
Good Budgeting Practices in Malaysian Public Universities

Mohamad Tayib and
Mohamad Rosli Amir Hussin
School of Accounting, Universiti Utara Malaysia

Abstract

Management accounting literature has put forward the characteristics of good budgeting practices by the private sector. This study, therefore, attempts to explore whether those characteristics were also adopted by the public sector agencies. Eight public universities were selected in the study. The findings indicate that Malaysian public universities do adopt some of these characteristics. Further research needs to be carried out in order to measure the quality of budgeting systems actually practised in public universities as this study only focuses on the characteristics of good budgeting systems.

Introduction

Malaysia's first university, the University of Malaya, was set up in 1949. Today there are ten public universities and higher education has become increasingly international in character. Malaysian public universities are becoming more contemporary in outlook with each university attempting to develop its own competitive strengths and positioning itself as a centre of selective excellence. However, even though Malaysian public universities were set up more than fifty years ago, there have been only very limited research studies on the internal management processes of public universities especially in the area of budgeting. Management accounting researchers focused mainly on the private sector (manufacturing and service sectors) and, to a lesser extent, on the more general public sector (e.g. local government). Many accounting researchers have thus largely ignored the management accounting aspects of higher education institutions despite the dramatic changes taking place throughout this sector.

This lack of research, especially under the Malaysian context, was a major motivator to carry out this study. It is also considered timely that this study be carried out in order to help the government in their plans to corporatise the public universities. This study can be regarded as the first attempt to explore the existing budgetary systems of Malaysian public universities. The study aims to obtain a broad overview of budgeting practices in Malaysian public universities. The findings may, however, give an indication on how far Malaysian public universities have adopted so-called good budgeting characteristics as previously identified by various studies into budgeting practices and processes in general. The results of the study may also potentially provide some input to Malaysian public universities as they move forward into a new more challenging managerial environment and attempt to improve their current budgeting systems. Finally, it may also strengthen the performance measurement processes of Malaysian public universities, and, enhance their ability to deliver the results to the government to achieve its reform process.

Research Objectives

The objectives of the study are:

- to identify and explain the present practice of Malaysian public universities budgeting systems;
- to find out the extent Malaysian public universities comply with or adopt the 'characteristics of good budgeting systems' as identified in the literature;
- to provide some recommendations to the Malaysian public universities in improving their budgeting systems.

Literature Review

As stated in the introduction, there are very limited studies conducted by researchers on the nature and scope of management accounting practices and systems in universities regarding budgeting. Studies by Cropper and Drury (1996) and Borgia and Coyner (1996) have, however, attempted to explore the budgeting practice of universities. The study by Cropper and Drury (1996) discussed the areas of profitability analysis, budgetary controls, performance reporting and investment appraisal techniques adopted in higher education institutions. They suggested that with a rapidly changing higher education sector, and increasing pressure to extract maximum benefit from scarce resources, management accountants have to develop new approaches in the provision of financial

information. This requires the financial managers of the higher learning institutions to try to develop sound systems with proper and systematic rules and procedures to allocate and distribute the scarce resources in order to achieve higher productivity.

Borgia and Coyner (1996) sought to evaluate the success of budgeting systems in higher education institutions. The findings indicate that the traditional incremental approach to budgeting is still the major system adopted but no longer dominates current practice. Apart from this traditional approach, four other systems were also found in higher education budgetary systems. They are: (1) rational system (RS), (2) planning, programming and budgeting systems (PPBS), (3) a combination of PPBS and zero-base systems, and (4) zero-base and performance systems (ZBS). This study, however, did not provide any clues on what characteristics represent good budgeting practices.

Definition of Good Budgeting

A study by Finney (1993) defined a good budgeting process as one that provides information and focuses on outcomes. It provides the right climate for good decisions, excellence and controls all activities, and is intelligent and timely for organisations. It can also directly aid down-sizing, integration of new acquisitions, pricing and “reengineering” activities that are poorly performed or wrongly budgeted. Campbell (1985) further added that the recognition of both technical and behavioural aspects of budgeting are essential if organisational goals are to be achieved.

