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# **BALANCED SCORECARD AND ITS ROLE IN EVALUATING STRATEGIC PERFORMANCE IN LIGHT OF THE APPLICATION OF PROGRAM AND PERFORMANCE BUDGETING (APPLIED STUDY)**

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## **Abstract**

Even the non-national nationalism exists or is capable of showing a complete picture of the distinguished performance well, which leads to the emergence of the new public, and the most important of which is the loss of the balanced scorecard and its balanced face and distinguished for different goals from the last for planning even in the performance budget directed and the barley control method for several dimensions in the balanced scorecard, in other words, it represents a theoretical reference for a future strategy. For this reason, this study has proven the possibility of applying the balanced scorecard system in many Sudanese economic figures and the latest and most appropriate to each other and known for their efficiency and effectiveness under the system of applying the impact balance as well as other control electronics. One of the most important results that I connected to is that the balanced scorecard is one of the advanced methods of examining performance in Sudanese as it depends on a number of dimensions and axes and it is possible to create that the indicators that are used and calculate the tools and then evaluate the performance to reach a result and the most important thing that the study reached is to perform the strong performance system with the balanced scorecard.

**Keywords:** balanced scorecard, good results, basic software.

## **Introduction**

he world is witnessing amazing technological developments in the field of business, which has made the situation complicated for many public and private establishments and institutions, so that they face difficulties in achieving more economic gains, achieving accomplishments, and ensuring continuity in light of the strong competition between them, as well as achieving their strategic goals for which they were established. Under these circumstances, the management of these establishments is looking for modern and appropriate tools and methods to be able to measure financial performance and strategic performance in general to ensure the implementation of their strategic goals and monitor them regularly and comprehensively, correct deviations, and make decisions according to comprehensive and appropriate information. The scientists Kaplan & Norton, 1992)) have created a comprehensive method to measure performance from all dimensions related to the establishment's activity and verify the implementation of its strategic goals in a more

efficient and effective manner, which is now known as the Balanced Scorecard (BSC), as it is not enough to measure financial and accounting performance to know the indicators that explain the extent to which the company has achieved its strategic goals, but it has become necessary to know all indicators related to strategic performance from various economic and social aspects as well. Ensuring the measurement of objectives and other control indicators in order to ensure the success of plans and objectives efficiently and effectively.

### **Study Problem:**

Many economic establishments and institutions in Sudan face difficulties related to measuring performance in order to ensure that their strategic objectives have been achieved efficiently and effectively, as well as to ensure their continuity in the future in light of the strong competition they face from competing establishments, as well as the result of rapid developments in all technological, economic and social aspects that have cast their shadows on the future of all businesses and economic activities. They are threatened with either final death or continued failure without achieving any of their objectives. Therefore, many of them seek to use the latest methods and tools to measure and evaluate their strategic performance to set strategic plans and objectives to ensure success and continuity in the future. The problem of these establishments lies in the methods of measuring their performance completely and regularly in order to implement the strategic plans and objectives set and exercise control over them to ensure that their performance is characterized by efficiency and effectiveness.

Several questions can be raised to demonstrate this problem:

Do Sudanese economic establishments set strategic plans and objectives? 1. Do Sudanese economic establishments measure indicators to know the strategic performance and its efficiency and effectiveness?

2. What are the methods of measuring strategic performance used by these establishments and are they appropriate for their activities and do they reflect all the true indicators of strategic performance?

3. Is the balanced scorecard an appropriate method for measuring strategic performance in Sudanese economic establishments?

4. Do Sudanese establishments apply the program and performance budget and is it considered the optimal system for achieving strategic goals?

### **Importance of the Research:**

This research is important from a scientific and practical point of view. From a scientific point of view, it provides a strategic future view of the establishment's goals using another planning method represented by the performance and program budget and an integrated control method represented by the balanced scorecard, in other words, it represents a theoretical reference for making a future plan. In practical terms, as we have previously indicated, it represents a plan for a new direction based on the future and strategy of Sudanese establishments, which are currently being directed towards a global direction in light of global competition.

