

PERFORMANCE INDICATORS FOR SRI LANKAN UNIVERSITIES

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ABSTRACT

Although performance measurement approach has been developed throughout the world as part of an extensive public sector reform, until recently there had been no formal system of evaluating the performance of the Sri Lankan universities using quantifiable indicators. At present, performance indicators have been identified as a salient feature in corporate plans of universities and other Government institutions, on which the budgetary allocations for future years are expected to be made. As such, output-based control used in the private sector has to be introduced to the public sector also.

Three categories of performance indicators, namely the internal, external and operational indicators that can be used to evaluate the performance of the universities in Sri Lanka are identified in this paper. The internal performance indicators include those concerned with undergraduate and postgraduate education, research and staff. The external performance indicators include those concerned with national and regional effectiveness of the universities and acceptability of graduates in employment. The operational indicators those associated with smooth functioning of the universities.

Performance indicators are classified as input, process and output/outcome indicators and also as the teaching/learning, scholarship/research/management and service/outreach indicators.

Some examples for each of these categories of performance indicators that can be used in Sri Lanka are presented in this paper.

INTRODUCTION

Current concerns on the effectiveness and efficiency of public sector institutions including universities have emphasized the need for a thorough examination of their performance throughout the world. Global demographic and social changes, increasing economic interdependence and public concerns have led to major changes in the higher education sector worldwide. The Government of Sri Lanka has also given high priority to tertiary education reforms as a response to the public concern. Most of the time, it is said that the graduates of Sri Lankan universities lack the competencies and skills required for the economic and social development of the country. Hence over the past few years, much emphasis has been given for the improvement of quality and relevance of the undergraduate and postgraduate education. Accountability and transparency of the higher education institutions have also received much attention of all stakeholders and the general the public.

At present, there is no formal system of evaluating the performance of the universities in Sri Lanka using quantitative indicators. However, with the increasing demand for higher education and the developing concerns on the quality and relevance of university education, both at the undergraduate and postgraduate levels, the universities are under pressure to become more efficient and effective in providing their services.

Since mid 1990's, performance measurement approach has been one of the international trends in public sector accounting (Ittner & Larcker 1998). The financial and non-financial performance indicators are used throughout the world in the performance measurement approach. As part of the New Public Management (NPM), it may be useful to introduce an output-based control such as Management by Objectives (MBO) and assess public sector effectiveness through value for money audits.

The concept of performance indicators was applied in the Sri Lankan University system recently when developing project proposals for the Quality Enhancement Fund of the Improving Relevance and Quality of Undergraduate Education (IRQUE) Project funded by the World Bank. Many academics from the Sri Lankan university system were trained in developing measurable and achievable performance indicators.

Further, at least part of the budgetary allocations for the Universities in future is expected to be based on Corporate Plans and as per the guidelines given by the Department of Public Enterprises, performance indicators are among the salient features of a Corporate Plan. Since an action plan identifying the responsibilities of managers with goals and the targets to be achieved during the period specified in the Corporate Plan is also required to be developed, aspects such as MBO and assessment of effectiveness have now been introduced to the public sector in Sri Lanka. This shows that MBO, which is an output-based control used in the private sector is now gradually being introduced into public sector institutions in Sri Lanka as done in most countries throughout the world (Ittner and Larcker 1998, Brignall and Modell 2000, Modell 2003).

At present, the universities in Sri Lanka usually carry out self evaluations on their performance using quantitative indicators such as the number of students enrolled in each academic year, number of degree programmes, number of scientific publications of the staff, scholarships secured by the academic staff etc. The presentation of such statistics in annual and other reports remained largely unchanged over the past years. It is necessary to pay attention to renew the reporting mechanism using greater number of performance indicators

In this paper, an attempt is made to develop and propose some indicators to evaluate the performance of a university.

DEVELOPING PERFORMANCE INDICATORS UNIVERSITIES

In order to develop performance indicators, the goals of each university should be clearly identified. These goals are already identified by most universities and presented in Corporate Plans. As such, development of performance indicators may not be a difficult task. Stakeholder consultation is also vital in developing the conceptual framework of university sector goals and hence in developing performance indicators. Interests of the community, social and economic priorities of the government, and international trends act upon the goals of the higher education institutions. The budgetary constrains, staff aspirations, council philosophies and strategic interests of the institutions also influence the educational and training needs.