The second characteristics indicate that good budgeting processes have both special behavioural and technical characteristic implications. However, this study only discusses the behavioural aspects of budgeting which arise from the technical aspect of the budgeting processes followed as a result of government constraints.

The behavioural characteristics of good budgeting practices will be identified from the business literature. As Campbell (1985) stated, every budgeting system (business and public sector) must be customized and its success measured by the extent to which it can provide necessary motivation for individuals in order to maximise their contribution in achieving organisational goals. This provides an indication that there is no significant difference in terms of behavioural aspects between business and public sector budgeting.

Good Budgeting Characteristics

Characteristics of good budgeting are defined to include: managers' involvement; a clear definition of long-term goals; the rational allocation of resources; control processes that lead to continuous improvement in the business; and all of these attributes are supported by sound accounting information systems (see, for example, Campbell (1985), Finney (1993) and Holland (2000)).

Managers' Involvement

Various scholars (for example Fisher *et al.* (2000), Lehan (1996), Hoque (1995), Grifel (1993), Schmidh (1992)) argued that workers' involvement in the process of setting and developing organisational budgeting was the major determinant of good budgeting. Hofstede (1965) put forward that staff participation in the budgeting process helped to strengthen the perceptions among workers that organisational goals were fair, and therefore the budget would be more relevant to them. This is in line with the budgeting concept that workers' participation may contribute to greater willingness from them to accept the budgetary goal. Campbell (1985) is also of the view that information gathered from lower-level managers can facilitate the process of budget preparation. This potentially provides opportunity to improve the organisational performance.

Clear Definition of Long-Term Goals

Murray (1990) perceived organisational goal as the objective or the performance target that every worker should seek to achieve. If an individual becomes committed to achieve the goal, it will influence the

individual's actions and consequently the performance of the organisation. Holland (2000) stated that the definition of long-term goals must be clear and must be derived from all levels in the organisation. This helps the management to decide the appropriate long-term strategies, and the input captured becomes a part of the organisation's objectives and policies. Organisational goals must be realistically formalised and attainable (Grifel, 1993), logically follow diagnosis (Lehan, 1996), be specific and measurable (Fernsler, 1999) and consider uncertainty and uncontrollability of environment (Finney, 1993).

Rational Allocation of Resources

Due to the limited supply of resources, organisations must compare costs and benefits of each potential activity and select those that are considered to result in the optimal allocation of resources. Management must ensure that rationality of resource allocation by comparing the cost and benefit of each activity (Campbell, 1985), must communicate where the emphasis and priority have been placed and what is the performance sought (Finney, 1993) and also establish a balance between the service level of each activity and the resources needed by each level (Grifel, 1993).

Continuous Improvement

Organisations should monitor their budget performance continuously throughout the period. Performance could be measured by using variance analysis. This is important to ensure that management applies continuous improvement concepts by taking corrective action immediately, doing it at the right time and right place. Schmidt (1992) indicated that ongoing performance improvement could be revised to reflect changes in the organisation strategy and structure.

Support by Accounting Information Systems

Henderson (1997) indicated that budgetary systems and control is the most visible user of accounting information in the management control process. By setting standards of performance, and providing feedback by means of a variance report, an accountant supplies much of the fundamental information required for overall planning and control. However, as the structure of business becomes more complicated, the function, scope and management of the budget have accordingly become more complex. Hence, technology has an important role to play in improving the efficiency of the budgeting process.

Budgeting must also relate expenditure and performance with responsibility, provide timely and accurate reporting systems and have the ability to provide additional information upon request (Campbell, 1985) and be parallel to or consistent with accounting rules and regulation (West, 1997).

Problem of Malaysian Budgeting Systems

Doh Joon Chien (1972 and 1981), on the other hand, discussed Malaysian budgeting systems problems. He commented on the following issues: (1) over-emphasis on the technical aspects and neglect of human variables; (2) little attention to develop understanding, receptivity and capability in using data; (3) inadequate support from top level administrators; (4) lack of trained staff; (5) inadequate support from the Treasury itself; and (6) trained staff being promoted to unrelated jobs. This was further supported by Dean (1990) who highlighted areas that are lacking in the budgetary systems. This includes the following: (1) lack of commitment; (2) lack of trained personnel; (3) information generation and use; and (4) lack of central agency support and technical difficulties. This study, therefore, intends to find out whether these issues still exist in the present budgeting systems of Malaysian public universities.

