

نحو الكفاءة والفعالية والاقتصاد

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الملخص

من أجل الحفاظ على ثقة المجتمع وضمان استمرارية الثقة المذكورة يجب على الحكومة أن تعمل على استخدام الموارد بشكل فعال في تنفيذ الخدمات ، وهذا بدوره يتطلب تطبيق موازنة البرامج والأداء في مختلف القطاعات بما في ذلك قطاع التعليم العالي . لأن ذلك يساعد على تحقيق الكفاءة والفعالية والاقتصاد الأمر الذي لجأت إلى تطبيقه العديد من الدول منها على سبيل المثال وليس الحصر: المملكة المتحدة، الولايات المتحدة الأمريكية وكندا وأستراليا ونيوزيلندا وفرنسا، وسنغافورة ، وماليزيا. وعليه فإن هذا البحث يمثل دراسة تحليلية للتحديات التي من المحتمل أن يتعرض لها قطاع التعليم العالي عند التحول إلى موازنة البرامج والأداء.

الكلمات المفتاحية : المساواة ، قياس الأداء على أساس البرامج ، الحوكمة، الشفافية.

INTRODUCTION

In order to maintain public confidence and support, governments must produce results that are valued by their citizens. While sound policies and the responsible allocation of resources are important, they are not enough. Good results also depend on effective implementation of often programs and services. This represents challenge to high education Institutions (HEIs). This is because strategic planning, budgeting and information systems management may not coordinate and integrate their efforts to establish, maintain and use performance measurement systems to evaluate the impact of education and research programs. However, governments (e.g. UK, USA, Canada, Australia, New Zealand, France, Singapore, and Malaysia) benefit a lot from the PBB system because of greater discipline in setting and enforcing hard budget constraints plus accountability mechanisms that make it possible for public managers to be given more authority to determine how agreed outputs and outcomes should be achieved. Performance Based Budgeting (PBB) system has been adopted as governance mechanism ties policy-making with resource realities, improving the allocation of funds to strategic priorities among and within economic and social sectors, and defines each output in terms of efficiency. PBB system shows the purposes of the expenditure, the cost of programs and sub-programs and measurements and results under each program and sub-program. However, such reform requires comparable information to enable auditing; influence of activity based costing and the search for allocation techniques. This study is relevant for informing the debates on devolution and accountability.

The remainder of this paper is organized in three sections. The first provides an overview of relevant literature, and outlines the research question that formed the focus of this study. In section 2, we will make a few remarks on classifying funding models and PBB in particular. In section 3, concluding remarks

2. An overview of relevant literature

2.1. Public management reform.

Recent attention to public management reform and the role of performance based budgeting is not new. Australia and New Zealand, for example, have developed very extensive performance based budgets and processes. This is based on reforms in public management that generally tried to delegate greater flexibility and autonomy to managers as a means of improving efficiency and effectiveness of their operations. Since this gives the manager greater power to make decisions, the reforms have included much greater emphasis on accountability as a means of balancing and checking the exercise of that power. The literature on new public management is broad and extensive (Hood,1991, Maor,1999, Pollitt & Bouckaert,2000, Pallot, 1998 & 2001, Ezzamel, Hyndman, Johnsen, Lapsley& Pallot ,2005).

2.2. Performance measurement

The optimal amount of performance data that should be supplied to evaluators is unclear, and may be related to the combinations and types of financial and nonfinancial measures employed (Alkaraan, F. & Hopper, T. 2005, Alkaraan & Northcott, 2006). However, techniques such as PBB, management by objectives, operations research, compliance and performance auditing, program evaluation, cost accounting, financial analysis, and citizen surveys have provided tools for enhancing performance measurement and reporting and for improving the quality and effectiveness of services. These methods in turn have contributed to improving the information available for decision making and to strengthening the accountability system. For example, management has been using goals, objectives, and measures of results to plan, direct, evaluate, and modify operations and improve performance. Performance auditing has expanded the scope of traditional auditing to encompass audits designed to assess the economy, efficiency, and effectiveness of programs.

