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A Study of University Research Administration; Organizational Structure, Function and Effectiveness

Louis H. Steinberg
Western Michigan University

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A STUDY OF
UNIVERSITY RESEARCH ADMINISTRATION:
ORGANIZATIONAL STRUCTURE,
FUNCTION AND EFFECTIVENESS

by

Louis H. Steinberg

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Doctor of Education

Western Michigan University
Kalamazoo, Michigan
August 1973
It is with grateful appreciation that I acknowledge the advice, cooperation and encouragement that I received from the many individuals who contributed to the completion of this study. My committee chairman, Dr. William P. Viall and my committee members, Dr. Rodney Roth, Dr. Richard T. Burke and Dr. Einard S. Haniuk, were constant sources of support and technical expertise. I am deeply indebted to them for their patience and understanding. A special note of thanks must also go to Mr. Michael J. Walters and the staff of The Office of Research Services at Western Michigan University who provided the initial help which made this study possible.

Finally, infinite appreciation must be expressed to my wife, Elaine, and to my sons, Jim, Robert and David for their patience with my limited availability during my doctoral study.
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CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

Introduction

In the past three decades, research activities have become a major function of institutions of higher education in the United States. At both older, more established institutions and at newer emerging ones, research is playing an increasingly important role. World War II, the Korean conflict, the Russian space triumphs of the late fifties and increasing technological competition from foreign countries have all combined to provide much of the impetus for the increased emphasis on both basic and applied research. Academic institutions have met the necessity for providing for a research function in many ways. Some have made it the responsibility of one individual, while others have created an office of research administration or even a non-profit research foundation.

The purpose of this study was to gather information concerning the ways in which colleges and universities organize to contract for and administer programs of sponsored research. Data regarding research administration were examined in a 3x3 design which included small (0 - 10,000 students), medium (10,001 - 20,000 students) and large (+ 20,000 students) institutions at three levels of annual research and development funding (R & D). Those levels were small ($0 - 5.5 million), medium ($5.6 - 20.5 million) and large (+$20.5 million).
million). This design was applied to four separate categories of data. They were: 1) organizational structure and characteristics, both within the research office and in regard to the research office's relation to the university as a whole, 2) functions or services provided by the research office or foundation, 3) an effectiveness or performance assessment of each of the nine groups in terms of the reported data, and 4) data concerning some possible criteria for assessing the effectiveness of university-based offices of research administration.

The origins of offices of research administration stem from the tremendous increase in the level of sponsored research that has taken place since the beginning of World War II. Between the years 1941 and 1964, the level of sponsored research in American universities increased from $50 million to almost $2 billion (Industrial Research, April 1964). In increasing numbers, colleges and universities have created training grants and other special projects. These offices are also charged with the responsibility of aiding faculty in the acquisition of research funds. Other responsibilities often include maintaining information concerning agencies that support research, acting as a liaison between the university and granting agencies and assisting faculty in the preparation of proposals. Some offices are involved in the administration of the university's internal research fund and in developing internal networks for implementing policies and practices in support of creative activities.

Although there is commonality as to responsibilities, there exists a great deal of diversity from one institution to another in terms of
the administrative control and organizational structure of the research office. In part, organizational structures and functions appear to have been determined by the level of research at a particular institution and also by the prevailing power structure and overall political climate which existed at the time the office was established. Steinberg and Walters (1972), found that the existence of a vice-president for research was more common in institutions with high annual allocations for research and development than in those institutions with relatively low allocations for research and development. The nature and effects of this organizational and functional diversity constituted a major reason for undertaking this study.

Statement of the Problem

The objectives of this survey focussed upon the acquisition and interpretation of data pertaining to the organizational structure, functions or services, effectiveness, and potential effectiveness measures of university-based offices of research administration. McBride (1966), reported a survey of 18 university offices of research administration. He examined the organizational structure and primary functions of these offices. However, data were reported only in raw form and effectiveness was not examined in relation to relevant organizational characteristics. McBride did ask research administrators how they and others viewed their effectiveness, but he did not ask them to specify the criteria upon which they based their evaluations. The present study will seek to provide answers
to some of these questions. Also, a relatively small sample size limited the nature of conclusions that could be drawn from the McBride study.

A larger sample size and a more comprehensive inquiry into potential measures of effectiveness were employed in the current study. Since this study involved survey research, the specific areas of inquiry were stated in question form. A few open ended questions were included so as to maximize the comprehensiveness of acquired data. The design of the study necessitated the separation of survey responses into nine groups. These groups were based upon the size of the institution and the level of reported annual research and development allocations. It was decided that this type of format would be most valuable to the practitioner in the field who wished to compare his own operation with those of institutions of similar size and research volume.

Since the intent of this survey involved the acquisition of data pertaining to the administration of sponsored research, results were reported primarily in descriptive form. Survey returns were analyzed in each of nine categories. These categories were as follows:

1. small institutions with small R & D,
2. small institutions with medium R & D,
3. small institutions with large R & D,
4. medium institutions with small R & D,
5. medium institutions with medium R & D,
6. medium institutions with large R & D,
7. large institutions with small R & D,
8. large institutions with medium R & D, and
9. large institutions with large R & D.

Four distinct types of data were analyzed for each of the above nine categories. The four types of obtained data were as follows:

1. data concerning organizational structure and characteristics both internally and in relation to the university as a whole,
2. data concerning basic functions and services provided by the research office or foundation,
3. data concerning some possible criteria for assessing the effectiveness of university-based offices of research administration, and
4. data concerning the performance and effectiveness of each of the nine groups of institutions.

Importance of the Problem

The role of the research office in grant acquisition has been especially crucial in the past few years. Federal support for university-based research has leveled off in recent years and in some academic areas it has actually declined. In addition, there are more universities competing for research funds now than ever before. Colleges and universities have had to deal with problems concerning the impact of research upon teaching, but both public and private institutions have recognized, and in most instances, welcomed their research
responsibilities. The ability of a university to acquire research funds plays a role in that institution's capacity to attract quality faculty and to maintain an acceptable level of faculty morale. The effectiveness, or the lack of it, of the research office can then be said to have the potential to exert a significant impact upon the entire university community. Institutions of higher learning have approached the problems of research administration in diverse ways. The question presents itself as to which, if any, of these diverse organizational structures might be more efficient in the grant acquisition and administration process? Which office structure or set of functions is best suited to the small, medium or large institution, to the research oriented institution or to the teaching oriented institution?

These questions were often being asked by research administrators throughout the United States. The format for this study was developed during the course of an administrative internship with the Office of Research Services at Western Michigan University during the summer of 1972. At that time, this office was about to undertake a study of the organizational structures of university based offices of research administration. This study (Steinberg and Walters, 1972) was being done at the request of the Society of Research Administrators. The data gathered in this earlier study provided the initial data, technique and insight for the current project. The response to and interest in the earlier study provided the impetus to engage in the expanded and more complex dissertation research.
The findings of this study should be of significant value to university offices of research administration in evaluating their own effectiveness and in planning future organizational changes. It is hoped that these changes will lead to increased success in obtaining grants, more efficient grant administration and greater dissemination of information to faculty.

Definition of Terms

1. **Sponsored Research** — that financed by sources outside the university or, in some cases, that financed by a special university fund usually created to issue small grants or preliminary monies for larger projects awaiting outside funding.

2. **Indirect Costs of Research** — those costs resulting from items such as provision of building space, utilities or depreciation of equipment which may not appear in a proposal or grant.

3. **R & D** — total funds allocated for research and development purposes.

4. **Small institutions** — those institutions of higher learning with enrollments of 0 - 10,000 students.

5. **Medium institutions** — those institutions of higher learning with enrollments of 10,001 - 20,000 students.

6. **Large institutions** — those institutions of higher learning with enrollments in excess of 20,000 students.
7. **Small R & D** — total annual research and development funds from $0 - 5.5 million.

8. **Medium R & D** — total annual research and development funds from $5.6 - 20.5 million.

9. **Large R & D** — total annual research and development funds in excess of $20.5 million.

10. **Soft money** — funding which is terminated at the end of a project as opposed to those funds which are continuing or reallocated on a yearly basis.

**Organization of the Dissertation**

Chapter I has served as an overview of the basic purposes of the study. Included within the first chapter are an introduction, an overview of the problem and sections dealing with a problem statement, major areas of inquiry, importance of the problem, a definition of terms and finally a brief outline concerning the organization of the dissertation.

Chapter II, Rationale and Related Literature, contains a detailed review of literature pertaining to the basic purposes of the study. Both theoretical and research oriented articles are cited to include a basis for understanding the history of research administration, the current status of the field and to provide a further foundation and justification for the current study.

The third chapter, entitled Design of the Study, contains a description of the area and population under study. It also describes
how the sample was selected, how the survey instrument was designed and the procedure for data collection. A discussion of specific areas of inquiry and methodology for treating the data is also included.

Presentation and Analysis of Data is the subject of the fourth chapter. Included are a breakdown of specific areas of inquiry and the analysis of data in each area. Results and trends are noted whenever possible.

Chapter V, Summary, Conclusions and Recommendations, includes a review of the problem, a review of the procedures used in the study, a summary of major findings and a discussion of trends in research administration. Finally, recommendations for possible organizational change and for further research are presented.
CHAPTER II

RELATED LITERATURE

Introduction

This chapter provides an overview of university research administration as well as a discussion of relevant literature and research investigations. Although there have been very few comprehensive studies of university offices of research administration, there does exist a good deal of information regarding the typical functions and responsibilities of the research office in promoting the research enterprise. Individual research offices have been studied quite thoroughly, but little comprehensive research has been undertaken. Literature discussed in this chapter has been selected for the contributions it will make to the reader's understanding of research administration and for the contributions it has already made to the research problem and design implemented within this study.

This chapter is organized and presented in the following manner:
a) an overview of university research administration, b) issues in research administration, c) the role and functions of the university research offices, and d) studies of university research administration.

An Overview of University Research Administration

For many years, research has been recognized as one of the primary functions of American colleges and universities. Today, much of
this research is sponsored by sources outside the university. Financial support is derived from the federal government as well as numerous private sources such as foundations, corporations or even individuals. Wilson (1967, p. 51) suggested that the process of sponsored research usually includes a contract between the chief investigator, the sponsor and the university. The grant usually is administered and the project conducted in accordance with the specifications of the sponsor. The project must also be conducted in compliance with policies and regulations established by the university.

In the early days of federal involvement in sponsored research, there was little concern expressed over the manner in which institutions managed the funds they received. Today, much the opposite appears to be true. The government and the university have entered into a partnership wherein detailed control by federal agencies is a fact of life. According to Griffin and Gross (1970, p. 5), this need for detailed control has been brought about by: a) an immense and unforeseen development of scientific investigation as a vital part of the nation's activity, b) a great increase in the requirements of administering research activities, and c) the inadequate development both by government and academic institutions of administrative concepts and practices equal to the research management demands of the present and future.

For most institutions, the influx of research monies has been a relatively recent phenomenon. DeBurlo (1965, p. 366) noted that in 1962 fewer than 500 American colleges and universities received
federal funds for research. Eighty percent of the $613 million spent for research that year went to only 50 institutions. The majority of institutions had relatively little experience in the administration or acquisition of research funds. Consequently, colleges and universities have had to find ways of both acquiring and administering these funds. Various administrative approaches have arisen, in part, out of the basic philosophy of the institution itself. The importance of sponsored research varies greatly among institutions. The strength of research orientation as well as the nature of ongoing research are important factors in the determination of administrative structure. Wilson (1967, p. 78) suggested that one key indication of the emphasis given research in any institution is reflected by the position occupied by the person responsible for the program. Wilson felt that, quite obviously, a different status for research was indicated when the director was a vice-president as opposed to when the director was a part-time coordinator responsible to one of the deans. Wilson surveyed ten institutions and found research administration responsibilities to be vested in many different individuals with varying titles.

Steinberg and Walters (1972) surveyed 90 colleges and universities in regard to the organizational structures for research administration. Table 2-1 reveals the fact that among the 75 institutions who responded, the research administration responsibility was vested in the hands of at least ten different types of university positions. Most often, research administration was the ultimate
TABLE 2-1

CONTROL OF RESEARCH ADMINISTRATION OFFICE BY SIZE OF INSTITUTION*

<table>
<thead>
<tr>
<th></th>
<th>V.P. President</th>
<th>V.P. Research</th>
<th>V.P. Academic</th>
<th>V.P. Finance</th>
<th>Provost</th>
<th>Exec. V.P.</th>
<th>V.P. Devel.</th>
<th>Grad. Dean</th>
<th>Dean Instr.</th>
<th>Comp-troller</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td>S</td>
<td>8</td>
<td>1</td>
<td>8</td>
<td>3</td>
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<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>27</td>
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<tr>
<td>M</td>
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<td>10</td>
<td>21</td>
<td>5</td>
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<td>3</td>
<td>2</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>75</td>
</tr>
</tbody>
</table>

Small
S = 0 - 10,000 Students

Medium
M = 10,001 - 20,000 Students

Large
L = 20,000 + Students

*Steinberg and Walters (1972, p. 11)
responsibility of the academic vice-president. This was true in institutions of all sizes. Table 2-2 reveals the fact that the level of annual research and development at a given institution does have a bearing upon research administration structure. Research administration responsibilities under the auspices of the office of the president, the academic vice-president or under a graduate dean are most common among institutions with less than a five million dollar annual research and development allocation. Institutions with more than a five million dollar annual research and development allocation tended to show much greater diversity in their research administration structures. Eighty percent of the institutions having a vice-president for research reported an annual research and development allocation in excess of ten million dollars. This finding lends support to the Wilson contention that there is some positive correlation between the existence of a vice-president for research and the status of research at a particular institution. The importance of this variable stems not only from the influence of a vice-president within the university community, but also because of the almost certain existence of one or more full-time employees devoting their energies to the research administration effort. These offices are typically well developed and possess a high degree of expertise.

Critical Issues in University Research Administration

The reasons why one institution will place research administration responsibilities in the hands of a dean and another in the hands
TABLE 2-2
CONTROL OF RESEARCH ADMINISTRATION OFFICE BY TOTAL 1970 R & D*

<table>
<thead>
<tr>
<th>1970 Total R &amp; D In Millions</th>
<th>President</th>
<th>V.P. Research</th>
<th>V.P. Academic</th>
<th>V.P. Finance</th>
<th>Provost</th>
<th>Exec. V.P</th>
<th>V.P. Devel</th>
<th>Grad. Dean</th>
<th>Instr. Controller</th>
<th>TOTAL</th>
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<td>10-15</td>
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<td>10</td>
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</tr>
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<td>15-20</td>
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<td>8</td>
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<tr>
<td>20-25</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
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<tr>
<td>+25</td>
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<td>3</td>
<td>2</td>
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<td>0</td>
<td>2</td>
<td>1</td>
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<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>16</td>
<td>10</td>
<td>21</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>11</td>
<td>1</td>
<td>75</td>
</tr>
</tbody>
</table>

*Steinberg & Walters (1972, p. 13)
of the academic vice-president are extremely complex. Institutional philosophy, internal politics and the problems of handling large sums of research money have all entered into the individual college's decision-making process. The tremendous growth in sponsored research brought with it many benefits to the university. However, many problems also arose. These problems made the organizational decision-making process even more difficult. Industrial Research (April 1966, p. 34) listed some of the difficulties caused by the increased emphasis upon research. They were:

1. financial support shifting from the institution to the federal government,
2. a shift in faculty loyalty from the institution to the sponsoring agency,
3. the potential neglect of teaching,
4. the formation of special research institutes, centers and laboratories to handle the greater research volume, and
5. a change in emphasis from student initiated graduate research to sponsored research dictated by outside needs.

Price (1965, p. 55) suggested that the proliferation of sponsored research has created a high degree of friction between teaching and research functions. This friction has led to confusion over administrative policies and fundamental changes in the nature of many institutions. In some institutions research is a primary criterion for promotion. The doctrine of publish or perish is common in research oriented universities. In some institutions administrative policies
are vague and faculty members are torn between teaching and pressures, real or imagined, to do research. The proper balance between teaching and research has been debated at virtually every major institution. Perhaps those institutions with the greatest concern for the impact of research upon teaching have often elected to place the research administration responsibilities under the control of the academic vice-president. This type of organizational control is often found in teaching oriented institutions with large colleges of education and relatively low annual allocations for research and development. Placing research under the control of the academic vice-president may have been done so that those responsible for teaching would be able to more closely monitor the impact of research upon the instructional program. The concern for the impact of research upon teaching is a real issue at many institutions.

