



FACTORS AFFECTING THE ADOPTION OF STRATEGIC MANAGEMENT ACCOUNTING TECHNIQUES IN PUBLIC UNIVERSITIES: ANALYTICAL THEORETICAL RESEARCH

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Article history:	Abstract:
Received: 6 th November 2022 Accepted: 8 th December 2022 Published: 11 th January 2023	The research aimed to identify the factors affecting the adoption of applying strategic management accounting techniques in public universities. The research dealt with the basic concepts of some of the techniques that were applied in public universities. Relied on the descriptive analytical approach to describe the phenomenon under research according to a theoretical framework supported by a group of Arab and foreign researches that dealt with the adoption of strategic management accounting techniques in public universities. The research concluded that there are many external and internal factors that affect the application of strategic management accounting techniques in public universities. As for the external ones, the most prominent of them is the political factors, since public universities are affiliated with the government and their management is not financially and administratively independent, and therefore they are bound by government provisions and legislation. As well as other factors. Influencing within the universities themselves, from the reluctance of the workers and employees therein to apply the technologies to the lack of knowledge of these technologies and the benefits that result from their application.

Keywords: Strategic management accounting techniques, public universities

1. INTRODUCTION

Government universities are currently seeking to keep abreast of rapid and successive developments, in various ways by managing government performance in the same approaches as the private sector, with a view to achieving development, providing the best educational services and addressing many challenges and obstacles.

The most important of these is the increasing needs and diversity of society due to technological development in the surrounding environment. and the scarcity of resources and economic transformations. In this environment and in subsequent developments, public universities are under increasing pressure to provide the best educational services and improve scientific realities. To overcome this and keep pace with recent developments and achieve its objectives, it needs to adopt strategic management accounting techniques. This is due to the capabilities and standards possessed by these techniques that were previously applied in different units, whether in the private sector or in the public sector. Which suffers from many problems related to the performance of its

units and the inability of traditional tools to measure the performance of these units and evaluate the efficiency and quality of the outputs of their operations. Hence, departments do not obtain appropriate information to guide them when making decisions. Then there are many factors and characteristics that affect the process of adopting strategic managerial accounting techniques. This is what the researchers are trying to shed light on by identifying the factors that affect the application of some strategic management accounting techniques in public universities.

Government universities that are concerned with providing educational services to the community face some of the accounting problems surrounding cost management from measuring, analyzing and evaluating performance for the services they provide. in light of the tremendous developments in the modern business environment, Most cost research and management accounting focused on the accounting problems of private sector industrial companies without focusing on public sector units and government universities, this is based on the results of



previous studies in this area. The main research problem can be identified by asking the following question: What factors influence the adoption of strategic management accounting techniques in public universities?

Therefore, the importance of research stems from the need for public universities to adopt strategic management accounting techniques to address their accounting problems and eliminate job sagging and lack of productivity in them. as well as keeping abreast of rapid developments in the age of international knowledge and classifications and the continuous pursuit of quality and excellence, For the purpose of sustaining the provision of educational service, which is the primary function of government universities to provide to the community s information needs for decision-making, especially strategy.

The main objective of the research is to identify the factors influencing the adoption of strategic management accounting techniques in public universities. The following sub-objectives derive from this main objective to: First. Highlight what public universities are, their dimensions and characteristics. Second. Introduction to management accounting and its modern techniques, the most important pros and cons of working in public universities. While research is limited to knowing the factors influencing the adoption of strategic management accounting techniques in public universities by relying on previous studies. The research also relied on the evidentiary approach by reviewing and analyzing research articles and periodicals and extracting other ideas and opinions from different sources in order to reach conclusions that support the research's objectives.

2. LITERATURE REVIEW

The management accounting function has evolved and its objectives have expanded as economic activity has increased and its importance has increased in all units in different sectors. As strategic management accounting techniques have evolved and become increasingly important in economic units. As a result, many techniques have emerged that have contributed to strengthening management accounting practices and functions, whether in support of planning, oversight or management evaluation in view of the expansion of strategic management accounting applications and their diverse techniques in many sectors, whether private or public, including government universities. This led to the initial adoption of strategic management techniques that came as initiatives by government university departments or through studies and research that focused on the

importance of strategic management accounting and its diverse techniques in the service of government units.