Research Methodology

The questionnaires were sent out to all bursaries of 8 public universities in Peninsular Malaysia and responses were collected personally. Further discussion with the bursary office was made in order to make sure questionnaires were answered by relevant respondents. Relevant respondents were identified as officers who are directly involved with the budgeting process. Through the bursary office, questionnaires were sent to the relevant officers in all departments/units in each public university as identified in this study.

All public universities located in Peninsular Malaysia were included in the study. They are: (1) Universiti Malaya (UM), (2) Universiti Kebangsaan Malaysia (UKM), (3) Universiti Sains Malaysia (USM), (4) Universiti Utara Malaysia (UUM), (5) Universiti Teknologi MARA (UiTM), (6) Universiti Putra Malaysia (UPM), (7) Universiti Pendidikan Sultan Idris (UPSI); and (8) Universiti Teknologi Malaysia (UTM). Of the 237 questionnaires sent, 98 were completed and returned, providing a response rate of 41 percent which were sufficient and used for this study. A summary of the characteristics of the respondents is reported in Table 1.

Table 1
Characteristics of Respondents

	Frequency (N)	Percentage
University		
Universiti Utara Malaysia (UUM)	27	27.6
Universiti Sains Malaysia (USM)	13	13.3
Universiti Malaya (UM)	7	7.1
Universiti Kebangsaan Malaysia (UKM)	17	17.3
Universiti Putra Malaysia (UPM)	17	17.3
Universiti Pendidikan Sultan Idris (UPSI)	11	11.2
Universiti Teknologi MARA (UiTM)	2	2.0
Universiti Teknologi Malaysia UTM)	4	4.1
Total	98	100.0
Department		
Academic	44	44.9
Non-Academic	54	55.1
Total	98	100
Age		
21 – 30 years	25	25.5
31 – 40 years	28	28.6
41 – 50 years	30	30.6
51 years and above	15	15.3
Total	98	100
Gender		
Male	54	55.1
Female	44	44.9
Total	98	100
Qualification		
SPM/MCE/STPM/Certificate	8	8.2
Diploma	4	4.1
Bachelor		55.1
Master	13	13.3
Doctorate	19	19.4
Total	98	100.0
Years Worked		
Under 5 years	27	27.6
06 – 10 years	12	12.2
11 - 15 years	15	15.3
16 – 20 years	16	16.3
21 – 25 years	15	15.3
26 – 30 years	11	11.2
31 years and above	2	2.0
Total	98	100.0

The Questionnaire

The questionnaire is designed to include the following: section A captures demographic information such as university department, age, gender, qualification and years of service. Section B of the questionnaire focuses on the current budgeting systems practiced by the universities. The questions designed in this section were based on good budgeting characteristics highlighted by the

authors discussed earlier. Finally, section C of the questionnaire seeks to find out what are the outstanding problems of budgeting systems faced by the universities. In section A, all of the questions required an indication of (-) for the correct answer. In sections B and C, a five-point Likert scale was used for most of the queries and the respondents had to circle an appropriate number.

Data analysis

The responses derived from the questionnaires were coded and entered into an SPSS spreadsheet. Descriptive statistics (frequency, mean) are used to determine the extent to which Malaysian public universities adopted good budgeting characteristics as identified in this study. Table 1 shows characteristics of the respondents participated in the study.

Results of the Study

Table 2 indicates that 75 percent of the respondents agree that they have been given opportunities to suggest ideas for the budget preparation process. This could be due to the fact that all the respondents chosen in this study were directly involved in the university budget preparation. Ninety-seven percent of the respondents agree that they are well aware of their responsibilities, roles and authorities. However, 22 percent of the respondents indicate that they are not well-trained staff and have not been given the opportunity to upgrade their knowledge of budgeting.

