

EMPIRICAL EVIDENCE OF THE USAGE AND BENEFITS OF MANAGEMENT ACCOUNTING TECHNIQUES IN NIGERIA COMPANIES

S. O. Ajibolade, (Ph.D)

Abstract

Deriving from arguments that the traditional management (MA) techniques may no longer be relevant in the modern industry, accounting research has recommended new MA techniques. These new techniques, which have been introduced into accounting education in the developed countries, have had very little attention in Nigerian accounting education. This study reports evidence on the extent of usage of these new MA techniques in comparison with the traditional techniques in Nigerian companies and the perception of practitioners on the level of benefits derived from them.

Data obtained from 83 medium-sized to large companies covering the manufacturing, financial and non-financial service companies in Lagos State, Nigeria are analyzed using Percentages, Means and Mann Whitney test. The results reveal that although, many traditional management accounting techniques are used to a higher extent than a number of the new management accounting techniques, these new techniques have also gained wide usage in business. The companies in the financial service industry, oil and gas and the pharmaceuticals for instance reveal a moderate level of usage of the integration of the financial and non-financial measures of performance (BSC) with mean usage at 3.67, 3.6 and 3.67 respectively. The Mann Whitney test however, indicates statistically significant differences at $p < 0.05$ in the level of usage and benefits from both categories of techniques. Following the evidence of the usage of the new MA techniques in practice, there is need, to pay greater attention to them. Steps should therefore be taken to incorporate research findings about practice into accounting curricula and textbooks.

Introduction

Research has provided evidence that traditional management techniques have been in use in business since the emergence of the modern form of business enterprise in the 1800s. These techniques, including the standard costing of products, absorption costing and budgeting were reported to have been in use for the purpose of providing timely and accurate information to managers, to assist them in controlling costs, measuring and improving productivity and in ensuring the achievement of the business goals (Amey & Egginton, 1973).

In the more recent years, these techniques have attracted a great deal of criticisms. Arguments have been presented that these techniques have lost relevance in the contemporary business organization (Kaplan, 1984; Johnson & Kaplan 1987; Cooper & Kaplan 1988; Johnson, 1992). Following these arguments, "new" management accounting techniques have been offered, which proponents argued will measure costs and performance more correctly and as such further the achievement of organizational goals more efficiently and effectively (Kaplan & Norton, 1992; Goldratt & Cox, 1992). Although empirical evidence on the benefits of these new techniques is yet inconsistent (Bromwich & Bhimani, 1989; Zimmerman, 2003), research has shown their usage in practice (Kennedy & Afflect-Graves, 2001). These management accounting (MA) techniques as: the activity based costing (ABC), the balanced score card (BSC), the theory constraints (TOC) and its associated throughout accounting (TA), target costing and lifecycle costing have consequently found their way into textbooks and management accounting curricula in the U.K. USA and other countries. However, these new techniques are yet to find their way into many management accounting textbooks and curricula in Nigeria as noted in Ajibolade et al, (2008). The objective of this study therefore, is to determine the extent of use and the perception of users on the level of benefits derived from these new techniques in comparison with the traditional management accounting techniques in Nigerian companies. The major research question focused is: Are these techniques relevant in our business environment to justify their attention in management accounting curricula and textbooks?

The rest of the paper proceeds with a review of literature on the historical, developments and criticisms of management accounting techniques. It then describes the method of the research, followed by a discussion of the results, conclusion from the findings and recommendations.

Historical Development of Management Accounting

The origin of Management accounting has been traced to the emergence of the managed Hierarchical enterprises in the nineteenth century. Evidence were reported of the use of management accounting techniques in the early industries including, Charlton Mills in England around 1800: Boston Manufacturing Company by 1820s (Johnson, 1981); the Lyman Mills Company, a New England textile mill established at about 1855 (Johnson, 1972) and in the U.S Railroad Corporations in the 1860s and 1870s (Chandler, 1977).

