenditures used for administration in public, four-year institutions; and what is the administrative cost per full-time equivalent student enrolled in public, four-year institutions?

The data reported in conjunction with the eighth research question were descriptive only. Administrative costs, total educational expendi-

Table 13

Board Cost for Governance/Coordination of Public, Four-Year Institutions per Full-Time Equivalent Student by State and by Total Number of Board Staff

State	Total Number of Board Staff[a]	Number of Public, 4-Year Institutions[a]	Board Cost for Governance/Coordination per FTE Student[b]
Arizona	30.5	3	$17.26
Florida	136	9	$56.80
Idaho	10	4	$13.16
Iowa	18	3	$ 6.86
Kansas	32	7	$ 8.91
Kentucky	61	8	$ 7.78
Mississippi	27	9	$12.32
Missouri	45	10	$ 4.45
New Jersey	245	12	$17.69
New Mexico	11	6	$13.00
North Carolina	75.5	16	$42.83
North Dakota	10	6	$18.79
Oklahoma	84	14	$ 8.62
South Carolina	21	12	$11.47
Texas	132.5	37	$ 3.31
Utah	16	4	$18.33
Virginia	42	15	$16.75
Washington	18	6	$ 6.24
West Virginia	39.5	12	$11.52
Wisconsin	213	13	$45.04

[a]Taken from survey instrument
[b]Calculated using data obtained from 1980-81 HEGIS tapes and survey instrument

tures, proportion of total educational expenditures for administration, and administrative cost per full-time equivalent student were reported for twenty-three states. A decision was made to report the findings for twenty-three states rather than for only the three states with no state-level board for higher education in order to make more meaningful comparisons. Table 14 includes the data used to calculate the proportion of total educational expenditures for administration and the administrative cost per FTE student. Table 15 includes the rank order proportions and per FTE student costs.

The proportion of total educational expenditures for administration in public, four-year institutions in Delaware, Vermont, and Wyoming, which had no state-level board for higher education in 1980-1981, were as follows: Vermont, .125713; Delaware, .111537; and Wyoming, .056030. The administrative cost per FTE student enrolled in public, four-year institutions were as follows: Vermont, $732.54, Delaware, $612.10; and Wyoming, $442.38. The proportion of total educational expenditures for administration in public, four-year institutions as a group ranged from a low of .056036 in Wyoming to a high of .139435 in Florida. Utah's percentage of .105547 was the median for the group and the group mean was .104207. Twelve of the twenty-three states were above the mean, including Vermont and Delaware. Two of these twelve states had governing boards and eight had coordinating boards. Eleven of the twenty-three states were below the mean, including Wyoming. One of these states had a coordinating board, and the remaining nine had governing boards.

Table 14

Data Used to Calculate the Proportion of Total Educational Expenditures for Administration and the Administrative Cost per Full-Time Equivalent Student

State	Cost of Administration in Public, 4-Year Institutions[a]	Total Educational Expenditures of Public, 4-Year Institutions[a]	Total Number of FTE Students Enrolled in Public, 4-Year Institutions[a]	Administrative Cost per FTE Student Enrolled in Public, 4-Year Institutions[b]
Arizona	$ 28,905,854	$ 319,210,677	65,276	$442.83
Delaware[c]	$ 10,870,282	$ 97,459,231	17,759	$612.10
Florida	$ 74,966,486	$ 537,646,594	100,851	$743.34
Idaho	$ 9,343,891	$ 95,565,614	22,332	$418.41
Iowa	$ 18,423,342	$ 285,325,877	54,046	$340.88
Kansas	$ 24,645,633	$ 289,275,500	63,053	$390.87
Kentucky	$ 47,012,401	$ 380,911,032	77,015	$610.43
Mississippi	$ 23,267,188	$ 246,376,065	46,723	$497.98
Missouri	$ 47,017,956	$ 391,428,155	93,394	$503.43
New Jersey	$ 55,537,956	$ 461,427,669	96,594	$574.96
New Mexico	$ 17,749,564	$ 152,258,864	35,373	$501.78
North Carolina	$ 49,734,115	$ 541,526,103	105,882	$469.71
North Dakota	$ 9,305,603	$ 101,721,657	21,660	$429.62
Oklahoma	$ 26,390,375	$ 255,965,564	72,283	$365.10
South Carolina	$ 39,432,249	$ 301,685,959	56,226	$701.32
Texas	$162,758,305	$1,423,594,124	284,522	$512.04[d]
Utah	$ 19,089,650	$ 180,863,210	38,071	$501.42
Vermont[c]	$ 9,329,638	$ 74,213,648	12,736	$732.54
Virginia	$ 64,411,749	$ 526,319,812	110,040	$585.35
Washington	$ 50,796,457	$ 441,623,637	74,136	$685.18
West Virginia	$ 15,968,814	$ 167,497,156	46,513	$343.32
Wisconsin	$ 44,247,584	$ 544,412,469	123,233	$359.06
Wyoming	$ 3,579,731	$ 63,882,747	8,092	$442.38

[a] Taken from 1980-1981 HEGIS tapes

[b] Calculated using data obtained from 1980-1981 HEGIS tapes

[c] States with no state-level board for higher education

[d] Median

Table 15

Rank Order Proportion of Total Educational Expenditures for Administration and Rank Order Administrative Cost per Full-Time Equivalent Student Enrolled in Public, Four-Year Institutions in Twenty-Three Selected States

State	Proportion of Total/Educational Expenditures for Administration in 4-Year Institutions[a]	Rank Order by State	Administrative Cost per FTE Student Enrolled in Public, 4-Year Institutions[a]	Rank Order by State
Arizona G[b]	.090554	19	$442.83	15
Delaware NB[c]	.111537	11	$612.10	5
Florida G	.139435	1	$743.34	1
Idaho G	.097775	14	$418.41	18
Iowa C	.064569	22	$340.88	19
Kansas G	.085198	20	$390.87	23
Kentucky C[d]	.123421	4	$610.43	6
Mississippi	.094438	16	$497.98	13
Missouri C	.120117	7	$503.43	10
New Jersey C	.120361	7	$574.96	8
New Mexico C	.116575	8	$501.78	11
North Carolina G	.091841	17	$469.71	14
North Dakota G	.091481	18	$429.62	17
Oklahoma C	.103101	13	$365.10	20
South Carolina C	.130718	2	$701.32	3
Texas	.114329	10	$572.04	9
Utah G	.105547[e]	12	$501.42[e]	12
Vermont NB	.125713	3	$732.54	2
Virginia C	.122382	5	$585.35	7
Washington C	.115022	9	$685.18	4
West Virginia G	.095338	15	$343.32	21
Wisconsin G	.081276	21	$359.06	22
Wyoming NB	.056036	23	$442.38	16

[a] Calculated using data obtained from 1980-81 HEGIS tapes

[b] G - Governing Board

[c] NB - No Board

[d] C - Coordinating Board

[e] Median

Institutional level administrative cost per FTE student ranged from a high of $743.34 in Florida to a low of $340.88 in Iowa. The median was $501.42, again in Utah, and the group mean was $514.09. Nine of the twenty-three states were above the mean, again including Vermont and Delaware. Six of these nine states had coordinating boards and one had a governing board. Fourteen states were below the mean, again including Wyoming, ten states had governing boards and three had coordinating boards.

Research Question 9. What is the relationship between the type of state-level board and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

One-way analysis of variance was used to test for significance of relationships between board type and the level of board involvement in each of the five areas. Table 16 contains the board scores in each of the five areas by board type and Tables 17, 18, 19, 20, and 21 contain the ANOVA summary tables.

The results showed significant differences in the level of board involvement in each of the five areas across board types. As a group, governing boards had a higher level of involvement in each of the five areas than did coordinating boards. The two areas in which both governing boards and coordinating boards were most heavily involved were budget and planning, planning being the area of highest board involvement. Governing boards' average involvement score for budget was 18.41 and for planning, 21.14. The average involvement score of coordinating boards for budget and planning were 13.06 and 15.17 respectively. Board involvement in the remaining three areas of curriculum, student affairs, and faculty was much lower.