Table 2
Managers' Involvement and Degree of Response

	Disagree	Neutral	Agree	Means
Involvement	14(14.2%)	9(9.2%)	75(76.5%)	3.95
Responsibility, role and authority	1(1.0%)	2(2.0%)	95(97.0%)	4.35
Skill and Knowledge	22(22.4%)	29(29.6%)	47(47.9%)	3.31
Support from higher authority	12(12.2%)	18(18.4%)	68(69.4%)	3.72
Satisfaction	13(13.3%)	21(21.4%)	64(54.3%)	3.66

The findings also indicated that about 69 percent of the respondent agree that they get full support and clear direction from their higher authority. More than 50 percent of the respondents are satisfied with the existing budgeting systems and used it as a tool to achieve their university's goals.

Goals influence the individual's actions and consequently her/his performance. Thus, goals must be realistic and attainable. Table 3 shows that 72 percent of the respondents agree that their university has realistic and achievable long-term goals. The respondents also understand the goals and act appropriately toward achieving the goals. As the university budget is comparable with the strategy formulated, thus showing that 82 percent of the respondents agreed that the strategy should be based on uncertainty and uncontrollable factors. Ninety percent indicated that the budget is a vital aspect in management for operating and measuring performance. Overall, it can be said that Malaysian public universities have a reasonable set of goals.

Table 3
Long-term Goals of the Budget

	Disagree	Neutral	Agree	Means
Realistic and Achievable	4(4.1%)	24(24.5%)	70(71.5%)	3.95
Understandable and act towards achieving the goals	3(3.1%)	18(18.4%)	77(78.6%)	4.00
Budgeting in parallel with Strategy	8(8.2%)	14(14.3%)	76(77.6%)	3.93
Strategy should consider uncertainty and uncontrollable factors	1(1.0%)	17(17.3%)	80(81.6%)	4.07
Budgeting is a vital tool in management	1((1.0%)	9(9.2%)	88(89.8%)	4.38

Due to the limited supply of resources, organisations must compare costs and benefit of each potential activity and select the optimal allocation of resources. This is reflected in Table 4 showing that 89 per cent of the respondents agree that officers-in-charge do compare costs and benefits of each potential activity to be implemented. The respondents also indicate that resources are allocated rationally and realistically by considering all factors. However, only 35 per cent of the respondents agree that budgeting is used in the process of attaining organisational goals.

Table 4
Resource Allocation by the University

	Disagree	Neutral	Agree	Means
Compare costs and benefit	3(3.1%)	8(8.2%)	87(88.8%)	4.16
Allocate resources rationally and realistically	6(6.1%)	12(12.2%)	80(81.7%)	4.04
Consider all factors	8(8.1%)	11(11.2%)	79(80.6%)	3.94
Budgeting could avoid misspending	3(3.1%)	8(8.2%)	87(88.7%)	4.33
Budgeting as a prerequisite to achieving goals	43(43.9%)	21(21.4%)	34(34.7%)	2.74

Table 5 represents the results of how far the current budgeting systems adopt continuous improvement concepts. It is noticed that public universities in Malaysia have not practised rigid budgeting systems, as it will reflect inaccuracy in measuring performance. Results show that 62 per cent of the respondents agree that the university has prepared a variance analysis. However, 34 per cent are undecided whether their department used variance analysis.

Table 5
Continuous Improvement

	Disagree	Neutral	Agree	Means
Budgeting could be revised in parallel with changes	3(3.1%)	12(12.2%)	83(84.7%)	3.90
Budgeting must be in parallel with external environment	3(3.0%)	21(21.4%)	74(75.5%)	3.62
Prepare variance analysis	4(4.1%)	33(33.7%)	61(62.3%)	4.19
Corrective action should be taken immediately	4(4.1%)	5(5.1%)	89(90.8%)	4.09
Rigid budgeting will reflect inaccuracy in measuring performance	10(10.2%)	19(19.4%)	69(70.4%)	3.96

More than 50 per cent of the respondents agree that budgeting could be revised in parallel with the changes in organisation strategy and structure and also changes in external environment. Thus, 91 per cent of the respondents agree that corrective action should be taken immediately, once identified.