The MA practices developed to support the decision-making activities of these business enterprises were mainly focused at identifying the different costs for the intermediate and final products of the business enterprise and to providing a benchmark to measure the efficiency of operations. Measured costs included labour and material costs and involved some attribution of overhead. The measures developed were simple, focusing on a conversion costs and summary measures such as cost per hour or cost per pound produced for each worker (Johnson & Kaplan, 1987). Extensive summary measures of internal operations and performance were subsequently developed following the development of larger decentralised to co-ordinate and control the activities of the geographically dispersed managers of these large organizations. Measures such as cost per ton-mile, operating ratio and ratio of revenue to operating costs, were used to measure the profitability of various segments of the business. Other measures such as gross margin by department and stock turnover were also developed to support managerial planning and control activities of the large enterprises involved in distribution activities. Further advances in performance measurement emanated from the work of the scientific management movement in the early twentieth century. The concern with improving efficiency and utilization of labour and material. These standards provided the basis for developing standards costs of material and labour which were eventually often combined with an allocation of overhead costs to make product costs decisions. This further led to the development of the technique of variance analysis (Johnson & Kaplan, 1987). The emergence of the vertically integrated multi-activity business enterprise gave impetus to further development in MA techniques such as budgeting and the return of investment (ROI) measure credited in particular to the Dupont Powder Company and the General Motors in the early 1900s. (Johnson, 1975; Chandler, 1977; Johnson & Kaplan, 1987).

Some researchers argued that subsequent to this period, the pace of developments in MA seemed to have stagnated, as virtually all MA practices developed to serve the informational and control needs of the managers of the increasingly complex and diverse organizations were in place by 1925. The suggested these practices have not kept pace with the evolution of product and process technologies of the 1980s and have eventually led to the problems of distorted product costs and performance measurements. (Cooper & Kaplan, 1988; Kaplan, 1984; Lawrence & Ractcliffe, 1990; Goldratt & Cox, 1992; Swenson, 1995).

Other researchers however suggested that the pace of innovation in MA may not be an issue, as there were major developments in MA through the 1950s onto the 1990s. some of the developments noted are the discounted cash flows, the total quality management and optimum transfer pricing in the 1950s; opportunity cost budgeting, Zero-base budgeting, decision tree and critical path scheduling in the 1960s; information economics and agency theory, just-in-time scheduling and strategic business units in the 1970s; activity-based costing benchmarking, target costing, value-added management and theory of constraints in the 1980s; and business process reengineering, quality functional deployment and outsourcing in the 1990s (Hagerty, 1997; Smith, 1999, cited in Askarany, 2004).

What Techniques Constitute Traditional Management Accounting Techniques?

Traditionally, the main objective of the management accounting system has been to provide information for costing products and for promoting efficiency in the use of labour and materials. The techniques used in attaining this objective are referred to as the traditional management accounting techniques. Such include the techniques for;

- Cost allocation, product cost measurements and cost control: variable costing absorption costing (which allocates only production overheads using single labour cost-based factory overhead rate) standard costing and flexible budgeting and variance analysis.
- Performance monitoring incremental analysis, cost-volume-profit analysis, capital budgeting and operations research techniques for decision-making; measurement of profit, contribution and return on investments; and
- The full integration of internal cost accumulating systems with the external financial reporting systems (Shillinglaw, 1989; Dugdale, 1990).

Criticisms of the Traditional MA Techniques

Literature is replete with criticisms regarding these MA techniques since the 1980s. One of the earliest criticisms presented by Goldratt (1983, cited in Edward & Heard, 1984, p. 44) suggested that the cost accounting productivity measurements provided the wrong signals to managers in their effort to control inventories, operating expenses and throughput. Goldratt therefore advocated that these methods should be discarded, because they failed to draw attention to the right things, led to unproductive behavior and decisions and reinforced the status quo, rather than supporting the continuous improvement philosophy underlying the majority of the new management models. Goldratt & Cox (1992) also referred to the MA system adopting these traditional techniques as the “cost world” arguing that it operates on the assumption that product cost is the primary way to understand value and business decisions. They offered a new way of accounting referred to as the “throughput world”.

