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A Conceptual Framework for Effective Cost Management of Higher Educational Institutions in India: An Activity Based Management Approach

Abstract

At present, the Higher Educational Institutions (HEIs) in India are drifting through a state of severe financial spasm. This condition has been chiefly attributed to the growing budgetary shrinkage in terms of fund allocation to higher educations by the government over the past decade. In addition, the emergence of private players coupled with the paradigm shift in the funding pattern have been adding vulnerability and posing threats to the existence of not only to those institutions that heavily rely on the grants received by the central or state government and funding bodies like UGC, but also to the self-financed institutions competing intensely on price front. The prevalent milieu enforcing the HEIs to look inward and scan the robustness of its existing cost management methodologies and its efficacy to mobilize the available resources optimally. The existing costing methodologies practiced in most of the HEIs in India are not uniform and mostly follow the traditional costing methodologies directed towards fund management. Now, the situation is reverse and universities and other institutions are jostling with the paucity of funds required for sustenance. The battle to sustain calls for a suitable cost management model, which would act more like a management tool for improved decision-making. Here, an Activity Based Costing (ABC) methodology is advocated in the form of Activity Based Management (ABM) over the other costing techniques. In tandem with the available objective evidences pertaining to the overwhelming success of ABC in the form of ABM and its proliferating acceptance as a management tool for decision making in the universities across the developed nations like U.K, Australia, U.S.A, New-Zeland, Canada, Spain etc., it appears justifiable to applaud the supremacy and suitability of this methodology in context to HEIs in India.

Key words: ABC (Activity Based Costing), ABM (Activity Based Management), HEIs (Higher Educational Institutions), Cost management model.

SECTION- I

INTRODUCTION

Since independence, the Higher Educational Institutions (HEIs) in India have undergone a multifaceted transformation in consonance with the other industries. The magnitude of turnaround in terms of institutional capacity is evidenced by the fact that during Independence and till today, the number of universities has increased from 20 to 457 and colleges from 500 to more than 20,677 (UGC, 2008). The significant turnaround was registered in tandem with the introduction of economic reform policies in 1990, which referred to sustained efforts towards privatization of higher education in India. The privatization was initiated broadly in two ways viz. financial privatization through reduction in public expenditures, which implied the cost recovery measures in conformity with the structural adjustment policies, and 'direct' privatization of higher education (Tilak, 2004). It has been observed that most of the reform measures recommended in higher education centered on improving efficiency in the functioning of public institutions and mobilizing resources from non-governmental sources (Varghese, 2000). The effect of structural reform is endorsed by the fact that the share of higher education in total education expenditure of both Central and State governments rose to 14.2 percent during 1981-82 to 1991-92, but fell to 12.7 percent during 1992-93 to 2003-04 (UGC, 2008). Thus, it connotes that the relative priority given to higher education declined after 1992-93. On contrary, the elementary education has been receiving maximum attention because of government's social obligation towards the constitutional "Rights for Education" for all children. As a matter of fact, the government is left with the Hobson's choice but to suggest ways and means to mobilize non-governmental resources for higher education. Punnayya committee report (1993) suggested the various ways to mobilize the resources, which includes raising fee levels; Raising of resources by institutions through consultancy and sales of other services; Introduction of self-financing courses and; Revitalization of student loans (Tilak, 2004). Another face of turnaround has been unveiled in the form of rapid growth of private (unaided) HEIs in India. The growth is supported by

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the fact that at present, there are 28 private universities and numerous self-financed private colleges affiliated by the different universities and approved by AICTE.

University Grants Commission (UGC) is the largest stakeholder as well as the implementer of planned resources to universities and colleges. The paradigm shift in the funding pattern of UGC clearly echoes the impetus of growing budgetary shrinkage in higher educations. In the 11th plan, UGC has charted out a comprehensive plan for making disbursement to the HEIs based upon a set of performance indicators (like, research initiatives, imparting quality education, effective utilization of resources etc.). In addition, a sound financial management information system (FMIS) has been advocated for monitoring the programme efficiently in the HEIs. All the financial information received from the university should be in a precise format that should have a software backing. This will facilitate quick decision, better fund flow and efficient financial monitoring of the programme (UGC, 2008).

Struggling with the financial crisis because of reduced allocations on one hand and escalating expenditure on the other, HEIs will have to look for alternate sources of revenue and explore the ways and means of reducing costs (Rani, 2006). A note on higher education by National Knowledge Commission (2006) suggested that universities should use their land as a source of finance. The prevalent costing methodologies practiced in most of the HEIs in India are not uniform and mostly follow the traditional costing methodologies directed towards fund accounting for statutory compliances. The battle to sustain calls for a suitable cost management model, which would act more like a management tool for improved decision-making. Here, an Activity Based Costing (ABC) methodology is advocated in the form of Activity Based Management (ABM) over the other costing techniques.