An additional factor of concern to colleges and universities engaged in research is the cost of research to that particular institution. Many granting agencies make provisions for reimbursement of what are known as "indirect costs." These include such items as building space, utilities, office equipment and the hiring of teaching personnel to replace the faculty member engaged in research. The rate at which indirect costs will be reimbursed is often negotiated between the institution and the sponsor. Depending on the indirect cost reimbursement rate, even sponsored research may constitute a financial loss to the college or university. Some university financial officers go so far as to claim that virtually all sponsored research
is conducted at a financial loss to the host institution.

To counter the university position for full indirect cost reimbursement, many sponsors argue that the institutions will have to pay for space and utilities regardless of whether or not there is an ongoing research project. Furthermore, sponsors contend that as part of the public service obligations of an institution of higher learning, they should be willing to share at least a part of the cost of research. Regardless of the respective positions involved in this issue, many colleges and universities are reluctant to accept research grants unless the sponsor is willing to reimburse the institution for virtually all indirect costs. C.C. Furnas (1967), President Emeritus, State University of New York at Buffalo, in addressing a group of university presidents on the problems of indirect cost reimbursement, noted that research grants often do not include any allocation for the salary of the principal investigator. Sponsors ignore the fact that another professor must be hired to take over at least a portion of the teaching duties of the researcher. Furnas indicated that if this policy continues, university might well prosper into bankruptcy.

Finally, many institutions have encountered serious financial problems when a grant is terminated. There are increasing numbers of employees on so-called soft money whom the university may be forced to salary directly when the grant expires. Most colleges now inform employees upon hiring that their employment is only for the duration of a particular project. Typically, tenure is not granted these employees.
The impact on instruction, the problems of indirect cost reimbursement and the issue of what to do with employees on "soft money" are all critical issues in an institution's decision to engage in research and development activities. The individual college's approach to these problems is certain to have a bearing on the control, size and organizational structure of the research administration operation. The scope of responsibilities given to the research office are, in part, the outcome to the institution's attitudes toward these issues. Eurich (1967, p. 1) has said that "to put the problem of university research administration into its clearest perspective, it must be viewed in its fullest context . . . as one manifestation of the perennial problem of the relationship of educational institutions to their society."

The Role and Function of the University Office of Research Administration

Although offices of research administration often have different names and are controlled and organized in numerous ways, there does appear to be some communality as to function. Willner and Hendricks (1972) listed seven basic responsibilities of an office of grants administration. They are:

1. the identification of federal programs which might support projects of interest to the faculty,

2. communication of information regarding programs to the faculty and the transmitting of faculty interests to appropriate government agencies,
3. assistance in the preparation of proposals,
4. administration of grants from the time of award to the
   time of completion,
5. act as a campus-based Washington liaison for the univer-
   sity.
6. maintain contacts with other universities and related
   organizations for aid in the solution of grant administra-
   tion problems, and
7. keep informed of changes in grant policies and procedures.

The ability of an office to perform these and other services varies
greatly among institutions. Some large operations have further ex-
panded services into the areas of editorial assistance, technical
typing, illustrations, photographic services and even the design and
development of sophisticated experimental equipment. These services
are usually found only in universities generating a high volume of
annual research.

Perhaps the most efficient way to view the functions of the
research office is to divide the numerous responsibilities into the
areas of: a) pre-proposal activities such as compilation of sponsor
information and dissemination of grant opportunities to the faculty,
b) proposal preparation including editing, reproduction and techni-
cal typing, c) active account administration which includes monitor-
ing of accounts and negotiation of overruns and extensions, and d)
accounting and fiscal activity such as cost control procedures, fis-
cal reports to the sponsor and computation of indirect cost rates.
Virtually all offices of research administration engage in pre-proposal activities. The vast majority of offices also involve themselves in proposal preparation and there appears to be a trend toward the establishment of separate proposal development sections. In some universities, this has gone so far as to enable a faculty member to bring in the nucleus of a research idea and have the proposal development section actually do the work of writing the proposal. Relieving the faculty member of the burden of proposal writing might lead to significant increases in the number of proposals submitted for funding.

With regard to active account administration, Steinberg and Walters found that 62% of the offices surveyed reported that they engaged in this activity. Only 25% of research offices reported being involved in accounting and fiscal activity. In most cases, accounting and fiscal activities were handled by the budget or finance office of the particular institution.

Wile (p. 180) noted that there existed many successful forms for the organization of sponsored research. Wile addressed himself not to organization or function, but to the so-called human element as making the crucial contribution to the field of research administration. For Wile, effective communication constituted the key to successful administration. The research administrator acts as the buffer between the performers of research and the stringent regulations and obligations imposed by outside sponsorship. Depending upon his ability to communicate, the research administrator, in his role, may be
perceived by the faculty as an intrusive impediment or as a friend providing a needed service. Likewise, his ability to communicate may be a key ingredient in a sponsor's decision to fund a particular project.

Mendelsohn (1971) studied the role of the university research administrator. He found some consensus among faculty, university administrators and research administrators as to their expected role. Consensus occurred in the perceived tasks of proposal preparation, sponsor information and coordination or management of the research process within the university. However, Mendelsohn found that when presented with more specific behavioral expectations regarding the role of the research administrator, the consensus across the three audiences declined substantially. Faculty tended to define the research administrator's role as involving more assistance with proposal preparation than did the research administrators themselves. In essence, Mendelsohn found a good deal of role conflict for the research administrator. Again, the human element is the most likely variable in this perceived role conflict. It is important for the university wishing to become more involved in research to closely examine their proposal development services. This is an area that research administrators may be avoiding, but certainly should examine in their desire to improve services to the faculty. The faculty member desiring this service must also realize that it may require more personnel than the research office can afford and also that he has an obligation to do much of the initial work in formulating his ideas into a workable proposal.
Studies of University Research Administration

The literature does provide an ample theoretical understanding of the role of the research administrator as well as insight into the major problems confronting him in his job. However, research data pertaining to university based offices of research administration are rarely seen in any organized, national perspective. The National Science Foundation does compile statistics revealing the annual amount of research and development funds given to particular institutions. Individual institutions generate publications which describe their research administration services and their overall research programs. Individual and isolated bits of information do exist and if properly pulled together would provide a greater understanding of how universities administer programs of sponsored research.

The need for comparative data and the sharing of solutions to common problems have stimulated research administrators to form professional organizations to facilitate communications. The National Council of University Research Administrators and the Society of Research Administrators are two such organizations. Even though they have provided a forum for the sharing and dissemination of ideas, the lack of periodic comprehensive research is still quite evident.

McBride (1966), Director of the Office of Research and Project Administration, University of Rochester, surveyed 18 offices of research administration. He did ask many questions pertaining to organizational structure and functions of these offices, however, the data were never published and remained in raw form. Like others, this
The study provided data on individual institutions, but because of limited sample size and the large number of open ended questions, the usefulness of the data was limited. McBride also asked research administrators how they and others viewed their effectiveness, but he did not ask them to specify the criteria upon which they based their judgments. The major contribution of the McBride study lies in the fact that it provided an understanding of many of the relevant variables one must investigate when doing this type of research. Major variables in the McBride study included proposal preparation, contract and grant negotiation, contract and grant administration, scientific or technical reports, review of state and federal legislation, security clearance matters, reports on sponsored activities, patent matters and negotiation of overruns and extensions. The breakdown of internal administrative activities was of significant help in the design of this study.

A search of the literature reveals one further study concerning the administration of faculty research projects. Wilson (1967) in a doctoral dissertation at East Texas State University, studied research administration in ten public universities. The Wilson study found that the philosophy of a university toward research is indicated by the organizational structure which it has established for the administration of research. Furthermore, the seriousness of a university's commitment to research is reflected in the procedures and policies which have been adopted to govern such research. The primary focus of the Wilson study centered on attitudes toward research and their
effects on research administration. Research procedures were studied from the preparation of proposals to final reports and the ultimate dissemination of results.

Several important recommendations were made as a result of the Wilson study. With regard to administrative structure, it was suggested that every university designate a research officer to be responsible for the administration of grants. It was deemed desirable that this individual be directly responsible to the president. Wilson noted that when research administration was added to the other responsibilities of an administrator, it was regarded as a subordinate obligation. It was stressed that the research office must be perceived by faculty members as a service facility which encourages their research efforts and gives assistance. Wilson also devoted a good deal of attention to the administration of internal research funds and the establishment of research councils to aid in the distribution of these funds.

The Wilson study concluded with a long list of recommendations regarding areas in need of further study. Research was recommended which would provide a comparison of administrative organizations among a wider range of both public and private institutions. The need for a larger sample was clearly recognized. In this way, comparisons based upon the obtained data would be more generalizable and of greater use to institutions in the process of establishing or modifying their efforts in the area of research administration. It is to this purpose that the present study addresses itself. The design of the current study, discussed in chapter three, is in part based upon the recommendations found in the Wilson research.
CHAPTER III

DESIGN OF THE STUDY

Review of the Problem

During the summer of 1972, a study of the organizational structure of university-based offices of research administration was undertaken by the Office of Research Services at Western Michigan University. In developing the instrument used in that study, interviews were conducted with research administrators, faculty and various university officials at Western Michigan University. These interviews had as their goal the development of a greater understanding on the part of this researcher as to the role and functions of the university research administrator.

In order to gain an even further understanding of the field of university research administration and also to further define the area of inquiry, interviews were also conducted with research administration personnel at Michigan State University, Governors State University in Illinois, and at the University of Michigan. As these interviews progressed, the questions asked increased in specificity. The data gathered were indispensable to the development of the pilot study instrument (Appendix A).

Results of the pilot study (Steinberg and Walters, 1972) were compiled and submitted for publication to the Society of Research Administrators. The obtained data dealt primarily with organizational control

26
and a brief look at basic functions. The data left many questions unanswered. A need for additional information arose in the area of organizational structure, control and functions in relation to the size of the institution and the level of research activity at the institution. Also, the pilot study did not elicit any data concerning effectiveness or accountability criteria. It was deemed desirable to secure information regarding these issues and consequently, the dissertation research was initiated. Feedback from research administrators who responded to the initial study confirmed the need and desire for this additional information.

In the formulation of goals for the current study, it was decided to examine offices of research administration in nine institutional categories. These categories were partitioned on the basis of the size of the college or university, i.e., student enrollment, and also on the basis of the annual volume of research and development allocations. Information was elicited concerning organizational structure, functions, an effectiveness assessment based on reported data and some potential criteria for assessing the effectiveness of a research office.

Selection of the Sample

The population studied included all colleges or universities having a centralized office or organization for the purpose of contracting for and administering programs of sponsored research. The sample of 200 offices was drawn from a master list provided by the National
Science Foundation and also from the membership list of the Society of Research Administrators. Table 3-1 characterizes the institutions sampled in terms of enrollment size and level of research and development allocations.

**TABLE 3-1**

**DESCRIPTION OF INSTITUTIONS IN ORIGINAL SAMPLE**

<table>
<thead>
<tr>
<th>ENROLLMENT</th>
<th>R &amp; D (IN MILLIONS)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SMALL ($0 - 5.5)</td>
<td>MEDIUM ($5.6 - 20.5)</td>
<td>LARGE (+20.6)</td>
<td>TOTAL</td>
</tr>
<tr>
<td>Small</td>
<td>55</td>
<td>25</td>
<td>9</td>
<td>89</td>
</tr>
<tr>
<td>Medium</td>
<td>30</td>
<td>26</td>
<td>11</td>
<td>67</td>
</tr>
<tr>
<td>Large</td>
<td>15</td>
<td>12</td>
<td>17</td>
<td>44</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>63</td>
<td>37</td>
<td>200</td>
</tr>
</tbody>
</table>

Eighty nine institutions were in the small enrollment (0 - 10,000) category while 67 institutions were in the medium (10,001 - 20,000) category and 44 were in the large (+20,000) group. With regard to the 1971-72 research and development allocation, 100 institutions or 50% of the sample were in the small (0 - $5.5 million) group, 63 were in the
medium ($5.6 - 20.5 million) group and 37 institutions had allocations in excess of $20.6 million. Fifty five institutions, or 27.5% of the original sample were in the small R & D, small enrollment category. This represented the largest category in the sample. The smallest group was small institutions with large research and development allocations. Nine institutions or 4.5% of the sample were in this category.

Both public and private institutions were included in the sample. Offices at 138 public colleges and universities and 62 private colleges and universities were surveyed. Both public and private sectors of education were present in eight of the nine basic categories under investigation. There were no private institutions in the large enrollment; large research and development category. A list of all institutions in the original sample will be found in Appendix B. In summary, the sample represented a broad range of public and private institutions of widely varying size and annual level of research and development allocations.

Instrumentation

The questionnaire used in this study was developed after an analysis of the pilot study results and after close consultation with university research administrators. The final instrument (Appendix C), entitled "Organization for Research Administration," contained questions in four basic categories. They were: a) organizational structure, b) functions, c) reported effectiveness or accountability criteria, and d) potential measures of effectiveness. A description of the instrument
follows:

**Questions pertaining to organizational structure.** (Numbers refer to item number in questionnaire)

1. What year was your office established? ____

2. To whom is your office directly responsible? 
   - Pres. 
   - V.P. Research

   V.P. Acad.  Dean Grad. Studies  Provost  Exec. V.P.  V.P. Finance
   V.P. Devel.  Comptroller  Other (specify)

3. How are research policies formulated at your institution?

   - Admin.  Admin.  Shared Admin. & Faculty  Faculty
   - Dominance  Primarily  Faculty Responsib.  Primarily  Dominance

5. Number of full time equivalent professional staff in office.

   - 1 - 3
   - 4 - 6
   - 7 - 10
   - 11 - 14
   - 15 - 18
   - 19 - 22
   - 23 - 26
   - +27

6. Number of full time clerical employees in office.

   - 1 - 3
   - 4 - 6
   - 7 - 10
   - 11 - 14
   - 15 - 18
   - 19 - 22
   - 23 - 26
   - +27

7. Using the most recent data you have available, please estimate the annual operating budget of your office.

   - $0-24,999
   - $25-49,999
   - $50-74,999
   - $75-99,999
   - $100-149,999
   - $150-250,000
   - +250,000

9. Does the research administration office have control over the distribution of indirect cost funds?

   - Yes  No  Partially  If no or partially, who controls these funds?
10. How are indirect cost funds distributed? Please estimate the percentage distributed to each of the following. (Should total to 100%)

Research administration office
Academic units or departmental research
General university funds
Faculty research funds
Others (specify)

18. With regard to the internal organizational structure of your office, place a check next to any of the following which appear to be applicable.

Office staff are assigned to particular sponsors.
Office staff are assigned to various colleges or units within the university.
Our office has a separate proposal development section.

19. Please sketch a brief diagram of your internal office structure.

20. If you are contemplating any changes in the organizational structure of your office, please discuss these changes briefly.

Questions pertaining to office functions.

8. Please place a check next to any of the following which is a responsibility of your office.

Pre-proposal activities, i.e. - compilation of information, assistance to faculty in the selection of potential sponsors, etc.

Proposal preparation, i.e. - editing, reproduction, preparation, typing, etc.

Active account administration, i.e. - monitoring of accounts, technical reports for sponsor, negotiation of overruns and extensions, etc.

Accounting and fiscal activity, i.e. - cost control procedures, computation of indirect cost rates, fiscal reports for sponsors, etc.
Questions pertaining to effectiveness or accountability data.

4. How do you perceive the research orientation of your faculty and administration?

   Minimal  Below Average  About Average  Fairly Strong  Very Strong

11. Please estimate the percentage of research funds at your institution that come from the following sources.

   Private  
   0-9%  10-19%  20-29%  30-39%  40-49%  50-59%  60-69%  70-79%  80-89%  90-100%

   Federal  
   0-9%  10-19%  20-29%  30-39%  40-49%  50-59%  60-69%  70-79%  80-89%  90-100%

   Internal  
   0-9%  10-19%  20-29%  30-39%  40-49%  50-59%  60-69%  70-79%  80-89%  90-100%

12. For the most recent year data is available, please indicate your total volume of awards. (Total R & D in millions)

   0-1.5  1.6-5.5  5.6-10.5  10.6-15.5  15.6-20.5  20.6-25.5  25.6-30.5

   If greater than 30.5, please indicate approximate amount._____

13. For the most recent year data is available, please indicate the number of proposals which your office processed and submitted for funding.

   0-99  100-199  200-399  400-599  600-799  800-999  1000-1199

   1200-1399  1400-1599  +1600

14. For the most recent year data is available, please estimate the percentage of proposals which were funded.

   29% or less  30-39%  40-49%  50-59%  60-69%  70-79%  80% or more

15. Using the last three years as a base period, please estimate the changes which have occurred in your office by circling the appropriate number.
Questions pertaining to potential measures of effectiveness.