2. 1. Concept of public universities

State or national universities are one of the units of higher education that provide educational, research and community services. It relies on government funding, in whole or in part.

Thus, they are subject to government laws and legislation, on their management and government accounting system, as much applies to government units in general, but they are distinguished from those units, and they are subject to a special law granting them a degree of university independence (Lutitsky & Dragija, 2012:41).

It also operates in a developed environment, and its objectives and strategies are influenced by the growth and development of the requirements of this environment, its interest in the required improvement of the quality of educational service, and the desire to apply local and international academic standards, through which the achievement of outstanding educational quality and high operational performance is achieved as the operational performance of universities has become the main reference for stakeholders in selecting one of the universities that occupies a distinct place between competitive universities, local and international (Mustafa, 2017:10) (Jado, 2013:1175).

In addition, State universities have unique characteristics and features from other units, both as a result of their multiple activities and the various services they provide, which lead to the production of a final product of intangible service to stakeholders.

Universities, like other government units, are linked to the State's general budget to finance their activities. They are therefore not financially independent. Therefore not for profit, as these universities perform their various activities in the light of the scarcity of available resources That requires the need for the optimal and efficient use of these resources efficiently and effectively. The concepts of efficiency and effectiveness are interrelated and inseparable. There must be rules and foundations in the process of producing the government service in a way that highlights its efficiency and effectiveness (Abu Leif, 2011:55). The concept of performance measurement and evaluation is linked to these concepts.

2. 2. Dimensions of educational services for public universities

Freedom of thought and expression in university societies is essential and indispensable education ",



and the task of university education is to put the fruits of science and knowledge at the service of society, Rationalization, insight, it is the duty of universities to help societies understand the problems they face and help solve them hence, the dimensions of university education are multiple and include many aspects: (Salem, 2001:75) (Abu Leif, 2011:43)

- a. **Social dimension:** the extension of the University's mission to encompass all aspects of economic, political, social, scientific and technological life, making it the most important duty of university education to examine the needs of society and respond to its requirements.
- b. **Intellectual dimension:** Cultural identity and intellectual ideology are an essential element of the philosophy of university education. They must be intellectually and civilizationally affiliated, and that membership is clearly reflected in society.
- c. **Human dimension:** University education is designed by an individual as a constructive human being: science, knowledge, culture, religious values and behavioral education.
- d. **Scientific dimension:** Scientific research is an important and vital element of the university's life as an intellectual scientific institution. It is one of the most important standards in the exercise of the leading role of universities in the scientific and cognitive fields. The reputation of universities is linked to the research they publish.
- e. **Cultural dimension:** The oriented category in any society is one of the graduates of universities who engage in high professions such as medicine, engineering, teaching, journalism, accountability, etc. This class must enjoy a degree of culture or common understanding of society's life and problems or understanding of the impact of their science and occupations on human life.
- f. **Mental dimension:** When enrolled in university education units, students need a climate that releases their potential and frees their minds from the families of intellectual stalemate, and trains them to practice self-criticism based on argument, logical evidence and creative thinking.

2. 3. Importance of strategic management accounting techniques in public universities

Universities have difficulty measuring, analyzing and evaluating performance due to, inter alia, lack of profit incentive and weak oversight and lack of team spirit, leading to conflicting objectives between different departments and administrations. The need for integration and globalization in the education sector has also increased competitive pressure on public

universities and that the policy of increasing the autonomy of public universities has led their administrations to consider developing their cost accounting system through the application of strategic management accounting techniques with a view to providing useful information for decision-making (Hoang et al., 2020: 878).