**Research Objectives:**

This paper aims to prove the possibility of applying the balanced scorecard system in Sudanese economic establishments as it is the latest and most appropriate method for measuring performance and knowing the extent of its efficiency and effectiveness in light of the application of the performance and program budget system as well as other control systems.

**Research hypothesis:**

The researcher is trying to prove a basic hypothesis that was formulated as follows:

There is a significant relationship between the application of the balanced scorecard method in Sudanese economic establishments in light of the application of the program and performance budget and measuring strategic performance.

**Research methodology:**

The researcher relies on a number of approaches to achieve the objectives of this study and prove its hypotheses, including the historical, inductive, deductive and analytical approaches by taking a sample from the study community and putting it to the test.

**Research Structure:**

In order to meet the requirements of this paper, its structure was divided to include the following:

First axis:

Introduction and previous studies.

Second axis:

The theoretical framework of the balanced scorecard:

Third axis:

The theoretical framework of strategic performance.

Fourth axis:

The theoretical framework of program and performance budgeting.

Fifth axis: The applied study.

Conclusion:

Results and recommendations.

Previous studies:

Previous studies were divided into three main axes related to each variable of the study variables from the balanced scorecard, program and performance budget, and strategic performance evaluation, and they came as follows:

**Study Boulianne (2006)<sup>1</sup>**

This study aimed to measure the extent to which the various dimensions included in the balanced scorecard model can be relied upon for the purposes of performance evaluation.

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<sup>1</sup> Boulianne, E.,(2006), "Empirical Analysis of the Reliability and Validity of Balanced Scorecard Measures and Dimensions", Advanced in Management Accounting, Vol. 15,P127

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The study also addressed the balanced scorecard model from the perspective of content validity and the extent to which it can be relied upon in building a level of internal consistency between the four dimensions of the method and performance measures. The study concluded that the dimensions were grouped into consistent groups that make the scale a valid tool for evaluation and can be relied upon. In addition, it recommended building evaluation measures and dimensions at a low cost in design and implementation in a manner that serves the organization within a framework that does not compromise the desired level of consistency between the dimensions.

The previous study dealt with the balanced scorecard as an evaluation measure that provides a degree of internal consistency, while the current study is distinguished by the fact that it deals with the card in its dimensions as an evaluation measure for implementing and evaluating the budget of programs and performance. This evaluation is specific to the strategic performance of Sudanese establishments operating in the Sudanese industrial sector.

**Study (Al-Khatatneh and Al-Sa'aida, 2010 AD)<sup>2</sup>** This study aimed to apply a modified model of the balanced scorecard, which consists of five main dimensions (the financial dimension, the customer dimension, the internal operations dimension, the learning and growth dimension, and finally the company environment dimension). The model included a set of strategic objectives for each of the five dimensions, in addition to the executive mechanisms for achieving and realizing these objectives. The study concluded with a set of results, the most important of which is the study sample's agreement to a large extent on the importance of applying the balanced scorecard model in Jordanian industrial companies when planning strategically and evaluating performance, in addition to the study sample's agreement.

The study came out with a number of results, the most important of which are: that the balanced scorecard model with its various dimensions contributes significantly to improving the effectiveness of banks' work, and that the financial performance dimension was the dimension that contributed the most to improving the effectiveness of banking performance, and finally that the customer dimension needs to be activated more to acquire and retain the largest number of customers. The previous study dealt with the balanced scorecard model as a comprehensive model for application to achieve the various objectives of the facility, while the current study deals with the direct use of the card in evaluating strategic performance through its evaluation and assistance in preparing the program and performance budget.