Table 6
Accounting Information Systems

	Disagree	Neutral	Agree	Means
Using Computerised budgeting	9(9.2%)	20(20.4%)	69(70.4%)	3.90
Report done by request	16(16.3%)	18(18.4%)	64(65.3%)	3.62
Information must be up-to-date	6(6.1%)	8(8.2%)	84(85.7%)	4.19
In parallel with accounting rules and regulation	3(3.0%)	16(16.3%)	79(80.7%)	4.09
Data is kept under strict security	5(5.1%)	19(19.4%)	74(75.5%)	3.96

Table 6 shows 71 per cent of the respondents agree that the public universities should use computerized budgeting as all reports could be done immediately upon request and information is continuously updated. However, budgeting must also comply with rules and regulation, and data must be strictly confidential. Technology, therefore, played an important role in improving the efficiency of the budgeting process.

Table 7
Good Budgeting Practices

Characteristics	Means	Std. Deviation
Long-term Goals	4.0653	0.5545
Accounting Information Systems	3.9531	0.6050
Continuous Improvement	3.9306	0.4925
Resource Allocation	3.8429	0.4790
Worker Involvement	3.7980	0.6203

Table 7 presents a summary of good budgeting practiced by Malaysian public universities. Workers' involvement was ranked the lowest from other good budgeting characteristics. This indicates that Malaysian public universities put less emphasis on this characteristic. Workers also needed support from their higher authority and clear definition of their roles, responsibilities and authorities. They must be given the opportunity to upgrade their skills and knowledge on the budget preparation or process. Other good budgeting characteristics were ranked average while long-term goal setting was highly ranked.

Table 8
Problem of Malaysian Public Universities Budgeting Systems

	Disagree	Neutral	Agree	Means
Lack of trained personnel	19(19.3%)	22(22.4%)	57(58.1%)	3.53
Lack of capability in using data	15(15.3%)	23(23.5%)	60(61.3%)	3.52
Lack of understanding	19(19.4%)	24(24.5%)	55(56.1%)	3.44
Over-emphasis on technical aspects	18(18.4%)	28(28.6%)	52(53.0%)	3.42
Inadequate support from the treasury itself	20(20.4%)	46(46.9%)	32(32.7%)	3.15
Lack of compliance	29(29.6%)	30(30.6%)	39(39.8%)	3.11
Insufficient Facilities	35(35.7%)	23(23.5%)	40(40.9%)	3.08
Financial performance is not important	13(13.3%)	23(23.5%)	62(63.3%)	2.96
Unrealistic goals	41(41.9%)	28(28.6%)	29(29.6%)	2.91

Doh Joon Chien (1972 and 1981) and Dean (1990) highlighted that the Malaysian budgeting systems discussed earlier needed greater attention. Results in Table 8 seek to find out whether these issues were also found in the present budgeting systems of Malaysian public universities. Problems like lack of trained personnel, lack of capability in using data, lack of understanding, and over-emphasis on technical aspects were highly ranked by the respondents. A lower scale ranked by the respondents indicated inadequate support from treasury, lack of compliance, insufficient facilities and unrealistic goals. Table 9(a) and 9(b) further explained that Malaysian universities to some extent are still facing the same problems as identified by Doh Joon Chien (1972 and 1981) and Dean (1990). These results, however, indicate that some of the problems have been overcome by Malaysian public universities. These problems will be resolved or should be given priority by universities when the government fully corporatises public universities by 2004. As a corporate body, the universities need to have good measures in managing their resources, especially for the planning and control of budgets. In short, the problems mentioned by Doh Joon Chien and Dean should be resolved.

