ABSTRACT

Any cost analysis begins by identifying the main cost-inducing variables in the system under consideration. Once these are identified and suitable measures of output derived, it is possible, although not always easy, to analyse expenditure against the level of activity associated with each variable, and thence derive unit costs per measure of output.

These unit costs can then be used to assess the financial implications of alternative plans. Such financial information forms an important element in the assessment of any plan. Indeed, while not the only consideration, it is difficult to see how decision-making can be wholly effective in the absence of an analytical framework for the analysis of institutional costs.

Such cost projections also enable average student costs to be determined and projected. The importance of these is that they give an indication of the relative overall efficiency of the institution, in comparison with other institutions operating at the same level.

The article uses the Universidad Estatal a Distancia as an example to illustrate the methodology and utility of cost analysis in educational planning and decision-making.

Introduction

During the 1970s, increased interest in and awareness of the possibilities of distance teaching at university level led to the foundation, in a number of countries, of universities wholly dedicated to this mode of teaching. The reasons underlying their development varied from country to country, but most were concerned with a widening of educational opportunities to previously deprived target groups.

In cases where distance education was seen as the only way of meeting a particular demand for access to higher education, the comparative costs of distance education and of expanding the conventional university sector did
not need to be considered. On the other hand, with rising costs in higher education, and increased demand for access, there was in many of the projects a hope, expressed either implicitly or explicitly, that distance teaching would provide a means of expanding the provision of places at a lower unit cost than would be the case if conventional, campus-based, solutions were applied.

However, in spite of considerable interest in distance teaching as a means of reducing unit costs in higher education, only two of the distance teaching universities have been the subject of cost studies. The institution that has attracted most attention from economists has been the Open University of the United Kingdom (UKOU). Studies by Laidlaw and Layard (1974), Lumsden and Ritchie (1975), Mace (1978) and Wagner (1972, 1977) examined the relationship of fixed and variable costs in the OU system, and drew comparisons between the relative cost-efficiency and cost-effectiveness of the OU and conventional campus-based universities in the United Kingdom. More recently, the cost structure of a smaller distance teaching university, Athabasca University in Canada, has been examined (Snowden and Daniel, 1979).

These studies show that in contrast to campus-based universities, in which teaching costs are traditionally treated as a variable cost directly related to the output of students, distance teaching universities incur very significant costs in the preparation of course materials, and that these costs are incurred irrespective of student numbers. Wagner, for example, has seen the investment in course development as analogous to capital investment in business, representing a move away from the labour intensive nature of conventional educational institutions.

It is also clear that choice of media can, and does, affect cost levels significantly. Some of the factors involved have been summarised by Eicher (1978). However, although both Wagner (1977) and Mace (1978) have pointed out, apropos of the OU, that cost would change significantly (both up and down) if the mix of media is changed, very few studies have looked at alternative levels of cost in a particular system, given changes in the media used.

One of the factors weighing against such studies has been the relatively simple nature of many of the cost studies undertaken in the past. Accounting and information systems do not on the whole support detailed multi-variable analyses of costs. Recent work by Neil et al. (1979), and in Kaye and Rumble, (1980) has suggested new approaches to this problem by attempting to define more closely the variables involved in distance teaching, and the data required to adequately analyse costs. However, their approach remains an ideal rather than an actuality.

Notwithstanding this, even relatively crude cost analyses, such as the one presented in this article, can be of use to decision makers if they identify