It provides the adoption of these technologies when measuring and evaluating the performance of public universities identification of parties interested in the measurement, analysis and evaluation process, and knowledge of the university's objectives as well as determining the relative importance of each objective in order to rationalize its management in decision-making, Among the most important techniques used in evaluation is the balanced scorecard The full and proper evaluation of performance can be achieved through this technology, It is concerned with financial and non-financial performance and contributes to the accurate clarification of the objectives of public universities by defining the appropriate strategy, as well as clarifying the balance of the efforts of these universities with their strategy (Abdulaal, 2019:436). leading to optimal use of available resources.

Through balanced scorecard (BSC) perspectives, information that gives a detailed and accurate picture of the State University's status is used as well as the need for public universities to make significant efforts in determining more accurately the costs of their products and services, Measuring and rationalizing the cost of educational services and providing information on the rationalization of administrative decisions, To achieve this, public universities must adopt cost-based technology that provides information for strategic and operational purposes. and supports the management of educational units when negotiating with funded units, acting as a control tool to comply with the budget. as well as providing information to assist in the planning and control of internal operations (Jiménez.et.al.2020: 16).

The cost information is essential to support the continuous and effective improvement of the budget, Prediction, performance analysis, and because universities are among the most important units serving the community because it provides all other units with competent scientific and professional human resources through which societies can be developed economically, culturally and politically, To complement its endeavor as well as all other units whether industrial, government or private service for a distinct place at the local, global or both levels, Therefore, public universities had to adopt quality ideas and



concepts in their units through the application of quality cost technology in order to increase the quality and grade of its outputs that will be brought to society by all public or private facilities (Jasim, 2019:2). Adopting these new concepts needs to cost quality, represented by financial or non-financial quality reports and data.

2. 4. Drivers for measuring, analyzing and evaluating performance in public universities

The concept of measuring, analyzing and evaluating performance involves many critical concepts related to success, failure, efficiency, effectiveness, planning and actual quantity and quality. Measuring and evaluating performance distinguishes and separates good work from bad work in order to develop and improve work. It is an important link in the overall management process to achieve the strategic objectives (Abdulaal, 2019:431). Therefore, the measurement and evaluation of performance in universities is not only an objective but also a means of improving and developing performance, and is therefore critical for many parties affected by this performance. The importance of measuring, analyzing and evaluating performance for each of the parties with different interests is varied: (Hassan, 2005:24) (Abu Leif, 2011:58) (Hoang et al., 2020: 879)

- a. The University Administration helps to ascertain the extent to which the Department achieves its strategic objectives. Achieving the goals is a measure of the University's ability to achieve a competitive position of excellence compared to others. It is also a measure of the degree of student satisfaction with the University and the University's ability to survive and sustain.
- b. Provides information to assist the Ministry of Higher Education to ensure the achievement of their short-term and long-term goals of profitability and safety, as there are university centers of a special nature, as well as the Ministry of Education's usually interest in maximizing the value of universities.
- c. Making sure that the needs of both new and old students are met and gaining their satisfaction. Achieving and maintaining student satisfaction and adding new students are strategic goals, and through which the university can achieve other goals, such as expansion and sustainability.
- d. Provides information that helps executive management to ascertain the achievement of the University's goals and optimal use of

resources by measuring and evaluating the University's implementation of production and marketing plans and programs, and measuring the skills of staff members, whether faculty or staff.

- e. Contributes to conveying a message of reassurance to society about the level of social performance of the University, represented by those measures that reveal the University's relationship with the external social environment, since the University is part of the social entity and must interact positively with it.

Higher education units are also under increasing pressure to provide better educational services to outside stakeholders from communities, graduates and students and to upgrade scientific realities to overcome these pressures and keep pace with recent and accelerated developments, and to achieve their objectives, they need to adopt strategic management accounting techniques. And because of the potential and standards of these technologies that have been applied in different units in both the private sector and for which they have been created, or in the public sector. Which suffers from many problems related to the performance of its units and the deficit of traditional tools to measure the performance of those units and to assess the efficiency and quality of its operations' outputs and therefore departments do not have adequate information to guide them in making decisions.