**Study (Al-Gharib, 2012 AD)** This study aimed to evaluate the theoretical and scientific foundations of the balanced scorecard and to know the extent of the possibility of using the balanced scorecard to evaluate performance in Libyan commercial banks. The study also sought to shed light on the most important obstacles facing its application. The study reached a number of results, the most important of which are: Libyan banks are fully prepared to

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<sup>2</sup> Al-Khatatneh, Wahid Rathan and Al-Sa'aida, Mansour Ibrahim, (2010 AD) A modified model of the balanced scorecard for Jordanian public shareholding industrial companies - Journal of Administrative Sciences Studies, University of Jordan, Volume 37, Issue 2.

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apply the balanced scorecard, and the necessary components are available to use different performance measures. The study also confirmed that the application of the balanced scorecard contributes and forms a major link between performance measures and the organization's strategy.<sup>3</sup>

The application of the previous study of the balanced scorecard is in Libyan banks and commercial banks in particular, while the current study deals with the application of the balanced scorecard in Sudanese industrial establishments.

#### **Study (Tariq. et al., 2014) :**

This study aimed to measure the effectiveness of applying the balanced scorecard model in the banking sector in Pakistan. The study also sought to determine the ability of the balanced scorecard model to improve the quality of organizational performance of the banking sector. The study concluded that the balanced scorecard model with its various dimensions contributes significantly to improving the effectiveness of banks' work. The study also concluded that the financial performance dimension was the most contributing dimension to improving the effectiveness of banking performance. The results of the study also showed that the customer dimension needs to be activated more to acquire and retain the largest number of customers<sup>4</sup>.

The previous study dealt with the application of the balanced scorecard in Pakistani banks as a model for evaluation. The current study deals with the same model of the balanced scorecard, but allocated strategic performance as the goal to be evaluated.

#### **8. Study ( Al-Baisani and Ibrahim, 2015 AD )<sup>5</sup>:**

This study sought to investigate the impact of using the balanced scorecard model on both performance management and organizational creativity in Sudanese industrial companies. The study also sought to evaluate the extent of applying the balanced scorecard model in Sudanese industrial companies. The study concluded a group of The most important results are: the study sample largely agreed on the financial dimension measures. The study also concluded that there is a statistically significant relationship between the dimensions of the balanced scorecard and many variables, which are (technological creativity, administrative creativity, organizational structure, marketing innovation). The previous study investigated the impact of the balanced scorecard on performance in general and organizational creativity, while the current study addresses this impact, but on strategic performance as an evaluation tool through the application of program and performance budgeting.

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<sup>3</sup> Al-Gharib, Abu Ajila Ramadan Othman, (2012 AD), "The Extent of the Possibility of Using the Balanced Scorecard to Evaluate Performance in Libyan Commercial Banks", Master's Thesis, Accounting Specialization, Accounting Department, College of Business, Middle East University, Jordan.

<sup>4</sup> Tariq ,Muhammad, Ahmed ,Arslan , Rafi , Syed Kashif , Ahmed,Shuaib (2014) Investigating the Impact of Balanced Scorecard on Performance of Business: A study based on the Banking Sector of Pakistan, IBT Journal of Business Studies (Formerly Journal of Management & Social Sciences), Vol. 10, No. 1, (Spring 2014) 125- 136

<sup>5</sup> Al-Baisani, Al-Nabulsi Yousef, Ibrahim, Siddiq Balal, The Impact of Using Balanced Scorecards on Organizational Creativity in Sudanese Industrial Companies, Journal of the University of Gadarif for Science and Arts, Issue 3, 2015.

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**Study: (Younis 2010)<sup>6</sup>**

The study problem was represented in the extent to which the program and performance budget can be applied by the Palestinian National Authority government. The study aimed to study one of the types of general budget, which is the program and performance budget and the possibility of applying it to the Palestinian National Authority budget. The study concluded that there are many shortcomings and many negative aspects in the process of preparing the general budget in the traditional way. The study proved that the general budget is prepared arbitrarily and with a percentage increase over previous budgets. The study recommended applying the program and performance budget to one or more government units as a gradual start to change.

The previous study discussed the possibility of using the program card as a system for preparing the government's general budget, while the current study discusses that the program and performance budget is a tool for achieving strategic performance through the balanced scorecard.