Kaplan (1984, p. 95) argued that the use in the 1980s of cost and management accounting systems developed in the 1920s was “a major and largely unnoticed obstacle to the lasting success of the revolution in the organization and technology of manufacturing operations”. He noted that the competitive environment of the 1980s, characterized by products with much lower direct labour contents, differed drastically from that of the 1920s with relatively few standard products having a high direct labour content. As such, apart from distorting product costs, the traditional techniques, which were instrumental in promoting the efficiency of the earlier mass production enterprises, are inadequate for measuring the manufacturing efficiency and effectiveness in the new manufacturing operations must serve the strategic objectives of the firm considering in addition to financial measures, non-financial measures relating to quality, inventory, productivity, innovation and the workforce.

Other researchers have contributed to the arguments suggesting the irrelevance of the traditional MA techniques to today’s organization. Johnson and Kaplan (1987) argued that the techniques focus on inputs such as direct labour that are relatively insignificant in today’s environment and as such distract managers’ attention from factors that are critical to production efficiencies. Cooper and Kaplan (1988) suggested that the allocation of rising overheads with their diminishing direct labour base by companies would result in managers making decisions such as pricing with distorted cost information and ultimately may consisted had competitive strategy for the business.

It would be noted from the foregoing that much of these earlier criticisms mainly targeted at the techniques of product costing, suggested inaccuracies in the product costs arising from the use of single volume-sensitive cost drivers in the allocation of overheads to produce rather than tracing overheads to products (Shillinglaw, 1989). Later criticisms were focused on the traditional financial measures of performance, which were argued to be inconsistent with current business reality (Niven, 2005). For example, Gendin (2004) noted arguments suggesting that:

Budget variance calculations provided by the budgetary control system provide no useful information for management decisions; at best, unfavorable variances may give warning that corrective action should be taken but they provide no information about what action should be taken. At worst they are irrelevant or even misleading (p. 39). These measures have also been criticized for “their lack of timeliness, their aggregation and the static nature of performance expectations” (Chenhall, 2006, p. 92).

Drury (1992) summarized the salient points from these arguments as follows:

- Traditional MAS do not meet the need of today's manufacturing and competitive environment.
- Traditional product costing systems provide misleading information for decision-making purposes.
- MA practices follow and have become subservient to financial accounting requirements:
- Traditional MAS focuses almost entirely on internal activities and are financially oriented paying relatively little attention to the external environment in which the business operates (p. 803).

Lawrence and Ratcliffe (1990) buttressing the arguments provided empirical evidence suggesting dissatisfaction among both management accountants and managers, with the MA techniques in use in the manufacturing companies.

Cadez expressing an alternative way of looking at these arguments suggested that they are a call on MA to provide information necessary for the formulation, implementation and realization of strategies for achieving competitive advantage in an increasingly complex and competitive environment. He argued that MA techniques for measuring performance neglect the very essence of competitive advantage by neglecting issues relating to customers, competitors and long-term strategy sustainability.

The response of the accounting profession to these criticisms led to the emergence of a number of "new", "sophisticated" management accounting techniques. Many of these techniques combine both financial and non-financial information and take a strategic focus:

What Techniques Constitute the New Management Accounting Techniques?