2.3. Accountability and governance

Accountability is a key concept of governance, means that people are held responsible for carrying out a defined set of duties or tasks, and for conforming with rules and standards applicable to their posts. It requires governments to answer the public to justify the raising of public resources and the purposes for which they are used (Freeman et al, 2006). Governance requires such accountability through mechanisms of control and legitimation (Collier, 2005). Governance is the exercise of political, economic and administrative authority in the management of a country's affairs at all levels. It is a neutral concept comprising the complex mechanisms, processes, relationships and institutions through which citizens and groups articulate their interests, exercise their rights and obligations and mediate their differences.

Various systems to integrate performance measurement into budgeting are applied in nations around the world. Several countries such as UK, USA, Canada, Australia, New Zealand, France, Singapore, and Malaysia use quality, efficiency, effectiveness indicators to prepare government budgets. PBB system is a considerable topic still open for debate in public management communities. PBB requires federal governmental agencies to articulate how public monies will be spent on services and products that have an impact on people's lives, monitor how effectively and efficiently these programs work, and take action to improve program results. As such, new systems for accountability share the following characteristics: (a) outcomes that clearly articulate what programs are to achieve; (b) indicators to measure whether or not outcomes have been achieved; (c) performance standards or benchmarks to assess how programs are progressing; (d) data collection instruments to regularly obtain indicator data; and (e) periodic collection and analysis of data for internal decision making and public reporting (Freeman et al, 2006).

Wilson (2003) observes that the organization decision-making process seemed to differ between different countries and that there is little evidence of universalism. When applied to high education budgeting process, this problem leads to the following research question:

Research questions

- 1- What are the limitations of traditional budgeting approach?
- 2- What are the recent reforms of budgeting processes?

- 3- What are the ongoing challenges surrounding high education budgeting reform?

3. Budgetary process of High Education Institution (HEIs)

Governments must set priorities and plan carefully in order to properly allocate their scarce resources; control their application of scarce resources to assure maximum delivery of services for expenditures made and compliance with laws, including appropriation ordinances; and evaluate the results of their operations from the standpoints both of legality and of efficiency and effectiveness.

Budgeting is a continual process of planning and controlling activities in accordance with the plan (and modifying it when necessary) and evaluating activities at year end in order to better plan and evaluate future activities. The budgetary process is a principal means by which governmental activities are planned, controlled, and evaluated (Freeman *et al.*, 2006, P. 73). Budgetary accounting techniques are important because the annual budget is a legal compliance standard against which the operations of government are evaluated.

In traditional systems of budgeting, the most important objective sometimes seems to be to spend money, without taking results into full consideration; this problem arises for many reasons, including: (1) there is often lack of flexibility and it is often not possible to spend the money meant for one item on another item; and (2) if the expenditure is not made for any reason such as a delay in the work, it gets returned to the treasury. The overall impact of traditional systems over a period of years is that resources become misallocated because no changes in the basis of the budget are made, it is always incremental. Implications of introducing output budgeting are: (1) strategies need to be expressed in terms of outcomes and outputs; (2) performance budgeting needs to take into account the financing of outcomes and key outputs, and (3) how will outputs relate to the federal budget.

PBB system enables HEIs to use limited federal budget funds more efficiently and encourage professionalism, initiative and innovation in federal ministries and autonomous agencies. PBB brings together organizations involved in policy formulation, policy execution, and audit, as well as the connections between the three. Careful and

considered specification of an outcome structure is critical to the success of the outcome framework. Collectively, outcome agreements articulate government's priorities and objectives, and therefore define the purpose of agencies. Outputs describe the manner in which universities plan to contribute to the government's outcomes.

For the allocation of the basic (or core) funds supplied by the government HEIs, many approaches are in use. Sometimes governments use a negotiations-based approach, where a budget request drawn up by an institution is decided upon after negotiations between the budget authorities and the higher education institution. A part of the negotiations (or budget) sometimes is left to intermediary organizations, such as funding councils or research councils. In other countries we find formula-based mechanisms for the allocation of funds between the different institutions and different disciplinary areas. In many countries, budget authorities make use of a combination of formulas and negotiations.