16. In reference to question 15, please rank order from one to four those variables which you feel to be useful criteria in measuring research administration effectiveness. Place a 1 to the left of the most important variable, a 2 beside the next important and so on.

17. If you are using or should plan to use an accountability procedure to judge the effectiveness of your office, what variables would you consider to be vital or crucial to this accountability scheme? Please list at least two.

The face validity of the items included in the questionnaire was evaluated by the staff of the Office of Research Services at Western Michigan University. Their comments and suggestions as well as those of my dissertation committee members were of great help in improving the clarity of individual items. Potential areas of ambiguity were continuously reevaluated and appropriate changes were made.

Items concerning organizational characteristics were mostly of
a forced choice nature. However, questions 19 and 20 were open ended so as to allow for the widest possible range of responses. It was considered desirable to obtain diagrams of organizational structure as well as any indications of potential organizational changes. Data concerning future directions in research administration is of significant value to emerging institutions and to those contemplating change.

The inquiry into the functions of university offices of research administration underwent considerable change as a result of the pilot study data. In the earlier instrument (Appendix A), a long list of possible functions was provided. Although valuable data were gathered, it was difficult to categorize. An examination of that function list revealed that the data clustered into four categories. In the final instrument, function items were partitioned into the four categories of pre-proposal activities, proposal preparation, active account administration and accounting and fiscal activity.

Data concerning performance and effectiveness were elicited by asking the respondents to answer a variety of forced choice items regarding the operations of their respective offices. Particular emphasis was placed upon questions which asked the respondent to indicate the percent of change over the past three years in a wide range of crucial areas. In part, these areas included the number of professional staff, the percent of proposals funded, the number of faculty submitting proposals and the number of different sponsors.

The final category, potential measures of effectiveness, asked
the respondent to rate those items which he felt might be useful criteria in determining the effectiveness of offices of research administration. Also included was an additional open ended question which asked the respondent to list at least two variables which he felt should be included in any research administration accountability procedure. This item was included in the event that the accountability criteria in the forced choice list were not relevant or meaningful to a particular office. Also, the possibility existed that research administrators in the field would generate new accountability and effectiveness measures not included in the questionnaire.

One additional goal in the construction of the final instrument was to keep the estimated time of completion as short as possible. It was felt that most research offices would have the requested data readily at hand and would not have to resort to researching any particular question. After several revisions, it was estimated that most research administrators could complete the instrument in about ten minutes. By maintaining a short completion time, the number of individuals willing to respond to the survey would be increased.

Collection of Data

The 200 university-based offices of research administration in the sample were surveyed by mail on December 13, 1972. Each office was sent a copy of the questionnaire, a letter of explanation and a stamped return envelope. The initial cover letter (Appendix C) indicated the history and intent of the research, the fact that it was being done for
dissertation purposes and that its content had been evaluated by the staff of the Office of Research Services at Western Michigan University. The letter also guaranteed anonymity to individual respondents. This was done in order to maintain the confidentiality of data and also to further increase the rate of return.

The original mailing occurred just prior to the Christmas holidays. The impact of the holidays on the rate of return was an unknown factor, however, it was decided to wait at least five weeks before a second request would be mailed. Individuals on vacation would thus be allowed some time after the first of the year to return the instrument.

On January 19, 1973 a second letter (Appendix C), an additional questionnaire and another pre-stamped envelope were mailed to all offices who had not yet responded to the initial request. The second letter indicated that approximately 60% of those sampled has already returned the questionnaire. The purposes of the research were again explained and an additional plea for cooperation was included. Responses to the second letter raised the usable rate of return to 76 percent.

Treatment of Data

The methods for analyzing the data were selected according to the research questions and the characteristics of the data gathered in the survey. The data from the returned questionnaires were placed on computer cards for processing and analysis. Computer programs were then written to fit the needs of this study. Descriptive statistics
were used to characterize the data gathered in this survey. Data from
questions 17, 19 and 20 were open ended inquiries into accountability
criteria, organizational diagrams and contemplated changes. These data
could not be keypunched and, as such, were analyzed separately in a
descriptive manner.

The discussion of results in Chapter IV will adhere to the fol-
lowing format. Frequency counts and percentages will be reported.

I. Analysis of rate of return
   A. By enrollment size
   B. By 1971-72 research and development allocation
   C. By public vs. private institutions

II. Analysis of all research offices in the final sample.
   A. Organizational structure and characteristics
   B. Functions
   C. Reported performance and effectiveness data
   D. Potential effectiveness criteria

II. Analysis by size and R & D category. The following format
    will be utilized in each of the nine categories.
   A. Organizational structure and characteristics
   B. Functions
   C. Reported performance and effectiveness data
   D. Potential effectiveness criteria
   E. Summary and findings of special interest
Summary

The design and procedures employed in this study have been discussed in this chapter. The sample selection, instrumentation, and analysis of data have also been considered. The data gathered as well as the analyses were descriptive in nature. The following chapter will give a description of the final sample, a presentation of results and a discussion of unusual or especially interesting findings.
CHAPTER IV

REPORT OF THE FINDINGS

The data obtained from the procedures and analyses discussed in Chapter III are presented here. The following information is presented: a description of the final sample, an analysis of the responses of all research offices in the final sample and an analysis of research offices responses in each of the nine enrollment size and research and development categories.

Description of the Final Sample

Two hundred university based offices of research administration were included in the original sample. Of the 200 offices surveyed, 157 responded in time for inclusion in this report. However, three institutions indicated they no longer had a centralized office of research administration and two other returns were improperly or only partially completed. Thus, the effective and usable rate of return was 152 or 76% of the original sample.

Table 4-1 describes the composition of the final sample in terms of enrollment size and research and development level of the institutions. Both frequency counts and percentages (in parentheses) are reported. Of the 152 offices in the final sample, 68 or 46% were from small institutions, 51 or 33% were from medium enrollment institutions, and 33 or 21% were from large enrollment institutions. With regard to research and development allocations, 75 or 49% had
allocations in the $0 - 5.5 million group, 46 or 31% were in the $5.6 -
20.5 million group and 31 or 20% were in the $+20.5 million group.
These percentages compare quite closely with the distribution of insti-
tutions in the original sample (see Table 3-1).

TABLE 4-1

DESCRIPTION OF FINAL SAMPLE COMPOSITION
BY SIZE AND R & D LEVEL

<table>
<thead>
<tr>
<th>ENROLLMENT SIZE</th>
<th>$0-5.5</th>
<th>$5.6-20.5</th>
<th>$+20.5</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10,000</td>
<td>42 (.28)</td>
<td>19 (.13)</td>
<td>7 (.05)</td>
<td>68 (.46)</td>
</tr>
<tr>
<td>10,001 - 20,000</td>
<td>22 (.14)</td>
<td>18 (.12)</td>
<td>11 (.07)</td>
<td>51 (.33)</td>
</tr>
<tr>
<td>+ 20,000</td>
<td>11 (.07)</td>
<td>9 (.06)</td>
<td>13 (.08)</td>
<td>33 (.21)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>75 (.49)</td>
<td>46 (.31)</td>
<td>31 (.20)</td>
<td>152 (100)</td>
</tr>
</tbody>
</table>

With regard to the public vs. private dimension of institutions
in the final sample, 102 or 67% were public and 50 or 33% were pri-

tate or independent. Both public and private institutions were re-

presented in eight of the nine enrollment and R & D categories. All
13 institutions in the large enrollment, large R & D category were

public. Table 4-2 shows the number of public and private institutions

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<table>
<thead>
<tr>
<th>ENROLLMENT</th>
<th>R &amp; D LEVEL (IN MILLIONS)</th>
<th>PUBLIC</th>
<th>PRIVATE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10,000</td>
<td>$0 - 5.5</td>
<td>24</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td>0 - 10,000</td>
<td>$5.6 - 20.5</td>
<td>8</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>0 - 10,000</td>
<td>$+20.5</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>10,001 - 20,000</td>
<td>$0 - 5.5</td>
<td>17</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>10,001 - 20,000</td>
<td>$5.6 - 20.5</td>
<td>16</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>10,001 - 20,000</td>
<td>$+20.5</td>
<td>5</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>+ 20,000</td>
<td>$0 - 5.5</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>+ 20,000</td>
<td>$5.6 - 20.5</td>
<td>8</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>+ 20,000</td>
<td>$+20.5</td>
<td>13</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>102</td>
<td>50</td>
<td>152</td>
</tr>
</tbody>
</table>
in each of the nine categories.

Of the 138 public institutions in the original sample, 102 or 74% responded while 50 of 62, or 81%, of the private institutions responded.

Analysis of Data from
All Offices in Final Sample

Data reported in this section describe the survey responses given by all research offices in the final sample. Findings are discussed in a four category format as follows: organizational structure, functions, reported performance data, and potential criteria for evaluating the effectiveness of a research office.

Organizational Structure

The development of centralized offices for the purpose of contracting for and administering programs of sponsored research has paralleled the growth in dollar allocations for university research. The survey data revealed the fact that research offices are a relatively recent phenomena on most university campuses. Seventy-seven percent of the offices surveyed indicated they had been established since 1961. Table 4-3 shows the distribution in the age of offices included in the survey. The reported data indicates the year in which the various offices were established in their present forms. A few institutions indicated that a rudimentary research administration function did exist prior to the establishment of a formal office. Formal operations are nevertheless a recent phenomenon.
# Table 4-3

**Years in Which Research Offices Were Established**

<table>
<thead>
<tr>
<th>Year Established</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1940-45</td>
<td>5</td>
<td>.03</td>
</tr>
<tr>
<td>1946-50</td>
<td>5</td>
<td>.03</td>
</tr>
<tr>
<td>1951-55</td>
<td>6</td>
<td>.04</td>
</tr>
<tr>
<td>1956-60</td>
<td>18</td>
<td>.13</td>
</tr>
<tr>
<td>1961-65</td>
<td>44</td>
<td>.31</td>
</tr>
<tr>
<td>1966-70</td>
<td>53</td>
<td>.37</td>
</tr>
<tr>
<td>1971-</td>
<td>13</td>
<td>.09</td>
</tr>
<tr>
<td><strong>Totala</strong></td>
<td><strong>144</strong></td>
<td></td>
</tr>
</tbody>
</table>

*aEight respondents left this item blank.*
With regard to administrative control of research offices, they have typically reported to many different categories of university offices. Table 4-4 shows the distribution of to whom the offices are directly responsible. Offices reporting to the president, academic vice president or to a graduate dean accounted for 56% of the total. Only 10% of the institutions surveyed had a vice president for research.

Responses to the question of control over university research policy formulation revealed a pattern of faculty-administration cooperation. Table 4-5 indicates that 74% of the institutions surveyed indicated a shared administrative-faculty approach to decision making in this area. Eighteen percent indicated research policy was formulated primarily by administrators while only three percent indicated primary control by faculty. There were no instances in which faculty had complete control in research policy formulation.

With regard to the number of professional and clerical employees working in research administration offices, the staff sizes are rather small in most institutions. Table 4-6 shows the distribution in size of professional and clerical staffs. Seventy three percent of the offices surveyed had three or less professional staff members while 66% had three or less clerical employees. Only nine percent of the offices surveyed had seven or more professional staff members. Most colleges and universities satisfy their research administration requirements with no more than three professional staff members and a similar number of clerical employees. A further breakdown of staff size in relation to the annual level of research and development allocations
# TABLE 4-4

**ADMINISTRATIVE CONTROL OF RESEARCH OFFICE**

<table>
<thead>
<tr>
<th>TO WHOM OFFICE REPORTS</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>27</td>
<td>.18</td>
</tr>
<tr>
<td>V.P. Research</td>
<td>15</td>
<td>.10</td>
</tr>
<tr>
<td>V.P. Academic</td>
<td>35</td>
<td>.23</td>
</tr>
<tr>
<td>Graduate Dean</td>
<td>22</td>
<td>.15</td>
</tr>
<tr>
<td>Provost</td>
<td>12</td>
<td>.08</td>
</tr>
<tr>
<td>Exec. V.P.</td>
<td>7</td>
<td>.05</td>
</tr>
<tr>
<td>V.P. Finance</td>
<td>11</td>
<td>.07</td>
</tr>
<tr>
<td>V.P. Development</td>
<td>5</td>
<td>.03</td>
</tr>
<tr>
<td>Comptroller</td>
<td>5</td>
<td>.03</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>.08</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>152</strong></td>
<td><strong>100.00</strong></td>
</tr>
<tr>
<td>Control of Research Policy Formulation</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>Administration</td>
<td>8</td>
<td>.05</td>
</tr>
<tr>
<td>Administration Primarily</td>
<td>28</td>
<td>.18</td>
</tr>
<tr>
<td>Shared Control</td>
<td>112</td>
<td>.74</td>
</tr>
<tr>
<td>Faculty Primarily</td>
<td>4</td>
<td>.03</td>
</tr>
<tr>
<td>Faculty</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>152</strong></td>
<td><strong>100.00</strong></td>
</tr>
<tr>
<td>TYPE OF EMPLOYEE</td>
<td>PROFESSIONAL</td>
<td>CLERICAL</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------</td>
<td>----------</td>
</tr>
<tr>
<td>NUMBER</td>
<td>FREQUENCY</td>
<td>PERCENT</td>
</tr>
<tr>
<td>1 - 3</td>
<td>111</td>
<td>.73</td>
</tr>
<tr>
<td>4 - 6</td>
<td>28</td>
<td>.18</td>
</tr>
<tr>
<td>7 - 10</td>
<td>10</td>
<td>.07</td>
</tr>
<tr>
<td>11 - 14</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td>15 - 18</td>
<td>2</td>
<td>.01</td>
</tr>
<tr>
<td>19 - 22</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td>23 - 26</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td>+ 27</td>
<td>1</td>
<td>.01</td>
</tr>
<tr>
<td>TOTAL</td>
<td>152</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table 4-7 reveals a wide range of operating budgets among the offices in the survey. Sixty percent of the offices surveyed had budgets of less than $75,000, 28% ranged from $75,000-149,999 and 12% had budgets in excess of $150,000.

The next item in the general category of organizational structure dealt with control over the distribution of indirect cost funds. Ten of the offices surveyed or seven percent indicated they had complete control over distribution of indirect costs. Forty-three offices or 28% indicated partial control, while 99 offices or 65% indicated they had no control over these funds. Indirect cost reimbursements are typically added to the university's general fund process. In all, 35% of the offices surveyed indicated complete or partial control over distribution of indirect cost funds.

Table 4-8 indicates which university offices or personnel control the distribution of indirect costs in the institutions sampled. It should be noted that several categories might possibly be combined. For instance, a budget director at one institution might have the identical responsibilities of a finance director at another institution. One thing evident from an examination of Table 4-8 is that the control over distribution of these funds varies significantly from one institution to another. Of the 53 institutions where the research office had partial or complete control, six indicated that this was a recent change. Two other research offices indicated that they would
### TABLE 4-7

**ANNUAL OPERATING BUDGETS OF RESEARCH OFFICES**

<table>
<thead>
<tr>
<th>DOLLAR AMOUNT</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 0 - 24,999</td>
<td>19</td>
<td>.13</td>
</tr>
<tr>
<td>$ 25 - 49,999</td>
<td>41</td>
<td>.27</td>
</tr>
<tr>
<td>$ 50 - 74,999</td>
<td>30</td>
<td>.20</td>
</tr>
<tr>
<td>$ 75 - 99,999</td>
<td>23</td>
<td>.15</td>
</tr>
<tr>
<td>$100 - 149,999</td>
<td>20</td>
<td>.13</td>
</tr>
<tr>
<td>$150 - 250,000</td>
<td>11</td>
<td>.07</td>
</tr>
<tr>
<td>$250,000</td>
<td>7</td>
<td>.05</td>
</tr>
<tr>
<td>TOTAL(^a)</td>
<td>151</td>
<td>100.00</td>
</tr>
</tbody>
</table>

\(^a\)One office left this item blank.
## TABLE 4-8
CONTROL OVER DISTRIBUTION OF INDIRECT COST FUNDS

<table>
<thead>
<tr>
<th>CONTROLLING PARTY</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Office in Conjunction with Administration</td>
<td>43</td>
<td>.28</td>
</tr>
<tr>
<td>Central Administration</td>
<td>21</td>
<td>.14</td>
</tr>
<tr>
<td>President</td>
<td>13</td>
<td>.08</td>
</tr>
<tr>
<td>V.P. Finance</td>
<td>12</td>
<td>.08</td>
</tr>
<tr>
<td>Business Office</td>
<td>11</td>
<td>.07</td>
</tr>
<tr>
<td>Research Office or Foundation</td>
<td>10</td>
<td>.07</td>
</tr>
<tr>
<td>University Budget Committee</td>
<td>9</td>
<td>.06</td>
</tr>
<tr>
<td>Comptroller</td>
<td>7</td>
<td>.05</td>
</tr>
<tr>
<td>V.P. Business</td>
<td>4</td>
<td>.03</td>
</tr>
<tr>
<td>Finance Director</td>
<td>4</td>
<td>.03</td>
</tr>
<tr>
<td>Treasurer</td>
<td>3</td>
<td>.02</td>
</tr>
<tr>
<td>V.P. Academic</td>
<td>3</td>
<td>.02</td>
</tr>
<tr>
<td>State Board Higher Education</td>
<td>3</td>
<td>.02</td>
</tr>
<tr>
<td>Provost</td>
<td>2</td>
<td>.01</td>
</tr>
<tr>
<td>Trustees</td>
<td>2</td>
<td>.01</td>
</tr>
<tr>
<td>Budget Director</td>
<td>2</td>
<td>.01</td>
</tr>
<tr>
<td>V.P. Administration</td>
<td>1</td>
<td>.01</td>
</tr>
<tr>
<td>Research Committee</td>
<td>1</td>
<td>.01</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>151</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

*aOne office left this item blank.*
be involved in the distribution of indirect cost funds in the near future.