Cadez (2006) noted that generating a definite list is bound to create some problems as there is no agreed conceptual framework outlining what constitutes strategic management accounting. He proposed that all management accounting techniques that exemplify strategic orientations are regarded as SMA. He listed seventeen (17) management accounting techniques as constituting strategic management accounting techniques. These are: attribute costing, competitor position monitoring, competitor appraisal based on published financial statement and customer profitability analysis, strategic pricing, quality costing, benchmarking, strategic costing, integrated performance measurement, value change costing, target costing, brand valuation, competitor cost assessment, life cycle costing, life time customer profitability analysis, valuation of customers as assets and included capital budgeting (which is noted as a traditional technique). He however, excluded activity-based costing from the list suggesting that activity-based costing is more concerned with costing accuracy than the adoption of a strategic orientation. Chenhall and Langfield-Smith (1998) on the other hand, in an earlier work, identified the new strategically focused management accounting as including activity-based costing, value share analysis, target costing, product life cycle analysis, shareholder value analysis and benchmarking. They also reported that "of all the recently developed management accounting practices, activity-based costing has gained a highly profile as a technique to enhance the accuracy of product costing and to help understand the way in which resources are used across the firm's value chain to deliver strategic outcomes" (Shank and Govindarajan, 1993, cited in Chenhall & Langfield-Smith, 1998, p. 9). The integration of the financial and non-financial performance measurements with a strategic focus in a balanced scorecard (BSC) has also been offered (Kaplan & Norton, 1992) and the theory of constraints (TOC) and its associated throughput accounting (TA) has been put forward as a sophisticated alternative to absorption costing techniques (Golldratt, 1990; Golldratt & Cox 1992).

Criticisms of the New Management Accounting Techniques

Proponents of the new management accounting techniques have suggested their superiority over the traditional techniques in their strategic orientations and performance influence. However, some researchers have called for caution in actively pursuing these "new" concepts. Some critics have argued that the techniques described as "new" were not really "new" but a "reinventing the wheel" (Jones & Dugdale, 2000, p. 1). Empirical evidence has also been provided suggesting that benefits

from traditional MA techniques might indeed be higher than those derived from the newer techniques (Chenhall and Langfield-Smith, 1998). Zimmerman (2003) also cautioned that:

While recent innovations in MA are important to discuss, they should be placed in their proper perspective. Traditional absorption costing systems have survived the test of time for over one hundred years. Accounting systems innovations are new, not necessarily better. We certainly do not know if they will survive (p. vi).

Specifically, in relation to ABC systems, Bromwich and Bhimani (1989) argued that even though “it is known that ABC changes product cost substantially, there is as yet little to suggest that it enhances profitability... the evidence and arguments advanced by advocates of wholesale changes in MA are not yet sufficient to justify wholesale revision of MA” (pp. 2-3). Bromwich and Bhimani in comparing ABC to other cost systems, traditional or otherwise further contended that the superiority of one costing systems over another cannot be established unambiguously. They proposed that ABC has not succeeded in addressing the problem of the overhead blob because it does not absorb the facility sustaining costs into products. Johnson (1992) also opined that “ABC” information does not necessarily help companies achieve continuous improvement of globally competitive operations. While ABC gives companies a better ‘rack and stack’ of their overhead costs, it does not drive them to change their fundamental views about how to organize work to efficiently satisfy customer” (p. 153). Askarany (2004), in a survey of Australian manufacturing companies also found no statistically significant differences between the level of satisfaction of adopters and non-adopters of ABC, implying that as with the traditional costing techniques, the recently developed cost and MA practices were not perfect. He referred to evidence from literature suggesting that some companies, which had earlier begun the implementation of ABC, halted implementation process mid-way (Innes & Mitchell, Madison & Power, cited in Askarany, 2004).

The critics of TOCTA have also questioned whether the ideas are really new, suggesting that TOC “was an extreme form of marginal costing that paralleled the contribution-per-unit-of-limiting factor technique” (Jones & Dugdale, 2000, p. 10). Others have suggested that TOC might be more of a theoretical than practical system (Scarlet, 1996). Evidence of its use in practice has been far more restricted than that of ABC, the spread of ABC being more rapid and widespread (Jones & Dugdale, 2000). Goldratt & Cox (1992) have also noted that “most readers of ‘The Goal’, (the book which popularized Goldratt’s propositions) agreed with its message to the extent that they called it ‘common sense’, nevertheless they didn’t implement it” (p. 342). Others also criticize TA’s complete disregard for capturing detailed product cost data. TA advocates that only direct materials are included in product cost and all other costs are fixed and not identifiable with products (Goldratt & Cox, 1992).