PBB mechanisms are focusing on the output-side of universities and colleges. Funding then is tied to the 'products' of teaching and research activities of higher education institutions.

In a performance-oriented university funding mechanism, examples of output indicators incorporated in the formula or the budget negotiations are: the number of credits accumulated by students, the number of degrees awarded, the number of research publications. These are the outputs that universities are able to control – at least to a large extent. Other output indicators, that lie a bit further away from the sphere of control of universities, would be: the relative success of graduates on the labour market, the number of graduates working in jobs related to their training ('graduate placement'), or the success of universities in generating additional funding from contract activities (in the fields of teaching as well as research).² Although some may argue that the number of enrolled students be viewed as an indicator of teaching output, we would regard student numbers as an input variable – it is the 'raw material' which is transformed into 'products'.

The choice of output indicators in PBB often will be a contentious issue. If we agree on the idea that the ultimate mission of a university is to generate value added in terms of human capital, the correct way of measuring education performance would be some indication of the increase in knowledge and skills incorporated in students. It will be

clear that such an ideal measure does not exist (Dill, 1997). What's more, for teaching, part of the increase in human capital cannot even be attributed to the university's efforts alone, but has to be attributed to the innate abilities and efforts of the students themselves (Barr, 1998). In looking for adequate research output indicators, one encounters similar problems. For instance, a straightforward indicator such as the number of research publications cannot express the impact, originality or even magnitude of the research performance of a university researcher or a research group. This is even more problematic if one tries to measure research outputs on different disciplinary areas. Every output indicator therefore will have its shortcomings. The main reason for this is that the services of a university are not sold on a kind of market where supply is meeting demand and prices reflect costs, quality and scarcity. In fact, the market on which universities operate is very much an imperfect market. Therefore, instead of a single, one-dimensional measure, a number of different indicators will be used for approximating the many dimensions of the output in terms of quantity as well as quality.

However, in practical situations, and to prevent 'injustices' being done to higher education institutions (HEIs), the funding agencies often will use a number of input indicators next to output indicators when deciding on the budgets to be allocated.

In any case, the mix of input and output elements in the funding mechanism will be a political decision, as the indicators will directly relate to the objectives of the funding authorities and how they feel these objectives can be met in the best way.

Objectives often are volatile and depend on political agendas. They may range from the goal of universities becoming more output-oriented or academic research becoming more application-oriented, promoting cost-effectiveness and efficiency, et cetera. The range and priorities attached to the objectives will determine the choice and weighting of output and input indicators.

Program budgeting reform is designed to improve decision-making by providing better information on how well government services meet the community's needs. An emphasis is put on the "3E" (that is, "Economy", "Efficiency", and "Effectiveness"). In traditional systems of budgeting, the most important objective sometimes seems to be to spend money, without taking results into full consideration. This

problem arises for many reasons, including: (1) there is often lack of flexibility and it is often not possible to spend the money meant for one item on another item; (2) if the expenditure is not made for any reason such delay in the work, it gets returned to the treasury; (3) it is difficult to relate the money you are planning to spend with the results of spending the money. The system does not permit executives to plan the budgets over a longer period, because allocations are not always predictable, and sometimes the money that was promised does not arrive. The overall impact of "traditional" systems over a period of years is that resources become misallocated because no changes in the basis of the budget are made - it is always "incremental".

The main feature of a traditional budget is that policy choices are made independent of resource realities. Thus policy is not sustainable and spending patterns may not reflect the priorities articulated by federal government. Direct costs are related to line items and not to programs of activities. Conversely, PBB focuses on appropriate strategies that emphasize on the medium term rather than cash management in the short term, and, it is a better mechanism for achieving strategic objectives than the traditional budget.