Table 16

Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Affairs, and Faculty by State and by Board Type

State	Board Type	Total Number of Board Staff	Level of Board Involvement[a]				
			Budget	Planning	Curriculum	Student Affairs	Faculty
Arizona	Governing	30.5	18	11	20	9	9
Florida	Governing	136	17	30	8	10	7
Idaho	Governing	10	14	13.5	8	5.5	4.5
Iowa	Governing	18	16.5	19.5	7.5	9	5.5
Kansas	Governing	32	18	27	15	12	12
Kentucky	Coordinating	61	15	21	6	8	0
Mississippi	Governing	27	17	10.5	8	8	7
Missouri	Coordinating	45	12.5	12	4.5	2	0
New Jersey	Coordinating	245	21.5	21	8	6	3
New Mexico	Coordinating	11	11	14	0	1	0
North Carolina	Governing	75.5	22	24	14	7.5	16
North Dakota	Governing	10	23	25	17	12	13
Oklahoma	Coordinating	84	21.5	20.5	17.5	13	2.5
South Carolina	Coordinating	21	17	16	8	2.5	1
Texas	Coordinating	132.5	4	9	6	0	0
Utah	Governing	16	15	19	10	6	4
Virginia	Coordinating	42	13.5	13	8	4	3
Washington	Coordinating	18	1.5	10	5.5	9.5	0
West Virginia	Governing	39.5	18	31	12	8	0
Wisconsin	Governing	213	24	22	14	7	4

[a]Taken from survey instrument

Table 17

One-Way Analysis of Variance Summary Table for Research Question 9, What Is the Relationship Between the Type of State-Level Board and the Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Afffairs, and Faculty?

Analysis of Variance of Level of Board Involvement in Budget and Board Type

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	141.8687	1	141.8687	5.25*
Within Groups	486.6313	18	27.0351	
Total	628.5000	19		

*For $p < .05$, $F(1, 18) > 4.41$

Table 18

One-Way Analysis of Variance Summary Table for Research Question 9, What Is the Relationship Between the Type of State-Level Board and the Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Afffairs, and Faculty?

Analysis of Variance of Level of Board Involvement in Planning and Board Type

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	176.4045	1	176.4045	4.58*
Within Groups	693.5455	18	38.5303	
Total	869.9500	19		

*For $p < .05$, $F(1, 18) > 4.41$

Table 19

One-Way Analysis of Variance Summary Table for Research Question 9, What Is the Relationship Between the Type of State-Level Board and the Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Afffairs, and Faculty?

Analysis of Variance of Level of Board Involvement in Curriculum and Board Type

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	127.7823	1	127.7823	6.56*
Within Groups	350.7677	18	19.4871	
Total	478.5560	19		

*For $p < .05$, $F(1, 18) > 4.41$

Table 20

One-Way Analysis of Variance Summary Table for Research Question 9, What Is the Relationship Between the Type of State-Level Board and the Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Afffairs, and Faculty?

Analysis of Variance of Level of Board Involvement in Student Affairs and Board Type

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	58.3838	1	58.3838	5.32*
Within Groups	197.6162	18	10.9787	
Total	256.0000	19		

*For $p < .05$, $F(1, 18) > 4.41$

Table 21

One-Way Analysis of Variance Summary Table for Research Question 9, What Is the Relationship Between the Type of State-Level Board and the Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Afffairs, and Faculty?

Analysis of Variance of Level of Board Involvement in Faculty and Board Type

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	205.5778	1	205.5778	15.40*
Within Groups	240.2222	18	13.4577	
Total	445.8000	19		

*For $p < .05$, $F(1, 18) > 4.41$

Further analysis of data contained in Table 16 revealed certain information about the board scores on each of the five areas.

Budget. The average overall involvement score for the area of budget was 15.85 with a standard deviation of 5.33. North Dakota's governing board had the highest score at 23, and Washington's coordinating board had the lowest score at 1.5. The mean score for the eleven governing boards was 18.41, and the mean score for the nine coordinating boards was 13.06.

Planning. The average involvement score for the twenty governing and coordinating boards was 18.45 with a standard deviation of 6.64. Governing boards had an average score of 21.14 for the area of planning, while coordinating boards had an average score of 15.17. Florida's governing board had the highest level of involvement in the area of planning with a score of 30. The lowest involvement score was 9 for Texas' coordinating board.

Curriculum. Governing boards had an average involvement score of 12.14, while coordinating boards had an average score of 7.06. The overall average involvement score for the area of curriculum was 9.85 with a standard deviation of 4.89. The highest involvement score of 20 was calculated for Arizona's governing board, while New Mexico's coordinating board had a score of 0.

Student Affairs. The overall mean score for student affairs was 7 with a standard deviation of 3.58. Governing boards had a mean score of 8.55, and coordinating boards had a mean score of 5.11. The coordinating board in Texas had the lowest score of 0, and the coordinating board in Oklahoma had the highest score of 13.

Faculty. Six of the twenty state-level boards had scores of 0 for involvement in faculty: the coordinating boards in Kentucky, Missouri, New Mexico, Texas, and Washington and the governing board in West Virginia. The highest score was 16 for the governing board in North Carolina. As a group, the mean score was 4.6 with a standard deviation of 4.72. The mean score for the eleven governing boards was 7.5, and for the nine coordinating boards it was 1.06.

Research Question 10. What is the relationship between the total number of board staff and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

Pearson product-moment correlations were used to test for the significance of relationships between board involvement scores in each of the five respective areas and the total number of board staff. Table 16 also contains the data used for research question ten.

Correlations between the level of board involvement in each of the five areas and board staff number are shown in Table 22. One of the five correlations was significant. There was a high correlation of 0.51 between the total number of board staff and the level of board involvement in the area of planning, which suggested that a direct relationship existed. This suggests that more board staff means more involvement in planning. However, more involvement in planning may require more board staff. Further research is needed to determine which is the case. It was found that staff size does not affect board involvement in the areas of budget, curriculum, student affairs, and faculty.

Research Question 11. What is the relationship between the total number of board staff and the type of state-level board?

Table 22

Pearson Product-Moment Correlations for Research Question 10, What Is the Relationship Between the Total Number of Board Staff and the Level of Board Involvement in the Areas of Budget, Planning, Curriculum, Student Affairs, and Faculty?

Area of Board Involvement	Correlation with Total Number of Board Staff (n = 20)
Budget	$r = 0.23$*
Planning	$r = 0.51$*
Curriculum	$r = 0.12$
Student Affairs	$r = 0.02$
Faculty	$r = -0.24$

*For $p < .05$, $r > .05$

One-way analysis of variance was used to test for significance of the relationship between board type and staff number. Table 16 also contains the board type and board staff number for the twenty states. Table 23 contains the ANOVA summary tables.

The F ratio of 0.23 was not significant at the .05 level and suggested that there is no significant difference in the total number of board staff across board type. However, the average number of staff for coordinating boards, 59.06, was slightly higher than the average number of board staff, for governing boards, 55.23.

SUMMARY

The data and statistical procedures described in this section indicated to what extent relationships existed between seven variables. These variables were hypothesized as being indicative of or impacting upon the expenditures of state-level boards for governance or coordination of institutions under their purview, and the expenditures of public, four-year institutions for administration. Certain data were also used to compute descriptive statistics which reported institutional expenditures in states with state-level boards for higher education and in states without these boards.

Analysis of the data revealed that when controlling for the number of full-time equivalent students at both the institutional level and the board level, there was no statistically significant between state-level board expenditures for operation and institutional expenditures for administration. However, significant differences in the administrative cost per FTE student at the institutional level were found across

Table 23

One-Way Analysis of Variance Summary Table for Research Question 11, What Is the Relationship Between the Total Number of Board Staff and the Type of State-Level Board?

Analysis of Variance of Board Type and Total Number of Board Staff

Source of Variance	Sum of Squares	df	Mean Squares	F
Between Groups	3717.3581	1	3717.3581	0.23*
Within Groups	297290.1919	18	16516.1218	
Total	301007.5500	19		

*For $p < .05$, $F(1, 18) < 4.41$

board types. The average cost of institutional administration, when controlling for number of FTE students, was greater in states with no state-level board than in states with governing boards or in states with coordinating boards. Finally, the data revealed that no strong relationship existed between institutions' expenditures for administration and the total number of board staff.

A direct relationship was indicated between institutional administrative costs per FTE student and the level of boards' involvement in the areas of budget and curriculum. Negative correlations for each of the five areas may indicate that higher board involvement scores mean lower administrative costs per FTE student at the institutional level.

A relationship was found between boards' operating costs, when controlling for FTE student number, and board type. The data also revealed that the average board cost for governance/coordination of four-year institutions was higher for governing boards than for coordinating boards.

Analysis of the data yielded further significant relationships. It was found that a relationship existed between the board cost for governance/coordination per FTE student and the level of board involvement in budget, planning, and faculty. Positive correlations for each of the five areas may indicate that the higher the level of board involvement, the greater are the boards' operating costs per FTE student. However, no relationship was found to exist between the board cost for governance/coordination of public, four-year institutions and the number of institutions or between board cost and board staff number.

On the average, institutions' administrative costs per FTE student are higher in states with coordinating boards than in states with governing boards. States without a state-level board had higher average institutional administrative costs per FTE student than states with either governing boards or coordinating boards.