These criticisms notwithstanding, evidence of the use of many of these practices have been provided in literature and their introduction into management accounting courses in business school curricula has been noted. According to Maher (2000), from 1983 management accounting teachers introduced many new topics into the classroom including, ABC, economic value added, BSC and target costing. From this period too, many textbooks in their newer editions covered new topics not covered in the earlier editions. For instance, Maher revealed a popular cost accounting textbook authored by Horgren et al, which he noted has added fourteen new topics between 1982 when the 5th edition was published and 2000 when the 10th edition was published. The sources of these new topics Maher argued are practice and empirical research about practice, which also appear to be influencing curricula either directly or through textbooks.

Kaplan (1984) had predicted that innovations in management accounting practice coming primarily from business will lead to new topics in textbooks and the classroom and Maher (2000) also noted that many ideas in textbooks and curricula took root in practice and evidence of this has been provided in literature from other countries. The expectation that practice and empirical research about practice should influence curricula provided the basis for this study. The study has therefore been designed to examine whether the current changes taking place in management accounting have affected the practice in Nigeria to the extent that might justify greater emphasis in management accounting textbooks and curricula in Nigerian institutions.

Research Method

This study consists of a survey of companies in the manufacturing and service industries in Lagos State, Nigeria. The purpose is to collect evidence on the extent of usage of traditional management accounting techniques relative to the newer management accounting techniques. The survey also sought the perception of the level benefits obtained from these techniques. The data collection instrument consisted of an adaptation of the instruments in Barker and Richardson (1998) and Cadez (2006) and Chenhall and Langfield-Smith (1998).

Following the classifications in these earlier research works, this study identified thirteen new MA techniques and eighteen traditional MA techniques. A survey instrument was constructed on a 5-point Lickert scale, which requested respondents to state the extent to which the thirty-one (31) listed management accounting techniques were used by their companies and their perception of the extent of the benefits obtained from their use. The survey sample consisted of 120 medium sized to large companies from which 83 usable responses resulting in a response rate of 69% were obtained. The characteristics of the companies surveyed are presented in table 1. The data were analyzed using Frequencies, Percentages, Means and Mann Whitney test. The results of the analysis are presented in tables 2 to 4.

Table 1: Characteristics of the Companies Surveyed

Industry Group	Medium sized (Employees less than 500)	Large (Employees greater than 500)	Total Number of Companies	Percentage of Total (%)
Food processing	16	6	22	26.51
Chemical and Pharmaceuticals	5	6	11	13.25
Oil and Gas	5	3	8	9.64
Electrical	3	4	7	8.43
Financial Services	4	8	12	14.46
Non-financial Services	19	4	23	27.71
Total	52	31	83	100

Result and Discussion

The mean scores representing levels of usage and benefit are presented in table 2, table 3 shows the level of usage across the industries examined and tables 4 and 5 present the Mann Whitney test of differences between the ranks of the usage and benefit obtained.

The level of usage and benefit of the thirty-one management accounting techniques was examined by computing the mean level of usage benefit from the responses for all companies for each of the techniques. Means of 1 to 2.5 were considered low level of usage benefit, means greater than 2.5 but less than 4.0 were considered moderate, while means of 4.0 and above were regarded as high usage benefit. The means obtained were then ranked in order of their magnitude.

The first 18 techniques listed as shown in table 2 are the techniques classified as traditional indicated by the value of the mean usage of these techniques and the ranks generated, the traditional MA techniques, ranked 1st to 5th among the MA techniques in use in the companies surveyed. The techniques of budgeting and financial performance measurement using return on investment were shown to be in high usage in these companies. The usage of the budgetary techniques seems to dominate, mean usage for detailed budgeting for cash flows was found to be the highest at 4.25, while mean usage for return on investment and capital budgeting were 4.13 and 4.09 respectively. However, the technique of allocating of service department cost to product cost as against the absorption of only production overhead in the typical absorption costing system, regarded as new technique also ranked above some traditional techniques indicating its high usage (mean usage of 4.00). Companies in the financial service industry, oil and gas and the pharmaceuticals showed a moderate level of usage of the integration of the financial and non-financial measures of performance (usage level at 3.67, 3.6 and 3.67 respectively).