As a general rule, performance should be measured by that mix of input, output, outcome that is appropriate to the specific sector concerned during the relevant period. The implementation of PBB system requires HEIs to clearly define what a particular program is to achieve for example, outcomes to ensure, for more students, a certain level of educational attainment. Therefore they have to define indicators, which help assess how well it does in achieving these outcomes. PBB system brings together organizations involved in policy formulation, policy execution, and audit, as well as the connections between the three. PBB focuses on the "3Es" that is "Economy", "Efficiency" and "Effectiveness".

Economy is related to the cost of inputs. It is the acquisition of the appropriate quality and quantity of financial, human and physical resources at appropriate times and at the lowest cost concerned and may be assessed through input measures and comparisons with norms and standards. Efficiency is the relationship between outputs and the resource used to produce them, and is measured by cost per unit of output. Effectiveness is the extent to which programmes achieved their expected objectives, or outcomes. Effectiveness requires competence;

sensitivity and responsiveness to specific, concrete, human concerns; and the ability to articulate these concerns, formulate goals to address them and develop and implement strategies to realise these goals.

Each university must specify the number of programs they need. Each program has inputs and out puts which should achieve in the specific period of time. They have to identify efficiency indicators (to compare inputs and outputs), and effectiveness indictors (to compare outputs with outcomes). Performance indicators and costs must be established, measured and reported. Such performances can be measured in terms of the quantities of outputs produced and other measures of quality and time consumption. Measures of the quality relate to the characteristics of an output that are most relevant to stakeholders.

While the supposed advantages of PBB revolve around promotion of accountability and performance, the use of performance indicators for funding purposes can also have undesired side effects. It may lead to risk-avoiding behaviour among institutional administrators and academic personnel. That is, only the outputs that are easily attainable are produced. As such, universities will under-invest in academic advancement in the long run. On the same note, if universities are funded on the basis of the number of degrees they award, some institutions may be tempted to lower the standards in order to improve their funding. So, again, quality is at risk and quality assurance mechanisms may have to be in place next to the funding mechanisms. The funding authorities (ministries or intermediary bodies such as funding councils and research councils) explicitly include quantified teaching and research output data in the formulas they use for distributing public funds among institutions. Burke and Serban describe PBB as: "state governments or co-ordinating boards are using reports of institutional achievements on performance indicators in an indirect way". In PBB, performance information (i.e. a quite long list of performance indicators) is used in a loose and indirect way for shaping the total budgets for public colleges or universities.

The major advantage of funding formulas is that, because they use objective criteria, they provide a clear insight in the distribution of funds among higher education institutions. Therefore, they facilitate comparisons between institutions. However, there are many cases in

which budgets are not determined on the basis of formulas but on qualitative assessments can be found in the approaches used by research councils for allocating budgets to researchers or research groups. The funds generally are awarded on the basis of project proposals submitted by researchers or research groups. In a competitive process knowledgeable experts (peers) judge the submitted proposals. The quality of the proposal and the requested budget are important elements in this process. Often, the expertise of the researchers and their past performance are used in the selection process. Thus performance, or rather expected performance, is an important criterion in arriving at the funding decision. Table (1) shows mechanisms that determine the core funds supplied by the funding authorities to the universities.

Table.1. Mechanisms that determine the core funds supplied by the

	Research council income (as a % of all public revenues)	Do formulas underlie the teaching budget?	Do formulas underlie the research budget?
USA	around 30%	Yes	No
UK	9%	Yes	Yes
Australia	8%	Yes	Partly
New Zealand	9%	Yes	Yes
Germany	10%	No	No
France	15%-20%	Yes	No
Japan	21%	Yes	Yes
Sweden	13%	Yes	No
Belgium	17%	Yes	Yes
Denmark	20%	Yes	No

funding authorities to the universities.