Governing boards had a higher level of involvement in each of the areas of budget, planning, curriculum, student affairs, and faculty than did coordinating boards. The two areas in which both governing and coordinating boards were most heavily involved were budget and planning, with planning being the area of highest involvement. Both governing and coordinating boards were involved with curriculum, student affairs, and faculty to a much lesser degree. There was also a significant relationship between the level of board involvement in planning and the board staff size. Boards served by larger staffs, whether coordinating boards or governing boards, were more heavily involved in planning. Staff size did not affect board involvement in budget, curriculum, student affairs, or faculty.

Finally, no significant difference was found in board staff size between governing boards and coordinating boards. However, the average coordinating board staff number was slightly larger than the average governing board staff number.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS FOR FURTHER RESEARCH

INTRODUCTION

The study had a two-fold purpose: first, to determine the relationship between the operating costs of state-level boards and expenditures for administration at public, four-year institutions governed or coordinated by those boards; and second, to determine the relationship between the operating costs of state-level boards and the level of board involvement in institutional affairs.

The population for the study consisted of twenty state-level boards for higher education, which included eleven governing boards and nine coordinating boards. Selection of boards for inclusion in the population was based on the availability of data on board expenditures for the governance or coordination of public, four-year institutions under the boards' purview. These data were crucial to the purpose of the study. The population further consisted of 216 public, four-year bachelor degree and higher degree granting institutions located in the twenty-three states specified in Chapter 4, Methodology. The three additional states were identified as having no state-level board for higher education.

Seven variables were hypothesized as factors either influencing the cost of administration in public, four-year institutions, the cost of operation of state-level boards for higher education, or the

relationship between the two. These variables were formulated with data which were obtained from two primary sources: a survey instrument and Higher Education General Information Survey (HEGIS) tapes. Financial and enrollment data on the public, four-year institutions were collected from HEGIS tapes on Financial Statistics of Institutions of Higher Education for Fiscal Year Ending 1981 and Fall Enrollment in Institutions of Higher Education - 1980 using the Statistical Analysis System (SAS) format. Descriptive data on the state-level boards for higher education were obtained from a survey instrument which was mailed to each of the fifty State Higher Education Executive Officers (SHEEO) member agencies. Of the forty-four surveys returned, twenty were complete and usable. Others did not include the amount expended by the board for performing centralized governance/coordination functions over the four-year institutions. Descriptive data on the state-level boards for higher education obtained from the survey instrument were merged with the financial and enrollment data on the public, four-year institutions taken from the HEGIS tapes to create on operational file.

Pearson product-moment correlation and one-way analysis of variance were used to test for significance of relationships between pairs of variables in each of ten research questions. The data reported in conjunction with research question eight were used to compute descriptive statistics. The Statistical Package for the Social Sciences supplied the computer applications for these procedures.

The specific findings of this study are listed in eleven sections which relate to the eleven research questions.

SUMMARY OF FINDINGS AND CONCLUSIONS

The following findings and conclusions were organized around the eleven research questions.

Research Question 1. What is the relationship between expenditures for administration of public, four-year institutions and expenditures for the operation of state-level boards?

This was the basic question underlying the purpose of the research. No significant relationship was found to exist when examining board expenditures and institutional expenditures while controlling for size, as measured by the number of full-time equivalent students.

Research Question 2. What is the relationship between expenditures for administration of public, four-year institutions and the type of state-level board? There was no significant difference in the proportion of total educational expenditures for administration across board types. However, significant differences in the expenditures for administration of public, four-year institutions were found across board types. When examining the average cost of administration per full-time equivalent student, costs were higher in states with coordinating boards than in states with governing boards. This was a significant finding in that it raised additional questions. Are greater demands for information placed on public colleges and universities by coordinating boards and do these demands drive up institutions' administrative costs? Do governing boards make as many or more demands than coordinating boards, but provide more services to institutions which help offset institutions' administrative costs? Do governing boards

restrict the number of administrative positions at the institutional level, thus, keeping costs down? Are institutions' attempts to protect their autonomy as coordinating boards become more involved in institutional affairs resulting in higher administrative costs? Substantial research is needed to answer these important questions.

States without state-level boards also had higher average institutional administrative costs per FTE student than states with governing boards or coordinating boards. The assumption had been that the cost of administration would be greatest in states without state-level boards because no centralized services for institutions of higher education were provided at the state level. The findings indicated that this was indeed the case. However, it should also be noted that no centralized demands for information were placed on institutions. Not having a state-level board did not result in savings on administrative costs at the institutional level, but this may have been a function of the small size of those systems of higher education and the inability to achieve economies of scale or the burden of responsibility for functions and services normally performed at the state level, e.g., budgeting, planning, lobbying, public information, to name a few, placed entirely upon the institutions.

Research Question 3. What is the relationship between expenditures for administration of public, four-year institutions and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

A high negative correlation was found between the cost of administration per FTE student in public, four-year institutions and the level of board involvement in each of the areas of budget and

curriculum. One possible explanation for the negative correlations between per student administrative costs and level of board involvement in these two areas is the assumption, at the state level, of responsibility for centralized budget planning, curriculum review, and the related tasks typically performed at the institutional level.

On the other hand, this may have been an artifact of the data base and there were other factors behind this finding. Lower institutional administrative costs may have been a function of the inflated operating costs of coordinating boards and not attributed to the boards' level of involvement. Further research is needed to determine what these factors are.

Despite the relationship between board involvement and per-student administrative costs, the level of board involvement in the five areas was not significantly related to the proportion of total educational expenditures used for administration at the institutional level.

Research Question 4. What is the relationship between expenditures for the operation of state-level boards and the type of state-level board?

There was a significant relationship between board type and board cost for governance/coordination per FTE student, and the average cost of this governance/coordination per FTE student was greater for governing boards than for coordinating boards.

Glenny (1976) favored coordinating boards over governing boards because the latter had stronger executives, larger staffs, and higher costs. The findings in research question four verified that the operating costs of governing boards were in fact higher than those of coordinating boards.

Research Question 5. What is the relationship between expenditures for the operation of state-level boards and the level of those boards' involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

Significant relationships were found between board cost for governance/coordination per full-time equivalent student and the level of board involvement in each of the areas of budget, planning, and faculty. As a whole, positive correlations between the variables indicated that a higher level of board involvement in the five areas was related to a higher cost of board operation per full-time equivalent student. This may indicate that there is a fixed institutional cost for administration and board involvement simply shifts that cost to the state level away from the institutional level.

Parkinson (1962) observed that the size and cost of the head office staff would roughly indicate how much control there was, and where there was too much, it would probably cost too much. It was not the purpose of the study to measure the amount of control or to specify how much control was too much, but it was the purpose to examine relationships between certain variables. In this context, the significance of relationships was tested to investigate the potential validity of Parkinson's speculation. It was found that a high level of board involvement was related to higher operating costs, but that staff size was not related to the level of board involvement in four of the five areas. The results substantiated Parkinson's speculation that cost would indicate control, vis-à-vis level of involvement, but on the other hand, they did not substantiate his speculation that staff size would indicate amount of control.

Research Question 6. What is the relationship between expenditures for the operation of state-level boards and the total number of board staff?

No significant relationship was indicated between the size of the board staff and expenditures for the operation of the board.

Research Question 7. What is the relationship between expenditures for the operation of state-level boards and the total number of public, four-year institutions governed or coordinated by the boards?

There was no significant relationship between the number of public, four-year institutions under the boards' purview and the cost of operation for the boards.

Research Question 8. In states with no state-level board for higher education, what is the proportion of total educational expenditures used for administration in public, four-year institutions, and what is the administrative cost per full-time-equivalent student enrolled in public, four-year institutions?

Findings were reported for the entire population of twenty-three states rather than for only the three states with no state-level board for higher education. Administrative costs of public, four-year institutions were higher in states with coordinating boards than in states with governing boards. The one exception was Florida's governing board, which had the highest administrative cost per FTE student and the largest proportion of total educational expenditures for administration.

Two of the states without state-level boards for higher education, Delaware and Vermont, also had higher institutional administrative costs than did states with governing boards. Wyoming was the excep-

tion; both the administrative cost per FTE student and the proportion of total educational expenditures for administration were below the group mean. However, it has already been noted that Wyoming had only one public, four-year institution.

Research Question 9. What is the relationship between the type of state-level board and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

Governing boards had a higher level of involvement than coordinating boards in each of the five areas; however, governing boards also had a higher operating cost per FTE student than coordinating boards. On the other hand, institutional administrative costs per FTE student were lower in states with governing boards than in states with coordinating boards. It is not known why these relationships exist and further research is definitely warranted.