While many of the goals are made explicit through formal documentation such as performance agreements, there will be many other goals which are implicit and never articulated. Yet, these goals must be addressed by the system and the individual universities when developing performance indicators. There are also complex external and internal forces that should be considered in the performance measurement agenda.

Many indicators have been used to evaluate the performance of the universities throughout the world. In Finland, the performance is evaluated concerning targets such as postgraduate degrees, scientific publications, adult education and international student exchanges (Jaaskelainen *et al.* 2009). Although pursuit and dissemination of knowledge are the primary objectives of universities, three major categories of output viz., highly qualified manpower, research and scholarship, and social benefits have been identified (Higgins 1989, Goddard 1999, Schutte & van der Sijde 2000). Social benefits expected from universities include impacts on national and regional culture (Higgins 1989), external tasks and commitment, and social responsibilities (Virtanen 1999). All these have to be considered in developing performance indicators.

The Universities are also expected to transfer the new information generated through research for the socio-economic development of citizens (Jaaskelainen *et al.* 2009). This also needs to be considered in developing performance indicators for the universities.

It is well accepted that the performance indicators are most effective when they relate an absolute figure to a depiction of relative position (Morrill 2000).

SOME EXAMPLES FOR PERFORMANCE INDICATORS

Performance indicators for universities are classified in many ways. The most common classifications include the following categorizations.

- Internal, External and Operational indicators
- Input, Process and Output/Outcome indicators
- Teaching/Learning, Scholarship/Research/Management, and Service/Outreach indicators

Internal, External and Operational Performance Indicators

Higgins (1989) identified the performance indicators for universities as internal, external and operating indicators.

Internal Performance Indicators

The internal performance indicators are those concerned with research, postgraduate education, undergraduate education and staff.

Some of the performance indicators that could be used to evaluate research and postgraduate education include the following.

- Percentage of state grants used for research
- Number of research grants received
- Total amount of research funds received from donor agencies
- Number of research publications
- Number of patents
- Number of external research grants
- Number of visits abroad by researchers
- Number of postgraduate degree programmes
- Number of postgraduate students registered
- Number of postgraduates produced
- Number of postgraduate produced/Number registered (%)
- Number of postgraduate students funded by donor funded projects
- Percentage of postgraduate students who have completed the postgraduate degrees under donor funded projects

Research publications are of several categories. These include the research papers in indexed journals, research papers in non-indexed refereed journals and the papers presented at conferences which are published in abstract form.

The external research grants may also be categorized as those received from international and local donor agencies as done in some other countries. Although the number of postgraduates

produced as a percentage of number enrolled may also be considered as a performance indicator, in most occasions, due to the factors beyond the control of the university, the % of students completing the postgraduates programme may be very low. These factors include the inability to get leave from the workplace, heavy workload at the work place, and family and social responsibilities as most of the postgraduate students are employed, married and have children.

Several performance indicators for undergraduate education have also been identified in most countries (Modell 2003, Jaaskelainen *et al.* 2009). Some of the performance indicators related to undergraduate education that could be applied in Sri Lankan universities may include the following.

- Number of entrants
- Number of entrants who have passed the GCE (A/L) in the first attempt
- Number of first choice applicants
- Number of first choice applicants /Number of openings
- Numbers of graduates produced
- Average credits per degree
- Number of General degree graduates who have completed the degree programme within 3 years
- Number of special degree graduates who have completed the degree programme within 4 years
- Number of overseas students
- Number of overseas students/ Number of local students
- Numbers of first degree programmes
- Employment rate of graduates within the first year after graduation

In many other countries, in addition to the above, performance indicators such as the median age of entrants, % of males, % of entrants whose parents have a university education are also considered (Modell 2003)

In Sri Lanka, % of entrants selected on merit, % of entrants selected on district basis and the % of entrants selected from under-privileged districts may also be used as performance indicators of the undergraduate education.

Most of the Sri Lankan universities conduct pre-degree diploma and certificate courses. The number of such programmes can also be considered as another performance indicator.