Against this backdrop, this paper focuses on developing and implementing a cost management model in the form of ABM for HEIs in India. The article is divided into five sections. The first section being introductory one deals with the overview of the financial management of HEIs in India. The second section deals with the present cost management system in the HEIs in India in a comprehensive way. The next section explores the relevance of ABM model in context to HEIs. The fourth section discusses the phase-wise implementation of ABM in HEIs in India. The last section concludes the discussion.

The prevalent costing methodologies practiced in most of the HEIs in India follow traditional costing methods for their expenses reporting directed towards the statutory compliance to the funding agencies and most often guided by the instructions of CAG, GOI. The higher education sector mostly resorts to budgetary accounting in combination with cost centre accounting for tracking of the costs incurred in performing the various activities and delivering the outputs. The budgetary accounts ensure the justification to the resources allotted; where as cost centres furnish the cost allocation in a broadly defined heads. The expense reports of most of the universities are generally designed to furnish cost allocation in a broadly defined heads. These heads normally reflect the aggregation of the allied cost sources. The costs that are not direct in nature put into the overheads cost pool. Thus, the main objective of the administrators is to fully use the resources assigned and ensure that their total expenditures do not exceed the allocated budgetary amount.

A comprehensive study of financial statements of various universities in India reveals the fact that there is no uniform and structured costing pattern and administrators are restricted to the job of Fund Accounting for statutory compliances through dispensation of the allotted funds to the identified cost centers. It has been observed that the anomaly in the costing pattern is cardinaly contributed to the complex structure of HEIs in India results in, a complicated financing pattern, which precisely depends upon their objective and size (Mathur & Pattanayak, 2004). The universities mostly receive funds in the form of Plan grant for development and planned investments and Non-plan grants for maintenance. Study of Income & Expenditure statements of some of the selected universities such as BHU, JNU, ISM University, Visva Bharati University, reveal that expenditures are furnished in two broad categories viz. Plan and non-plan expenditures. Plan expenditures consist of a pool of allied cost centers pertaining to the construction and other capital expenditures and non-plan expenditures include administrative, academic program, common services and general charges, library, salary and allowances, examinations, students' services etc. In case of ISM, both Plan and non-plan expenditures are exhibited in two broad

heads viz. Establishment expenses and Other Administrative expenses. Thus, the study clearly connotes the fact that HEIs in India greatly require a uniform costing pattern.

Based on a study, Powar (1995) observed that the HEIs in India have received least efforts in the field of cost analysis and management in comparison to the other countries. There has not been any significant attempt to estimate the costs of higher education programmes, which are offered through a cross section of universities under the aegis of central and state governments. Powar (1995) further, advocated for the unit costs analysis, which can best be used for educational planning, efficiency measures, resource mobilization and resource allocation in HEIs. Tilak (1985) attempted to analyze the cost of education in India. He highlighted the importance of cost analysis in higher educations; described taxonomy of costs of education; and discussed alternative concepts of unit costs of education and several other conceptual and analytical issues.

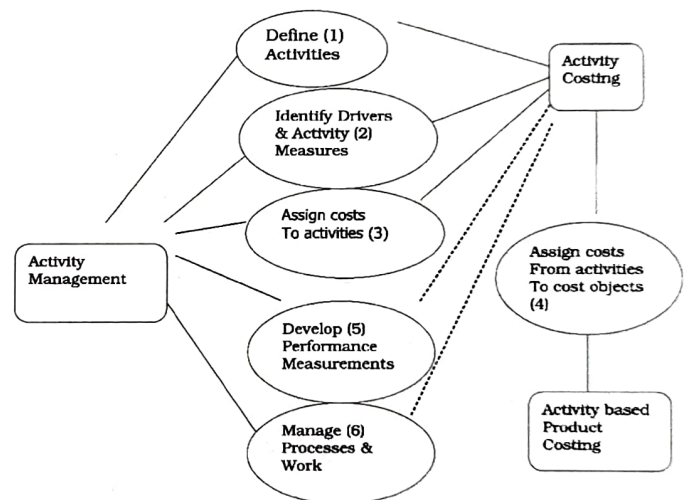
Universities in India are sitting on a huge repertoire of untapped resources. No efforts have been made in the past to explore and exploit the available resources by the universities. The reason behind this indifference lies in the fact that funds were adequately & easily available in the past to higher education sector directly by the government and government-run funding bodies. Now, in the reverse situation where the cost structures of the universities are being constantly tested in the competitive market place, the universities have no comparable mechanism to detect and root out efficiencies. The above facts manifest a growing zeal of the university administrators to adopt a costing methodology that would suffice their needs for sustenance and prolonged viability amid the competitive forces. Thus, in the prevalent milieu, HEIs require a robust cost management model, potent enough to cover the entire gamut of cost information, which can satiate the needs ranging from resource management to rational pricing through cost optimization.