**Study: (Salman, and June 2016)<sup>7</sup>:**

The problem of the study was that the process of monitoring government spending is of great importance for reasons including the enormity of government spending. The study aimed to demonstrate the role of the program and performance budget in enhancing monitoring of government spending as well as helping in accurately determining estimates. The study reached several results, the most important of which are: The program and performance budget method is based on reclassifying public expenditures so that it shows what government units accomplish in terms of work and what activities they carry out by determining costs, which consequently leads to

reducing expenditures and also helps in completing the process of effective monitoring and paying attention to what has been accomplished.

The previous study was concerned with applying the program and performance budget in the government sector, while the current study discusses its application in the industrial sector of Sudanese establishments.

**Study: (Ibrahim, Walaa, 2017)<sup>8</sup>:** The problem of the study was that the process of preparing the general budget of the state in Iraq has been taking place since a long time ago and up to the present time according to the method of budgeting items (traditional). This method is not consistent with the developments in the size of resources and spending that government units are responsible for, as estimates are set according to unscientific standards. The study aimed to identify the basic components necessary to implement the program and

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<sup>6</sup> Younis Ibrahim Ahmed Jaafar, The Possibility of Implementing the Program and Performance Budget by the Government of the Palestinian National Authority, Sudan University of Science and Technology, College of Graduate Studies, Unpublished Doctoral Thesis, 2010 AD

<sup>7</sup> Salman Hussein Abdullah, and Joan Jassim Khader, Program and Performance Budgeting as a Means to Enhance Control in Governmental Economic Units, Baghdad: Al-Muthanna University, College of Economic and Administrative Sciences, Journal of the College of Administrative and Economic Sciences, Volume 22, Issue 89, pp. 454-566, 2016 AD

<sup>8</sup> Al-Saabari, Ibrahim Abdul Musa, Fakhr al-Din, Walaa Moeen Kazim, A proposed model for implementing program and performance budgeting, an applied study in the Directorate of the Municipality of Najaf al-Ashraf, Baghdad, Al-Qadisiyah Journal of Administrative and Economic Sciences, Volume 19, Issue 1, 2017, pp. 183, 203.

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performance budget in Iraqi government units and contribute to its development, by presenting a proposed model for implementing the program and performance budget in the Directorate of the Municipality of Najaf Al-Ashraf. The study concluded that the process of preparing the general budget of the state in Iraq is carried out according to the method of budgeting items traditionally, according to which government units are monitored to ensure that they do not exceed the allocations set for them and that they are spent on the purposes designated for them, without paying attention to evaluating the extent to which the goals for which the appropriations were spent were achieved. The previous study focused on the shift to the program and performance budget in order to keep pace with developments in expenditures that came as an inevitable result of community development. The study under study discusses the application of the budget in Sudanese industrial establishments through the balanced scorecard

**Study: (Yasser, and Muhammad, 2018)<sup>9</sup>:**

The study problem was represented in the following main question: What is the impact of applying the program and performance budget on developing and improving the quality of performance in state agencies? The study aimed to know the role of the program and performance budget in developing and evaluating performance in state agencies from the point of view of employees in administrative affairs at the Sudanese Ministry of Interior. One of the most important results reached by the study is that there is a weakness in the level of follow-up by senior management to implement the program and performance budget, in addition to the absence of coordination between different departments in implementing the budget during the fiscal year. The results also showed that there is a weakness in the availability of training opportunities for administrators in administrative affairs.

The previous study also discussed the application of the program and performance budget in the government sector in Sudan, applied to the Sudanese Ministry of Interior, while the current study deals with the application of the study in the Sudanese environment as well, but in industrial facilities.