2. 5. Features and characteristics of educational services for public universities

Providing quality education service is one of the most important success factors for government universities which can be known by stakeholders' satisfaction with the level of service provided, the impact of the University's vision and mission on society, and therefore there are a number of characteristics and features of educational services in public universities, as in the case of service in general. The following are: (Radwan, 2012:13) (Al-Saied., 2014: 146-147) (Raqad, 2014: 25-26) (Ismail, 2019: 186-187)

- a. **Educational services are intangible:** The beneficiary of educational services cannot restore them if they fail to achieve the quality required for difficult inspection and knowledge of their quality before obtaining them. But they are not necessarily intangible in their entirety, but can contain tangible aspects that support the production and delivery of educational service, such as the faculty's use



of some teaching members. In addition, tangible material aspects, such as the premises of the Institution of Higher Education, its external design, equipment, devices and the appearance of its staff, constitute one of the most important basis on which students rely in their assessment of the quality of the educational service provided.

Students depend on it for their assessment of the quality of the educational service provided.

- b. **Educational service asymmetry:** that is, there is no uniformity in the provision of educational service due to the different competence and skill of the faculty, the place and time of its delivery, and the degree of interaction between faculty members and students.
- c. **Ownership in the provision of educational service:** Educational service, like other services, is utilized, cannot be owned, transferred or resold and cannot be transferred from one place to another, because it is essentially intangible and is consumed directly upon receipt.
- d. **Educational service inseparability:** That is, educational service like other services is produced and consumed at the same time, and that it relies on direct contact between its provider and the recipient.
- e. **Difficulty in evaluating the quality of service by the beneficiary:** The process of evaluating the quality of the educational service is more difficult and complex, the results of which come late and are usually after students graduate and engage in careers. Students also rate this service in different ways depending on their perceptions of its quality, which makes it necessary to reveal the dimensions and criteria they use in their assessment of the quality of the educational service provided.
- f. On the basis of the foregoing, the two researchers consider that all features are essential for university services. University education relates to all individuals responsible for the delivery of university services and products to faculty members, their collaborators and their skill, and therefore (student) stakeholders. Commitment and personality of all employees is an integral part of the university product.

2. 6. Impediments to performance assessment and measurement in public universities

Measuring and evaluating performance at public universities is extremely difficult because they are less resilient to a culture of change, are geared towards meeting society's needs, improving its well-being, have scarce resources, and do not seek to maximize profits to avoid its profit goal (Ogawa & Tanahashi, 2008:56). The most significant impediments to performance measurement in public universities are: (Abu Leif, 2011: 40-42) (Pereira & Melão, 2012: 921), (Hussein et al., 2020: 1)

- a. **The difficulty of quantitative or monetary expressions of activities:** Government activities and programs are aimed at achieving economic, social and political impacts that are often difficult to express in quantitative or monetary terms. In fact, these activities did not exist for profit, but were found primarily to advance development and the economic and social well-being of members of society.
- b. **Failure to meet the cost of producing the service:** Most government units provide necessary and vital services to cope with undesirable situations within the community or in a particular group. These services are often not exchanged on markets, as they are offered free of charge or for a symbolic fee that has nothing to do with the cost of their production. These are among the most important problems facing public universities.
- c. **The Government is a source of funding:** Government (service) activities and programs are funded through the allocation of proposed funds from the executive authority approved by the legislature in the general budget, which is determined annually according to the needs of the activities and programs. In addition to sovereign resources, the funding source of these activities and programs may be represented in voluntary contributions, grants, subventions and gifts from different individuals or units, Once presented, they become public property with no rights regarding these units, resulting in the difficulty of establishing a general criterion of differentiation between available alternatives, and hence the difficulty of measuring efficiency and effectiveness of performance.



d. **Legal constraints on the use of resources:** The State's general budget is adopted by the legislature and thus becomes an enforceable law in addition to the Budget Act, certain laws, regulations and instructions governing expenditure and collection are issued, the most important of which is that allocations for each type of use are not exceeded. This results in difficulty in identifying and analyzing cost elements and lack of flexibility in the use of inputs. Hence the difficulty of creating a relationship between inputs and outputs, which naturally affects the measurement and evaluation of efficiency and effectiveness.

e. **Lack of an adequate accounting system for reporting that provides adequate and necessary information for performance control:** the most important accounting problems faced by these types of units are limited information that describes their performance, obtained solely from financial lists, which are usually difficult to understand and interpret, and sometimes not easy to obtain.