SECTION- III

RELEVANCE OF ABM IN HIGHER EDUCATIONAL INSTITUTIONS

Robertson et al (1998) conducted a study on HEIs and argued that, ABM is likely to be the most appropriate in complex and highly diversified

organizations that have high support overheads and operate in highly competitive environment. The knowledge of how much each cost centre within a university spends, by type of expenditure, does not provide insight about how much it cost to produce and deliver university products that may be derived from a heap of cost centers. An ABM system can gauge the amount of resources that are consumed by individual cost centers and customers and by the activities and processes that deliver the products to customers. This process will identify the true costs of producing and delivering services to the university's customers. The Activity Based Management cannot be performed unless & until ABC is implemented at the operational level. This justifies the fact that ABC is inevitable for ABM. ABC helps in assigning the costs from the identified resource centers to the various activities performed at the process level and also, designed to allocate the cost of each activity and its contribution to the final cost objects at the output level. ABM uses the data provided by ABC for internal decision-making and strategic analysis in different business environment (Chandra & Pattanayak, 2008). The operational view of ABM model is described in the Figure-1.



Source: Adopted from James, M.R. (2000): Management Accounting: Concepts, Techniques & Controversial Issues, Chapter 8; accessed at <http://maaw.info/chapter8.htm>, p-5.

Figure 1: Operational view of ABM Model

Cooper & Kaplan (1990) observed the diminishing importance of traditional costing methodologies in the organizations where overheads functions have exploded and direct costs represent a small fraction of corporate costs. The efficacy of ABC methodology was advocated to overcome the intricacies of

overheads. Cropper & Cook (2001) argued the merit of ABC methodology in allocating the overheads correctly by classifying the activities analogous to a hierarchy first described by Cooper (1990). This approach recognizes that not all overhead resources are consumed in proportion to the number of outputs produced. Coy and Goh (1995) advocated the use of Activity Based Costing within a University environment, particularly the method of allocating the overhead costs. Thus, ABC helps focus institutions' attention on improving activities, which will have the biggest impact on course costs.

Granof et al (2000) demonstrated how ABC could be used to manage more effectively in universities, government and not profit organizations. Instead of measuring traditional "inputs" of salary and administrative costs, ABC provides a methodology to measure the costs of "outputs". Westbury (1997) in association with HEFC (Higher Education Funding Council) for England and Wales applied ABC methodology to develop costing guidelines for sound costing information to underpin decision making in HEIs. JCPSG (2000) in consistent with the guidelines of HEFC (1997) proposed costing guidelines for HEIs based on the principles of Activity Based Costing (ABC), which was termed as Transparent Approach towards Costing (TRAC).

A growing bodies of literature along with the available evidences pertaining to the over-whelming success of ABC in the form of ABM in the universities across the developed nations like U.K, Australia, U.S.A, New-Zeeland, Canada, Spain etc. justify the supremacy and suitability of this methodology in context to HEIs of India. Thus, ABC methodology in the form of ABM has been advocated over the other costing techniques for the development of a suitable cost management model.

SECTION- IV

PROCESS OF IMPLEMENTING ABM IN HEIs VIS-À-VIS INDIA

Based on his study titled "The Implementation Stages of Activity-Based-Costing and the impact of contextual and Organizational Factors", Krumwiede (1998) argued that implementing Activity Based Costing (ABC) requires advancement through several stages if full infusion, known as Activity Based Management (ABM) is to be achieved. The stages include all the steps adopted by Cooper and Zmud (1990) for IT (Information Technology) implementation in an organization. The IT

implementation process is categorized as six sequential stages: initiation; adoption; adaptation; acceptance; routinization; and infusion (Cooper and Zmud 1990). JCPSG (2000) proposed a number of steps that institutions in UK would follow to implement its costing guidelines termed as TRAC approach. The TRAC methodology is broadly based on the principles of Activity Based Costing (ABC).

The process outlined here is in consonance with the process adopted by JCPSG (2000) in the HEIs of UK and also, incorporates steps used by Cooper and Zmud (1990) for IT implementation in a manufacturing organization.