**Study: (Al-Khawli, 2000 AD)<sup>10</sup>:**

It addressed the use of the balanced scorecard model in measuring the strategic performance of business establishments. The study aimed to determine the extent of strategic management's need for a balanced set of performance measures, which are linked to the establishment's strategic objectives, in addition to the management's need for control standards and strategic information about strategic achievements. The study concluded that the balanced scorecard model is one of the approaches to measuring strategic performance, which is relied upon in measuring the strategic performance of business establishments, due

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<sup>9</sup> Yasser Mohamed Taha Badri, and Mohamed Dafallah Ahmed, Program and Performance Budgeting and its Role in Continuous Quality Improvement in Public Institutions from the Perspective of Administrative Affairs Workers at the Ministry of Interior, University of Nilein, College of Graduate Studies, Journal of the College of Graduate Studies, Volume 12, Issue 1, 2018, pp. 228-244

<sup>10</sup> Al-Khawli, Hala Abdullah 2000 AD, Using the Balanced Scorecard Model to Measure the Strategic Performance of Business Establishments, Journal of Accounting, Management and Insurance, Faculty of Commerce, Cairo University, Fortieth Year, Fifty-Seventh Issue, p. 41

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to what it includes: financial measures that provide information about actual business results, in addition to other non-financial measures, which are represented in external customer satisfaction, internal operations, learning and growth.

The previous study discussed the use of the balanced scorecard in its various dimensions to achieve the strategic objectives of the strategic performance of organizations. As for the current study, it discusses the use of the balanced scorecard to achieve the strategic objectives of industrial establishments by balancing programs and performance. Here, the gap that the researcher wants to overcome becomes clear.

### **The second axis: Strategic performance**

Before discussing strategic performance, the concept of performance must be discussed first. It has been defined as the transformation of regular inputs such as raw materials and semi-manufactured materials into outputs consisting of goods and services with specific technical specifications and rates<sup>11</sup>. Performance is an essential and important concept for business organizations in general and almost represents the comprehensive phenomenon of all branches and fields of administrative knowledge, including strategic management. It is also a broad concept, and its contents include many concepts related to success and failure, efficiency and effectiveness, planned and actual, quantitative and qualitative, and many other factors related to it. Therefore, performance represents that comprehensive, continuous activity that reflects the success of the organization, its continuity and its ability to adapt to the environment, or its failure and shrinkage, according to specific foundations and standards set by the organization and according to the requirements of its activity,<sup>12</sup> and in light of long-term goals. That is, performance is the human behavior that transforms inputs of all kinds (financial resources, human resources, material resources) into useful outputs that can be measured and controlled (goods and services). Many studies have discussed strategic performance in general, but in this study we will approach it from the perspective of the balanced scorecard. Strategic performance has been defined from the perspective of the balanced scorecard as "a model for measuring performance in an integrated manner, by linking its four dimensions of performance with strategy. These dimensions are: the financial dimension, the external customer dimension, the internal business operations dimension, and the learning and growth perspective."<sup>13</sup> The company's strategic performance can only be achieved by taking all dimensions together. The strategic performance measurement system from the perspective of the balanced scorecard has been applied in many companies, most of which are profit-oriented companies. However, there is limited research on its applications and how it works in the environment of public institutions, as it is a system for managing and improving performance, and part of the organization's strategic management system. Therefore, many researchers consider the balanced scorecard an administrative tool for evaluating management performance, but performance differs according to the parties

<sup>11</sup> Mohamed Abdel-Ghani Hilal, *Performance Skills*, Performance Development Center, Cairo, 2002, p. 19

<sup>12</sup> Dr. Falah Hassan Adi Al-Hussaini, *Strategic Management, its Contemporary Concepts, Approaches and Operations*, Amman: Wael Publishing House, 2000 AD, 132 pp.

<sup>13</sup> Teresa Valderrama, Eva Mulero-Mendigorry, Daniel Revuelta-Bordoy · 2009·Relating the perspectives of the balanced scorecard for R&D by means of DEA", *European Journal of Operational Research*,196



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from which it is viewed. It is financial, administrative, human and material performance,<sup>14</sup> in addition to being an integrated administrative institutional system that works on planning and following up on the implementation of the plans set. With the current developments in the economic environment, it has become difficult to isolate performance of all kinds from the strategic direction that institutions must pay attention to, otherwise they will be out of competition. It is preferable to resort to using the balanced scorecard as a means of measuring strategic performance in companies, especially those that have departments whose work cannot be measured by financial measurement systems (what the departments generate in profits) such as information technology departments, as these departments perform many non-financial tasks, and evaluation methods that depend only on financial measures are not suitable for evaluating the performance of these departments.