Several staff-related performance indicators for universities have also been identified in many countries (Modell 2003). Staff-related performance indicators that could be applied in Sri Lankan universities may include the following.

- Number of staff (both academic and non-academic)
- Number of teaching staff
- Number of teaching staff / total number of staff (%)
- Number of students per teacher
- Number teaching staff with doctoral degrees
- Number of teaching staff with doctoral degrees/ total number of teaching staff (%)
- Number of Professors
- Number of Professors / total number of teaching staff (%)
- Number of non-chaired full professors

In addition to those indicated above, the following may also be used as performance indicators.

- Number of teaching staff with postgraduate degrees
- Number of teaching staff with postgraduate degrees / total number of teaching staff

Since inbreeding is a general phenomenon observed today in most of the universities in Sri Lanka, the number of teaching staff with overseas postgraduate qualifications and that number as a % of total teaching staff could also serve as useful performance indicators. Evaluation of performance through these indicators may discourage inbreeding of knowledge among the academic staff.

In addition, the number of staff who have received overseas travel grants to present papers at conferences and research symposia, number of staff who have participated in workshops and training programmes organized locally and the number of staff who have served as resource

persons in training programmes can also be considered as other staff-related performance indicators.

External Performance Indicators

The external performance indicators include those concerned with national and regional effectiveness, acceptability of graduates in employment, staff publications for general public, etc.

Performance indicators that could be used to measure the national and regional effectiveness of a university may include the following.

- Number of books published by the staff
- Number and volume of co-operation projects with the industry
- Number of activities such as exhibitions and public lectures organized
- Numbers of people attended to such activities
- Number of articles in popular magazines and newspapers

Further, the number of staff and students involved in community activities and number of such activities organized by the university can also be used as performance indicators of regional effectiveness.

Other external performance indicators that can be applied for the universities in Sri Lanka may include the following.

- Mean waiting time to get the first job after graduation
- Average salary of the graduates at first placement

Operational Performance Indicators

These are the indicators that could be used to measure the smooth functioning of the universities. These include indicators that are concerned with staff/student ratios, staff workloads, revenue, unit cost of production of graduates and social harmony. Some examples for operational indicators could be as follows.

- Total Government grant

- The amount of earned funds'
- The amount of earned funds/total revenue (%)
- Average cost of production of a graduate.

Another factor which affects smooth functioning Sri Lankan universities is the social harmony within the university. This aspect has been given much emphasis in awarding grants from the quality enhancement fund and the institutional block grant of the IRQUE Project. The following performance indicators could be considered in measuring social harmony.

- Number of occasions or days the university was closed due to students' agitations.
- Number of extra-curricular activities organized.
- Number of students participated in extra-curricular activities.
- Number of students participated in extra-curricular activities/total number of student

Input, Process and Output/Outcome Indicators

Performance Indicators of universities are often classified also as Input, Process and Output/Outcome indicators

Input Performance Indicators

Input indicators deal with the resources available to carry out the teaching learning process and the students who enter the university. Examples for input indicators include those associated with student intake, quality of incoming students, staff numbers, staff qualifications, teaching facilities, library facilities and laboratory facilities available

Some examples for input indicators that could be used in Sri Lankan universities are as follows:

- Number of entrants
- Number of entrants who have passed the GCE (A/L) in the first attempt
- Number of first choice applicants
- Number of first choice applicants /Number of openings

- Mean Z-Score of the entrants
- Number of staff (both academic and non-academic)
- Number of teaching staff
- Number teaching staff with doctoral degrees
- Number of teaching staff with doctoral degrees/ total number of teaching staff (%)
- Number of Professors
- Number of Professors / total number of teaching staff (%)
- Total Government grant
- The amount of generated funds
- The amount of generated funds/total revenue
- Number of lecture theatres
- Number of lecture theatres with audiovisual facilities
- Number of books available in the library
- Number of books / Number of Students
- Number of computers available
- Number of computers per student

Process Performance Indicators

Process performance indicators are those dealing with what universities do with the inputs. These include the indicators dealing with curricula, staff workloads, instructional organization, use of technology etc.