Initiation (Imperatives for change)

The 'initiation' stage occurs when there is pressure to change an existing system, which arises from organizational need, technological innovation or external competitive threats, and a search for solutions (Changruksut, 2002). In context to HEIs, the forces that drive change and configure imperatives for transformation include:

- Requirement of government for improved public accountability
- Growing sense of universities towards the satisfaction of stakeholders
- Improved information for internal management.

The process of 'initiation' is proportionate to the degree of requirements from the regulatory authorities (government, audit, and funding bodies) through introducing necessary costing guidelines, which would inculcate the sense of public accountability and fairness towards the costs incurred and prices charged. The main driver for the successful implementation of ABM model in HEIs is the scale of requirement by the Government for institutions to demonstrate the full costs of research and other publicly funded activities in order to improve public accountability. TRAC model laid down three costing standards, which would meet the government objectives for improved public accountability. The costing standard includes Information Standards, Costing Process Standards, and Data Quality Standards (JCPSG, 2000).

The stakeholders in HEIs comprise of funding agencies (governmental/ non-governmental), government (MHRD), management, administrators, and students. The necessity of the universities for a robust costing system depends upon the level of consciousness of the funding bodies towards the fairness of the funds expensed and a fair & reasonable view of total costs for each research sponsor type. Cropper & Cook (2001) based on a

study pertaining to the implementation of ABC in HEIs of U.K argued the significance of the support of funding agencies and the external sponsors. In the 11th plan, UGC has charted out a sound Financial Management Information System (FMIS) for monitoring the programme efficiently in the HEIs. All the financial information received from the university should be in a precise format that should have a software backing. This will facilitate quick decision, better fund flow, and efficient financial monitoring of the programme (UGC, 2008). The growing consciousness of the biggest funding institution i.e. UGC in India manifests that ABM is inevitable in HEIs of India.

Many institutions wish to improve their costing information and systems for their own internal management. Some of these benefits will only become clear once institutions begin to see the possibilities that arise from having robust information on the way their resources are currently deployed (JCPSG, 2000). The management motivation to introduce ABC is cardinaly influenced by the need to have detailed information on value added and non-value added activities followed by the need to be competitive in terms of price quality and performance (Anand et al, 2005).

The requirement of an effective control mechanism is unavoidable for the overall cost management of the HEIs. This can be achieved by appointing an appropriate institutional committee (Audit) that will not only confirm the compliance to the costing standards but also ensure the accuracy and the robustness of the data. It is a clear requirement of accountability and of satisfying research sponsors, that the cost calculated by this approach is supported by audit trails by which institutions can demonstrate the validity of their cost calculations (JCPSG, 2000). The process of effective cost management is described in the Figure-2

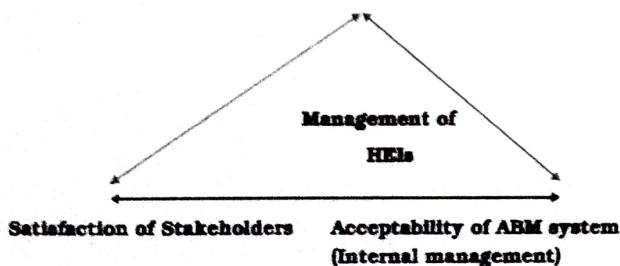


Figure-2: Effective control mechanism (Audit)

Adoption

'Adoption' involves a decision to invest the resources necessary for implementing ABC (Changruksut,

2002). In this stage, approval has been granted from top management to implement ABC and invest the required resources, but analysis has not begun yet Cooper and Zmud (1990). The support from the top management is necessary in this stage and consensus is developed to invest resources necessary to accommodate the implementation effort. JCPSG (2000) suggested that the commitment of head of the institution is significant for the successful implementation of transparency approach (a form of ABC).

Adaptation (Designing & Development of ABM Framework for HEIs)

This stage mainly deals with the conceptual designing, development and installation of ABM in HEIs. That is, the implementation team analyses the resource costs and links them to activities. Then, team members cooperate to identify cost drivers and to trace these activities to outputs, such as students, support service etc (Changruksut, 2002). The conceptual designing phase is probably the most critical stage, because the design of the model determines what data are to be included and how the results will be used (Holst et al, 1996). The process outlined here for the development of model is compatible with costing guidelines proposed by HEFC (1997) for HEIs in UK.