Based on the foregoing, the researchers believe that the process of evaluating, measuring, analyzing and evaluating performance will help universities to verify that their different departments perform their various functions as efficiently as possible, through information available to departments that helps them to make appropriate and rational decisions.

2. 7. Impediments to the use of a balanced scorecard as a performance measurement method in public universities

A balanced scorecard can be used as a tool for university excellence using measures that broadly reflect the University's mission and critical success factors. The most important point in university education is excellence in scientific research and academic programs, which offer excellence in creativity and participation in knowledge described in the terms of education, in fellowships and scholarships, and in the public service of society. In contrast, there are a range of obstacles and factors influencing the assessment and measurement of university performance, which can be summarized as follows: (Abdul Rahman, 2014: 75-76) (Abdul Hamid & Mansour, 2015:68), (Hussein & Mahmood, 2021: 1), (Hussein et al., 2006: 130)

- a. The assessment and measurement of university performance according to the balanced scorecard are influenced by the cultural concepts prevailing in universities and their history, the values that university administrations seek to achieve, as well as the difficulty of directing the behavior of all workers in different cultures and opinions towards the common goal.
- b. The prevailing management approach is one of the key factors influencing the determination of a performance calendar system such as balanced scorecard technology or other techniques and methods of implementation. For example, most of senior management's bonuses are tied to financial measures only. Workers' remuneration is based on their earnings.
- c. The nature and patterns of social relations available within universities or with the surrounding environment of trade unions, stakeholders and suppliers determine the performance appraisal system, as the expectations for the application of balanced scorecard technology are directly or indirectly linked to the interests of the university's clients.
- d. The omission of non-financial benchmarks in evaluating the Unit's performance and its staff will make them focus more on what their performance shows when evaluating, neglect and diminish the relevance of these benchmarks.
- e. Difficulties in arranging measures and how to choose them in a manner consistent with organizational strategies and objectives, and there are some units that do not have measures of their objectives and strategy.

2. 8. Advantages and constraints of applying cost-based technology to activity in public universities

In addition to the advantages that we have referred to, there are a range of obstacles and disadvantages that are encountered and result from the application of ABC in universities, including: (Dražić&Dragija,2012:38) (Toompuu & P;lajeva, 2014:1021) (Demina et al., 2019: 6) (Madwe et al., 2020: 4)

- a. Difficulties faced by universities in the selection process of cost causes and activities, and that there is no cost accounting standard



or system or cost model suited to non-profit units as a whole or each university alone.

- b. The Department and the faculty may lack most of the information necessary for the cost of the programs they administer and the activities they are engaged in, although universities and other government units boast of building accounting systems covering thousands of accounts.
- c. Universities are not easily neutral to required constraints such as sound management and cost control. Many members of the University's Council have chosen academic work to escape rules and constraints in other types of units and can be unaware of any link between costs and the benefits of their activities.
- d. The lack of a full understanding of the technology (ABC) by stakeholders, the high cost of implementing the technology and the lack of staff cooperation, as well as political influences. This results in a lack of detailed costing and knowledge of cost causes and cost packages.
- e. ABC technology is a very complex approach and takes a lot more effort and resources to implement in universities than in traditional systems, so there is no justification for its application unless the intended benefits exceed its implementation costs.
- f. The application of ABC requires regular data collection on the University's activities, which is a complex and time-consuming work, because of its need to organize and collect data and compare it with the costs arising from different activities, as well as the need to develop analytical accounting to determine the number of cost drivers, as well as to maintain an analytical calculation of certain types of indirect expenditures.

The two researchers believe that cost technology needs to be applied on the basis of university activity to accurately allocate indirect costs to productive services, providing appropriate information to assist in the conduct of planning, forecasting, oversight and performance appraisal processes, as well as effectively making different decisions based on sound cost information that the university administration can rely on.