Both governing boards and coordinating boards were more involved with budget and planning. They were also involved with curriculum, but to a lesser degree. There was very little involvement with student affairs and faculty. These findings were consistent with Millard's (1976) observation that the three major areas of board responsibility were planning, program approval (curriculum), and budget development. Planning was the area of highest involvement, confirming Harcleroad (1973) and Martorana's (1974) emphasis on statewide planning as the foremost board function.

Research Question 10. What is the relationship between the total number of board staff and the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty?

A relationship between the size of the board staff and the level of board involvement in the area of planning was indicated. Staff size did not vary significantly with the level of involvement in budget, curriculum, student affairs, or faculty, however.

It appeared that a large board staff was related to a higher level of involvement in planning. Boards which were larger did more planning. However, governing boards had a higher level of involvement in planning than coordinating boards had, although the average coordinating board staff number was slightly larger than the average governing board staff number. It was obvious that governing boards, regardless of staff size, were more involved with planning than were coordinating boards. Coordinating boards may be using staff for monitoring and oversight rather than for planning. It should also be noted that planning is more commonly a function of governing boards.

Research Question 11. What is the relationship between the total number of board staff and the type of state-level board?

There was no significant difference in staff size across board types. However, the average staff number for coordinating boards, 59.06, was slightly larger than the average staff number for governing boards, 55.23.

Collectively, the findings of this study resulted in a profile for each of the board types on the cost of operation of state-level boards for higher education and the cost of administration in public, four-year institutions of higher education, along with the level of board involvement in the areas of budget, planning, curriculum, student affairs, and faculty.

Compared to the eleven governing boards, the nine coordinating boards had lower operating costs per full-time equivalent student, but the public, four-year institutions under the coordinating boards' purview had higher administrative costs per FTE student. Coordinating boards were more involved in the areas of budget and planning and less involved in curriculum, student affairs, and faculty. However, coordinating boards had a lower level of involvement in all five areas than did governing boards.

The eleven governing boards had higher operating costs per full-time equivalent student, but the public, four-year institutions for which they were responsible had lower administrative costs per FTE student. Governing boards had a higher level of involvement in the five areas, but were most heavily involved in planning and budget respectively.

Administrative costs per full-time equivalent student in public, four-year institutions were higher in the three states with no state-level board than in states with either governing or coordinating boards.

Additional information about the nature of state-level boards and their relationship with the four-year institutions under their jurisdiction was garnered from the study. Coordinating boards, on the average, had slightly larger staffs than governing boards. However, board expenditures for operation were not related to the number of board staff, regardless of board type. Nor, were board operating costs related to the number of public, four-year institutions for which the boards were responsible.

A high level of board involvement, whether governing boards or coordinating boards, in the areas of budget and curriculum were related to low administrative costs per FTE student at the institutional level. On the other hand, high board involvement in budget, planning, and faculty were related to high board operating costs per FTE student.

The reasons for these findings are subject to much speculation. It was not the purpose of this study to examine reasons for relationships, rather it was to examine the relationships themselves. Speculation at this point would be presumptuous. Further research is needed.

RECOMMENDATIONS

Based on the findings and procedures of this study, the following recommendations are suggested:

1. Public, four-year institutions and the state-level boards which governed or coordinated them were the subjects for this study. Further research should sample the two-year institutions and the state-level boards which had jurisdiction over them, provided that accurate data on board cost for governing/coordinating two-year institutions could be obtained.

2. The population for this study consisted of twenty-three states. An effort should be made to gather data on additional states and replicate the study to ascertain whether the same relationships existed on a larger scale.

3. Results of this study should be disseminated to each of the State Higher Education Executive Officers (SHEEO) member agencies as an additional source of information about the nature of state-level boards for higher education.

4. The process of developing a data base which allowed comparison of the level of expenditures for board operation with board type, staffing, and functions should be disseminated as a basis for further research on the nature of state-level boards.

5. The study raised questions about other aspects of the relationship between state-level boards for higher education and the institutions under their purview. Further research should measure the level of board demand for information, documentation, and accounting placed on institutions and examine relationships between boards' expenditures and the level of demand, and between institutions' administration expenditures and the level of demand. The relationship between institutions' expenditures for administration and the total number of state-level board staff might also be examined.

6. The study addressed the relationship between state-level boards for higher education and public, four-year institutions. Further research should address the relationships between state-level boards and private institutions.

7. A wide range of board operating costs per full-time equivalent student and institutional administrative costs per full-time equivalent student was found between states and in some cases, between the same board types. Further research is needed on the reasons for this wide variation.

8. Several of the general findings of the study were significant. For example, institutions' administrative cost per FTE student were higher in states with coordinating boards than in states with governing

boards. However, Florida, a state with a governing board, was an exception in that institutions' administrative cost per FTE student was the highest of the twenty-three states studied. Case studies are needed to investigate possible reasons for this individual exception along with others.

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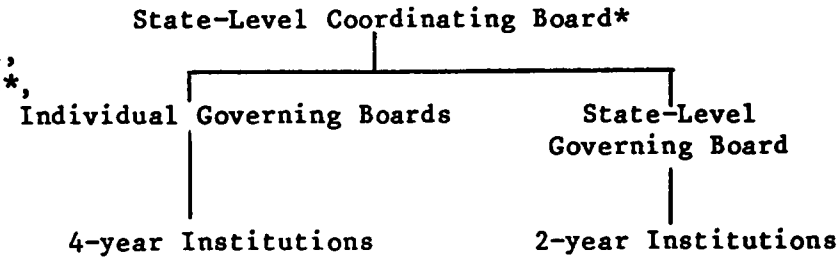
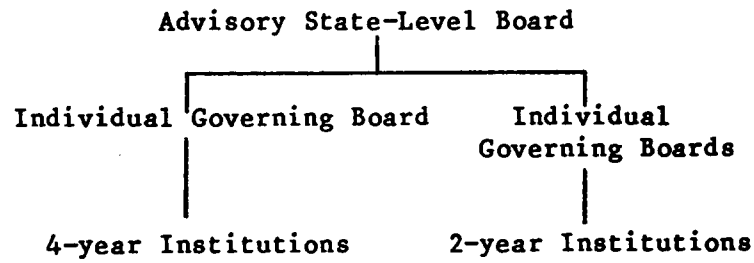
APPENDIX A

SCHEMATICS OF HIGHER EDUCATION GOVERNANCE STRUCTURES
IN THE FIFTY STATES

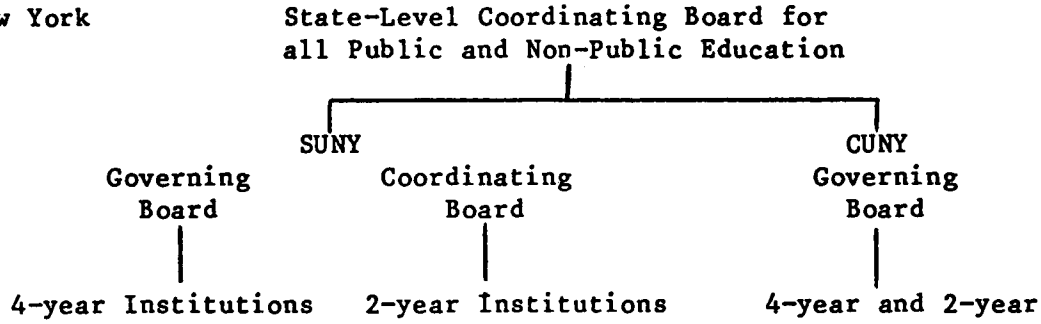
STATE	HIGHER EDUCATION GOVERNANCE STRUCTURE
Arizona*, Florida* Mississippi*	State-Level Governing Board* → 4-year Institutions; State-Level Coordinating Board → Individual Governing Boards → 2-year Institutions
Georgia, Hawaii, Idaho, Massachusetts, Nevada, Maine, North Dakota*, Rhode Island, Utah*, West Virginia*, Wisconsin*, Montana	State-Level Governing Board* → 4-year Institutions; 2-year Institutions
Iowa*	Voluntary State-Level Board → Individual Governing Board* → 4-year Institutions; Individual Governing Boards → 2-year Institutions

STATE	HIGHER EDUCATION GOVERNANCE STRUCTURE
Kansas*, North Carolina*	State-Level Governing Board* → 4-year Institutions State-Level Governing Board → 2-year Institutions
Alaska, Arkansas, Indiana, Kentucky*, Louisiana, Missouri*, New Mexico*, Nebraska, Ohio, Olkahoma*, Tennessee, South Dakota	State-Level Coordinating Board* → Individual Governing Boards → 4-year and 2-year Institutions
Illinois, Maryland, New Jersey*, Oregon	State-Level Coordinating Board* → Individual Governing Boards → 4-year Institutions State-Level Coordinating Board → Individual Governing Boards → 2-year Institutions