Responses to the survey also showed some differences in how indirect cost funds are distributed within the universities studied. Table 4-9 describes the number of institutions which allocated various percentages of indirect cost funds into certain budget categories. Among the major recipients of these funds were the research office itself, academic units such as colleges or departments, the general fund and the faculty research fund. Sixty-four institutions or 42% indicated that virtually all indirect cost funds went directly into the general fund. Thirty-nine institutions allocated between 21% and 100% of these funds to various academic units while 30 institutions used between 21% and 100% of these funds for the support of the research office. Thirty institutions reported that they allocated from 11% to 60% of these funds for use in the faculty research fund. These results suggest that although indirect cost reimbursement funds are intended to defray the costs of research, they are also being used to promote additional research programs.

The final item in the survey dealing with organizational characteristics involved the issues of specialization and decentralization of offices of research administration. For the most part, only the larger and more established offices indicated that they had diversified internal functions or had taken steps to decentralize their operations. Twenty-two research offices, or 15% of the sample, indicated that their office staff were assigned to particular sponsors. For
### TABLE 4-9

**RECIPIENTS OF INDIRECT COST FUNDS**

<table>
<thead>
<tr>
<th>RECIPIENT</th>
<th>0-10</th>
<th>11-20</th>
<th>21-30</th>
<th>31-40</th>
<th>41-50</th>
<th>51-60</th>
<th>61-70</th>
<th>71-80</th>
<th>81-90</th>
<th>91-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Offices</td>
<td>107</td>
<td>15</td>
<td>11</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Academic Units</td>
<td>104</td>
<td>9</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>General Fund</td>
<td>26</td>
<td>4</td>
<td>9</td>
<td>11</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>11</td>
<td>64</td>
</tr>
<tr>
<td>Faculty Research Fund</td>
<td>118</td>
<td>13</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Others</td>
<td>127</td>
<td>12</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>
instance, one research administrator would deal solely with foundations while another would deal with the Department of Defense.

Of the 152 research offices surveyed, 30 or 20% indicated that their staff members were assigned to various colleges or units within the university. This type of organization is less centralized and is aimed at better serving the many different facets of the university at the local level. One additional item relating to internal office structure asked each office if they had a separate proposal development section. In all, 20 offices or 13% of the sample indicated they did have a proposal development section. Six other offices indicated they hoped to soon offer increased proposal development services to their faculty.

Functions

The survey design divided potential office functions into four categories. Table 4-10 describes the distribution of offices involved in the various functions. Pre-proposal activities such as compilation of information and dissemination of grant opportunity data were performed by 144 or 95% of the offices surveyed. Proposal preparation activities were performed by 94 or 62% of the offices surveyed. This included such tasks as editing, typing and technical illustrations. Almost an equal number of offices, 97 or 64%, engage in active account administration. This includes such things as the monitoring of accounts and the negotiation of overruns and extensions. The final category of functions involved accounting and fiscal activity.
Only 49 offices or 32% of those surveyed reported responsibility in this area. Responsibilities involving cost control procedures, fiscal reports for sponsors and the computation of indirect cost rates were more typically performed by individuals outside of the research office.

TABLE 4-10

DESCRIPTION OF OFFICE FUNCTIONS

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-proposal Activities</td>
<td>144</td>
<td>.95</td>
</tr>
<tr>
<td>Proposal Preparation</td>
<td>94</td>
<td>.62</td>
</tr>
<tr>
<td>Active Account Administration</td>
<td>79</td>
<td>.64</td>
</tr>
<tr>
<td>Accounting and Fiscal Activity</td>
<td>49</td>
<td>.32</td>
</tr>
</tbody>
</table>

Reported Performance and Effectiveness Data

The initial question in this area asked the respondent to rate his institution in terms of his perceptions of the research orientation of the faculty and administration. Table 4-11 describes the responses to this question. Only four institutions or three percent of those surveyed rated themselves as having a minimal research orientation. At the other extreme, 26 institutions or 17% described themselves as having a strong research orientation. Many institutions which rated themselves as minimal or below average were teaching
oriented institutions such as state teachers' colleges. They evidenced relatively low levels of annual allocations for research and development.

TABLE 4-11

PERCEIVED RESEARCH ORIENTATION OF FACULTY AND ADMINISTRATION

<table>
<thead>
<tr>
<th>STRENGTH OF ORIENTATION</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal</td>
<td>4</td>
<td>.03</td>
</tr>
<tr>
<td>Below Average</td>
<td>32</td>
<td>.21</td>
</tr>
<tr>
<td>Average</td>
<td>61</td>
<td>.40</td>
</tr>
<tr>
<td>Strong</td>
<td>28</td>
<td>.19</td>
</tr>
<tr>
<td>Very Strong</td>
<td>26</td>
<td>.17</td>
</tr>
<tr>
<td>TOTAL(^a)</td>
<td>151</td>
<td>100.00</td>
</tr>
</tbody>
</table>

\(^a\)One respondent left this item blank.

Data were also gathered regarding the sources of research funds. The federal government has long been the largest contributor to university based research, however, many institutions are now turning to state and private sources for some of their research funds. Table 4-12 describes the number of institutions receiving various percentages of their research funds from private, federal and internal or state sources. One hundred thirty-five institutions or 89% of those
### TABLE 4-12

**SOURCES OF RESEARCH FUNDS**

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>0-9</th>
<th>10-19</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>80-89</th>
<th>90-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>73</td>
<td>53</td>
<td>19</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Federal</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>8</td>
<td>18</td>
<td>37</td>
<td>45</td>
<td>27</td>
</tr>
<tr>
<td>Internal</td>
<td>82</td>
<td>38</td>
<td>14</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
sampled still receive at least 50% of their research funds from the federal government. Seventy-seven institutions or 50% of those sampled received from 10 to 50% of their funds from private sources. Private institutions tended to receive a greater percentage of their funds from private sources than did public institutions. Sixty-two offices or 40% of those sampled reported that from 10 to 50% of their funds are generated internally. The distribution of funding sources will also be examined later in relation to the enrollment size and level of research funds of the various institutional categories under study.

Individual offices were also asked to report the total volume of awards the institution received during the most recent year that information was available. Table 4-13 describes the distribution of funds received. Over 49% of the offices sampled reported total annual research and development awards of less than $5.5 million. Thirty-one offices or 21% reported awards in excess of $20.6 million. Sixteen institutions or 11% of the sample reported annual awards of $30.5 or more.

The research offices surveyed also reported wide variations in the total number of proposals they annually submit for funding. Table 4-14 examines the number of proposals submitted for funding by the research offices included in the survey. One hundred five institutions or 69% of the sample reported that they annually submitted 400 or less proposals. Only 11 offices or seven percent reported the submission of 1,000 or more proposals. Although the majority of institutions generate a volume of proposals numbering in the hundreds, many survey
**TABLE 4-13**

**ANNUAL VOLUME OF AWARDS (IN MILLIONS)**

<table>
<thead>
<tr>
<th>AMOUNT</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - 1.5</td>
<td>38</td>
<td>.25</td>
</tr>
<tr>
<td>$1.6 - 5.5</td>
<td>37</td>
<td>.24</td>
</tr>
<tr>
<td>$5.6 - 10.5</td>
<td>22</td>
<td>.14</td>
</tr>
<tr>
<td>$10.6 - 15.5</td>
<td>15</td>
<td>.10</td>
</tr>
<tr>
<td>$15.6 - 20.5</td>
<td>9</td>
<td>.06</td>
</tr>
<tr>
<td>$20.6 - 25.5</td>
<td>10</td>
<td>.07</td>
</tr>
<tr>
<td>$25.6 - 30.5</td>
<td>5</td>
<td>.03</td>
</tr>
<tr>
<td>+ $30.5</td>
<td>16</td>
<td>.11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>152</td>
<td>100.00</td>
</tr>
</tbody>
</table>
TABLE 4-14

ANNUAL NUMBER OF PROPOSALS
SUBMITTED FOR FUNDING

<table>
<thead>
<tr>
<th>NUMBER OF PROPOSALS</th>
<th>NUMBER OF OFFICES</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 99</td>
<td>39</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>100 - 199</td>
<td>33</td>
<td>.22</td>
<td></td>
</tr>
<tr>
<td>200 - 399</td>
<td>33</td>
<td>.22</td>
<td></td>
</tr>
<tr>
<td>400 - 599</td>
<td>15</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>600 - 799</td>
<td>10</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>800 - 999</td>
<td>11</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>1,000 - 1,199</td>
<td>3</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>1,200 - 1,399</td>
<td>3</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>1,400 - 1,599</td>
<td>3</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>+ 1,600</td>
<td>2</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>152</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>
respondents indicated that they were trying to increase this number in the hopes of gaining additional research and development funds.

The last survey question relating specifically to proposal activity asked the respondents about the percent of proposals approved and funded at their respective institutions. Table 4-15 describes the percentage range of proposals approved and funded at the institutions studied. Again, a wide range of responses characterized the sample. Some institutions reported less than 29% approval while four reported an approval rate in excess of 80%. Fifty-four percent were below the 50% approval rate and 46% were above the 50% point. Many factors have contributed to this varying success rate and only some will directly rate to the performance of the research office staff. However, it is obvious that some institutions have a much higher rate of success in getting proposals funded than do other institutions. Some of the possible factors in this issue will be discussed in the final chapter.

The last question dealing with reported performance data asked the respondents to indicate the percentage of change during the last three years in a variety of variables concerning their office. Table 4-16 describes these changes. The number and percent of offices reporting specific changes are given in the table. Far more offices have experienced growth than decline during the past three years. Every office variable considered in this question showed more growth than decline. Forty-two percent of the offices surveyed reported a 10-29% increase in the total volume of awards. Twenty-eight offices or 19% reported a 30% or greater increase in annual research and development funds.
TABLE 4-15

PERCENT OF PROPOSALS FUNDED

<table>
<thead>
<tr>
<th>NUMBER OF OFFICES</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 29%</td>
<td>19</td>
<td>.13</td>
</tr>
<tr>
<td>30 - 39%</td>
<td>29</td>
<td>.20</td>
</tr>
<tr>
<td>40 - 49%</td>
<td>32</td>
<td>.21</td>
</tr>
<tr>
<td>50 - 59%</td>
<td>31</td>
<td>.21</td>
</tr>
<tr>
<td>60 - 69%</td>
<td>23</td>
<td>.15</td>
</tr>
<tr>
<td>70 - 79%</td>
<td>10</td>
<td>.07</td>
</tr>
<tr>
<td>&gt; 80%</td>
<td>4</td>
<td>.03</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>148</strong></td>
<td>100.00</td>
</tr>
</tbody>
</table>

*Four respondents left this item blank.*
### TABLE 4-16

**PERCENT OF CHANGE IN VARIOUS OFFICE STATISTICS OVER PAST THREE YEARS**

<table>
<thead>
<tr>
<th></th>
<th>-30% or more</th>
<th>-29-10%</th>
<th>±9%</th>
<th>+10-29%</th>
<th>+30% or more</th>
<th>did not respond</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Professional staff</strong></td>
<td>5</td>
<td>4</td>
<td>101</td>
<td>25</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.66)</td>
<td>(.16)</td>
<td>(.09)</td>
<td>(.03)</td>
</tr>
<tr>
<td><strong>Number of Clerical Staff</strong></td>
<td>4</td>
<td>5</td>
<td>102</td>
<td>23</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>(.03)</td>
<td>(.03)</td>
<td>(.67)</td>
<td>(.15)</td>
<td>(.09)</td>
<td>(.03)</td>
</tr>
<tr>
<td><strong>Percent of Proposals Funded</strong></td>
<td>1</td>
<td>18</td>
<td>75</td>
<td>40</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(.01)</td>
<td>(.12)</td>
<td>(.49)</td>
<td>(.26)</td>
<td>(.08)</td>
<td>(.04)</td>
</tr>
<tr>
<td><strong>Annual Volume of R &amp; D Awards</strong></td>
<td>1</td>
<td>15</td>
<td>40</td>
<td>64</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(.01)</td>
<td>(.10)</td>
<td>(.26)</td>
<td>(.42)</td>
<td>(.19)</td>
<td>(.03)</td>
</tr>
<tr>
<td><strong>Number of Different Sponsors</strong></td>
<td>0</td>
<td>3</td>
<td>79</td>
<td>53</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(.00)</td>
<td>(.02)</td>
<td>(.52)</td>
<td>(.35)</td>
<td>(.09)</td>
<td>(.03)</td>
</tr>
<tr>
<td><strong>Number of Faculty Submitting Proposals</strong></td>
<td>0</td>
<td>5</td>
<td>46</td>
<td>79</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>(.00)</td>
<td>(.03)</td>
<td>(.30)</td>
<td>(.52)</td>
<td>(.11)</td>
<td>(.03)</td>
</tr>
<tr>
<td><strong>Operating Budget of Office</strong></td>
<td>0</td>
<td>8</td>
<td>82</td>
<td>47</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(.00)</td>
<td>(.05)</td>
<td>(.54)</td>
<td>(.31)</td>
<td>(.06)</td>
<td>(.04)</td>
</tr>
</tbody>
</table>
Large increases were also reported in the number of professional staff, the number of sponsors and in the number of faculty submitting proposals. Some institutions did experience declines. However, they were relatively few in number. Eighteen research offices or 12% of the sample reported a 10-29% decrease in the percent of proposals funded. The overall picture, however, is one of growth in the area of sponsored programs and their administration.

Potential Measures of Research Administration Effectiveness

Data concerning potential measures of effectiveness were elicited in two ways. Respondents were first asked to rank order a given list of variables in terms of their usefulness in measuring research administration effectiveness. In order to allow the widest possible range of responses an additional open-ended question asked research administrators to list accountability criteria they felt might be of use in evaluating their own offices.

In terms of the listed variables, respondents ranked the number of faculty submitting proposals as the most important item. Others in decreasing order were the percent of proposals funded, the total annual volume of research and development funds and the number of different sponsors.