### **The third axis: Program and performance budget:**

The program and performance budget is considered a type of budget with planning objectives and it works to accurately determine the programs that the institution should perform during the period to which the budget is linked and the required level of performance<sup>15</sup>.

The program and performance budget is defined as the budget that is concerned with the function of administrative control and the rational use of financial capabilities that leads to raising the efficiency of performance by identifying the various cost elements and setting performance levels for each activity in order to evaluate the actual performance on the basis of them. The program and performance budget represents a set of goals for which appropriations are monitored or determined after detailing them according to programs and activities and determining the estimated cost for implementing each program or activity and determining standards and indicators to measure achievement and performance effectiveness<sup>16</sup>.

Elements for implementing the program and performance budget<sup>17</sup>:

To implement the program and performance budget, some basic elements must be available, which are as follows:

1. The quality of the structure of public institutions or economic units as well as the quality of the organizing laws (the availability of advanced and clear administrative structures).
2. The availability of a high degree of technical knowledge to prepare it, specifically the presence of experts to apply it correctly.
3. The existence of a cost accounting system and an information system on the use of financial resources.
4. The existence of an incentive and reward system to enhance performance.
5. The use of scientific and practical tools for forecasting.

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<sup>14</sup> Griffiths, J. "Balanced Scorecard Use in New Zealand Government Departments and Crown Entities", Australian Journal of Public Administration, 2003, PP70-79

<sup>15</sup> Asfour, Muhammad, Fundamentals of Budgeting, First Edition, Dar Al-Masirah Publishing House, Amman - Jordan, 2008 AD

<sup>16</sup> Abdul Rahman, Jalila Mustafa, Ahmed, Iman Ghanem, Qasim, Rafia, Using Program Budgeting and Performance, Al-Takni Magazine, Volume Twenty-Seven - Issue Five, Baghdad, 2014 AD

<sup>17</sup> Fahmy, Laila Abdel Hamid: "The Accounting System for Program Budgeting and Performance and Expenditure Classification", Program Budgeting and Performance Forum in Arab Universities, Damascus, Syria, 2004.

6. The existence of an advanced accounting system that includes a chart of accounts and a coding system, modern financial management and an effective internal audit system.
7. The existence of advanced information technology systems and specialized software that have the ability to measure results and performance.

#### **Steps to implement the program and performance budget:**

The transition from the regular or traditional budget is not paid all at once, but rather in a gradual manner that takes place through several stages or steps, which are as follows:

1. The quality of the structure of public institutions or economic units, as well as the quality of the organizing laws (the availability of advanced and clear administrative structures).
2. The availability of a high degree of technical knowledge to prepare them, specifically the presence of experts to implement them correctly.
3. The presence of a cost accounting system, and an information system on the use of financial resources.
4. The presence of an incentive and reward system to enhance performance.
5. The use of scientific and practical tools for prediction.

#### **Fifth axis: Practical framework**

##### **First: The institution under study:**

The study community is represented by Light Company for Carton Production, which produces cardboard boxes for packaging and packing products in preparation for displaying them in the market, and which deals with a production system based on production orders (i.e. production is not done from units until the request is made by the relevant institution, which determines the product specifications and the shape of the cardboard boxes that must be manufactured for it).

Second: Performance evaluation using the balanced scorecard in light of the program and performance budget.

It is worth noting that the institution does not prepare a special budget for programs and performance to determine the plan for how the work will proceed, but rather determines its goals based on the budget of the previous year and compares the actual with the goal that it has set, and then determines the deviations and their causes. Accordingly, and based on what was discussed in the theoretical framework of the study, we will calculate the strategic performance index according to the balanced scorecard according to each axis of this card (it is worth noting that the study will not address all indicators, but will address the indicators that exist in the institution under application).