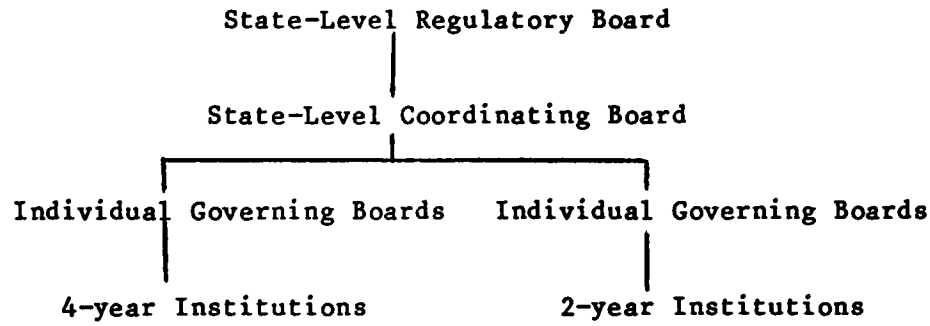
STATE	HIGHER EDUCATION GOVERNANCE STRUCTURE
Alabama, Colorado, Connecticut, Minnesota, South Carolina*, Texas*, Virginia*, Washington*	
Delaware*, Vermont*, Wyoming*	No State-Level Board for Higher Education
California, Michigan, New Hampshire	

STATE	HIGHER EDUCATION GOVERNANCE STRUCTURE

New York



Pennsylvania



Note: Asterisks indicate the states and the boards included in the study.

APPENDIX B

STATE-LEVEL BOARDS FOR HIGHER EDUCATION
USED IN THE STUDY AND SURVEY RESPONDENTS

STATE	STATE-LEVEL BOARD FOR HIGHER EDUCATION	RESPONDENT
Arizona	State Board of Regents 1535 West Jefferson Phoenix, Arizona 85007 (602) 255-4082	Robert L. Lawless, Associate Director Finances
Florida	Board of Regents of State University System of Florida 107 West Gaines Street Tallahasse, Florida 32301 (904) 488-0522	Emoryette McDonald, Assistant Director Personnel Programs
Idaho	Board of Regents of the University of Idaho Len B. Jordon Building, Rm 307 650 West State Street Brise, Idaho 83720 (208) 334-2270	Lindy High, Public Information Officer
Iowa	State Board of Regents Lucas State Office Building Des Moines, Iowa 50319 (515) 281-3934	R. Wayne Richey, Executive Secretary
Kansas	Board of Regents 1416 Merchants National Bank Tower 800 Jackson Topeka, Kansas 66612 (913) 296-3421	Unknown
Kentucky	Council on Higher Education West Frankfort Office Complex U.S. 127 South Frankfort, Kentucky 40601 (502) 564-3553	Cathy L. Cole, Executive Assistant to the Executive Director
Mississippi	Board of Trustees of State Institutions of Higher Learning P. O. Box 2336 Jackson, Mississippi 39205 (601) 982-6611	E. E. Thrash, Executive Secretary and Director

STATE	STATE-LEVEL BOARD FOR HIGHER EDUCATION	RESPONDENT
Missouri	Coordinating Board for Higher Education 600 Monroe Street Jefferson City, Missouri 65101 (314) 751-2361	Judy Vickrey, Assistant Commissioner for Finance
New Jersey	Board of Higher Education 225 West State Street Trenton, New Jersey 08625 (609) 292-4310	George Silver, Executive Associate
New Mexico	Board of Educational Finance 1068 Cerrillos Road Santa Fe, New Mexico 87503 (505) 827-8300	Dewayne Mathews, Capital Budget Director
North Carolina	Board of Governors of the University of North Carolina P. O. Box 2688 Chapel Hill, North Carolina 27514 (919) 224-2960	A. K. King, Assistant to the President
North Dakota	Board of Higher Education State Capitol Building Bismark, North Carolina 58506 (701) 224-2960	Unknown
Oklahoma	State Regents for Higher Education 500 Education Building State Capitol Complex Oklahoma City, Oklahoma 73105 (405) 521-2444	J. A. Leone, Chancellor
South Carolina	Commission on Higher Education 1429 Senate Street, Suite 1104 Columbia, South Carolina 29201 (803) 758-2407	Howard R. Boozer, Executive Director
Texas	Coordinating Board, Texas College and University System P. O. Box 12788, Capitol Station Austin, Texas 78711 (512) 475-2599	Mary Patterson, Director of Research
Utah	State Board of Regents 807 East South Temple, Suite 204 Salt Lake City, Utah 84106 (801) 533-5617	Derald V. Johnson, Budget Director

STATE	STATE-LEVEL BOARD FOR HIGHER EDUCATION	RESPONDENT
Virginia	State Council on Higher Education James Monroe Building 101 North Fourteenth Street Richmond, Virginia 23219 (804) 225-2600	Gordon K. Davies, Director
Washington	Council for Postsecondary Education 908 East Fifth Avenue, EW-11 Olympia, Washington 98504 (206) 348-1765	Denis Curry, Deputy Coordinator
West Virginia	West Virginia Board of Regents 950 Kanawha Boulevard, East Charleston, West Virginia 25301 (304) 348-2101	Robert R. Ramsey, Jr. Chancellor
Wisconsin	Board of Regents of the University of Wisconsin System 1530 Van Hise Hall Madison, Wisconsin 53706 (608) 262-2623	Allan Abell, Title Unknown

APPENDIX C

PUBLIC, FOUR-YEAR BACHELOR DEGREE AND HIGHER DEGREE GRANTING INSTITUTIONS USED IN THE STUDY

STATE		INSTITUTION	FICE IDENTIFICATION
Arizona	1.	Arizona State University	001081
	2.	Northern Arizona University	001082
	3.	University of Arizona	001083
Delaware	4.	Delaware State College	001428
	5.	University of Delaware	001431
Florida	6.	Florida A&M University	001480
	7.	Florida Atlantic University	001481
	8.	Florida International University	009635
	9.	Florida State University	001489
	10.	University of Central Florida	003954
	11.	University of Florida	001535
	12.	University of North Florida	009841
	13.	University of South Florida	001537
	14.	University of West Florida	003955
Idaho	15.	Boise State University	001616
	16.	Idaho State University	006120
	17.	Lewis-Clark State College	001621
	18.	University of Idaho	001626
Iowa	19.	Iowa State University of Science and Technology	001869
	20.	University of Iowa	001892
	21.	University of Northern Iowa	001890
Kansas	22.	Emporia State University	001927
	23.	Fort Hayes State University	001915
	24.	Kansas State University of Agriculture and Applied Science	001928
	25.	Pittsburg State University	001926
	26.	University of Kansas Main Campus	001948
	27.	University of Kansas Medical Center	004605
	28.	Wichita State University	001950
Kentucky	29.	Eastern Kentucky University	001963
	30.	Kentucky State University	001968
	31.	Morehead State University	001976
	32.	Murray State University	001977
	33.	University of Kentucky	001989
	34.	University of Louisville	001999
	35.	Western Kentucky University	002002
	36.	Northern Kentucky University	009275

STATE		INSTITUTION	FICE IDENTIFICATION
Mississippi	37.	Alcorn State University	002396
	38.	Delta State University	002403
	39.	Jackson State University	002410
	40.	Mississippi State University	002423
	41.	Mississippi University for Women	002422
	42.	Mississippi Valley State University	002424
	43.	University of Mississippi Main Campus	002440
	44.	University of Mississippi Medical Center	004688
	45.	University of Southern Mississippi	002441
Missouri	46.	Central Missouri State University	002454
	47.	Harris-Stowe State College	002466
	48.	Lincoln University	002479
	49.	Missouri Southern State College	002488
	50.	Missouri Western State College	002490
	51.	Northeast Missouri State University	002495
	52.	Northwest Missouri State University	002496
	53.	Southeast Missouri State University	002501
	54.	Southwest Missouri State University	002503
	55.	University of Missouri-Columbia	002516
	56.	University of Missouri-Kansas City	002518
	57.	University of Missouri-Rolla	002517
	58.	University of Missouri-Saint Louis	002519
New Jersey	59.	College of Medicine and Denistry of New Jersey at Newark	002620
	60.	Glassboro State College	002609
	61.	Jersey City State College	002613
	62.	Kean College of New Jersey	002622
	63.	Montclair State College	002617
	64.	Ramapo College of New Jersey	009344
	65.	Rutgers the State University of New Jersey Camden Campus	004741
	66.	Rutgers the State University of New Jersey Newark Campus	002631
	67.	Rutgers the State University of New Jersey New Brunswick Campus	006964
	68.	Stockton State College	009345
	69.	Trenton State College	002642
	70.	William Patterson College	002625
New Mexico	71.	Eastern New Mexico University Main Campus	002651
	72.	New Mexico Highlands University	002653
	73.	New Mexico Institute of Mining and Technology	002654
	74.	New Mexico State University Main Campus	002657
	75.	University of New Mexico Main Campus	010313