Empirical Evidence of the Usage and Benefits of Management Accounting Techniques in Nigeria Companies

It is noteworthy that there seems to be none of the MA techniques that has not found some level of usage in industry except the theory of constraint, which has been reported by majority of the companies surveyed as not being used at all or used in a few cases to a very low extent (Mean usage of 2.19).

Analysis of level of usage among companies in different industries sampled also revealed differences in the level of usage of a number of these techniques, as shown in table 3. For instance, while the mean level of usage of break even analysis in chemical and pharmaceutical industry was found to be 5.00 that of the electrical industry was found to lag behind in the usage of this technique with mean usage at 1.33. However, the usage of a number of the traditional techniques of budgeting in the companies seems to be an established practice, their usage found to be high in all industries examined.

The differences noted in the level of usage and in the benefit of traditional MA techniques, when compared with the new MA techniques were tested for statistical significance, using the Mann Whitney test. The differences were found to be statistically significant at $p < 0.05$ as shown in tables 4 and 5. These results suggest that the level of usage and benefit of traditional MA techniques are higher than that of the new MA techniques in conformity with results of earlier studies including Chenhall and Langfield-Smith (1998).

Table 2: Mean Usage and Benefits of Management Accounting Techniques

	Industry Mean	Mean Usage	Ranking	Mean Benefits	Ranking
	Traditional MA Techniques:				
1	Variable costing	3.34	13	3.59	11
2	Graphical cost behavior analysis	2.38	29	2.53	27
3	Statistical cost behavior analysis	2.81	21	2.88	21
4	Break-even analysis	3.90	8	3.84	7
5	Capital budgeting	4.09	3	3.91	5
6	Master budgeting	3.66	11	3.56	12
7	Flexible budgeting	3.81	9	3.71	10
8	Zero-based budgeting	2.34	30	2.41	30
9	Budget variance analysis	3.97	7	3.83	8
10	Absorption costing using single volume based overhead	3.22	16	3.01	19
11	Quantitative models for resource allocation (linear programming)	2.47	27	2.44	29
12	Detailed budgeting for cash flow	4.06	4	4.19	2
13	Detailed budgeting for all items of cost	4.03	5	4.13	3
14	Detailed budgeting for revenue	4.25	1	4.22	1
15	Controllable profit	3.25	15	3.24	15
16	Divisional profit	3.13	18	3.28	13
17	Return on investment	4.13	2	4.12	4
18	Residual income	3.53	12	3.22	16
	New MA Techniques:				
19	Product profitability analysis	3.78	10	3.71	10
20	Activity based costing	3.28	14	3.25	14
21	Activity based budgeting	3.19	17	3.13	17
22	Target costing	2.94	20	3.03	18
23	Life cycle costing	2.44	28	2.47	28
24	Allocation of service dept costs	4.00	6	3.88	6
25	Customer satisfaction	3.03	19	2.75	24
26	Customer returns in percentage	2.63	24	2.81	22
27	Customer profitability	2.56	25	2.78	23
28	Theory of constraint/throughout accounting	2.19	31	2.00	31

29	Balanced Score Card (mix of financial and non-financial measures)	2.72	22	3.00	20
30	Benchmarking of operational process	2.66	23	2.59	26
31	Competitor appraisal based on published financial statement	2.53	24	2.72	25