Financial dimension evaluation: The indicators on which the financial axis evaluation is based are:

Asset turnover ratio index: It measures the extent to which the institution is able to exploit all available resources in achieving sales, and indicates that the institution uses its assets with high efficiency in achieving sales.

**Asset turnover ratio = Net sales / Total assets**

Based on the information provided by the institution under study, the progress of the indicator can be tracked for three years to measure the extent of the institution’s success and development:

2016	2017	2018	2019	Statement
43,115,360	46.644.500	49.843.720	52.334.895	Sales
1,280,229	1,572,000	1,853.209	2.334.446	Total Assets
%33.68	%44	%47	%49	Rate%

Source: Light Company’s specific budgets, 2019-16 (Finance Department) It is noted from the previous table that the asset turnover rate is witnessing growth, although the growth rate is slow, as it recorded the lowest rate in 2017 (44%), and the highest rate (49%) in 2019. Although the growth rate is slow, there is still growth, and this is attributed to the increase in the demand rate due to the increase in the number of customers.

Cost reduction and productivity increase index: This index is determined by the percentage of net profit achieved by the institution from one year to another, in addition to the financial share of the institution and its financial goals, and is calculated through the following equation:

$$\text{Net profit} = \frac{\text{profit for year } n + 1 - \text{profit for year } (n)}{\text{profit for year } (n)} \times 100 \%$$

2016	2017	2018	2019	Year
5,040,973	6,900,544	8,742,666	11,499,369	Profit
%36,89	%53	%21.07	%31.53	Change %

**The table shows cost reduction and increased productivity.**

Source: Light Company's specific budgets (2016-2019) Finance Department

It is noted from the previous table that the index in 2016 was (53%) and decreased to (21.7%) due to the economic conditions that were difficult to adapt to at the beginning, but after a year and controlling the causes and re-coordination, we notice an increase in the index.

2- Evaluation of the customer axis dimension: The customer index is considered one of the most important institutions, as any institution is based only on customers. To measure this dimension, the customer retention index is calculated.

Customer retention and acquisition of new customer’s index: This index is measured periodically because it indicates the development or increase in sales and thus the increase in profits and expansion in the institution's production activity. Based on the information obtained, a comparison was made on the rate of increase and rise in customers in the following table:

The table shows the degree of customer retention in the institution

2016	2017	2018	2019	Year
173	185	201	216	Number of Clients
6.94	%15.6	%8.64	%7.5	Growth Rate

Source: Light Company's specific budgets (2016-2019) Finance Department

It is noted from the table that there is an increase in the rate, although in the year (2018 AD) the rate of increase in customers was less than in the year (2017 AD) due to the aforementioned economic conditions, which also caused the decrease in the rate of increase at the beginning of (2019 AD) (It is worth noting that the previous information was also obtained from the Finance Department due to the lack of a separate marketing department.

Evaluation of the internal operations axis:

This axis or dimension is evaluated through the inventory turnover indicator, and this indicator can be calculated through the following equation:

$$\text{Inventory turnover ratio} = \text{Cost of sales} / \text{Average inventory}$$

The table shows the inventory turnover ratio.

2016	2017	2018	2019	Year
25,971,000	28,895,043	32,480,512	35,586,849	Cost of Sales
6,788,313	8000,000	8,642,611	9,590,073	Average Inventory
383	361	375	371	Turnover

Source: Light Company's specific budgets (2017-2019), Finance Department

It is clear from the previous table that the inventory turnover index is positive, although the rate decreased. In (2018 AD) it reached (375), while in (2019 AD) it reached (371), and this is attributed to the economic conditions that existed during that period.

Evaluation of the customer dimension:

The most important indicators contained in the customer axis and present in the institution are the following:

- Market share index: It can be calculated by using the daily sales rate, which determines the increase and decrease in sales, and sales are the other side of customers, meaning that they represent the market share.

