

Several changes need to be made in the instructions to the HEGIS finance form to enhance the usefulness of the information.

# The Utility of HEGIS Data in Making Institutional Comparisons

by Mary P. McKeown and Lucy T. Lapovsky

For the last decade, the National Center for Educational Statistics (NCES) has collected data about institutions of postsecondary education through the rubric of the Higher Education General Information Survey (HEGIS). Data have been collected concerning the general characteristics of institutions including proprietary schools, their student bodies, faculties, facilities, degrees awarded, expenditures, and revenues. The purposes of the HEGIS data collection efforts have included the development of an adequate and timely set of data that could be used in policy considerations at the national level and policy review at the state level, and which would permit intra- and interstate comparisons. The administrator of NCES, Marie Eldridge, has suggested that HEGIS data could be used to reflect and track federal, state, and institutional responses to the challenges presented in the Commission on Excellence Report "A Nation at Risk," or any of the other reports currently in vogue.<sup>1</sup>

Those decisionmakers and others interested in inter- and intrastate comparisons of postsecondary educational institutions have available several other sources of information including M.M. Chambers' surveys<sup>2</sup> and the Halstead and McCoy analyses of data<sup>3</sup> based on HEGIS information. A high level of interest in comparative information is evidenced by the existence of many studies prepared to gather, critique, interpret, and/or analyze data on higher education.<sup>4</sup> Of particular interest to those involved with decisionmaking related to higher education policy are data that may be used to influence decisions related to levels of adequate support and to measures of quality among institutions.

However, equally widespread as the comparative

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studies are critiques of the usefulness and comparability of national data, especially HEGIS data. Both structural and technical differences among states have been identified and weaken the comparability of data among states.<sup>5</sup> HEGIS provides a valuable national source of data, despite problems associated with the surveys. The data are readily accessible and are being used increasingly by educational researchers, planners, and decisionmakers.

Like the coordinating and governing boards in many states, the State Board for Higher Education in Maryland has adopted the concept of comparing Maryland institutions with selected peer institutions to assess the relative standing of the Maryland institutions. In order to make comparisons, the Maryland State Board for Higher Education has been using data collected through the Higher Education General Information Survey (HEGIS). To make comparisons meaningful, the Maryland General Assembly directed the State Board for Higher Education to assess the comparability of data.

In order to address this issue, Maryland's staff met with staff from the coordinating/governing boards and institutions in comparison states. The purposes of this study were the following: to identify problems of comparability with HEGIS data; and to make suggestions to NCES for improvement of the data and of the data collection effort. The study was made possible by a grant from the Personnel Exchange of the State Higher Education Executive Officers—National Center for Education Statistics (SHEEO-NCES) network.

This study concentrated on data from four of the HEGIS forms: finance, faculty salaries, enrollment, and degrees awarded by academic program. Data from the finance form were found to be least comparable. Differences in reporting among institutions were found on the other forms, but these differences were few in number. Most of the following discussion, therefore, will concentrate on reporting issues relating to the finance form.

Problems of comparability with HEGIS data that were encountered can be classified into three categories:

1. Universe definition
2. Funding differences
- and 3. Reporting problems.

The discussion that follows was based primarily on conversations with personnel from institutions and coordinating boards in California, Illinois, Michigan, Maryland, North Carolina, Texas, Virginia, and Wisconsin. Problem areas are addressed in the discussion that follows from the perspective of comparisons of a system of higher education like the University of California with other systems or parts of systems. Other comparisons might permit different conclusions to be reached.

## Universe Definition

The first of the comparability problems to be addressed concerns the issue of which functions of a university/campus/system are included in the HEGIS universe and which are excluded. A related issue is more complex: what **should** be included and what **should** be excluded.

The National Center for Education Statistics uses what is known as a "FICE" code (Federal Institutional Code) to identify institutions of postsecondary education. However, not all institutions, or parts of systems of institutions, have been assigned this identifying code. Further complicating the issue is the fact that not all pieces of an institution or campus are identified.

When placed in the perspective of the HEGIS finance form, several areas are of concern. All entities that have a FICE code are easily identifiable and can be reported without difficulty. However, not all parts of universities have FICE codes; moreover, elements included within entities with FICE codes change over time as the organizational structure of the institution/campus/system change.

The HEGIS finance form instructs that those parts of campuses without FICE codes should be included with the "appropriate campus." Proper inclusion can only be accomplished if a central system office is involved in the completion of the forms. An individual campus is unlikely to be aware of the fact that a part of its University does not have a FICE code and is not included on another campus form. If a system office is involved, it may select the "appropriate campus."