Source: Jongbloed, B, 2001

Two groups of countries can be distinguished. One group contains countries where research council funds represent only a relatively small amount of university revenues (Australia, New Zealand, the UK, and Germany). The other group includes countries in which research councils account for more than 10 percent of the universities' revenues

from public sources. Table (2) provides an overview of the use made of performance information in the funding mechanisms that underlie the core budgets for teaching and research. The performance information can take several forms. There is a choice of output indicators that are currently in use in the countries included in our survey, such as: number of credits accumulated by students, number of graduates, research publications, and number of doctoral theses.

Table 2. Performance orientation in the funding mechanisms for universities

Country	Degree of performance orientation in the allocation of core funds for:	
	Teaching	Research
USA	- to -/+	- to -/+
UK	-	+
Australia	-	-/+
New Zealand	-	-
Germany	- to -/+	-
Sweden	+/-	-
Denmark	+	-/+
Belgium	-	-
Sweden	+/-	-
Australia	-	-/+

Source: Jongbloed, B, 2001.

+ : fully output-oriented

+/- : mix of output- and input-orientation, but primarily output-oriented

-/+ : mix of output- and input-orientation, but primarily input-oriented

- : fully input-oriented

One of the main conclusions to be drawn from this table is that, with a few exceptions, one cannot speak of a high degree of performance orientation in the countries surveyed by Jongbloed B, 2001. This is a fact for teaching as well as research. This may come as a bit of a surprise considering the attention paid to accountability and quality issues in public debates on university funding. With respect to the core

budgets for teaching, Denmark seems to be the only country that employs an example of output-oriented funding in our sample. As regards the funding for research, the UK shows the strongest performance orientation. In Australia, the base funding for teaching to undergraduates mainly depends on the number of student places negotiated between the individual institutions and the department for education in the so-called 'profiles negotiations'. Denmark is the only country where teaching budgets are determined solely on the basis of output. This funding mechanism is known as the taximeter model. Funding is based on the number of credits obtained by students during each year. The French system of supplying teaching funds to universities is based on the number of enrolled students. In the case of Germany, the integrated core funds for teaching and research are negotiated between the state legislatures and the university sector. The public universities in Japan receive their funds for teaching activities mainly on the basis of the number of student places, teachers and the number of educational units. As far as research is concerned, again an input-based formula is applied which takes into consideration staff posts, type of research, and number of graduate students. In New Zealand, the government's core funding for teaching and accompanying research in universities takes the form of tuition subsidies that are paid out to higher education providers on the basis of the number of equivalent full-time students (EFTS). The Swedish funding formula includes input and output indicators for calculating the universities' allocations for teaching. For their teaching activities the UK universities were, until recently, primarily rewarded by the Higher Education Funding Councils on the basis of their relative efficiency in instruction.

4. Discussion and conclusion

PBB system requires HEIs to review why they exist or have been established in the first place, i.e. state their "Missions"; and what they are expected to achieve in the medium-term or their "Objectives". Based on a clear understanding of their mission(s) and objectives, federal agencies assess the outputs required to achieve set objectives and the activities.

Proper and beneficial use of performance indicators results only when they are used intelligently, in conjunction with other available

information, by persons understanding both their strengths and their limitations.

Performance indicators are judgment supplements, not substitutes. No single indicator can be expected to result in a comprehensive and reliable measure of performance of complex tasks, though a carefully developed series or combination of indicators can provide both useful measurements and powerful tools with which to influence behaviour.

PBB is designed to improve decision-making by providing better information on how well Government services meet the community's needs, as the emphasis was on the "3 Es".

Determining goals and specific objectives for budget activities basically allows linking federal government priorities within a sustainable medium-term expenditure framework and measuring the performance of federal agencies. It also allows the implementation of an appropriate budget policy.

Achieving effectiveness requires competence; sensitivity and responsiveness to specific, concrete, human concerns; and the ability to articulate these concerns, formulate goals to address them and develop and implement strategies to realise these goals.

Finally, budgetary control difficult to achieve as programs may cross departmental lines of authority and responsibility. It is not clear yet who is accountable? To whom are they accountable? For what are they accountable?