Some examples of process indicators that could be used in Sri Lankan universities may include the following.

- Staff/Student ratios
- Staff workloads
- Student workloads (e.g. credit requirements)
- Class size
- Course options (e.g. number of elective modules available)
- Length of study (e.g. number of months spent in the University to complete the degree programme)
- Number of days the university was closed due to student disturbances

Output/Outcome Performance Indicators

Output/Outcome indicators deal with the cognitive and non-cognitive effects of the university experience on students and staff.

Examples for output/outcome indicators may include the following.

- Number of research publications produced by the staff and /or students
- Number of research publications in indexed journals
- Number of books published by the staff
- Number of patents produced
- Number of visits abroad by researchers for academic purposes
- Number of postgraduates produced
- Number and volume of co-operation projects carried out with the industry
- Number of activities such as exhibitions and public lectures organized
- Number of articles published in popular magazines and newspapers
- Mean waiting time to get the first job after graduation
- Employment rate of graduates within the first year after graduation
- Average salary of the graduates at first placement
- Number of extra-curricular activities organized for students
- Number of National/International Awards won by students and/or staff

Teaching/Learning, Scholarship/Research/Management, and Service/Outreach Performance Indicators

Performance indicators are also classified as those dealing with teaching/learning scholarship/research/management, and service/outreach activities

Teaching/Learning Performance Indicators

Some examples for performance indicators dealing with the teaching learning process may include the following.

- Staff workloads

- Student workload (Credit Requirements)
- Class size
- Number of elective courses available for Students
- Length of Study
- Number of days of closure of the University due to students' agitations

Scholarship/Research/Management Performance Indicators

Some examples for performance indicators dealing with the scholarship, research and management may be as follows.

- Graduate output (e.g. Number of graduates produces per academic year)
- Completion rate (e.g. Number of graduates produces as a percentage of intake)
- Number of Classes awarded at the degree examination
- National/International awards won by teachers and /or students
- Research output (e.g. Number of publications etc.)
- Waiting time for the first employment
- Initial salary of the graduates

Service/Outreach Performance Indicators

Examples for performance indicators dealing with service and outreach activities of the universities could include the following.

- Number and volume of co-operation projects carried out with the industry
- Number of Activities such as exhibitions and public lectures organized by the university
- Number of people attended such activities
- Number of articles published in popular magazines and newspapers
- Number of services provided

ISSUED TO BE CONSIDERED IN USING PERFORMANCE INDICATORS

Performance indicators that are based on complex formulae are not easily interpreted. Therefore they should be very simple and transparent.

When identifying performance indicators, most desirable and useful results are achieved if an agreed framework for data collection & reporting is established. In addition, the number of Performance indicators should be kept to minimum. Otherwise collection of data would be very difficult and expected results may not be achieved.

Performance Indicators attached to certain goals and objectives may lead to redirection of resources. Therefore, selection of performance indicators will also determine the 'right' direction of future activities.

A characteristic feature of higher education is the lengthy time gap between actions and outcomes. Therefore, when developing performance indicators, this time gap should also be considered. It is also necessary that performance indicators are interpreted considering what has been actually measured. Special care should be taken to distinguish quality and efficiency. For example, when the cost per student is taken as a performance indicator, clear interpretation should be done considering the quality as well as the efficiency. High cost involved may be an indication of the high quality of the output; it may also be an indication of poor management of financial resources

Performance indicators do not indicate the action that should be taken. Interpretation of Performance indicators within a broader understanding of the context is required to take appropriate action. They should be used only for the purposes that they have been developed for and should not be misused.

CONCLUDING COMMENTS

Performance measurement approach has now become an internationally accepted trend in public sector accounting (Ittner & Larker 1998). However, in the public sector of Sri Lanka, performance measurement approach using performance indicators is not widely applied yet.

In this paper, an attempt was made to identify some performance indicators that could be used in Sri Lankan universities with respect to research, postgraduate and undergraduate education, staff, community development and social harmony.

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However, performance measurement should be selectively tailored towards clearly specified objectives and goals. The development of performance indicators should be viewed as another effort toward enhancing efficient management and ensuring the quality of the output of our universities.

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