1. Identification of Financial & Operational Resources and associated costs

Activity costs are calculated by ascertaining the cost of the resources consumed for performing the activity. An important step therefore, is to define the operational and financial resources consumed by an activity, such as staff, equipments, facilities, supplies and services and any other items used in the performance of activity. The cost information is extracted from the general ledger.

2. Defining activities and Processes

This step includes identification of all-possible activities and development of Activity Dictionary; determination of time allocation methods; and finally preparation of activity sheet in the form of time allocation schedule.

I) Activity Dictionary

It includes all the activities corresponding to the major functions: Teaching (T), Research(R), Other activities (O) and Support activities (S). The listing of activities assigned to Faculty/Staff members is described in the table-1

Table-1: Listing of activities assigned to Faculty/Staff members

FUNCTIONS	ACTIVITIES
TEACHING	Giving Lectures, Seminars, Tutorials, Preparing materials, Supervising projects, Workshops and Lab works, Field work, Organizing and visiting placements, Assessment, Marking and Examination including External Examining, All award & credit-bearing courses, Non credit-bearing courses, External examining, Over-seas and other commercial teaching.
RESEARCH	Research and Experimental development, Training and Supervision of research fellows, Speculative work to investigate potential ideas projects,
OTHER ACTIVITIES	Residence and Catering, Health services, Consultancy, Public services and other services not related to teaching and research.
SUPPORT SERVICES	Time tabelling, Examination services, Admission work, Drafting research and other project proposals, Referring papers, Administrative services.

II) Time allocation method and preparation of Activity Sheet

This describes a range of methods, which can be used to allocate academic, and other staff time. Cropper & Cook (2001) based on a study observed that approximation of the resources such as, facilities, equipments, accommodation and consumables consumed by various areas of expenditure can be obtained but main difficulty lies in the division of academic staff costs between different activities. JCPSG (2000) suggested time allocation approach that includes annual

retrospective method; and In year method. A method is considered robust if it involves individuals recording their own time (i.e. this is not done on their behalf by their head of department); over short time periods (e.g. weeks, months, and terms) of which there should be at least three in a year; and covering a whole year (JCPSG, 2000). Once the time allocation method is decided, the 'Activity Sheet' is prepared which contains a detailed distribution of time to perform the various activities by individual staff. A format of time allocation schedule is described in Table-2.

Table-2: Format of Time Allocation Schedule for Individual Faculty/Staff Member

FUNCTIONS	ACTIVITIES	% TIME OF JOB HOURS
TEACHING	A	
	B	
	C	
Total		% time on Teaching
RESEARCH	D	
	E	
	F	
TOTAL		% time on Research
OTHER ACTIVITIES	G	
	H	
Total		% time on Other Activities
SUPPORT SERVICES	I	
	J	
	K	
Total		% time on Support Services
GRAND TOTAL TIME (%)		100%

3. Attribution of Resource costs to the Activities

This step involves the attribution of resource costs to the activities by using robust cost drivers. In case of Academic staff, the pertinent cost (Faculty Salary)

is attributed in proportion to the percentage time consumed for performing various activities, which can be extracted from the 'Time Allocation Schedule'. The 'Resource Drivers' used for allocating costs to the various identified activities are elaborately described in the Table-3

Table- 3: Identification of Resource centres and corresponding resource drivers

Resource Centres	Cost (Rs)	Resource Driver	Activities	Resource driver quantity
Faculty salary	A B C D	Effort	Teaching Research Other Activities Support Services	Percentage time
Common services and general charges	E F G H	No Calls Per KM Per Sq.ft Per Sq.ft	Telephone Travelling Rents Utility	Numbers Distance Area Area
Maintenance centre	I J K L M N O	Per Sq.ft Per Sq.ft Per Number Per Sq.ft Per Number Per Number Per Sq.ft	Cleaning Building Repairing Electric goods Repair Sanitation Furniture Repairing Computer maintenance Wall Painting	Area Area Numbers Area Numbers Numbers Area

4. Identification of Cost Objectives

This step involves the identification of cost objects. In case of HEIs, the cost objects include various courses offered at different levels of program, research papers, full-time students, research fellows, consultancy, catering, part-time students, departments, support centres etc.