References

Alkaraan, F. 2011. High Education Budgeting Reform: Towards the "3Es", Paper presented to the International Higher Education Congress New Trends and Issues, May 27-29-2011, Istanbul, Turkey.

Alkaraan, F. & Northcott, D. 2006. "Capital investment decision-making: A role for strategic management accounting? A study of practice in large U.K. manufacturing companies", *British Accounting Review*, 38(2).

Alkaraan, F. & Hopper, T. 2005. Capital Budgeting: Theory and Practice", in Z. Hoque (ed): Handbook of Cost and Management Accounting, Spiramus, London.

Barr, N. (1998). The economics of the Welfare State, (3rd edition) Oxford: Oxford University Press

Burke, J.C. & Serban, A.M. 1998. Current status and future prospects of performance funding and performance budgeting for public higher education: The second survey. New York: The Nelson A. Rockefeller Institute of Government.

Collier, P. M., 2005. Governance and the quasi-public organization: a case study of social housing, *Critical Perspectives on Accounting* 16, 929-949

Dill, D.D. 1997, Higher education markets and public policy, *Higher Education Policy*, vol. 10, no. 3/4, pp. 167-85.

Ezzamel, M., Hyndman, N., Johnsen, A., Lapsley, I. and Pallot, J. 2004. Has Devolution Increased Democratic Accountability?, *Public Money and Management*, 24(3): 145-153.

Ezzamel, M., Hyndman, N., Johnsen, A., Lapsley, I. & Pallot, J. 2005, Conflict and Rationality: Accounting in Northern Ireland's Devolved Assembly, *Financial Accountability & Management*, 21(1): 33-55.

Freeman, R. J., Shoulders, C. D., & Allison, G. 2006. *Governmental and Nonprofit Accounting: Theory and Practice*, 8th Edition, Prentice Hall, : 0-13-185129-2

Hood, C., 1991. A public management for all seasons?, *Public Administration*, Vol. 69, 1, 3-19.

Jongbloed, Ben., 2001, Performance-based Funding in Higher Education: an international survey, Acer Centre For Economics of education and Training, working paper No.35 , March 2001

Maor, M., 1999. The paradox of managerialism, *Public Administration Review*, Vol. 59, 1, pp. 5-18.

Pallot, J., 2001. A decade in review: New Zealand's experience with resource accounting and budgeting, *Financial Accountability and Management*, 17, 4, 383-400.

Pallot, J., 1998. "The New Zealand Revolution." in Olov Olson, James Guthrie, Christopher Humphrey, eds. *Global Warning: Debating International Developments in New Public Financial Management*. Bergen: Cappelen Akademisk Forlag: 156-184.

Pollitt, C. & Bouckaert, G., 2000. *Public Management Reform. A Comparative Analysis*. Oxford: Oxford University Press.

Wilson, D. 2003. Strategy as decision making. In S. Cummings, & D. Wilson (Eds.), *Images of strategy*: 383-410. Oxford: Blackwell.

TOWARDS EFFICIENCY, EFFECTIVENESS AND ECONOMY

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Abstract

In order to maintain public confidence and support, governments must produce results that are valued by their citizens. While sound policies and the responsible allocation of resources are important, they are not enough. Good results also depend on effective implementation of often programs and services. This represents challenge to high education Institutions (HEIs). This is because strategic planning, budgeting and information systems management may not coordinate and integrate their efforts to establish, maintain and use performance measurement systems to evaluate the impact of education and research programs. Governments (e.g. UK, USA, Canada, Australia, New Zealand, France, Singapore, and Malaysia) paid attention to efficiency, effectiveness and economy ("3Es"). Performance Based Budgeting (PBB) system has been adopted as governance mechanism ties policy-making with resource realities, improving the allocation of funds to strategic priorities among and within economic and social sectors, and defines each output in terms of efficiency. This paper provides a comprehensive overview of Performance Based Budgeting (PBB) system, and addresses the challenges faced by HEIs universities funded on the basis of what they produce in terms of graduates and research outputs.

Key words: Accountability, Performance based budgeting, Governance .

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