STATE		INSTITUTION	FICE IDENTIFICATION
New Mexico (cont'd)	76.	Western New Mexico University	002664
North Carolina	77.	Appalachian State University	002906
	78.	East Carolina University	002923
	79.	Elizabeth City State University	002926
	80.	Fayetteville State University	002928
	81.	North Carolina Agricultural and Technical State University	002905
	82.	North Carolina Central University	002950
	83.	North Carolina School of the Arts	003981
	84.	North Carolina State University at Raleigh	002972
	85.	Pembroke State University	002954
	86.	University of North Carolina at Asheville	002907
	87.	University of North Carolina at Chapel Hill	002974
	88.	University of North Carolina at Charlotte	002975
	89.	University of North Carolina at Greensboro	002976
	90.	University of North Carolina at Wilmington	002984
	91.	Western Carolina University	002981
	92.	Winston-Salem State University	002986
North Dakota	93.	Dickinson State College	002989
	94.	Mayville State College	002993
	95.	Minot State College	002994
	96.	North Dakota State University Main Campus	009265
	97.	University of North Dakota	003005
	98.	Valley City State College	003008
Oklahoma	99.	Cameron University	003150
	100.	Central State University	003152
	101.	East Central Oklahoma State University	003154
	102.	Langston University	003152
	103.	Northeastern Oklahoma State University	003161
	104.	Northwestern Oklahoma State University	003163
	105.	Oklahoma College of Osteopathic Medicine and Surgery	011282
	106.	Oklahoma Panhandle State University	003174
	107.	Oklahoma State University Main Campus	003170
	108.	Southeastern Oklahoma State University	003179

STATE		INSTITUTION	FICE IDENTIFICATION
Oklahoma (cont'd)	109.	Southwestern Oklahoma State University	003181
	110.	University of Oklahoma Health Science Center	005889
	111.	University of Oklahoma Norman Campus	003184
	112.	University of Science and Arts of Oklahoma	003167
South Carolina	113.	Citadel Military College of South Carolina	003423
	114.	Clemson University	003425
	115.	College of Charleston	003428
	116.	Francis Marion College	009226
	117.	Lander College	003435
	118.	Medical University of South Carolina	003438
	119.	South Carolina State College	003446
	120.	University of South Carolina at Aiken	003449
	121.	University of South Carolina at Coastal Carolina	003451
	122.	University of South Carolina at Columbia	003448
	123.	University of South Carolina at Spartanburg	006951
	124.	Winthrop College	003456
Texas	125.	Angels State University	003541
	126.	East Texas State University	003565
	127.	Lamar University	003581
	128.	Midwestern State University	003592
	129.	North Texas State University	003594
	130.	Pan American University	003599
	131.	Sam Houston State University	003606
	132.	Southwest Texas State University	003615
	133.	Stephen F. Austin State University	003624
	134.	Sul Ross State University	003625
	135.	Prairie View A&M University	003625
	136.	Tarleton State University	003630
	137.	Texas A&M University Main Campus	010366
	138.	Texas A&M University at Galveston	010298
	139.	Texas College of Osteopathic Medicine	009768
	140.	Texas Southern University	003642
	141.	Texas Tech University	003644
	142.	Texas Woman's University	003646
	143.	University of Houston Central Campus	003652

STATE		INSTITUTION	FICE IDENTIFICATION
Texas (cont'd)	144.	University of Houston at Clear Lake City	011711
	145.	University of Houston Downtown College	012826
	146.	University of Houston Victoria Campus	013231
	147.	Corpus Christi State University	011161
	148.	Laredo State University	009651
	149.	Texas A & I University	003639
	150.	University of Texas at Austin	003658
	151.	University of Texas at Arlington	003656
	152.	University of Texas at Dallas	009741
	153.	University of Texas at El Paso	003661
	154.	University of Texas Health Science Center at Dallas	003660
	155.	University of Texas Health Science Center at Houston	011618
	156.	University of Texas Health Science Center at San Antonio	003659
	157.	University of Texas Medical Branch at Galveston	004952
	158.	University of Texas of the Permian Basin	009930
	159.	University of Texas at San Antonio	010115
	160.	University of Texas at Tyler	029164
	161.	West Texas State University	003665
Utah	162.	University of Utah	003675
	163.	Utah State University	003677
	164.	Southern Utah State College	003678
	165.	Weber State College	003680
Vermont	166.	University of Vermont and State Agriculture College	003696
	167.	Castleton State College	003683
	168.	Johnson State College	003688
	169.	Lyndon State College	003689
Virginia	170.	College of William and Mary	003705
	171.	Christopher Newport College	003706
	172.	George Mason University	003749
	173.	James Madison University	003721
	174.	Longwood College	003719
	175.	Mary Washington College	003746
	176.	Norfolk State University	003765
	177.	Old Dominion University	003728
	178.	Radford University	003732
	179.	University of Virginia Main Campus	006968
	180.	University of Virginia Clinch Valley College	003747

STATE		INSTITUTION	FICE IDENTIFICATION
Virginia (cont'd)	181.	Virginia Commonwealth University	003735
	182.	Virginia Military Institute	003753
	183.	Virginia Polytechnic Institute and State University	003754
	184.	Virginia State University	003764
Washington	185.	Central Washington University	003771
	186.	Eastern Washington University	003775
	187.	Evergreen State College	008155
	188.	University of Washington	003798
	189.	Washington State University	003800
	190.	Western Washington University	003802
West Virginia	191.	Bluefield State College	003809
	192.	Concord College	003810
	193.	Fairmont State College	003812
	194.	Glenville State College	003813
	195.	Marshall University	003815
	196.	Shepherd College	003822
	197.	West Liberty State College	003823
	198.	West Virginia College of Graduate Studies	006869
	199.	West Virginia Institute of Technology	003825
	200.	West Virginia School of Ostopathic Medicine	011245
	201.	West Virginia State College	003826
	202.	West Virginia University	003827
Wisconsin	203.	University of Wisconsin - Eau Claire	003917
	204.	University of Wisconsin - Green Bay	003899
	205.	University of Wisconsin - La Crosse	003919
	206.	University of Wisconsin - Madison	003895
	207.	University of Wisconsin - Milwaukee	003896
	208.	University of Wisconsin - Oshkosh	009630
	209.	University of Wisconsin - Parkside	005015
	210.	University of Wisconsin - Platteville	003921
	211.	University of Wisconsin - River Falls	003923
	212.	University of Wisconsin - Stevens Point	003924
	213.	University of Wisconsin - Stout	003915
	214.	University of Wisconsin - Superior	003925
	215.	University of Wisconsin - Whitewater	003926
Wyoming	216.	University of Wyoming	003932

APPENDIX D

LOCATION AND DESCRIPTION OF VARIABLES
DERIVED FROM HEGIS DATA FOR USE IN THE STUDY

	VARIABLE DESCRIPTION	LOCATION AND DESCRIPTIONS	HEGIS DATA
1.	Cost of Administration in Public, 4-year Institutions	Part B-Line 7 Institutional Support	Financial
	Total Education Expenditures of Public, 4-year Institutions	Part B-Line 1 Instruction	Financial
		-Line 4 Academic Support	Financial
		-Line 6 Student Services	Financial
		-Line 7 Institutional Support	Financial
		-Line 8 Operation and Maintenance of Plant	Financial
		-Line 9 Scholarships and Fellowships, Awards from Unrestricted Funds	Financial
		-Line 10 Scholarships and Fellowships, Awards from Restricted Funds	Financial
2.	Cost of Administration in Public, 4-year Institutions	Part B-Line 7 Institutional Support	Financial
	Total Number of FTE Students Enrolled in Public, 4-year Institutions	Part B-Line 14 - Column 13 Grant Total, All Students, Men	Enrollment
		-Line 14 - Column 14 Grand Total, All Students, Women	Enrollment
		-Line 29 - Column 15 Grand Total, All Students, Full-time Equivalent of Part-time Headcount	Enrollment
3.	Board Cost for Governance/ Coordination of Public, 4-year Institutions		
	Total Number of FTE Students Enrolled in Public, 4-year Institutions	-Line 14 - Column 13 Grand Total, All Students, Men	Enrollment
		-Line 14 - Column 14 Grand Total, All Students, Women	Enrollment
		-Line 29 - Column 15 Grand Total, All Students, Full-time Equivalent of Part-Headcount	Enrollment
4.	Cost of Administration in Public, 4-year Institutions	Part B-Line 7 Institutional Support	Financial

APPENDIX E

SURVEY INSTRUMENT USED TO COLLECT DATA AMONG THE STATE HIGHER EDUCATION EXECUTIVE OFFICERS (SHEEO) MEMBER AGENCIES

Virginia Polytechnic Institute and State University

College of Education

Blacksburg, Virginia 24061

State_____

Respondent_____

Title_____

Address_____

_____

Phone Number_____

Survey: State Boards Responsible for Public Higher Education

1. The following is a schematic of the higher education governance structure of your state based on information appearing in the State Postsecondary Education Profiles Handbook published by the Education Commission of the States. If the schematic is correct, write "correct" at the bottom of this sheet. If the schematic is incorrect, make the necessary corrections, construct another schematic on the back of this sheet, or enclose a copy of a schematic that has already been prepared by your staff.