The open-ended data yielded a long list of potential effectiveness criteria. Table 4-17 lists the reported criteria and the frequency with which they were mentioned. The criteria items are listed as they were received. Most are objective and quantifiable, however,
### TABLE 4-17

**POTENTIAL CRITERIA FOR EVALUATING THE EFFECTIVENESS OF RESEARCH ADMINISTRATION**

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Percent of proposals funded.</td>
<td>36</td>
</tr>
<tr>
<td>2. Number of faculty submitting proposals.</td>
<td>34</td>
</tr>
<tr>
<td>3. Annual volume of awards.</td>
<td>33</td>
</tr>
<tr>
<td>4. Number of proposals submitted for funding.</td>
<td>20</td>
</tr>
<tr>
<td>5. Rapport with faculty.</td>
<td>18</td>
</tr>
<tr>
<td>6. Number of different sponsors.</td>
<td>10</td>
</tr>
<tr>
<td>7. Rapport with sponsoring agencies.</td>
<td>7</td>
</tr>
<tr>
<td>8. Operating budget of office.</td>
<td>4</td>
</tr>
<tr>
<td>9. Number of sponsor contacts made on behalf of faculty.</td>
<td>4</td>
</tr>
<tr>
<td>10. Dissemination of information to faculty.</td>
<td>4</td>
</tr>
<tr>
<td>11. Ratio of professional staff to proposals funded.</td>
<td>4</td>
</tr>
<tr>
<td>12. Technical reports submitted on time.</td>
<td>3</td>
</tr>
<tr>
<td>13. Quality of proposals.</td>
<td>3</td>
</tr>
<tr>
<td>14. Awards as a ratio of operating budget of office.</td>
<td>3</td>
</tr>
<tr>
<td>15. Ability to support faculty/institutional interests.</td>
<td>3</td>
</tr>
<tr>
<td>16. Percent of audit disallowances vs. expenditures.</td>
<td>2</td>
</tr>
<tr>
<td>17. Percent of overexpenditures vs. total budget.</td>
<td>2</td>
</tr>
<tr>
<td>18. Number of office publications.</td>
<td>2</td>
</tr>
</tbody>
</table>
**TABLE 4-17**  
*(continued)*

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. Percent of faculty with awards.</td>
<td>2</td>
</tr>
<tr>
<td>20. Overhead rate negotiation disallowance.</td>
<td>2</td>
</tr>
<tr>
<td>21. Number of requests by granting agencies for proposals.</td>
<td>2</td>
</tr>
<tr>
<td>22. Dollar volume of indirect cost recovery.</td>
<td>1</td>
</tr>
<tr>
<td>23. Number of proposals funded.</td>
<td>1</td>
</tr>
<tr>
<td>24. Number and amounts of project cost overruns</td>
<td>1</td>
</tr>
<tr>
<td>25. Achievement of pre-set goals, i.e., dollars, rate of growth, etc.</td>
<td>1</td>
</tr>
<tr>
<td>26. Number of proposals processed as a ratio of operating budget of office.</td>
<td>1</td>
</tr>
<tr>
<td>27. Ratio of dollars received from sponsors to dollars requested.</td>
<td>1</td>
</tr>
<tr>
<td>28. Effective unobtrusive administrative support procedures.</td>
<td>1</td>
</tr>
<tr>
<td>29. Results vs. investment of funds.</td>
<td>1</td>
</tr>
<tr>
<td>30. Satisfactory audits.</td>
<td>1</td>
</tr>
<tr>
<td>31. Percent of faculty submitting proposals.</td>
<td>1</td>
</tr>
<tr>
<td>32. Top administrator's confidence.</td>
<td>1</td>
</tr>
<tr>
<td>33. Quality of reports to sponsors.</td>
<td>1</td>
</tr>
<tr>
<td>34. Avoidance of fiscal or legal errors.</td>
<td>1</td>
</tr>
<tr>
<td>35. Proposal generation in new areas.</td>
<td>1</td>
</tr>
</tbody>
</table>
items such as rapport with faculty or sponsors are not objective performance criteria. They are not quantifiable in present form, but are rather presented as items which were important to practicing research administrators. Their usefulness will be dependent on the ability of the individual research administrator to adapt them to his own unique situation.

The three most commonly mentioned effectiveness criteria were the percent of proposals funded, the number of faculty submitting proposals and the annual volume of awards. Of particular interest were two cost-benefit ratios. These were the total volume of awards as a ratio of the operating budget of the office and the number of proposals processed as a ratio of the operating budget of the office. These ratios would be probably applicable to both large and small research offices and should be considered in any ongoing process of internal evaluation.

Before moving on to a discussion of data pertaining to research offices in various categories of research and development funding, and institutional enrollment size, it should be noted that the group as a whole showed great diversity on most variables. Patterns of organization and performance will be more readily discernable in the discussion of the nine research office categories that follows.

Research Offices at Institutions with 0-10,000 Enrollment and $0-5.5 Million Research and Development Allocations

There were a total of 42 research offices in the final sample that met the criteria of small enrollment and small research and development
allocations. Twenty-four were public institutions and 18 were private. This group contained many recently established state colleges and universities and some small private colleges.

Organizational structure

Research administration is a relatively new function at most of the institutions in this category. Thirty-eight of these offices or 90% have been established since 1961. Twenty-three of these offices report to either the president or academic vice president. This pattern of control accounts for 55% of the offices in this category. The remainder report to virtually every other university office mentioned in the questionnaire.

With regard to the formulation of research policy, 34 of the 42 offices indicated it was a shared faculty-administration responsibility. Only four offices or 10% indicated that the administration had sole or primary responsibility in this area. Most research offices in this category are relatively small operations. Thirty-eight offices or 90% indicated they had one to three professional staff members. Organizational diagrams revealed that over 75% of these offices had only one professional staff member. The same proportions were generally also true of clerical employees. Thirty-five offices or 83% reported they had one to three clerical employees.

Since the staff sizes are generally small, the office budgets are correspondingly rather low. Twelve offices or 29% reported annual office budgets of under $25,000 while 17 offices reported budgets of
$25,000 - $49,999. Ten offices or 24% were in the $50,000 - $99,999 range.

In responding to the issue of control over the distribution of indirect cost funds, one office indicated complete control, 17 partial control and 24 no control. Table 4-18 describes the distribution of university offices controlling indirect costs within the institutions in this group. Again, many variations occur in the structure of control over these funds. The percentage of research offices participating in the decision making process in this group compares favorably to the percent involved in the sample as a whole. With regard to the recipients of indirect cost funds, a very high number of the research offices in this group are dependent upon these funds to support their own operation. Sixteen offices received from 11-100% of these funds to support their own operation. Only eleven research offices reported that any of these funds were given directly to academic units. Seventeen of these institutions put indirect cost reimbursement funds directly into the general fund and eight institutions placed 31% or more of these funds into an internal faculty research fund.

Internal diversification or specialization was rare among these offices. Their small staff size does not lend itself to specialization or decentralization. Three offices reported assigning office staff to particular sponsors. Three offices also indicated their staff was assigned to various colleges or university units and six offices indicated the existence of a proposal development section.
### Table 4-18

**CONTROL OVER DISTRIBUTION OF INDIRECT COST**

<table>
<thead>
<tr>
<th>Controlling Party</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Office with Administration</td>
<td>16</td>
<td>.38</td>
</tr>
<tr>
<td>University Budget Committee</td>
<td>1</td>
<td>.02</td>
</tr>
<tr>
<td>President</td>
<td>3</td>
<td>.07</td>
</tr>
<tr>
<td>Business Office</td>
<td>5</td>
<td>.12</td>
</tr>
<tr>
<td>Central Administration</td>
<td>3</td>
<td>.07</td>
</tr>
<tr>
<td>Research Office</td>
<td>1</td>
<td>.02</td>
</tr>
<tr>
<td>V.P. Finance</td>
<td>4</td>
<td>.10</td>
</tr>
<tr>
<td>V.P. Business</td>
<td>1</td>
<td>.02</td>
</tr>
<tr>
<td>Finance Director</td>
<td>2</td>
<td>.05</td>
</tr>
<tr>
<td>Comptroller</td>
<td>4</td>
<td>.10</td>
</tr>
<tr>
<td>V.P. Academic</td>
<td>1</td>
<td>.02</td>
</tr>
<tr>
<td>State</td>
<td>1</td>
<td>.02</td>
</tr>
</tbody>
</table>
Functions

Pre-proposal activities were performed by 39 of the 42 offices in this category. Thirty-five offices engaged in proposal preparation services while only 22 had responsibilities in the area of active account administration. Only 16 offices engaged in accounting and fiscal activities.

Reported performance and effectiveness data

Because this group contains many small private colleges and emerging state institutions, the perceived research orientation of faculty and administration were typically low. Four offices rated the research orientation as minimal, 15 as below average, 17 as average and six as strong or very strong. An examination of data pertaining to total research and development allocations in each of these institutions tends to confirm the accuracy of these ratings.

Data on funding sources revealed that 27 institutions received 70% or more of their funds from federal agencies. Eighteen offices reported that from 10-39% of their research funds were generated internally. Only 22 offices reported the receipt of funds from private sources. In most cases this amounted to 29% or less of total revenues.

By definition all institutions in this category had a total annual volume of awards under $5.5 million. Twenty five of the research offices reported awards of under $1.5 million. The total annual number of proposals submitted for funding was under 299 a year for all except one office. Twenty seven offices submitted less than 99 yearly. Despite
the consistencies in level of research and development funding and in the number of proposal submissions, there was considerable variation among institutions as to the percent of proposals funded. Table 4-19 shows the range of the percent of proposal approvals among the institutions in this category. The data indicates that some institutions are much more successful than others in getting their proposals funded. Additional research will be required to isolate the various factors involved in this differential ability to get proposals funded. The type of funds being sought and even the way in which the percentage of approval is calculated may both have a bearing on this outcome measure.

**TABLE 4-19**

PERCENT OF PROPOSALS FUNDED AMONG SMALL INSTITUTIONS WITH SMALL R & D

<table>
<thead>
<tr>
<th>PERCENT FUNDED</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 29%</td>
<td>7</td>
<td>.17</td>
</tr>
<tr>
<td>30 - 39%</td>
<td>9</td>
<td>.21</td>
</tr>
<tr>
<td>40 - 49%</td>
<td>7</td>
<td>.17</td>
</tr>
<tr>
<td>50 - 59%</td>
<td>10</td>
<td>.23</td>
</tr>
<tr>
<td>60 - 69%</td>
<td>5</td>
<td>.12</td>
</tr>
<tr>
<td>70 - 79%</td>
<td>4</td>
<td>.10</td>
</tr>
<tr>
<td>&gt; 80%</td>
<td>0</td>
<td>.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>42</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>
As in the sample as a whole, the research offices in this group reported far more increases than declines on all of the relevant variables. The numbers of professional and clerical staff had increased over the past three years and 17 offices reported a 10% or greater increase in the percent of proposals funded. The total volume of awards increased 10-29% in 11 institutions and 30% or more in 13 institutions. Only five offices reported a decline in the total volume of awards. The total number of sponsors, the number of faculty submitting proposals and the office budget all showed strong increases.

Potential measures of research administration effectiveness

Research administrators in this group listed the number of faculty submitting proposals as the best index of their effectiveness. Other important measures were the percent of proposals funded and the total volume of awards. Responses to open-ended questions regarding effectiveness yielded similar answers. In addition to looking at the number of faculty submitting, several respondents also stressed the importance of rapport with faculty, administration and potential sponsors.

Respondents in this category resisted the concept of effectiveness measures for research administrators more than respondents in any other group. Eleven did not respond to the question and several others commented that their responsibilities could not be evaluated by a "numbers game."
Summary and findings of special interest

Research offices in the category of small enrollment institutions with low research and development allocations are generally small operations. Typically there is one professional staff member and two or three clerical employees. The office most often reports to the president or academic vice president. Most offices submit fewer than 99 proposals a year. However, great differences exist among institutions as to the percent of these proposals that are funded.

Research Offices at Institutions with 0-10,000 Enrollment and $5.6-20.5 Million Research and Development Allocations

There were 19 offices among this group of institutions who responded to the survey. Included were eight public and 11 private institutions. Many of these institutions are prestigious engineering and science schools with excellent academic reputations.

Organizational structure

The research offices in this category are also relatively recent in their origins. None were in existence prior to 1956 and nine of them have been established since 1966. The pattern of to whom these offices are responsible is extremely varied. Four offices report directly to the president, one to a vice-president for research, four to a vice-president for finance and three to the academic vice-president. Research policy formulation is either shared (12 institutions) or is
controlled completely or in part by the administration (seven institutions).

The professional and clerical staff of these offices tended to be somewhat larger than that of those offices in the low research and development allocation group. Fifteen offices reported having one - three professional staff members, three offices had four - six while one office had seven - ten. Budgets were correspondingly larger. Nine had budgets of $25,000 - 49,999 and nine others had budgets of $50,000 - 149,999. One research office listed its annual budget as being in excess of $250,000.

Only one research office in this group indicated complete control over the distribution of indirect cost reimbursement funds, five offices indicated partial control and 13 reported no control or involvement. Control of these funds varied greatly among the institutions surveyed. No dominant pattern was discernible. Nine institutions placed all the indirect cost reimbursement funds into a general university fund. One research office in the group received all funds and directed their allocation. Academic units were the next major recipient of these funds and only two institutions allocated any of these funds for the faculty research fund.

Few offices in this group reported any degree of decentralization or internal specialization. Only two offices assigned staff members to particular sponsors, three assigned staff members to colleges or units within the university and one had a proposal development section. The finding of little internal diversification is, in part,
due to strong emphasis on the federal government as the only source of research funds.

Functions

All but one of the research offices in this category engaged in pre-proposal activities. Ten of the nineteen offices provided proposal preparation services, 14 engaged in active account administration and nine had responsibilities in the area of accounting and fiscal activity. The functions performed by these research offices typify those functions performed by other offices in the various categories under study. A somewhat lower percentage of offices involved in proposal preparation activities is the only noteworthy difference.

Reported performance and effectiveness data

Respondents from these institutions rated the research orientation of their faculty and administration as being relatively high. Ten were rated as strong or very strong, seven as average and two as below average. As a group, these offices are heavily dependent upon the federal government as the source of most of their research funds. Fourteen institutions received 80% or more of their research and development funds from the federal government. Only eight offices reported the receipt of any private funds for research and only three reported having any internal research funds. Further development of private funding sources is a matter many of these institutions may want to consider.

The range of research and development funds acquired by institutions
in this group was $5.6 - 20.5 million. Within that range 11 institutions received $5.6 - 10.5 million, six received $10.6 - 15.5 million and two received $15.6 - 20.5 million. The total number of proposals submitted each year by these offices varied from fewer than 99 to more than 500. Sixteen of the offices reported proposal submissions of from 100 - 399.

Again, great differences in the percent of proposals funded were reported by the research offices in this category. Table 4-20 describes the distribution of percent of proposals funded among these institutions. An additional examination of data revealed that the relationship between the total volume of awards and the percent of proposals funded is not very helpful in explaining the great variations in percent of proposals funded. Some institutions at the lower end of the $5.6 - 20.5 million range had the greatest percentage of proposals approved.

Data concerning changes in office characteristics over the past three years revealed that staff sizes have remained relatively stable. The percent of proposals funded has increased only slightly, however, strong increases have occurred in the total annual research and development funds acquired and in the number of different sponsors and number of faculty submitting proposals.

Potential measures of research administration effectiveness

The number of faculty submitting proposals was considered the most sensitive indicator of effectiveness in this group. The number of different sponsors and the percent of proposals funded were also ranked as
<table>
<thead>
<tr>
<th>PERCENT OF PROPOSALS FUNDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREQUENCY</td>
</tr>
<tr>
<td>&lt; 29%</td>
</tr>
<tr>
<td>30 - 39%</td>
</tr>
<tr>
<td>40 - 49%</td>
</tr>
<tr>
<td>50 - 59%</td>
</tr>
<tr>
<td>60 - 69%</td>
</tr>
<tr>
<td>70 - 79%</td>
</tr>
<tr>
<td>&gt; 80%</td>
</tr>
<tr>
<td>TOTAL</td>
</tr>
</tbody>
</table>

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high in importance. In open-ended responses the most frequently men-
tioned criteria were rapport with faculty and sponsoring agencies, the
number of sponsor contacts made on behalf of the faculty and the effec-
tive dissemination of information to faculty.

Summary and findings of special interest

Research offices in this category vary greatly in size, pattern of
organizational control and in the percent of proposals funded. They
tend to rely heavily upon the federal government for research funds
and less than half report any significant awards from private sources.
A few offices have specialized internal functions wherein office staff
members are assigned to particular sponsors. Strong clerical and tech-
nical staffs are present in a number of these offices.

Research Offices at Institutions with
0-10,000 Enrollment and Research
and Development Allocations in Excess
of $20.6 Million

This group of research offices constituted the smallest category
in the study. Seven offices responded to the survey. Included were
five private institutions and two public institutions. This group con-
tains some of the most exclusive and prestigious institutions in the
United States.

Organizational structure

Of the seven offices in this group, two were established from
1946-50, two from 1956-60, one from 1961-65 and two from 1966-70. In
terms of administrative control, one research office reports to a pro-
vost, two to a vice-president for development, one to a comptroller
and three directly to the president. Research policy formulation is
a shared administration-faculty responsibility in six of the seven re-
sponding institutions.

The size of the professional staff ranged from one - three in four
offices, four - six in one office and seven - ten in two offices. The
number of clerical employees closely paralleled the number of profes-
sional staff. Operating budgets were $50,000 - 74,999 in two offices,
$75,000 - 99,999 in one office, $100,000 - 149,999 in two offices and
$150,000 - 250,000 in two offices.