Table 9(a)
Current problems of Malaysian Public Universities budgeting systems

University	N	Lack of trained staff		Lack of capability in using data		Lack of understanding on budgeting		Over-emphasis on technical aspects		Inadequate support from treasury itself	
		Means	Std. Dev	Means	Std. Dev	Means	Std. Dev	Means	Std. Dev	Means	Std. Dev
Universiti Kebangsaan Malaysia (UKM)	17	4.00	1.06	3.71	0.77	3.53	1.07	3.29	1.31	3.18	.81
Universiti Teknologi MARA (UiTM)	2	4.00	0.00	2.50	2.12	4.00	0.00	3.00	1.41	4.00	.00
Universiti Putra Malaysia (UPM)	17	3.71	0.92	3.71	0.85	3.88	0.93	3.24	0.90	3.00	.94
Universiti Malaya (UM)	7	3.57	1.13	3.43	0.98	3.29	0.76	3.86	1.07	3.14	.38
Universiti Utara Malaysia (UUM)	27	3.52	1.01	3.70	0.87	3.48	0.94	3.56	0.75	3.37	.84
Universiti Sains Malaysia (USM)	13	3.23	0.93	3.23	0.73	2.85	1.21	3.54	0.97	3.00	.91
Universiti Pendidikan Sultan Idris (UPSI)	11	3.00	1.10	3.00	0.89	3.09	1.04	3.18	1.17	2.91	.94
Universiti Teknologi Malaysia (UTM)	4	3.00	1.15	3.75	1.26	3.75	0.96	3.50	1.29	3.00	1.15

Table 9(b)
Current problems of Malaysian Public Universities budgeting systems

University	N	Lack of compliance		Insufficient facilities		Financial Performance is not important		Unrealistic goals	
		Means	Std. Dev	Means	Std. Dev	Means	Std. Dev	Means	Std. Dev
Universiti Kebangsaan Malaysia (UKM)	17	3.65	0.79	2.88	0.86	3.29	1.16	3.00	1.00
Universiti Pendidikan Sultan Idris (UPSI)	11	3.55	0.82	3.18	1.08	2.45	1.04	3.00	1.18
Universiti Utara Malaysia (UUM)	27	3.04	0.94	3.26	1.02	3.19	1.08	2.85	1.10
Universiti Malaya (UM)	7	3.00	0.82	2.71	1.11	2.86	0.90	2.57	.79
Universiti Teknologi MARA (UiTM)	2	3.00	1.41	3.50	0.71	2.50	2.12	2.50	.71
Universiti Teknologi Malaysia (UTM)	4	3.00	1.15	2.50	1.00	3.25	1.50	2.75	1.50
Universiti Putra Malaysia (UPM)	17	2.94	0.90	3.29	1.21	2.59	0.87	3.12	.93
Universiti Sains Malaysia (USM)	13	2.54	0.79	2.92	1.38	3.00	1.41	2.85	.80

Conclusions and Future Research

In conclusion, Malaysian public universities do to some extent adopt the so-called 'good budgeting characteristics' identified in the literature. This indicates that the budgeting systems of the public universities in Malaysia are not that bad and can be used as a control mechanism to strengthen performance measurement systems. This is important because public universities are moving towards corporatisation and need a good budget and performance evaluation process in order to gain competitive advantage.

However, Malaysian public universities are still facing similar problems as indicated by Doh Jien Chien (1972, 1981) and Dean (1990), especially on the lack of trained staff and lack of capability in using data. These problems need immediate corrective action and improvement because after ten years, the outstanding problems of public sector budgeting highlighted by earlier studies still exist. The budgeting system of the public sector should possess good budgeting characteristics, as is the case for the private sector, to ensure the system is at par or perhaps better. This will lead to public recognition and also help in preparing the universities to equip themselves to compete to their advantages. The results of this study indicate that serious attention must be emphasized by Malaysian public universities especially in the process of preparing to position themselves as corporate entities. Key factors to be addressed include:

- The establishment of a clear definition of responsibility, role and authority from top management and operational levels;
- Workers' participation in goal setting and the budget preparation process;
- The updating of workers' knowledge and budgeting skills;
- Improvement in the quality of information in order to enable good decision-making;
- The use of computerised systems should be given priority instead of manual systems.

Further research, however, needs to be carried out to examine the quality of budgeting systems practised in the public universities as this study mainly focused on the characteristics of good budgeting systems. The behavioural aspects of budgeting systems also needs further attention as this study has not examined these aspects in detail. This study, however, could be a starting point for other researchers to further explore public sector management accounting issues especially in higher education institutions, given their importance, not only to Malaysia, but other countries as well. This study, therefore, may potentially provide an indication that the higher education business is one of the growth areas throughout the world and research in this area could provide a significant contribution to the betterment of higher learning institutions at large.