2. Indicate the pattern which best describes your state's organizational structure for coordinating and/or for governing public institutions of higher education by placing

a check (✓) in the appropriate box. If none of the eight patterns apply to your state, please check other, and specify your state's organizational structure.

a. ☐ Each institution has its own governing board and/or several institutions (those of a similar type or that constitute a system) are under governing boards. No single state level coordinating or governing board for all public institutions exists.

b. ☐ All public institutions are under a single board which is voluntary and coordination is performed by the institutions themselves operating with some degree of formality. Single institutions or groups of institutions have their own governing boards.

c. ☐ All public institutions are under a single board which has responsibility at the state level for advising in relation to public higher education institutions, but which does not have specified authority to govern or coordinate these institutions. Single institutions or groups of institutions have their own governing boards.

d. ☐ All public, degree-granting institutions are under a single state board which has coordination responsibility but no governing responsibility. Single four-year bachelor degree granting and higher institutions and/or groups of institutions have their own governing boards. Two-year institutions are under a separate state board with coordinating responsibility.

e. ☐ All public, degree-granting institutions are under a single state board which has coordinating responsibility but no governing responsibility. Single four-year bachelor degree granting and higher institutions and/or groups of institutions have their own governing boards. Two-year institutions are under a separate state board with governing responsibility.

f. ☐ All public, four-year bachelor degree granting and higher institutions and/or groups of institutions are under a single state governing board. Two-year institutions are under a separate state board with coordinating responsibility.

g. ☐ All public, four-year bachelor degree granting and higher institutions

and/or groups of institutions are under a single state governing board. Two-year institutions are under a separate state board with governing responsibility.

h. ☐ All public institutions are under a single state governing board.

i. ☐ Other. Please specify._____

_____

_____

Note: If you checked pattern a, disregard the rest of the survey.

3. In the table below, give the total number of public institutions in the state by type of institution and the number by type of institution for which your board has governing/coordinating/advisory responsibility. Branches, campuses, or centers should be counted as separate institutions if they have a FICE code.

Institutions	Total	Separate Professional school	State University	4-year or more college	2-year college	Voc-Tech schools	Other
In State							
Under Board							

4. If your board also has responsibility for other levels of education, place a check (✓) beside each of the levels for which your board has responsibility.

Elementary Schools ☐

Secondary Schools ☐

Special Schools (hearing or seeing impaired) ☐

Vocational-technical Schools ☐

Other ☐ (Please specify)

5. In the table below, give the legal status of board by placing a check (✓) beside the legal provisions whereby the board was created, given authority, and made a corporate body in the state.

Legal Provisions	For Creation	For Managing Authority	For Corporate Status
Statutory			
Constitutional			
Constitutional/Statutory			
Other (Please specify)			

6. What was the amount of money allocated by the state legislature for the fiscal year beginning July 1, 1980, and ending June 30, 1981, for the operation and staffing of your board? Exclude allocations for capital outlay, student financial aid, and any other allocations not directly related to board operations.

$_____

7. Of the amount specified in item 6, approximately what amount was expended for performing centralized governance/coordination functionss for the four-year bachelor degree granting and higher institutions for the fiscal year 1980-1981?

$_____

8. Has the staffing, functions, and/or responsibilities of your board changed since 1980-1981 to such and extent that cross-year comparisons would be spurious?

YES ☐ NO ☐

9. In the table below, give the total number of full-time professional/classified staff positions according to responsibility. Exclude persons whose duties are primarily secretarial/clerical. In cases where an individual has dual/multiple responsibilities, estimate the proportion of time/effort spent for each. For example, 1/2 time Academic Affairs and Programs, and 1/2 time Faculty and Personnel, equals total work load.

Areas of Responsibility											Total No. of Professional/ Classified Staff
Executive Officer	Assistant Executive Officer	Budget Analysis/ Finance	Physical Facilities	Academic Affairs and Programs	Faculty and Personnel	Student Affairs	Public Relations	Legal	Institution & Research & Management Information	Other (Specify)	

(Sum of numbers under areas of responsibility should equal total number of professional/ classified staff.)

10. Give the total number of full-time secretarial/clerical employees.

_____

11. In the following table, indicate your board's functions or areas of responsibility and the extent of your board's authority over those functions or areas of responsibility by placing a check (✓) in the appropriate boxes on the right side of the table. Indicate the approximate amount of time/effort expended by your board's staff for those functions or areas of responsibility by placing a check in the appropriate boxes on the left side of the table. Give only those functions or areas of responsibility that are directly related to four-year bachelor degree granting and higher institutions.

Maximum Time/Effort	Median Time/Effort	Minimum Time/Effort	None	FUNCTION	State Board Has Primary Respons	Inst.-Local Board* has Primary Respon.	Inst.-Local Board** has Primary Respon.	Not Applicable
				Budget				
				1. Development of formulas, guidelines, criteria, etc. for maintenance and operating budget requests.				
				2. Preparation of annual/biennial maintenance and operating budget requests.				
				3. Approval of maintenance and operating budget requests.				
				4. Presentation and defense of maintenance and operating budget.				
				5. Development of capital budget requests.				
				6. Oversight of expenditure of state appropriated funds.				
				Planning				
				7. Development of institutional mission statements.				
				8. Final approval of institutional mission statements.				
				9. Development of enrollment projections.				
				10. Final approval of enrollment projections.				
				11. Establishment of enrollment caps.				
				12. Development of master plan for programs and facilities.				
				13. Final approval of master plan for programs and facilities.				
				14. Planning/design of new facilities to be supported by state appropriations.				
				15. Planning/design of new facilities to be self-supported by revenue bonds, etc.				
				Curriculum				
				16. Approval of establishment of new degree programs.				
				17. Discontinuance of degree programs.				
				18. Approval of new courses or fields of study.				
				19. Discontinuance of courses or fields of study.				
				20. Approval of establishment of new divisions within an institution.				
				Student Affairs				
				21. Establishment of student admissions policies.				
				22. Establishment of student charges - tuition and/or fees				
				23. Establishment of probation and/or suspension policies.				
				24. Establishment of policies on transferring from one state institution to another.				
				Faculty				
				25. Establishment of faculty salary schedules.				
				26. Establishment of faculty promotion policy.				
				27. Establishment of policy on tenure.				
				28. Approval of new appointments.				

*State Board Approves or Reviews **State Board Plays No Role

APPENDIX F

APPROPRIATION ACTS AND OTHER FISCAL DOCUMENTS USED TO DOCUMENT STATE ALLOCATIONS FOR OPERATING COSTS OF STATE-LEVEL BOARDS FOR HIGHER EDUCATION

Arizona. House Bill 2463, Chapter 244, 1980 Arizona Legislature.

Florida. Laws of Florida Section 1, Chapter 79-212, 1980 Florida Senate.

Idaho. Senate Bill 1469, Chapter 248, 1980 Idaho Legislature.

Iowa. Senate File 485, 1980 Iowa General Assembly.

Kansas. 1980-81 Appropriations Report. Kansas Legislative Research Department, Topeka, Kansas, 1980.

Kentucky. House Bill 931, Chapter 109, 1980 Kentucky General Assembly.

Mississippi. Senate Bill 2946, Chapter 188, 1981 Mississippi Legislature.

Missouri. C.C.S.H.B. 1003, 1981 Missouri General Assembly.

New Jersey. Appropriations Handbook Fiscal year 1980-81. New Jersey State Legislative Office of Legislative Services, Trenton, New Jersey, 1980.

New Mexico. House Bill 2, Chapter 155, 1980 New Mexico Legislature.

North Carolina. Senate Bill 947, Chapter 1137, 1980 North Carolina General Assembly.