For political as well as other reasons an institution may not choose to include an entity, for example, an agricultural experiment station, with any existing campus. Inclusion of other entities, such as central administration, would require prorating revenues and expenditures across several campuses. The internal consequences and the time involved to allocate the costs of central administration may be deemed to be unworthy of the effort, or of too low a priority to be completed.

There are several consequences of these problems. First, researchers do not know what was included in or excluded from the HEGIS finance universe without asking specific questions. For example the Universities of California and Illinois submitted separate HEGIS finance forms for their central administration, although these entities do not have FICE codes. NCES then apparently prorates these costs among each university's campuses according to enrollment. Staff of the University of California believes this is a reasonable allocation while the University of Illinois' staff does not believe this method of allocation correlates well with actual expenditures. Alternatively, the Universities of Texas and Maryland did not report the costs of their system administrations. The University of Michigan prorates its central system costs among its campuses before submission of the HEGIS form. In addition, the University of Maryland does not report any information on its agricultural experiment station. The list of varying treatments could continue, but questions about the seriousness of the problem and possible solutions remain.

This problem is serious, especially when a small number of schools are being studied for very specific comparative purposes. For example, at the University of California, the central system costs per student amount to more than \$800 per FTES; this is not an insignificant amount. A more efficient solution than having each researcher who works with the data collect this information can be suggested.

NCES could compile information on the entities that make up a university and which are not explicitly identified in the NCES directory. Data on obvious entities such as system administrations, research laboratories, and experiment stations could be requested. Universities could then identify how these entities are reported on the HEGIS finance forms. Institutions should be given the option of submitting a separate HEGIS finance form for each of these entities knowing that NCES will edit the submission into the campuses with FICE codes. This solution would eliminate the need to call the University of California to locate the Lawrence Hall of Science on the Berkeley

campus or the Scripps Oceanography Lab included in the San Diego campus. It must be noted that someone at the system level does need to be involved in this effort because individual campuses will not have the total picture.

### Funding Differences

The problems associated with differences in the methods by which institutions in the various states fund institutions of higher education result in legitimate differences in reporting the funding differences often need to be understood in order to explain why an institution is funded at the level it is; these are differences which are not related to inconsistent reporting. Several types of funding differences will be discussed; the examples given are meant to be illustrative of the great variations that exist.

Faculty salaries are affected by the total compensation package provided. The level of fringe benefits provided by the states varies substantially and impacts faculty salary comparisons. For example, in Texas and Tennessee the state pays the employees' share of social security contributions. Virginia froze all faculty salaries for FY 1984 but will pick up the employees' retirement contributions equivalent to five percent of salaries; Tennessee already pays the employees' share of fringe benefits.

Faculty salary comparisons also are affected by the definition of faculty rank. For example, the University of California does not use the rank of instructor. However, the University of California uses the rank of lecturer in a manner equivalent to the way most institutions use the instructor rank.

Another major difference in funding concerns the activities that are included in an institution's budget versus the budget of its related foundation(s). None of the foundation expenditures would or should enter the HEGIS universe, but legitimate differences are attributable to the existence of foundations. For example, at the University of Michigan, the foundation administers several named professorships, chairs, and other grant funds. At the University of Illinois, Urbana-Champaign, all intercollegiate athletic expenditures and revenues are handled by the University of Illinois Athletic Association which is a separate entity and, therefore, is not a part of the HEGIS universe.

An interesting problem encountered was the reporting of extension education. At most of the universities visited, extension education was conducted through state-funded campuses. Expenditures and revenues of the activity were reported on the HEGIS finance form; however, extension enrollments frequently were not included on the enrollment form. For example, at the University of California, approximately 135,000 head-count regular students and more than 300,000 head-count extension education students were enrolled. None of the extension students were included in the HEGIS universe. At the University of Maryland, all of extension education is handled through a separate campus which receives no state funds. Enrollments for this campus were reported on a HEGIS enrollment form.

Among institutions with medical schools, the amount of state support for the affiliated hospitals differs significantly and cannot be identified on the HEGIS form. The hospital expenditures are readily identifiable on the appropriate campus' HEGIS finance form but the state subsidy for the hospital is included with all of the state funds received by the campus.

The problem of funding differences does not negate

the use of HEGIS data in any way. These differences often will produce results that will prompt a researcher to learn more about the institutions which are being compared so that the results can be explained. Knowledge of funding differences can enhance the ability to interpret the data.