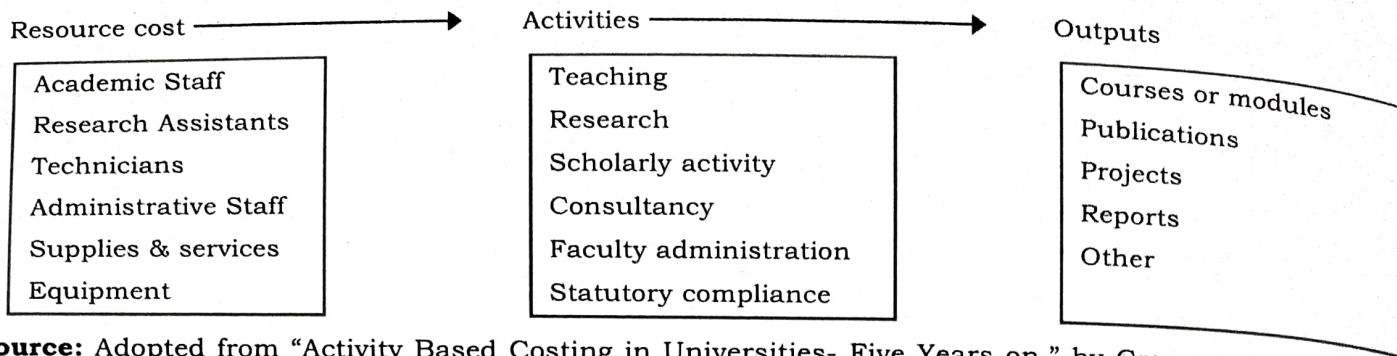
5. Linking activities to the cost objectives

This step deals with the identification of robust 'Activity Drivers' and attributing costs to the cost objects by using activity drivers. For direct activities, there is a one-to-one relation with the cost objectives. For shared activities, appropriate proportion from step-4 is converted into the amount for allocating costs to the final output. The 'Activity Attribute Analysis' is performed to evaluate the contribution of activities to the output (Holst et al, 1996). In case of higher educations some of the identified activity drivers include Teaching Hours, Research Hours, Number of New Courses, Number of Counselling Sessions, Number of Purchase Orders, Number of Works Order etc.

6. Analyze and report the results.

The model is finally developed and subjected to analysis and further reporting the results for improved decision-making. Institutions should review their costing results and methods and to develop and improve their methods where appropriate to streamline and reduce complexity that is not required) on an annual basis, at least in the first few years of implementation until full robustness has been achieved (JCPSG, 2001).

An illustration of the typical direct resources, activities, and outputs for an academic department and how the process works is described in Figure-3. Resource cost will be assigned to activities and to outputs based on either direct attribution or some method of apportionment using cost drivers such as student numbers, staff employed or space occupied. The indirect costs of an institution, including student services, general administration and premises, will be apportioned arbitrarily (Cropper & Cook, 2001).



Source: Adopted from "Activity Based Costing in Universities- Five Years on," by Cropper, P and Cook, R (2001), Further and Higher Education Newsletter, 8th Issue, December 2000- January 2001, CIPFA, p-7.

Figure 3: Academic Department Cost Allocation Model

Acceptance

The major activity involved in this stage includes the acceptance and commitment of institutional members' to use ABM. The staff concern senses the potential benefits and worthwhile investment of ABM. 'Acceptance' will not occur if these individuals do not comprehend and approve of ABC and members' incomprehensibility and disagreement with ABC usually entail their resistance to use ABC. Therefore, to educate managers and employees about the value of the ABC system will eliminate their resistance and create their internal commitment (Changruksut, 2002). Cropper & Cook (2001) based on a study observed that organizational factors significant in context to HEIs include adequacy of resources, implementing training, clarity of objectives and purposes of ABM, psychological costs of the employees, non-accounting ownership by developing cross-functional team, and commitment of the top management. Shields' (1995) based on a study observed that the successful implementation of ABC is associated more with behavioural and organisational variables than with technical variables. Ernst & Young (1998b) noted that "the most prominent and persistent challenge," in implementing an improved costing methodology within the sector was "dealing with and overcoming cultural resistance." Cropper & Cook (2000) commenting on a survey of UK higher education institutions and their use of activity based costing systems through the decade of the 1990's, noted that: "No institution rejected ABC on the basis that it was technically flawed or that it could not be used as an effective decision aid within a university environment. The difficulties identified tended to be cultural rather than technical". Furthermore, Cropper noted that the concerns of the staff and the psychological costs of introducing the system should

be taken into account at the face value. Fowler et al (2000) noted that reasons for the non-adoption of ABC were attributed to internal institutional weaknesses rather than drawbacks of ABC itself. The survey conducted in 1998 by Ernst & Young gave an indication of possible reasons underlying the reluctance of university staff to be involved in activity based costing and management methodologies. In some instances, the comments provide an indication for the general dismissal among university staff of costing methodologies and benchmarking activities within the sector, but also of perceptions of a "uniqueness" prevalent in many institutions, which underpins either reticence or rejection of such methodologies (Gerdson, 2003). Westbury (1997) pointed out that institution's costing framework should establish the level of detail that the central information systems will maintain to support academic and non-academic costing. Thus, the cost requirements and information system should be co-ordinated to implement the system successfully.