North Dakota. House Bill 1004, Chapter 3. 1979 North Dakota Legislative Assembly.

Oklahoma. Senate Bill 399, Chapter 320, 1980 Oklahoma Legislature.

South Carolina. (R585, H3241) No. 517, 1980 South Carolina Legislature.

Texas. House Bill 558, Chapter 843, 1979 Texas Legislature.

Utah. House Bill 97, Chapter 86, 1980 Utah Legislature.

Virginia. Amended Appropriation Act, Chapter 601, 1981 Virginia General Assembly.

Washington, State of Washington Budget 1983-85 Biennium, Governor John Spellman, Olympia, Washington, December, 1982. (Actual 1980-81 figures included in this document.)

West Virginia. Enrolled Budget Bill Committee Substitute for Senate Bill 100, 1980 West Virginia Legislature.

Wisconsin. Worksheet indicating actual expenditures for 1980-81, Tom Fletemeyer, Legislative Fiscal Analyst, Wisconsin Legislative Fiscal Bureau, May, 1983.

APPENDIX G

TELEPHONE CALLS TO RESPONDENTS AND/OR FISCAL OFFICERS IN ORDER TO RECONCILE DISCREPANCIES BETWEEN AMOUNT SPECIFIED IN ITEM SIX ON THE SURVEY AND AMOUNT SPECIFIED IN THE APPROPRIATION ACTS AND OTHER FISCAL DOCUMENTS

1. W. P. Bigger, Jr.
   Fiscal Officer
   State Council of Higher Education
   Richmond, Virginia
   Telephone conversation July 9, 1984

2. Marvin Burris
   Associate Director for Budget
   Board of Regents
   Topeka, Kansas
   Telephone conversation July 3, 1984

3. Carl Blackwell
   Vice Chancelor for Budgeting
   Board of Regents of State University System of Florida
   Tallahasse, Florida
   Telephone conversation July 5, 1984

4. Floyd E. Case
   Assistant Commissioner for Fiscal Affairs
   Board of Higher Education
   Bismarck, North Dakota
   Telephone conversation July 7, 1984

5. Clare Stapleton Concord
   Senior Staff Associate
   Baord of Regents of the University of Wisconsin System
   Madison, Wisconsin
   Telephone conversation July 3, 1984

6. Denis Curry
   Deputy Coordinator
   Council for Postsecondary Education
   Olympia, Washington
   Telephone conversation July 9, 1984

7. Barbara Gittens
   Financial Officer
   State Board of Regents
   Salt Lake City, Utah
   Telephone conversation July 3, 1984

8. Michael Glennon
Associate Executive Secretary for Finance
Board of Educational Finance
Santa Fe, New Mexico
Telephone conversation July 7, 1984

9. A. K. King
Assistant to the President
Board of Governors of the University of North Carolina
Chapel Hill, North Carolina
Telephone conversation July 3, 1984

10. Ronald Marlow
Assistant Chancelor for Fiscal Affairs
Board of Higher Education
Trenton, New Jersey
Telephone conversation July 7, 1984

11. R. Wayne Richey
Executive Secretary
State Board of Regents
Des Moines, Iowa
Telephone conversation July 3, 1984

12. Judy Vickrey
Assistant Commissioner for Finance
Coordinating Board for Higher Education
Jefferson City, Missouri
Telephone conversation July 5, 1984

13. Ken Walker
Director for Planning and Budget
Council on Higher Education
Frankfort, Kentucky
Telephone conversation July 9, 1984

APPENDIX H

INVOLVEMENT SCORES OF STATE-LEVEL BOARDS FOR HIGHER EDUCATION IN THE AREAS OF BUDGET, PLANNING, CURRICULUM, STUDENT AFFAIRS, AND FACULTY

STATE	BUDGET SCORE	PLANNING SCORE	CURRICULUM SCORE	STUDENT AFFAIRS SCORE	FACULTY SCORE
Arizona	18	11	20	9	9
Florida	17	30	8	10	7
Idaho	14	13.5	8	5.5	4.5
Iowa	16.5	19.5	7.5	9	5.5
Kansas	18	27	15	12	12
Kentucky	15	21	6	8	0
Mississippi	17	10.5	8	8	7
Missouri	12.5	12	4.5	2	0
New Jersey	21.5	21	8	6	3
New Mexico	11	14	0	1	0
North Carolina	22	24	14	7.5	16
North Dakota	23	25	17	12	13.5
Oklahoma	21.5	20.5	17.5	13	2.5
South Carolina	17	16	8	2.5	1
Texas	4	9	6	0	0
Utah	15	19	10	6	4
Virginia	13.5	13	8	4	3
Washington	1.5	10	5.5	9.5	0
West Virginia	18	31	12	8	0
Wisconsin	24	22	14	7	4

APPENDIX I

DATA COLLECTED FROM SURVEY INSTRUMENT AND HEGIS TAPES TO ANSWER THE RESEARCH QUESTIONS

STATE	BOARD TYPE	BOARD EXPENDITURES FOR GOVERNANCE/ COORDINATION	NUMBER OF 4-YEAR INSTITUTIONS	NUMBER OF BOARD STAFF PROFESSIONAL	CLERICAL	TOTAL	NUMBER OF FTE STUDENTS	ADMINI-STRATIVE COSTS OF 4-YEAR INSTITUTIONS	TOTAL EDUCATIONAL EXPENDITURES OF 4-YEAR INSTITUTIONS	PROPORTION OF EDUCATIONAL EXPENDITURES FOR ADMINISTRATION	INSTITUTIONS' ADMINISTRATIVE COST PER FTE STUDENT	BOARD EXPENDITURES FOR GOVERNANCE/ COORDINATION PER FTE STUDENT
Arizona	Gov.	1,126,500	3	22.5	8	30.5	65,276	28,905,854	319,210,677	.090554	442.83	17.26
Delaware	No Bd.	NA	2	NA	NA	NA	17,759	10,870,282	97,459,231	.111537	612.10	NA
Florida	Gov.	5,728,608	9	99	37	136	100,851	74,966,486	537,646,594	.139435	743.34	56.80
Idaho	Gov.	294,000	4	6.5	3.5	10	22,332	9,343,891	95,565,614	.09775	418.41	13.16
Iowa	Gov.	371,000	3	10	8	18	54,046	18,423,342	285,325,877	.064569	340.88	6.86
Kansas	Gov.	562,103	7	16	16	32	63,053	24,645,633	289,275,500	.085198	390.40	8.91
Kentucky	Coord.	600,000	8	41	20	61	77,015	47,012,401	380,911,032	.123421	610.43	7.78
Mississippi	Gov.	575,843	9	12	15	27	46,723	23,267,188	246,376,065	.094438	497.98	12.32
Missouri	Coord.	415,897	10	31	14	45	93,394	47,017,210	391,428,155	.12017	503.43	4.45
New Jersey	Coord.	1,709,061	12	128	117	245	96,594	55,537,956	461,427,669	.120361	574.96	17.69
New Mexico	Coord.	460,000	6	7	4	11	35,373	17,749,564	152,258,864	.116575	501.78	13.00
N.Carolina	Gov.	4,535,052	16	40.5	35	75.5	105,882	49,734,115	541,526,103	.091841	469.71	42.83
N.Dakota	Gov.	406,942	6	6	4	10	21,660	9,305,603	101,721,657	.091481	429.62	18.79
Oklahoma	Coord.	623,239	14	48	36	84	72,283	26,390,375	255,965,569	.103101	365.10	8.62
S.Carolina	Coord.	645,000	12	15	6	21	56,226	39,432,249	310,658,959	.130718	701.32	11.47
Texas	Coord.	941,506	37	86.5	46	132.5	284,522	162,758,305	1,423,594,124	.114329	572.04	3.31
Utah	Gov.	698,000	4	11	5	16	38,071	19,089,650	180,863,210	.105547	501.42	18.33
Vermont	No Bd.	NA	4	NA	NA	NA	12,736	9,329,638	74,213,648	.125713	732.54	NA
Virginia	Coord.	1,843,000	15	30	12	42	110,040	64,411,749	526,319,182	.122382	585.35	16.75
Washington	Coord.	462,325	6	15	3	18	74,136	50,796,457	441,623,637	.115022	685.18	6.24
W.Virginia	Gov.	535,705	12	25	14.5	39.5	46,513	15,968,814	167,497,156	.095338	343.32	11.52
Wisconsin	Gov.	5,550,000	13	160	53	213	123,233	44,247,584	544,412,469	.0812758	359.06	45.04
Wyoming	No Bd.	NA	1	NA	NA	NA	8,092	3,579,731	63,882,747	.056036	442.38	NA

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