### Reporting Problems

Reporting problems are the result of insufficient instructions on the HEGIS form, insufficient information on the part of the institution, and/or insufficient incentives to complete the forms correctly. The instructions on the HEGIS form provide wide latitude for interpretation. For institutions that have a budget program structure different from the HEGIS program structure, the exercise of mapping the institution's budget programs to the HEGIS programs requires interpretation by the person completing the form. For example, in Maryland, "public safety" is a separately identified programmatic area for which institutions receive appropriations. Several institutions reported these expenditures in plant operations while others reported the expenditures in institutional support. Either placement was justifiable within the directions.

A major reporting problem concerns fringe benefits. The instructions are clear that fringe benefits should be included, but many institutions do not budget fringe benefits and do not know how much they are. Fringe benefit expenditures can amount to as much as 25 percent of an institution's expenditures for salaries and wages; therefore, this is a significant reporting problem.

There are two possible solutions to this problem. One would be an explicit question on the HEGIS finance form: "Are fringe benefits included?" Answers could range from yes, to a certain percent, to no. For example, in California all fringe benefits are included while in Texas only the fringe benefits that run through the institutional budgets are included which is just a small percent of the total fringe benefits. Another solution would be an explicit instruction to estimate the total cost of fringe benefits if actual data are not available. Then a question could be included to ascertain whether the fringe benefit data are actual or estimated.

Another problem encountered was the accurate reporting of faculty salaries. At many institutions where faculty receive salary stipends from sources other than regular salary funds, e.g. endowment income, the stipends are frequently not reported. The University of Texas at Austin, which does not report salary stipends, found that the result of this underreporting is to reduce the average salary of full professors by about \$1,000.

What are the solutions to the reporting problems? If more people use the HEGIS data, more institutions may be willing to spend the additional time required to report accurately. In those instances where the information is not available and the institution is uncomfortable making an estimate, this should be noted. The most common example of this is the reporting of fringe benefits.

### Summary and Conclusions

Problems of comparability with HEGIS data were found in this study, and were classified into three categories: universe definition, funding differences, and reporting problems. The majority of problems were related to the

HEGIS finance forms. However, the problems associated with the use of HEGIS data in comparing institutions do not negate the use of HEGIS data in any way.

HEGIS is the only available, universally collected information source on higher education institutions and their characteristics. Data collected through HEGIS surveys provide researchers with a valuable, and commonly understood, tool that can be used in decisionmaking. As is true with the use of other sophisticated tools like computers, the challenge facing those using HEGIS data is understanding how to best use this tool. The HEGIS finance form is a special case that, like a specialized computer software package, requires special care and instruction in use.

Specifically, the results of this study suggest that several changes be made in the instructions to the HEGIS finance form to enhance the usefulness of the information for researchers and others using these data. First, the addition of information on the entities that make up a university and that are not explicitly identified in the NCES Directory would be valuable. Data on entities such as system administrations, research laboratories, and experiment stations could be requested, and universities could identify how these entities are reported on the HEGIS finance forms. It is essential that someone at the system level of a university or the state level be involved in this effort to ensure that the total university system is included in the HEGIS universe.

Second, the inclusion of an explicit question on fringe benefits would be of value to those using the HEGIS forms in the comparison of institutions. The answer to the question of whether the data are actual or estimated, and to whether fringe benefits are included at all, would provide additional information that would be of use to those making comparisons among institutions.

Third, the continued and more widespread the use of HEGIS data in comparisons among institutions may prompt more individuals responsible for completion of the forms to spend the additional time to report accurately. Because it is unlikely that the collection of another survey would be viewed positively by institutional personnel, it is important that the HEGIS surveys be continued and used by those in decision-making positions.

### Notes

<sup>1</sup>Marie Eldridge, "Improving the Quality and Relevance of Data through an Effective Partnership," proceedings of the SHEEO-NCES Communication Network National Conference, May 18, 1983, Silver Spring, Maryland.

<sup>2</sup>M.M. Chambers, *Grapevine*, published monthly, Department of Educational Administration and Foundations, Illinois State University, Normal, Illinois.

<sup>3</sup>D. Kent Halstead and Marilyn McCoy, *Higher Education Financing in the Fifty States: Interstate Comparisons, Fiscal Year 1979*, National Center for Higher Education Management Systems, Boulder, Colorado, 1982.

<sup>4</sup>Paul Lingenfelter, "The Uses and Abuses of Interstate Comparisons of Higher Education Funding," *Business Officer*, September 1983, p. 14.

<sup>5</sup>See, for example, James A. Hyatt and Robert K. Thompson, "State and Institutional Comparative Analyses Using HEGIS Finance Data: A Review" *Business Officer*, June 1980.