Routinization

'Routinization' occurs when ABM is used as a part of normal activities in the institutions. In this stage, ABM is accepted and its application crosses the functional boundaries, which were erstwhile confined, to the accounting function only. The non-accounting departments (outside the accounting/finance function) use ABM as an important tool for decision-making.

Infusion

In this stage, ABM is integrated with the primary financial systems and used extensively. The benefits can be recognized in terms of the model efficiency in identifying the non-value added activities in the process, scope for improving performance, strategic pricing and ultimately cost optimization.

SECTION-IV

CONCLUSION

As higher education in India is drifting through a state of financial strain coupled with the burgeoning competitive forces, it is apparent that a scanning of the cost of institutional activities will become the focal point of every management decision. Although the traditional costing methodologies are important but the call for a managerial outlook of costs cannot be overruled. In comparison to other developed countries, Indian HEIs have received least discrete efforts in the field of cost analysis and management. Now, the situation is reverse, and HEIs are challenged to coup up with the dearth of funds, necessary for sustenance. Thus, the battle to sustain entails a robust cost management model, which would act more like a management tool for improved decision-making directed towards overall performance management. In this article, an ABM model has been advocated over other cost management systems. The success story of ABM can be traced from its proliferating acceptance in HEIs across the different nations. ABC is inevitable at the operational level to implement ABM at the management level. ABM receives costs inputs from ABC to act upon. The HEIs are unique in nature and possess features completely different from the other service sectors. Unlike corporate managers, education managers are self-validating professionals and repeal the proposals that demand compliance to the rules. Thus, challenges lie chiefly in the successful implementation of ABM in HEIs. The implementation steps outlined here are in consonance to the steps adopted by Cooper and Zmud (1990) for IT (Information Technology) implementation in an organization. The IT implementation process is categorized as six sequential stages: Initiation; Adoption; Adaptation; Acceptance; Routinization; and Infusion. The forces that navigate the extent of success at implementation stage include support from the regulatory authorities (government, audit, and funding bodies) through introducing necessary costing guidelines inculcating the sense of public accountability and fairness towards the costs incurred and prices charged. The top management support & commitment and the cultural resistance are the major factors that impede the implementation of a system at the organizational level. Hence, a fair amount of calibration is required to align the divergent forces towards the objectives of implementing ABM in HEIs.

REFERENCES:

- Anand, M. & Sahay.B.S. (2005): Activity Based Cost Management practices in India: An Empirical Study, p- 15, accessed at <http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN026859.pdf>.
- Chandra, B & Pattanayak, J.K. (2008): "Efficacy of Activity Based Management Model in Higher Educational Institutions in India", *The Alternative*, Deptt. Of Management, B.I.T Mesra, Journal, Vol.VII, No. 1&2, P-17
- Cooper, Robin; Kaplan, Robert, S. (1990). Measure Costs Right: Make The Right Decision. *The CPA Journal*; Feb 1990; 60, 2; ABI/INFORM Global p-38
- Coy, D & Goh, G. (1995): "Overhead Costs Allocations by Tertiary Education Institutions", *Journal of Institutional Research in Australasia*, Vol 4, No. 1, May 1995.
- Cropper, P and Cook, R. (2001): "Activity Based Costing in Universities- Five Years on," *Further and Higher Education Newsletter*, 8th Issue, December 2000-January 2001, CIPFA, p-1-20.
- Doyle, Ken (1991): Study of student costs using activity based costing methodology; accessed at [www.eair.org.au/jit/1991 Papers /Doyle.pdf](http://www.eair.org.au/jit/1991%20Papers/Doyle.pdf).
- Doyle, Ken (1994): Some pioneering studies of student costs using the new activity based costing methodology, accessed at http://www.eair.org.au/jet/2001papers/paper_4.pdf.
- Ernst & Young (1998b): *Issues Report: On Costing within Australian Higher Education Institutions*, September, DETYA, Canberra.
- Ernst & Young (2000). *A Study to Develop a Costing Methodology for the Australian Higher Education Sector: Final Report*, May, DETYA, Canberra.
- Fowler. & Yahanpath, N. (2000): *Implementing Activity Based Costing in Tertiary Institutions*, *Chartered Accountants Journal of New Zealand*, 79(11); p-28-31.
- Gerdsen, T. (2002): *Activity-based costing as a performance tool for library and information technology services*; *Information and Education Services Division*, p-119-123; accessed at www.libqual.org/documents/admin/gerdsen.pdf
- Granof, H., Michael, P., David, E., & Vaysman, I. (2000): *Using Activity Based Costing to manage more effectively*; accessed at [http://www.com.au/abc/ABCPDF/ Granofreport.pdf](http://www.com.au/abc/ABCPDF/Granofreport.pdf).
- Holst,R. and Savage,R.J. (1999) : *Tools and techniques for implementing Activity Based Management*, New York John Wiley & Sons, 3-19.
- James, M.R. (2000): *Management Accounting: Concepts, Techniques & Controversial Issues*,