Only one of the seven offices reported being involved in decisions
regarding the distribution of indirect cost funds. Control over distrib-
ution of these funds varied greatly among the institutions. In three
institutions these decisions were made by either the vice-president
for finance or the treasurer. Five of the institutions placed all in-
direct cost reimbursement funds into the general fund. One institution
rebated all these funds back to academic units. In no case did the
research office receive any of these funds for their own budget.

Although none of the offices in this group had a separate proposal
development section, four offices assigned staff members to the various
colleges or units within the university. One office assigned staff mem-
ers to individual sponsors. The clear trend in this group is decentral-
ization wherein staff members are assigned throughout the institution.
Functions

The usual range of functions were performed by the seven offices in this group. Six offices engaged in pre-proposal activities, five in active account administration and two in accounting and fiscal activities. Only three offered proposal preparation services.

Reported performance and effectiveness data

The research orientation of these institutions was rated average by one respondent, strong by three others and very strong by the other three in the group. Only one institution reported almost completely dependency upon the federal government for research funds. Five received from 10-29% of their awards from private sources and four reported having significant income from internal sources.

Three offices reported a total annual volume of awards of $20.5 - 25.5 million, two reported $25.6 - 30.5 million and two other indicated awards in excess of $30.5 million. Proposal submissions were consistently high among institutions in this group. Two were in the 400-599 range, three in the 800-999 range, one in the 1,000-1,199 range and one in the 1,200-1,399 range.

Despite the similarity of these institutions in terms of the total annual volume of awards, there was, again a great deal of variation in the percent of proposals funded. The range of percent of approval varied from 30-39% to over 80%.

In terms of changes in office statistics over the past three years,
the number of employees and office budgets have remained fairly con-
stant. Little change has also been observed in the number of spon-
sors or the total volume of awards. Three offices reported a 10-29%
decline in the percent of proposals funded. The only strong increase
occurred in the number of faculty submitting proposals. It appears
that these institutions have maintained high levels of research and
development awards by submitting high numbers of proposals and by in-
volving more and more faculty in the process.

Potential measures of research administration effectiveness

Among the potential effectiveness measures mentioned by this group
were the number and percent of proposals funded, the number of differ-
et sponsors, top administration's confidence, rapport with faculty
and the number of services provided.

Summary and findings of special interest

The research offices in this group process a high number of pro-
posals. They have emphasized involving additional faculty in the pro-
posal submission process. Research policy formulation is shared by
faculty and administration. Organizationally there is a tendency to-
ward partial decentralization. Staff members in several offices were
assigned to various colleges or units within the university. Though
the percent of proposals funded has decreased in several institutions,
this appears to have been offset by an increase in the total number of
proposals submitted and by higher numbers of faculty attempting to
get awards.

Research Offices at Institutions with
10,001 - 20,000 Enrollment and Research
and Development Allocations of $0 - 5.5 Million

A total of 22 research offices in this category responded to the
survey. Of these, 17 were public institutions and five were private
institutions. Included are many newer state universities which are
part of state systems of higher education and a number of private urban
universities.

Organizational structures

Seventeen of the 22 offices in this category were established after
1961. The most common patterns of organizational control in this group
find the research office being responsible to either a graduate dean
or to the academic vice-president. This occurred in over 54% of the
cases. Research policy formulation was shared in 17 institutions and
handled primarily by the administration in five other institutions.
Professional and clerical staff sizes remained almost exclusively in
the one - three range. Operating budgets ranged from under $25,000
to a maximum of $74,999.

Eight research offices indicated they had partial control over the
distribution of indirect costs. Indirect cost reimbursement funds were
distributed widely throughout various facets of the institutions in
this group. Only eight universities placed these monies in their gen-
eral fund. Seven rebated from 11-39% back to the research office and
ten others gave 10-49% of these funds directly to various academic units. The faculty research fund also received some of these funds in five institutions.

Internally, little decentralization or specialization was present in these offices. Only one assigned staff to sponsors. Three offices assigned staff to units within the university and one had a proposal development section.

Functions

All the responding offices in this category indicated that they were involved in pre-proposal activities. Fourteen offered proposal preparation services, 14 were involved in active account administration and four indicated responsibilities for accounting and fiscal activities.

Reported performance and effectiveness data

Nine respondents rated the research orientation of their faculty and administration as below average. Ten respondents rated their institution as average and two as being strong. The sources of funding were extremely varied among these institutions. Table 4-21 examines the sources of research funds in these institutions. Fourteen institutions received 79% or less of their research funds from the federal government. Nine institutions acquired 10-19% of their awards from private sources. Overall, this group appears to have successfully diversified their funding sources.
TABLE 4-21

SOURCES OF RESEARCH FUNDS
MEDIUM INSTITUTIONS WITH LOW R & D

<table>
<thead>
<tr>
<th>PERCENT FUNDS RECEIVED</th>
<th>PRIVATE</th>
<th>SOURCE FEDERAL</th>
<th>INTERNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0- 9%</td>
<td>9</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>10-19%</td>
<td>9</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>20-29%</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>30-39%</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>40-49%</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>50-59%</td>
<td>0</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>60-69%</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>70-79%</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>80-89%</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>90-100%</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

In terms of the total volume of awards, 11 institutions received $0 - 1.5 million and 11 received $1.6 - 5.5 million. The annual number of proposal submissions was 0-99 in eight universities, 100-199 in nine institutions and 200-399 in five others. The percent of proposals funded again varied greatly, however, 17 of the offices reported the funding rate as being under 49%.

Staff size has remained constant during the past three years. The
percent of proposals funded increased in seven institutions, remained the same in nine and decreased in five institutions. These colleges and universities reported mixed results in terms of the total volume of awards. Five reported 10-29% decreases, four remained unchanged, eight experienced 10-29% increases and four increases of 30% or more. The greatest increases occurred in the number of faculty submitting proposals. These offices appear to have made strong efforts in encouraging faculty to submit proposals and in developing their sources of funding.

Potential measures of research administration effectiveness

Respondents ranked changes in number of faculty submitting proposals as the best indicator of effectiveness. Open-ended responses ranked the annual volume of awards and the percent of proposals funded as being important effectiveness criteria. Others included rapport with faculty, the number of office publications and the number of sponsors.

Summary and findings of special interest

These research offices are relatively recent in origin. Their office sizes are small, but heavily service oriented. Many are involved in decisions regarding indirect cost reimbursements. Efforts have been made to increase the number of sponsors and the number of faculty submitting proposals. The percent of proposals funded tended to be low, but still varied greatly among the institutions.
Research Offices at Institutions with
10,001 - 20,000 Enrollment and Research and
Development Allocations of $5.6 - 20.5 Million

Eighteen research offices in this group responded to the survey. Sixteen were public institutions and two were private institutions. This is a heterogeneous group of state and private universities. Many are located in the south or far west. Most are considered to be average to above average in academic standing.

Organizational structure

Fifteen of these offices were established after 1961. Three others were somewhat older with one dating back to the 1946-1950 period. Four of the offices report directly to the president, three to the vice-president for research, four to the academic vice-president and four to a graduate dean. Research policy formulation is a shared responsibility of faculty and administration in 13 of the institutions. In four institutions this was primarily an administration responsibility and in one institution it was completely an administration responsibility.

Most research offices in this group reported having one - three professional and one - three clerical staff members. Four offices had from four - six professional staff members and one had from seven - ten. Twelve of the offices had budgets ranging from $50,000 - $100,000. One office indicated its budget exceeded $150,000.

Two offices indicated complete administrative control over the distribution of indirect cost reimbursement funds. Five offices had
partial control and 11 had no control at all in this matter. Among the 11 institutions wherein the research office had no control over these funds, no consistent pattern of control was discernible. Many different offices or individuals were involved. These varied from the president to the university budget committee to the vice-president for finance.

Only four of these universities put indirect cost monies into the general fund. Academic units were the primary recipients in eight of the institutions. Two universities direct all indirect cost funds into the faculty research fund. Six research offices received approximately 11-20% of indirect cost funds to supplement their own operations.

Three research offices assigned staff members to particular sponsors. Three offices assigned staff members to units within the university and four offices reported having proposal development sections.

Functions

All but one of the reporting offices were involved in pre-proposal activities. Only nine of the offices offered proposal preparation services. Fourteen offices had responsibilities for active account administration, but only four offices performed accounting and fiscal activities.
Reported performance and effectiveness data

Six respondents rated their institutions as strong or very strong in research orientation. Eleven were rated as average and one as below average. With regard to funding sources, eight of the offices reported having internal funds available to support faculty interest. Nine offices received 10-29% of their awards from private sources. Fifteen institutions reported that 60-80% of their award funds came from the federal government. The distribution of the total annual volume of awards among institutions in this group had ten in the $5.6 - 10.5 million range, four in the $10.6 - 15.5 million range and four in the $15.6 - 20.5 million range.

Both the number of proposals submitted and the percent funded varied greatly among these institutions. Eight offices reported processing 200-399 proposals while five offices processed 600-799. The percent of proposals funded varied from less than 29% in one case to a maximum of 60-69% in three cases. Most offices were in the 40-49% range on this variable. This figure is slightly lower than in most other office categories studied.

Professional and clerical staff sizes remained fairly constant among the research offices in this category. Two offices, however, reported substantial decreases in staff size over the past three years. The percent of proposals funded, the total annual volume of awards and the number of faculty submitting proposals all registered increases in almost one half of the institutions in this group. The number of
sponsors evidenced a 10-29% increase in eight institutions and remained fairly constant in the remainder.

**Potential measures of research administration effectiveness**

Frequently mentioned criteria in this group were the percent of proposals funded, the total volume of awards and the number of faculty submitting proposals. Several respondents remarked that getting more faculty to submit proposals was a primary goal of their office. Open-ended responses were quite similar with number of involved faculty topping the list. One respondent suggested that the annual volume of awards (in dollars) as a ratio of the operating budget of the office was a useful statistic in judging office effectiveness.

**Summary and findings of special interest**

The research offices in this group have experienced significant growth during the past three years in several dimensions. These include total volume of awards and number of faculty submitting proposals. Funding sources are diversified and the percentage of proposal approvals appears to be on the increase. There is little internal staff specialization and staff size has remained fairly constant. Indirect cost reimbursement funds are often rebated back to academic units perhaps in the hope of further stimulating research activities.
Eleven research offices met the criteria for inclusion in this category. Of these, five were in public institutions and six were in private institutions. This group has many well known public and private institutions. Most are older, established schools with extensive graduate programs.

Organizational structure

The age of these research offices varied greatly from one to another. Two offices were established prior to 1950, four from 1956-1960 while three others have been established since 1966. In terms of organizational control, two offices reported to a vice-president for research, two to an academic vice-president and three to a vice-president for finance. Research policy formulation was shared in eight universities and in three universities it was handled primarily by the administration.

Staff sizes were quite large in some of the offices in this category. Three offices had as many as seven – ten professional staff members and seven offices had anywhere from four – fourteen clerical employees. The majority of office budgets were in excess of $100,000 with three offices being in the $150,000 – 250,000 range.

Only one research office indicated having any control whatsoever over the distribution of indirect cost reimbursement funds. This stems
from the fact that nine of these institutions place all indirect cost monies into the general fund. This practice appears to be more common in the high research and development institutions. In this way there is no need for special decisions to be made regarding the use of these funds. Responsibility rests within the general budgetary apparatus of the institution.

With regard to internal specialization or decentralization, the trend in these research offices is clearly toward partial decentralization. Seven of these offices indicated their staff members were assigned to various colleges or units within the institution. Only one assigned staff members to sponsors and only one had a proposal development section.

Functions

Ten of the research offices engaged in pre-proposal activities, but only two offered proposal preparation services. Seven were involved in active account administration and five had accounting and fiscal responsibilities. Possible explanations for the lack of proposal preparation services include the possibility that these services might be available at the department or college level and further that the faculty might be sufficiently sophisticated in this area so as to need little outside help.

Reported performance and effectiveness data

Perceived research orientation was very high among this group of
institutions. One was rated as average, two as strong and eight as very strong. Four universities received virtually all of their awards from the federal government. Five had received 10–29% of their research funds from private sources. Only three research offices indicated the existence of significant income from internal sources. Examination of the annual dollar volume of awards showed that three institutions were between $20.6 - 25.5 million, one was in the $25.6 - 30.5 million range and seven were over $30.5 million.

A wide range of annual proposal submissions existed among the offices in this group. Reported data showed one office in the 200-399 range and two offices as high as 1,200-1,399 annual submissions. No dominant pattern existed with responses being found throughout the scale. As in other groups, great variations were also observed in the percent of proposals funded. Response occurred throughout the scale with two offices reporting a 30-39% approval rate and two reporting an approval rate in excess of 80%.

Little change has occurred in the staff size or operating budget of these offices during the past three years. Small increases have occurred in the percent of proposals funded and in the number of sponsors. Substantial increases in total research and development funds and in the number of faculty submitting proposals were reported by more than two thirds of the offices in this category. In most instances these increases ranged from ten to 29%, but in some cases it was in excess of 30%.
Potential measures of research administration effectiveness

The number of faculty submitting proposals and the percent funded were the two most frequently ranked items. More than in other categories, the operating budget of the research office was also seen as an indirect measure of performance. Increased office budgets were viewed as a vote of confidence from top administration.

Comments to open-ended questions indicated that rapport with faculty and the percent of proposals funded were considered to be of importance. The number of professional staff in relation to award volume was also considered to be useful in evaluating performance.

Summary and findings of special interest

The institutions in this group have a very strong research orientation. The research administration offices vary greatly in number of proposals processed and in percent of proposals funded. For the most part, indirect cost reimbursements go directly into the general fund. Proposal preparation services are not generally offered. Large increases in total awards and in the number of faculty submitting proposals have occurred during the past three years. There is a trend toward partial decentralization in that office staff are being assigned to colleges or units with the university.
Research Offices at Institutions with Enrollment Over 20,001 and Research and Development Allocations of $0-5.5 Million

Eleven research offices met the criteria for inclusion in this category. Of these, nine were public and two were private. Included are many state universities belonging to large state systems. Most have rather limited graduate programs. Emphasis is on undergraduate programs.

Organizational structure

Only four of these offices were in existence prior to 1960. Five were formed between 1961 and 1965 and two others were created within the past five years. Typically these offices report to an academic vice-president or to a graduate dean. Only one research office reported to a vice-president for research. Research policy formulation was a shared administrative-faculty responsibility in nine of the 11 institutions in this group.

Only three research offices reported having more than three professional or three clerical staff members. Clerical staff size did exceed seven in at least two of the offices. Budgets ranged from under $25,000 to over $150,000 annually. Most budgets ranged from $25,000 to $75,000.

With regard to control over indirect cost reimbursement funds, four offices indicated partial control while seven others reported no involvement. Control over these funds followed the usual budgetary
process of the individual university. Only three institutions placed these monies in their general fund. In four universities the research office received some of these funds. In two cases this amounted to over 60% of all indirect cost funds. Academic units received a small percentage of these funds in three universities. Five institutions used these funds to support their internal faculty research fund.

Responses to questions concerning internal organizational structure revealed that two research offices assigned staff to particular sponsors, two offices assigned staff to colleges or units within the university and two offices had separate proposal development sections. Specialization or partial decentralization did not occur in the overwhelming majority of these offices.

Functions

All the research offices in this category engaged in pre-proposal activities. Eight of the 11 offices offered proposal preparation services and were responsible for active account administration. Accounting and fiscal activities were handled by only three of the offices in this group.

Reported performance and effectiveness data

With regard to research orientation, three research offices rated their institutions as below average, seven as average and one as strong. Awards from private sources amounted to less than nine percent of the total in six institutions, 10-19% in three institutions, 20-29% in one
institutions and 30-39% in the remaining university. Only one college appeared to be almost completely dependent upon the federal government for research funds. Seven institutions received from 60-79% of their research dollars from federal sources. Five research offices reported having internal research funds. Typically, these funds accounted for less than 19% of the total allocated for research.

The total volume of awards received by each institution in this category was less than $5.5 million. Within that range, two institutions received $0 - 1.5 million and nine received $1.6 - 5.5 million. The number of proposals processed was relatively low. Three offices processed and submitted 0-99 proposals, seven offices 100-199 and one office 200-399. The percent of proposals funded also tended to be rather low. Two offices reported less than a 29% approval rate, two offices 30-39%, four offices 40-49%, and three offices 50-59%.