References

- Arya, A., Fellingham, J., Glover, J. and Sivaramakrishnan, K (2000), Capital budgeting, the hold-up problem, and information system design, *Management Science*, vol. 46, pp.205
- Borgia, Carl R. and Coyner, Randolph S. (1996), The evaluation and success of budgeting systems at institutions of higher education, *Public budgeting and financial management*, vol. 7, No. 4, pp. 467
- Campbell, Ian J. (1985), Budgeting: is it a technical or behavioural process, *Management Accounting*, pp. 66-70
- Cropper, P. and Drury, C. (1996), Management accounting practices in universities, *Management Accounting*, vol. 74, ISS 2, pp. 28

- Dean, Peter N. (1986), Programme and performance budgeting in Malaysia, *Public administration and development*, vol. 6, pp. 267-286
- Doh Joon Chien (1972), An interim evaluation of programme and performance budgeting in Malaysia, *Tadbiran Awam*, pp.3
- Doh Joon Chien (1984), Programme and performance budgeting: the Malaysia experience, unpublished research report prepared for a comparative evaluation of performance budgeting in four Asian countries.
- Dunbar, R. L. M (1971), Budgeting for control, *Administrative Science Quarterly*, Vol. 16, pp.88
- Fanning, J. (1999), Budgeting in the 21st century, *Management Accounting*, vol. 77, pp.24
- Fernsler, T. (1999), Budgeting for any organization, *Non profit world*, vol. 17, No. 5, p. 51-52
- Finney, Robert G. (1993), Budgeting: From pain to power, *Management review*, vol. 16, ISS 4, pp. 37
- Fisher, J. G. and Frederickson, J. R. and Peffer, S. A (2000), Budgeting: an experimental investigation of the effects of negotiation, *Accounting Review*, vol. 75, pp. 93
- Government of Malaysia: Federal Constitution
- Government of Malaysia: Financial Procedure Act 1957
- Government of Malaysia: Treasury Instruction
- Government of Malaysia: Treasury Circulars
- Government of Malaysia: Development Fund Act
- Government of Malaysia: Supply Act
- Grifel, Stuart S. (1993), Performance measurement and budgetary decision making, *Public Productivity and management review*, vol. 16, No. 4, pp.403
- Henderson, I. (1997), Does budgeting have to be so troublesome, *Management Accounting*, pp.26
- Holland, L (2000), Horsepower, *Management Accounting*, vol. 78, pp.24
- Hoque, Z. (1995), Budgeting control system in public sector enterprise in a Developing country, *The International Journal of Accountancy*, pp. 345-355
- Hornyak, S. (1998), Budgeting made easy, *Management Accounting*, pp. 18
- Latimer, M. F. (2001), Linking strategy-base costing and innovation-base budgeting, *Strategic Finance*, vol. 82, pp.38
- Lehan, Edward A (1996), Budget appraisal-the next step in the quest for better budgeting, *public budgeting and finance*, vol. 16, No. 4, pp.3
- Mak, Y. T and Roush, M. L. (1996), Managing activity costs with flexible budgeting and variance analysis, *Accounting Horizons*, vol. 10, pp.141
- Mak, Y. T and Roush, M. L. (1994) Flexible budgeting and variance analysis in activity-base costing environment, *Accounting Horizons*, vol. 8, pp. 94
- Margavio, G. and Margavio, T. (1995), Managing the cost of quality in the era of continuous improvement, *CMA Magazine*, vol. 69, pp. 29
- Murray, D. (1990), The performance effects of participative budgeting: an integration of intervening and moderating, *Behavioural Research In Accounting*, vol. 2, pp. 104
- Newing, R. (1994), out with old, in with new, *Accountancy*
- Sharman, P. (1996), Activity/process budgets: a tool for change management, *CMA Magazine*, vol. 70, pp. 21
- Schmidt, Jeffrey A (1992), Is it times to replace traditional budgeting? *Journal of Accountancy*, pp. 103-107
- West, R. N. and Snyder A. M (1997), How to set up a budgeting and planning system, *Management Accounting*, pp.20