Table 3: Level of Usage of Management Accounting Techniques Across Industries

	Industry Mean	Chemical & Pharmaceutical	Food Processing	Financial Services	Oil & Gas	Electrical
1	Allocation of service dept costs	4.67	4.30	4.50	4.40	1.67
2	Graphical cost behavior analysis	2.33	2.20	2.00	3.60	1.00
3	Statistical cost behavior analysis	3.33	3.00	3.50	2.80	2.00
4	Break-even analysis	5.00	4.40	3.30	3.80	1.33
5	Capital budgeting	5.00	4.30	4.07	4.60	3.67
6	Master budgeting	5.00	3.50	3.00	4.40	2.00
7	Flexible budgeting	3.00	3.90	4.00	4.40	2.00
8	Zero-based budgeting	4.67	2.90	2.50	1.60	1.00
9	Budget variance analysis	5.00	3.80	4.00	4.20	4.30
10	Absorption costing (using single volume based overhead rate)	5.00	3.30	2.83	4.20	1.00
11	Variable costing	3.67	4.10	2.50	.80	1.00
12	Detailed budgeting for cash flows	5.00	4.00	4.50	4.60	3.00
13	Detailed budgeting for all items of cost	5.00	3.70	4.30	4.40	4.30
14	Detailed budgeting for revenue	5.00	4.10	4.67	4.20	4.67
15	Controllable profit	4.67	3.50	3.00	3.00	1.00
16	Divisional profit	3.67	3.80	3.50	2.80	1.00
17	Return on investment	4.67	4.00	4.17	4.40	2.33
18	Residual income	3.67	2.90	3.33	4.20	2.00
19	Quantitative models for resource allocation (linear programming)	3.30	2.30	2.17	2.80	1.00
20	Activity based costing	3.00	2.90	4.00	4.40	2.67
21	Activity based budgeting	3.67	3.00	3.17	3.40	3.33
22	Target costing	4.67	3.00	3.33	3.20	1.00
23	Life cycle costing	3.67	2.30	2.33	2.80	1.33
24	Customer returns in percentages	3.00	2.10	2.50	3.60	1.67
25	Customer satisfaction	2.90	3.10	4.20	2.79	2.00
26	Customer profitability	3.67	2.90	3.33	4.20	2.00
27	Product profitability analysis	5.00	4.00	3.83	4.20	1.67
28	Balanced Score Card (mix of financial and non-financial measures)	3.67	3.40	3.67	3.60	1.67
29	Benchmarking of operational process	2.12	2.78	2.00	4.60	2.00
30	Competitor appraisal based on published financial statement	2.18	2.67	3.67	3.05	2.18
31	Theory of constraint throughout accounting	2.37	2.11	1.00	2.00	2.33

Table 4: Mann Whitney Test of Significant Differences between Local Level of Usage of the Traditional and New Techniques

	N	Mean rank	U-statistic	Significance
Traditional MA techniques	18	19.06	62	0.027
New MA techniques	13	11.77		

Table 5: Mann Whitney Test of Significant Differences between Benefit derived from Traditional and New Management Accounting Techniques

	N	Mean rank	U-statistic	Significance
Traditional MA techniques	18	19.13	60.50	0.024
New MA techniques	13	11.65		

Conclusion

In conformity with earlier arguments that traditional management accounting techniques are still useful in practice, this study found that the level of usage and benefit of traditional MA techniques are higher than that of the new MA techniques. It is noteworthy however, that there seems to be none of the MA techniques that has not found some level of usage in industry except the theory of constraint, which has been reported by majority of the companies surveyed as not being used at all or used in a few cases to a very low extent (mean usage of 2.19). this study has found that many of the new concepts in MA have gained acceptance in practice among companies in Nigeria, although usage is still at a lower level, than the traditional techniques. These findings are perhaps a result of the lag in management accounting research and information on the use and benefit of these techniques in the Nigeria, since as Maher (2000) noted, both research and practice are expected to influence teaching.

The result of this study should provide a useful basis for other studies of management accounting curriculum and help shape the future of management accounting in particular and accounting programs in general in Nigerian tertiary institutions.

Recommendations

- The way management accounting is taught can increase the value of students. Ensuring that practice is reflected in teaching should make students more comfortable with practice by the time they become exposed to such practice in organizations and increase their capability to add substantial value to their organizations. Practice can only be reflected in what is taught through incorporation of research findings in textbooks from where they will find their way into the classroom.
- Management accounting educators should continue to observe business practice through field visits, participation in internships in organizations and collaborative research with practitioners.
- A process of regular reviews of curricula should help to ensure that findings from such efforts are incorporated in curricula and textbooks in order to help students develop life long problem solving skills and to understand the organizational context in which MA techniques are used to support decisions.

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