2. 9. Advantages and constraints of applying quality cost technology in public universities

Since there are benefits and advantages from the application of COQ technology, there are certainly a

range of obstacles and difficulties facing the application of quality cost technology in public universities. The following are a range of constraints as follows: (Al-Atiqi, 2016:24) (Al-Rashidi, 2019:488)

- a. Severe centralization of university administration and lack of material resources, as well as restrictions on expenditure and the consolidation of centralization and authorization. This makes it difficult to obtain senior management's support and commitment regarding the need to introduce new working methods and systems to manage the cost of quality of the services provided.
- b. The resistance of university workers to change because they feel that this will impose new burdens on them. This requires the dissemination of a culture of cost of quality among them and their awareness of the benefits to them and their communities from applying this technology.
- c. The diversity of academic activities carried out by faculty members that are not stereotypical, are intangible intellectual activities, and therefore it is difficult to link the costs of resources with the outputs of the educational process.
- d. The outputs of academic members overlap with the difficulty of clearly separating them from each other, as it is difficult to distinguish between scientific research activity and teaching activity, and academic services activity of the faculty.

Based on the foregoing, the researchers believe that the application of quality cost technology in public universities activities. Which could help universities plan and control costs, by creating a clear relationship between activities and costs on the one hand and activities and services provided on the other and hence the ability to determine quality costs by providing information through which to identify and account for opportunities to improve quality, and thus enable management to make appropriate decisions.

3. CONCLUSIONS

The characteristics of public universities may pose a challenge to the application of strategic management accounting techniques. Their application is influenced by the characteristics and nature of public universities and the political, social and economic environment surrounding them. Public universities operate in a political context as a result of their association with government and legislation that affects both planning



and implementation of universities' strategies. There is also a need in public universities to adopt strategic management accounting techniques to address the problems of deficiencies in their traditional accounting systems. Their application can provide a contribution to improving the realities of operational processes, making them provide services at the required speed and quality at the lowest possible costs and enhancing the potential of public universities as well as assessing the efficiency of the pre-prepared university program and identifying weaknesses and imbalances. Most strategic management accounting techniques also need to be reformulated and more flexible to engage with public universities in order to achieve their objectives. The application of the balanced scorecard helps government universities understand the mission and vision of the unit at all levels of administration and focuses all efforts on this awareness. Thus, the balanced scorecard practically encourages managers at all levels to make strategic decisions.

The adoption of activity-based cost technology also helps to identify and allocate costs for each cost-causing activity, providing accuracy in cost-determination, as well as meeting the University's demand for continuous improvement and management of processes that lead to satisfaction with stakeholders.

Quality costs at public universities must be systematically measured, and their quality reports disclosed, for the purpose of identifying the university's level of progress and how it can maintain the quality of the service provided, thus providing support for effective management, from contributing to competitive advantage, increasing the effectiveness and efficiency of operations, and thus achieving quality goals. Accordingly, there is a need for public universities to use strategic management accounting techniques to address the problems of deficiencies in traditional accounting systems and to avoid the difficulties and problems faced by such universities as a result of accelerated developments in the modern environment.

The need for government universities to adopt balanced scorecard technology to measure, evaluate and manage performance, which can be adjusted in terms of dimensions and themes to suit the nature of non-profit public universities subject to government legislation and accounting regulations as well as the activity-based cost technique for identifying and allocating costs for each cost-causing activity, Accuracy in determining the cost of services produced by public sector units the role and importance of such

information in the conduct of planning, forecasting, oversight and performance appraisal processes.

As well as the need for government university units to adopt quality cost technology for the purpose of identifying the quality of services provided by these units and how they can maintain quality and reduce the cost of failing to provide quality to the least possible to maintain a high-quality level of services and products provided. Finally, many applied research needs to be directed to develop and increase confidence in the use of strategic management accounting techniques in public sector units. and demonstrate their applicability to the activities and operations of public sector units, including public universities, and the relevance of information obtained from performance appraisal and identification of activities that add or do not add value, as well as the quality of services provided.

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