Despite the relatively low submission and percent of proposal rates, this group of institutions evidenced the strongest and most consistent pattern of growth on the tested variables. Table 4-22 describes this rate of growth. Strong increases were reported in staff size, percent of proposals funded, total volume of awards, number of different sponsors, number of faculty submitting and in the operating budgets of the research offices. The number of sponsors increased 10-29% in eight of the responding offices. A similar increase was observed in the number of faculty submitting proposals. Since these are large institutions which have not, in the past, concentrated on research they have many of the resources required to
TABLE 4-22
PERCENT OF CHANGE IN VARIOUS OFFICE STATISTICS OVER PAST THREE YEARS AMONG LARGE INSTITUTIONS WITH LOW R & D

<table>
<thead>
<tr>
<th>Category</th>
<th>-30% or more</th>
<th>-29–10%</th>
<th>±9%</th>
<th>+10–29%</th>
<th>+30% or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Professional Staff</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Number Clerical Staff</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Percent Proposals Funded</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Annual Volume Awards</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Number Different Sponsors</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Number Faculty Submitting</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Office Budget</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>
continue the pattern of growth reported in the data. The starting points were initially quite low and consequently large percentage growth in the relevant variables may be misleading. Whether this rate of growth can continue remains to be seen.

Potential measures of research administration effectiveness

Changes in the number of faculty submitting was seen as the most important measure of effectiveness among research administrators in this group. The percent of proposals funded was next in importance and was closely followed by change in the total volume of awards. Open-ended responses yielded similar results. Increasing faculty involvement in research was seen as a primary responsibility.

Summary and findings of special interest

This group of institutions is showing increasing involvement in the research process. Strong growth has been experienced during the past three years. Funding sources are becoming more diversified. Internal faculty research funds are being made available to further stimulate the research process. Typically these offices report to a dean or to the academic vice-president. Proposal preparation services are available. From an organizational standpoint, there has only been minor movement toward decentralization or internal specialization.
Research Offices at Institutions with Enrollment over 20,000 and Research and Development Allocations of $5.6 - 20.5 Million

Nine offices met the criteria for inclusion in this category. Of these, eight were public and one was private. This group is comprised primarily of large state universities with high academic standards and extensive graduate programs.

Organizational structure

Four of these research offices were established prior to 1955. One was established between 1956 and 1950, three between 1961 and 1965 and one between 1966 and 1970. As a group they have been functioning longer than research offices in other categories. Two offices report directly to the president, two report to a vice-president, two report to a vice-president for research and the others an academic vice-president, a dean, a provost and a vice-president for development. Research policy formulation is shared in five institutions, dominated by administrators in three institutions and by faculty in the remaining institution.

Staff sizes were rather large in these research offices. Six offices reported having from 4 - 10 professional staff members while seven offices reported having from 4 - 14 clerical employees. Office budgets ranged from $75,000 - 99,999 in four offices, $150,000 - 250,000 in two offices and in excess of $250,000 in three offices.

Two research offices reported complete control over the distribution
of indirect cost reimbursement funds, six reported no control and distribution of these funds followed the normal budgetary process in the majority of these institutions. Three research offices received anywhere from 11-50% of these funds to support their own operation. Only three universities gave any of these funds directly to academic units. Three placed the entire amount into general fund and two placed small amounts into a faculty research fund.

Internally, two of these offices assigned professional staff members to particular sponsors, three assigned staff to units within the university and three reported having a proposal development section.

Functions

Eight of the nine offices reported being involved in pre-proposal activities. Only five offices offered proposal preparation services. Six were involved in active account administration while only four had accounting and fiscal responsibilities.

Reported performance and effectiveness data

Research orientation was rated as below average in two institutions, average in three, strong in three and very strong in the remaining institution. Awards from private sources amounted to 0-9% of the total in five institutions, 10-19% in three and 20-29% in the remaining institution. Federal contributions were at least 70% in eight of the nine institutions. Internal funds accounted for 10-19% of the total in five of the nine institutions.
Reported total volume of awards was $5.6 - 10.5 million in one institution, $10.6 - 15.5 million in five institutions and $15.6 - 20.5 million in three institutions. The number of proposal submissions was 200-399 in three cases, 400-599 in three cases, 600-799 in two cases and 800-999 in one case. The percent of proposals funded again evidenced wide variations, however, five of the nine offices reported an approval rate of 40-49%.

Reported changes over the past three years showed slight increases in staff size, little change in the percent of proposals funded or in the total volume awarded and moderate to strong increases in the number of sponsors, number of faculty submitting proposals and in the operating budgets of the research offices. These offices appear to be working harder to maintain their current levels of research and development funding.

Potential measures of research administration effectiveness

Research administrators in this group rated changes in the number of faculty submitting proposals as the primary index of their performance. The percent of proposals funded was also considered to be of great importance. Open-ended responses yielded similar results. Also listed were rapport with faculty and the timely submission of technical reports.

Summary and findings of special interest

Research offices in this group tended to be larger and more
established than those in other groups. Budgets were correspondingly higher. Although the total volume of awards has remained fairly constant, the number of faculty submitting and the number of sponsors has increased. More effort is being expended to maintain current levels of funding. Organizationally, only a few offices have specialized staff or have decentralized their operations.

Research Offices at Institutions with Enrollment over 20,000 and Research and Development Allocations in Excess of $20.6 Million

Thirteen offices met the criteria for inclusion in this group. All were based in public institutions. All are major state universities with excellent academic standards, large medical schools and high graduate enrollments.

Organizational structure

Even in these highly research oriented institutions, offices of research administration are a recent phenomenon. In fact, ten of the 13 offices have been established since 1961. Three offices report to a vice-president for research, four to an academic vice-president and the remainder to a variety of university officials. Research policy formulation is shared in eight of these universities, administrator dominated in four and faculty dominated in only one institution.

Staff sizes are typically large. Seven offices reported having at least four to six professional staff members. Clerical staff size ranged from four to six in seven offices to 23 - 26 in one office.
Most office budgets were in the $100,000 - 150,000 range and two exceeded $250,000.

None of the research offices had complete control over indirect cost reimbursement funds. Five offices had partial control and eight had no control. Only two research offices received any of these funds. Academic units were recipients in only four institutions. Seven universities placed these monies into the general fund. Three placed small amounts into the faculty research fund.

In terms of internal organizational structure, seven offices assigned staff members to particular sponsors, two assigned staff to units within the university and two had proposal development sections.

Functions

All of the offices in this category performed pre-proposal activities. Eight provided proposal preparation services, seven engaged in active account administration and two had responsibility for accounting and fiscal activities.

Reported performance and effectiveness data

Research orientation was rated as average in four institutions, strong in four and as very strong in five. Data on funding sources revealed stronger than average reliance on internal sources. Typically internal funds accounted for 10-29% of total awards, but in two cases this was as high as 69% of the total. Federal funds accounted for 70-79% of the total in more than half the institutions. Private funds
typically accounted for 10-19% of the total.

The total volume of awards ranged from $20.5 - 25.5 million in four universities, $25.6 - 30.5 million in two universities and over $30.5 million in seven universities. Proposal volume varied from 200-399 in one institution to over 1,000 in another institution. The majority reported submitting 600-999 proposals yearly. As for percent of proposals funded, one office reported a success rate of 30-39%, five offices reported 50-59% and seven offices reported 60-69%. In spite of the high annual volume of awards in dollars, the percent of approval rate does not substantially differ from that of other groups. The high volume of proposal submission may, in part, explain the high yield of research and development funds.

Data regarding changes over the past three years revealed strong growth in all the variables surveyed. Eleven of the 13 institutions reported a 10% or greater increase in total volume of awards. Similar growth was observed in the number of faculty submitting proposals. The percent of proposals funded increased slightly. These data clearly indicate growth in the research and development programs at these institutions.

Potential measures of research administration effectiveness

The total volume of awards was considered to be of prime importance by this group of research administrators. This response undoubtedly reflects their past success in acquiring research and development funds. The percent of proposals funded and the number of faculty
submitting proposals were also ranked highly. Open-ended responses were similar, but also mentioned criteria like the importance of the number of requests by granting agencies for proposals and the ratio of professional staff to the number of proposals funded.

Summary and findings of special interest

The research offices in this group are large, handle a high number or proposals and have aided their institutions in acquiring the funds to support massive research and development programs. Organizationally, they tend to assign professional staff members to act as liaisons with particular sponsors. Internal research funds contribute to the overall research effort. The data would tend to support the impression that research efforts at these institutions are continuing to grow and develop at a fairly strong rate.

This concludes the discussion of data reported by research administration offices in the various categories set forth by the design of this study. Chapter V, to follow will summarize the study, cite relevant conclusions and offer recommendations for further research.
CHAPTER V

SUMMARY AND CONCLUSIONS

Review of the Study

In the past three decades the level of research conducted in American universities has increased dramatically. For the most part, these research activities have been sponsored by sources outside the university. Funding from the federal government and from private foundations has made it possible for many institutions to greatly increase their involvement in programs of basic and applied research. University-based offices of research administration have been established in order to more efficiently contract for and administer research programs.

The objective of this survey was to acquire and interpret data pertaining to the organizational structure, functions, effectiveness and potential measures of the effectiveness of university-based offices of research administration. The research offices in the sample were partitioned into nine separate categories based upon the size of the institution (student enrollment) and the current level of research and development allocations (R & D). A 3x3 design was utilized. The three institutional sizes were: small (0 – 10,000 students), medium (10,001 – 20,000 students) and large (over 20,000 students). The three research and development levels were: small ($0 – 5.5 million), medium ($5.6 – 20.5 million) and large (over $20.5 million). In
reporting data, the study has thus controlled for institutional size and the annual volume of awards.

Two hundred university-based offices of research administration were included in the original sample. The effective and usable rate of return was 152 or 76% of the original sample. Of these, 102 were public institutions and 50 were private institutions.

The methods for analyzing the data were selected according to the research questions and the characteristics of the data gathered in the survey. Frequency counts and, in some instances, percentages were reported for data on the sample as a whole and then for data in each of the nine institutional categories.

Discussion of the Findings

This discussion will follow the general format used for reporting data in the previous chapter. Results will be discussed in the areas of organizational structure, functions, reported effectiveness data and potential measures of effectiveness.

Organizational structure

Offices of research administration are relatively recent in origin at most universities. The data showed this to be true even in a great many research oriented institutions. Over 72% of these offices were not in existence prior to 1961. Because of their recent origins, administrative procedures are still evolving in many of the research offices that responded to this survey.
Only ten percent of the offices surveyed indicated that they reported to a vice-president for research. This tended to occur mainly in the high research and development institutions. Many other schools of equally high research orientation placed research administration responsibilities in the hands of a graduate dean, academic vice-president or other university official. The Wilson study contended that the existence of a vice-president for research is indicative of a higher research status in that institution. The current study fails to substantiate this contention. A vice-president for research may be helpful in advancing an institution's research activities, but based on the data of the present study it is not a necessity.

One further finding regarding organizational control is that small and medium-size institutions with large research and development revenues frequently regard research administration as a development or finance function. This was especially true among private institutions wherein research was, in part, a fund raising endeavor. From a purely financial standpoint, this type of organizational structure appears to have been successful.

Research policies in 74% of the institutions surveyed are formulated by a cooperative faculty-administration effort. Administrators tend to dominate these policy decisions in a few very small public institutions and in some private institutions. In both instances, these are usually institutions wherein faculty do not traditionally participate in any form of governance.

On the whole, the professional and clerical staff sizes tended to
be small. Research office budgets were correspondingly low. In small institutions the research office staff typically consisted of one professional employee and one secretary. Larger institutions tended to have larger office staffs regardless of their level of research and development funding. Internally, there was a trend toward partial decentralization. Professional staff members were increasingly being assigned to various units or colleges throughout the university. Only large institutions with large research and development allocations did not appear to be moving in this direction. In those offices, staff were being assigned to sponsors rather than to internal units. This finding is consistent with the fact that proposal development activities are more common in the small and medium research and development institutions. In the large research oriented universities the faculty is typically more acquainted with the proposal development process and requires less assistance from the office of research administration. Likewise, the need for assigning office staff to individual colleges is not as great and the research administration staff is able to concentrate on cultivating sponsor relationships. Emerging research institutions require more faculty liaison and this need is often being met by assigning staff to various units throughout the institution.

The current survey yielded some interesting data regarding the control and distribution of indirect cost reimbursement funds. Forty-two percent of the institutions surveyed placed all these monies into the general fund and then followed the usual budgetary process for allocation. These tended to be large state institutions or institutions
required to do this by state law. The tendency to distribute these funds directly to various units was observed in a wide range of both public and private institutions. Often, research office personnel participated in the decisions as to how these funds were to be expended. In all, 88 institutions allocated indirect cost funds to a variety of recipients. In 55 instances the research office had at least partial control over distribution. The primary recipients of these monies were the research office itself, academic units and faculty research funds. The majority of institutions were using these funds more to expand their research efforts than to defray indirect costs.

Functions

The data on research office functions revealed that almost all research offices engage in pre-proposal activities. There seems to be almost complete agreement as to this phase of responsibility. Agreement is more difficult to obtain in regard to other responsibilities. Proposal preparation services are offered by 62% of the offices. However, some of the remaining research offices indicated that this was a departmental or college responsibility. Accounting and fiscal activities were performed by less than a third of the offices surveyed. Some of the larger research offices indicated they had a project account auditor housed in their office even though he was directly responsible to a finance office. This arrangement was said to facilitate communications between the research office, the grant administrator and the researcher. This arrangement might be of considerable interest to
institutions where considerable communications problems exist.

Reported performance and effectiveness data

In spite of all the current speculation and talk about declining federal funding for higher education, the data revealed a clear and consistent pattern of growth in university-based research. Many institutions are attempting to become less dependent on the federal dollar and are looking more to private sources to sponsor research. More than 50% of the institutions surveyed received ten percent or more of their research funds from private sponsors. Small institutions with high research allocations tended to rely on federal funds more than did other groups. This group also showed the least growth in total research funds, percent of proposals funded and number of sponsors. Heavy reliance on federal funds was, in part, responsible for this weak performance.

Data regarding the total number of proposals submitted and the percent of proposals funded varied greatly among the institutions surveyed. Interestingly, these variations occurred within research offices categories as well as among categories. Even among institutions receiving over $20.6 million a year, the percent of proposals approved varied from under 30% to over 80%. Part of this discrepancy can be explained by the fact that some universities submit more proposals than do others. The high volume of submissions still enables them to receive millions of dollars in spite of a low approval rate. Similar variations in approval rate were reported at all funding levels. The reasons for these varying approval rates are not clear. Some possible explanations
might be found by examining the formulas used to calculate the percent of approval, the prestige of the institution, the subject matter of the proposals and the rapport of the research staff with sponsoring agencies.

The data regarding changes over the past three years in various office statistics showed strong growth on most variables. Although the variable of staff size increased only slightly, strong growth occurred in the percent of proposals funded, the total annual volume of awards, the number of different sponsors and especially in the number of faculty submitting proposals. More university-based research is being undertaken today than ever before.

**Potential measures of research administration effectiveness**

The development of effectiveness measures for research administrators is a difficult task. No set of criteria taken in isolation is meaningful. Criteria must be developed taking into account the unique situation in each individual institution. The research administrator should not necessarily bear the blame for a small annual volume of awards and a poor percentage of proposal approval. The research orientation of the faculty must be taken into account in any evaluation effort. Changes in the number of proposal submissions, the percent of proposal approval and the total annual volume of awards may be the best ways to assess whether or not the research administrator is effectively stimulating research and aiding the faculty in finding interested sponsors. By examining the base rates of these variables and then by setting up goals for improvement, the research administrator will be in an excellent
position to judge the impact of his actions. For example, the research office might establish a goal of increasing the number of proposals submitted by faculty by ten percent over a 12 month period. Success or failure would be quite simple to evaluate.

Some of the criteria most frequently mentioned by research administrators were the percent of proposals funded, the number of faculty submitting proposals and the annual volume of awards. Although not frequently mentioned, two cost-benefit ratios were cited which are worthy of additional consideration. These were the total annual volume of awards as a ratio of the operating budget of the office and the number of proposals as a ratio of the operating budget of the office. The ratios can be examined by research administrators in both large and small offices and in universities with widely varying levels of research and development. The ratio by itself would not be particularly helpful. However, changes in the ratio over a specific period of time would constitute a sensitive indicator of performance. The achievement of pre-set goals as to rate of growth in the total volume of awards, the number of faculty submitting proposals and the percent of proposals approved as well as the utilization of cost-benefit ratios constitute the most systematic approach to examining the effectiveness issue.