**Daily sales rate:**

$$\text{Daily sales rate} = \text{number of units sold} / \text{number of days in the year}$$

The table shows the sales turnover rate.

2016	2017	2018	2019	Year
13,110,000	15,200,317	18,630,740	20,347,520	Number of Units Sold
365	365	365	365	Days of the Year
35,918	41,645	51,043	55,747	Daily Sales Average

Source: Light Company's specific budgets (2016-2019) Finance Department

From the previous table, it is clear that sales increased from what they were in the previous year, as they reached 55,747 in (2019), compared to 51,043 in (2018), which is somewhat an acceptable indicator and achieves the study's objectives that the program and performance budget can be two appropriate tools for evaluating the company's financial indicators.

**Evaluation of the learning and growth dimension:**

This dimension can be measured by using the employment rate:

The employment rate refers to the number of workers and employees who have actually been appointed, and this indicator indicates the extent of the institution's development and expansion, as an increase in the indicator is evidence of an increase in production operations, and it is calculated using the following equation:

$$\text{Employment rate} = (\text{number of employees per year (n+1)} - \text{n number of employees per year (n)}) / \text{n number of employees per year (n)} * 100$$

The table shows the employee turnover rate.

2016	2017	2018	2019	Year
270	288	300	320	Total Workers
6.67	4.17	6.67	7.5	Employment Rate

Source: Light Company Limited Budgets (2016-2019) Finance Department

Based on the previous table, it is noted that the employment rate is increasing positively, although it is a slight change, but it is calculated as growth.

Scorecard in light of the program and performance budget

Based on the previous and subsequent interviews conducted with the company's management, it can be said that the company's management does not prepare a specific budget for the programs and the level of performance required to be achieved, and therefore the company does not use the balanced scorecard coupled with the program budget, which could have given a more accurate assessment of the financial performance of the company under study. This study and other studies have proven the importance of the balanced scorecard and the program budget for evaluating the financial performance of commercial and industrial companies alike.

**Results and Recommendations:**

Based on the field study conducted by the study, the following results were reached:

1. Sudanese establishments and institutions do not prepare long-term plans and goals, but rather prepare them based on the goals and plans of the previous year (this is due to the volatile economic conditions in which long-term strategic planning is difficult).
2. Establishments do not measure strategic performance indicators because they do not carry out strategic planning as previously mentioned, but rather measure using the axes and dimensions of the balanced scorecard to determine the annual performance level.
3. Establishments use the balanced scorecard through its dimensions, and strategic performance can be reflected on it through balancing programs and performance, where strategic programs are determined, then strategic performance, and since they will extend for more than one year, they will be divided into programs and performance distributed over the years of achieving the strategy, and this performance is achieved through the balanced scorecard.

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4. The balanced scorecard is one of the appropriate methods for measuring strategic performance in Sudanese establishments, as it depends on a number of dimensions and axes, and any establishment can use the indicators used to calculate and evaluate the dimension and thus evaluate the performance of the establishment.

5. The program and performance budget is not applied and is not considered an appropriate system for application in a country with a volatile economic situation such as Sudan.

Recommendations:

6. Develop a system for measuring strategic performance using the balanced scorecard, which is as follows:

A. Determine strategic objectives.

B. Determine programs that achieve strategic objectives.

C. Achieve performance levels that rise to the level of strategic performance.

D. Divide strategic objectives and performance into annual plans that are implemented and measured through the balanced scorecard.

7. Prepare the balanced scorecard in a comparative manner for years, and this is done through a number of steps.

A- Determine the axes and dimensions that are appropriate for each institution

B- Determine the relative importance of each axis.

C- Determine the specific value for each axis compared based on the strategic objective and performance.

D- Measuring actual performance and comparing it with the strategic. E- Identifying deviations, addressing them, and reformulating the strategic objectives and performance that are found to be inappropriate and should be modified.

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