- chapter 8; accessed at <http://maaw.info/chapter8.htm>.
- JCPSPG (2000): Transparent approach to costing: Overview and implementation pack, p-4-27 (AI) & 5 (BI), Vol.2
- Krishnan, A. (2006): An application of Activity Based Costing in higher learning institution: A Local Case Study, *Contemporary Management Research*, p-75-90, Vol.2, No.2, September issue.
- Krumwiede, R. (1998): "The Implementation Stages of Activity-Based-Costing and the impact of contextual and Organizational Factors", *Journal of Management Accounting Research*, Vol.10, p-240-245.
- Mathur, P. and Pattanayak, J.K. (2004): Analysis of accounting practices towards developing an Accounting Standard for higher educational institutions in India, *Indian Accounting Review*, 8(2), p-54.
- McChlery, S. and Rolfe, T. (2004): "University Costing Systems: A Case Study on Value Management", *The Journal of Finance and Management in Public Services*, vol.4
- National Knowledge Commission (2006): Note on higher education; p-11; accessed at www.go8.edu.au/.../2007/Go8%20paper%20on%20higher%20education%20and%20university%20research%2006.06.07.pdf.
- Powar, B.K, Panda, S.K., Sharma, T.C., & Sharma, M. (1995): Unit Costing of higher education: Concepts and Methodology; Policies of Higher Education; Association of Indian Universities, New Delhi, p-85-87.
- Rani, G.P. (2004): Economic reforms and financing higher education in India, *Indian Journal of Economics and Business*; p-11; accessed at http://www.ijeb.com/issues/data/june04_6_erafheii.pdf.
- Reich, F, and Abraham, A. (2006): Activity Based Costing and activity data collection: A case study in the Higher Education Sector; accessed at http://www.ro.uow.edu.au/cgi/view_content.cgi?article=1220&context=commpapers.
- Report of the K. Punnayya Committee, (1992-93). UGC funding of Institutions of Higher Education, UGC, New Delhi.
- Reich, F, and Abraham, A. (2006): Activity Based Costing and activity data collection: A case study in the Higher Education Sector; accessed at http://www.ro.uow.edu.au/cgi/view_content.cgi?article=1220&context=commpapers.
- Robertson, S. (1998): Costing methodology for use within Australian Higher Educational Institutions, September, DETYA, Canberra, p-5-10-16; accessed at <http://www.dest.gov.au/archieve/higherd/otherpub/costme2.pdf>.
- Sharma, V. (2007): Indian Higher Education: Commodification and Foreign Direct Investment; *The Marxist*, Vol. XXIII, No. 2, April to June.
- Shields, M.D. (1995): An empirical analysis of firms' implementation experiences with activity-based costing, *Journal of Management Accounting Research*, p-146-166
- Tilak, G.B. (1985): *Analysis of Costs of Education in India*. Occasional Paper 10, p-15, accessed at www.eric.ed.gov/recordDetail?accno. ERICWebPortal/
- Tilak, G.B. (2004): Absence of Policy and Perspective in higher education, *Economic and Political Weekly*, 22nd May, P-2159-2163
- UGC report (2008): Higher education in India: Issues related to expansion, inclusiveness, Quality, and finance; p-2, 230 & 239.
- Varghese, N.V. (2000): Reforming education Financing; p-1-12; accessed at <http://www.india-seminar.com/2000/494/n.v%20varghese.htm-46k>. 49%20
- Westbury, D. (1997): *Management Information for Decision Making: Costing Guidelines for Higher Education Institutions*. Scottish Higher Education Funding Council, accessed at www.sfc.ac.uk/publications/pubs_other/shefcarchive/costing/contents.htm
- Whelan, V. (2003): The impact of activity based costing in managing the financial performance of a university department; accessed at <http://www.sapmea.asn.au/conventions/tem2003/conf-papers/WHELAN.pdf>.