Implications for Research Administration

This study was designed and executed for the purpose of gaining a better and more comprehensive understanding of university research administration. The following implications are expressed in order to
further summarize the study and to further stimulate thought on the subject.

1. Research administration is a new and expanding field. As such, there is great opportunity for growth and innovation.

2. Many different types of organizational structures are successfully performing their appointed tasks. Successful programs are being run by graduate deans, academic vice-presidents and by vice-presidents for research. The manner of organizational control does not appear to be crucial to the success of the research program.

3. Institutions with emerging research programs need to have offices of research administration that are highly service oriented. Proposal development services are extremely helpful to faculty members who are relatively new to research.

4. The size of the research office staff is more highly related to the size of the university than to the annual number of proposal submissions or to the annual volume of awards. The extent of support and/or technical services available at the department or college level will have a bearing on the size of the research office staff.

5. Increasing numbers of research offices are partially decentralizing their operations by assigning staff to various colleges or units throughout the university. This is probably most helpful in terms of increasing the number of faculty
involved in research.

6. Research offices are becoming more involved in decisions regarding the distribution of indirect cost reimbursement funds.

7. There is a need to diversify funding sources and turn more toward the private sector.

8. The lack of comprehensive research regarding how universities contract for and administer programs of sponsored research points out the need for more self study and examination. There is a need for improved dissemination of this type of research data among those in the field.

Suggestions for Future Research

The current study was extremely comprehensive in nature. Many interesting questions arose in the course of this research which could not be answered by an examination of the data in hand. The focus of future research needs to be narrowed. Two areas of particular interest come to mind. There is a need to examine the issue of widely varying rates of proposal acceptance. Institutions of similar award volume, but with widely varying proposal acceptance rates should be isolated and studied. Factors which contribute to this type of success would be extremely interesting and valuable to the practicing research administrator.

Another issue which warrants additional investigation is that of decentralization of office staff. A research design which examined offices that assigned staff to sponsors as opposed to offices that
assigned staff to various units within the institution would also be of great interest. Other questions of equal or greater importance may arise in the minds of others who examine the current research.

Closing Statement

This study of research administration has been extremely rewarding and stimulating for the investigator. I am deeply indebted to the many competent and empathic individuals who have helped me during the course of this research. It is hoped that the results and suggestions in this study have contributed to the field of research administration and to the professional research administrator.
BIBLIOGRAPHY


Johnson, Gary R. Ten basics of research administration. College Management, 1972, 7 (8), 14-16.


APPENDIX A
August 21, 1972

Dear

The Office of Research Services at Western Michigan University is conducting a survey of the organizational structure of university offices of research administration. The findings will be forwarded to the Society of Research Administrators for inclusion in The Research Administrator's Notebook.

We are interested in your office's relation to the university as a whole and also in your office's internal structure. On the following pages you will find a brief series of questions pertaining to:

1. the purposes of your institution;
2. the position of your office in the university organizational structure;
3. the primary functions of your office and
4. the division of responsibility within your office.

These questions can be completed in a few minutes. Also, if your institution has available any organizational charts or diagrams, pertaining to your office, the submission of these along with the completed questionnaire would be greatly appreciated. An envelope has been enclosed for this purpose.

It is important to note that names of individual institutions will not be included in the final report. It is hoped that sufficient organizational information will be obtained so as to be of significant use to developing institutions and to those institutions contemplating change.

This information about your office and institution is important to the outcome of this survey and a response at your earliest convenience will be much appreciated.

Yours gratefully,

Louis Steinberg
Research Associate

LS/jas
Encl.
Questionnaire
Organization for Research Administration

1. Is your institution primarily considered:
   __ a. An undergraduate institution
   __ b. An upper division and/or graduate institution
   __ c. A combined undergraduate and graduate institution
   __ d. Other: describe

2. Is your institution:
   __ a. Public
   __ b. Private, non-church related
   __ c. Private, church related

3. Is your institutional orientation:
   __ a. Liberal arts
   __ b. Natural sciences
   __ c. Applied sciences
   __ d. Comprehensive
   __ e. Other: describe

4. How do you perceive the research orientation of your faculty and administration:
   Very Strong  Fairly Strong  About Average  Below Average  Minimal

5. How are research policies established at your institution?

6. What is the title of your office?

7. To whom is your office directly responsible?
   President  V.P. Research  V.P. Academic  V.P. Finance  Dean: specify  other: specify

8. Is your office responsible for the administration of all sponsored activities, federal and private?  Yes  No

If no, please place a check next to the following activities for which your office is responsible.
   _ Federal agreements only
   _ Private agreements only
   _ Research grants and contracts
   _ Research grants only
   _ Research contracts only
   _ Acquisition of surplus property
   _ Financial aids
   _ Training Grants
   _ Other: please specify

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9. Please place a check next to the following functions and/or activities in which your office is typically involved:

- Editing proposals
- Preparation of charts and/or drawings
- Typing proposals
- Reproduction of proposals
- Maintaining information on sources of support
- Assisting in selection of potential sponsors
- Cost-sharing arrangements
- Budget preparation for sponsored activities
- Development of cost control procedures
- Security matters for government classified information
- Patent matters
- Computation of indirect cost rates
- Preparation and distribution of regular publications to faculty
- Negotiation of overruns and extensions
- Monitoring sponsored accounts
- Fiscal reports for sponsor
- Technical reports for sponsor
- Other

10. Describe briefly how your office is organized.

________________________________________________________________

11. Do you have any additional comments which you feel are pertinent to this survey?

________________________________________________________________

________________________________________________________________

________________________________________________________________
INSTITUTIONS IN ORIGINAL SAMPLE

A & T State University: North Carolina
Adelphi University
Alfred University
American University
Antioch College
Arizona State University
Auburn University
Ball State University
Baylor University
Boston College
Bowling Green State University
Brandeis University
Bridgewater State College
Brigham Young University
Brown University
Bucknell University
California Institute of Technology
California State College: California, Pennsylvania
California State College at Long Beach
California State College at Los Angeles
California State University at Northridge
Carnegie – Mellon University
Case Western Reserve University
Catholic University of America
Central Michigan University
Central State University: Ohio
Chicago State College
Chico State College
City University of New York: Hunter College
Clark University
Clemson University
Cleveland State University
Colgate University
College of William and Mary
Colorado State University
Columbia University
Cornell University
Dartmouth College
De Paul University
Drexel University
Duke University
Duquesne University
East Carolina University
East Texas State University
Eastern Kentucky University
Eastern Michigan University
Eastern New Mexico University
Eastern Washington State College
Emory University
Fairfield University
Fairleigh Dickinson University
Florida Atlantic University
Florida State University
Fordham University
Franklin and Marshall College
Fresno State College
George Washington University
Georgetown University
Georgia Southern College
Georgia State University
Glassboro State College
Goshen College
Grambling College
Hofstra University
Illinois State University at Normal
Indiana University at Bloomington
Indiana University at Indianapolis
Iowa State University
John Carroll University
Kent State University
Louisiana State University
Loyola University at New Orleans
Marquette University
Memphis State University
Miami University: Ohio
Mississippi State University
Morehead State University
New Mexico State University
New York University
North Carolina State University
North Dakota State University
North Texas State University
Northeast Louisiana State University
Northeastern University
Northern Arizona University
Northern Illinois University
Northern Michigan University
Northwestern University
Oakland University
Ohio State University
Ohio University
Old Dominion University
Oklahoma State University
Oregon State University
Pennsylvania State University
Princeton University
Purdue University
Queens College
Rutgers University
San Diego State College
San Jose State College
South Dakota State University
Southern Illinois University
St. Cloud State College
St. Johns University
St. Louis University
Stanford University
State University of New York at Buffalo
State University of New York at Potsdam
State University of New York at Stony Brook
Syracuse University
Temple University
Texas A & M University
Texas Southern University
Texas Technical University
Tufts University
Tulane University
Tuskegee Institute
University of Akron
University of Alabama at Birmingham
University of Alabama at Tuscaloosa
University of Arizona
University of Arkansas
University of California at Davis
University of California at Santa Barbara
University of Chicago
University of Cincinnati
University of Colorado
University of Connecticut
University of Dayton
University of Delaware
University of Denver
University of Florida
University of Georgia
University of Hawaii
University of Houston
University of Idaho
University of Illinois
University of Iowa
University of Kansas
University of Kentucky
University of Louisville
University of Maine
University of Maryland
University of Massachusetts at Amherst
University of Massachusetts at Boston
University of Miami
University of Minnesota
University of Mississippi
University of Missouri at Columbia
University of Missouri at Kansas City
University of Montana
University of Nebraska at Lincoln
University of Nebraska at Omaha
University of Nevada
University of New Hampshire
University of New Mexico
University of North Carolina at Chapel Hill
University of North Carolina at Greensboro
University of North Carolina at Wilmington
University of North Dakota
University of Northern Iowa
University of Notre Dame
University of Oregon
University of the Pacific
University of Pennsylvania
University of Pittsburgh
University of Portland
University of Rhode Island
University of Rochester
University of South Carolina
University of South Dakota
University of Southern Florida
University of Southern Mississippi
University of Tampa
University of Tennessee
University of Texas at Austin
University of Texas at El Paso
University of Toledo
University of Tulsa
University of Utah
University of Vermont
University of Virginia
University of Washington
University of Wisconsin at Green Bay
University of Wisconsin at Madison
University of Wisconsin at Milwaukee
University of Wisconsin at Oshkosh
University of Wyoming
Utah State University
Vanderbilt University
Washington University at St. Louis
Washington State University
Wayne State University
West Virginia University
Western Connecticut State College
Western Illinois University
Western Washington State College
Wichita State University
William Marsh Rice University
Yale University
QUESTIONNAIRE
ORGANIZATION FOR RESEARCH ADMINISTRATION

Name of Institution: ________________________________

Name of Office: ________________________________

Name of Respondent: ________________________________

Title: _________________________________________

1. What year was your office established? _______
2. To whom is your office directly responsible?

Pres. V.P. Research V.P. Academic Dean Grad Studies Provost Exec. V.P.
and Research

V.P. Development Comptroller Other (specify)

3. How are research policies formulated at your institution?

<table>
<thead>
<tr>
<th>Administration Dominance</th>
<th>Administration Primarily</th>
<th>Shared Administration &amp; Faculty Responsibility</th>
<th>Faculty Primarily</th>
<th>Faculty Dominance</th>
</tr>
</thead>
</table>

4. How do you perceive the research orientation of your faculty and administration?

Minimal Below Average About Average Fairly Strong Very Strong

5. Number of full time equivalent professional staff in your office.

1 - 3 4 - 6 7 - 10 11 - 14 15 - 18 19 - 22 23 - 26 +27

6. Number of full time clerical employees in your office.

1 - 3 4 - 6 7 - 10 11 - 14 15 - 18 19 - 22 23 - 26 +27

7. Using the most recent data you have available, please estimate the annual operating budget for your office.

<table>
<thead>
<tr>
<th>Budget Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - 24,999</td>
</tr>
<tr>
<td>$25 - 49,999</td>
</tr>
<tr>
<td>$50 - 74,999</td>
</tr>
<tr>
<td>$75, - 99,999</td>
</tr>
<tr>
<td>$100 - 149,999</td>
</tr>
<tr>
<td>$150 - 250,000</td>
</tr>
<tr>
<td>+250,000</td>
</tr>
</tbody>
</table>
8. Please place a check next to any of the following which is a responsibility of your office.

- Pre-proposal activities, i.e. - compilation of information, assistance to faculty in the selection of potential sponsors, etc.
- Proposal preparation, i.e. - editing, reproduction, preparation, typing, etc.
- Active account administration, i.e. - monitoring of accounts, technical reports for sponsor, negotiation of overruns and extension, etc.
- Accounting and fiscal activity, i.e. - cost control procedures, computation of indirect cost rates, fiscal reports for sponsor, etc.

9. Does the research administration office have control over the distribution of indirect cost funds? Yes No Partially

If no or partially, who controls these funds?____________________________

10. How are indirect cost funds distributed? Please estimate the percentage distributed to each of the following. (Should total to 100%)

Research Administration

Academic units or departmental research

General university funds

Faculty research fund

Other (specify)

Total

11. Please estimate the percentage of research funds at your institution that come from the following sources. (Should approximate 100%)

Private

Federal

Internal

12. For the most recent year data is available, please indicate your total volume of awards. (Total R&D in millions)

If greater than 30.5, please indicate approximate amount.
13. For the most recent year data is available, please indicate the total number of proposals which your office processed and submitted for funding.

<table>
<thead>
<tr>
<th>Range</th>
<th>0-99</th>
<th>100-199</th>
<th>200-399</th>
<th>400-599</th>
<th>600-799</th>
<th>800-999</th>
<th>1000-1199</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. For the most recent year data is available, please estimate the percentage of proposals which were funded.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>29% or less</th>
<th>30-39%</th>
<th>40-49%</th>
<th>50-59%</th>
<th>60-69%</th>
<th>70-79%</th>
<th>80% or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Using the last three years as a base period, please estimate the changes which have occurred in your office by circling the appropriate number.

<table>
<thead>
<tr>
<th>Change</th>
<th>Large</th>
<th>Moderate</th>
<th>Little</th>
<th>Moderate</th>
<th>Increase</th>
<th>Large</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>or more</td>
<td>-30%</td>
<td>-29 -10%</td>
<td>±9%</td>
<td>+10 -29%</td>
<td>or more</td>
<td>Large</td>
<td>or more</td>
</tr>
<tr>
<td></td>
<td>-30%</td>
<td>-29 -10%</td>
<td>±9%</td>
<td>+10 -29%</td>
<td>or more</td>
<td>Large</td>
<td>or more</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of professional staff</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of clerical staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>% of proposals funded</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Annual volume of awards (R&amp;D)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Number of different sponsors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Number of faculty submitting proposals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Operating budget of your office</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

16. In reference to question 15, please rank order from one to four those variables which you feel to be useful criteria in measuring research administration effectiveness. Place a 1 to the left of the most important variable, a 2 beside and next important and so on.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. If you are using or should plan to use an accountability procedure to judge the effectiveness of your office, what variables would you consider to be vital or crucial to this accountability scheme? Please list at least two.

A. _____________________________________________________
B. _____________________________________________________
C. _____________________________________________________

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18. With regard to the internal organization structure of your office, place a check next to any of the following which appear to be applicable.

___ Office staff are assigned to particular sponsors.
___ Office staff are assigned to various colleges or units within the university.
___ Our office has a separate proposal development section.

19. Please sketch a brief diagram of your internal office structure.

20. If you are contemplating any changes in the organizational structure of your office, please discuss these changes briefly.

If you would like to receive a summary of the results of this survey, please place a check in the box below.

Return this survey in the enclosed envelope to:

Mr. Louis Steinberg
C/O Office of Research Services
Administration Building
Western Michigan University
Kalamazoo, Michigan 49001
December 13, 1972

Dear

This past summer, in conjunction with the Office of Research Services at Western Michigan University, a preliminary survey was conducted of the organizational structures and functions of ninety university-based offices of research administration. We were extremely gratified in that responses were received from over 80% of the offices contacted. These data are currently being prepared for future publication by the Society of Research Administrators.

The enclosed instrument was designed after a careful analysis of the data received in the earlier study. It has been developed for purposes of dissertation research and the appropriateness of its content has been evaluated by the staff of the Office of Research Services at Western Michigan University.

The current sample involves two hundred offices across the country and consequently a much more comprehensive pool of data will be collected. A check next to the most appropriate answer is all that is required for most questions. It is important to note that the estimated time of completion is less than ten minutes.

This information about your office and institution is vital to the outcome of this survey. Names of individual institutions will not be linked to any particular set of data in the final report. A response at your earliest convenience will be very much appreciated.

Your gratefully,

Louis Steinberg

LS/jas

Enclosures
January 19, 1973

Dear

Several weeks ago we sent you a survey designed to explore the organizational structure and functions of university-based offices of research administration. Approximately sixty percent of the institutions contacted have already returned the survey. However, we have not as yet received a completed questionnaire from your office.

Your cooperation in this project is very important to its success and will be greatly appreciated. The estimated completion time is less than ten minutes, and responses of individual institutions will remain confidential. The instrument has been developed for purposes of dissertation research, and the appropriateness of its content has been evaluated by the staff of the Office of Research Services at Western Michigan University.

Undoubtedly you have many demands on your time, and I extend my apologies for adding this additional burden. However, if you already have not done so, please complete and return the survey as quickly as your limited time might allow.

Thank you for your assistance.

Sincerely,

Louis Steinberg

LS/jas

Enclosure