

Planning Budgets And Their Impact On The Relationship Between Balanced Scorecard And Profitability Maximization: An Applied Study On Commercial Banks Listed On Amman Stock Exchange

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Abstract

This study aimed to know the impact of planning budgets on the relationship between the application of the Balanced Scorecard and Profitability Maximization on Commercial Banks Listed on Amman Stock Exchange, where the balanced scorecard was measured by the four axes (financial prespective, customer prespective, internal operations prespective, growth and development prespective). In order to achieve the objectives of the study, a questionnaire was designed and distributed to employees, managers and heads of departments working in the financial management department in commercial banks listed on Amman Stock Exchange, and accordingly (108) questionnaires were adopted and entered for statistical analysis.

The results of the study showed that there is an impact of applying the balanced scorecard on maximizing the profitability of commercial banks listed on Amman Stock Exchange, and there is an impact of applying each of (financial prespective, customer prespective, internal operations prespective, growth and development prespective) on on maximizing the profitability of commercial banks listed on Amman Stock Exchange. Also, the results of the study showed that there is an impact of planning budgets on the relationship between the application of the Balanced Scorecard and Profitability Maximization on Commercial Banks Listed on Amman Stock Exchange.

The study recommended a set of recommendations, the most important of which are: Jordanian commercial banks should pay attention to the application of all axes of the balanced scorecard by developing training programs for their employees on applying the balanced scorecard in order to know how to benefit from its data in forming the estimated dimensions of future performance.

Keywords: Planning Budgets, Balanced Scorecard, Profitability Maximization, commercial banks.

I- Introduction

The idea of planning budgets arose as a means of expressing all the required policies, and the first budget in history was prepared by Prophet Yusuf, peace be upon him, for the production of wheat and barley, knowledge of existing and consumed quantities at that

time, and the need to know future annual revenues and expenditures, so governments resorted to the preparation of planning budgets through government accounting because they were the basis from which planning budgets stemmed (Al-Ramli, 1998), where accounting plays an important role in

providing data and information that enable departments to perform their planning, oversight and discretionary tasks, and planning budgets are among the most important accounting tools used by commercial banks, as they prepare budgets to raise their administrative efficiency and achieve optimal use of their available resources, thereby increasing activities, maximizing profitability, improving performance, and achieving competitiveness and comparative advantage over other banks and institutions (Al Momani, 2017). The preparation of planning budgets is not limited only to commercial, service or industrial companies but is prepared for all companies and fields because planning budgets are considered one of the most important tools of control, performance evaluation and planning for all companies, as they are called discretionary budgets by accountants (Haj Omar and Ahmed, 2011).

In order to evaluate the performance of commercial banks, the so-called balanced scorecard emerged in the early 1990s, which is considered one of the tools relied upon by commercial banks to evaluate performance and achieve objectives, because it shows financial results, and is a method balances between strategy and tactics that includes four perspectives (financial, customers, internal processes, learning and growth). (Kaplan & Norton, 1996).

There is no doubt that the vast majority of commercial banks focus on higher levels of global competition to achieve profitability and gain the highest profit at the lowest cost, and their success will be reflected in their emerging impact on the economy and activities at the local and global levels (Al-Mubaideen et al., 2016).

This study seeks to clarify the relationship between the balanced scorecard and profit maximization through planning budgets in

the commercial banking sector, which is the pillars of the Jordanian economy in establishing the position of these banks in the face of domestic and external challenges, and accordingly the performance of banks is evaluated using the balanced scorecard (Abu Qamar, 2009).

I-I The problem of the study and its questions

In view of the criticism, problems with financial measurement instruments and increased competition in institutions and banks, the commercial banks listed on Amman Stock Exchange experienced difficulties and problems, including low compliance with plans, poor distribution and increased costs of banking services which hampered the achievement of high growth rates. Banks therefore tended to use the Balanced scorecard to evaluate performance and link between its perspectives (financial perspective, customer perspective, internal processes perspective, learning and growth perspective) to achieve competitive advantage (Al-Najjar, 2018), because using the balanced scorecard is a method of success in banks (Tyler, 2010). Therefore, the study problem is to demonstrate the impact of applying the balanced scorecard as a tool to maximize profitability in the commercial banks listed on Amman Stock Exchange, where the idea of enhancing the efficiency of internal processes has become one of the priorities of bank managers, in order to influence the use of the balanced scorecard at the local and international levels in the context of knowing of economic conditions and domestic competition (Al-Khalayleh and Saima, 2020).

Based on the foregoing, the problem of the study revolves around answering the following questions:

The first main question: Is there an impact of the balanced scorecard on profit maximization in commercial banks listed on Amman Stock Exchange?

The following sub-questions fall within the first main question:

- 1- Is there an impact of applying the financial perspective on profit maximization in commercial banks listed on Amman Stock Exchange?
- 2- Is there an impact of applying the customer perspective on profit maximization in commercial banks listed on Amman Stock Exchange?
- 3- Is there an impact of applying the internal processes perspective on profit maximization in commercial banks listed on Amman Stock Exchange?
- 4- Is there an impact of applying the learning and growth perspective on profit maximization in the commercial banks listed on Amman Stock Exchange?

The second main question: Is there an impact of planning budgets on the relationship between the balanced scorecard and profit maximization in commercial banks listed on Amman Stock Exchange?

I-2 Importance of the study

The importance of this study is the importance of planning future periods for the preparation of budgets for banks and companies, where planning budgets are one of the most important management accounting methods in evaluating the performance of commercial banks, and the use of the balanced scorecard is very important through its perspectives (financial, customer, internal processes, learning and growth), as they play a prominent role in achieving competitive advantage in profit

maximization and improving and developing performance in commercial banks listed on Amman Stock Exchange. The importance of the study is confirmed by:

1. Knowing the use of the Balanced Scorecard to demonstrate the strengths and weaknesses through which decisions are taken and the mission, goal and vision are defined.
2. This study enables the management of banks to take advantage of all the perspectives of the balanced scorecard to affect the profitability and a higher level compared to other banks, and to determine the efficiency of their personnel and to strengthen their capabilities, with a view to improving their performance.

I-3 Study Objectives

The main objective of this study is to demonstrate the impact of planning budgets on the relationship between the balanced scorecard and profit maximization in commercial banks listed on Amman Stock Exchange.

The main objectives of this study are as follows:

1. Finding whether there is an impact of applying the balanced scorecard in maximizing the profitability of commercial banks listed on Amman Stock Exchange.
2. Finding whether there is an impact of applying the financial perspective in maximizing the profitability of commercial banks listed on Amman Stock Exchange.
3. Finding whether there is an impact of applying the customers perspective in maximizing the profitability of commercial banks listed on Amman Stock Exchange.

4. Finding whether there is an impact of applying the internal processes perspective in maximizing the profitability of commercial banks listed on Amman Stock Exchange.
5. Finding whether there is an impact of applying the learning and growth perspective in maximizing the profitability of commercial banks listed on Amman Stock Exchange.
6. Finding whether there is an impact of applying the planning budgets on the relationship between the balanced scorecard and maximizing the profitability of commercial banks listed on Amman Stock Exchange.

I-4 Study hypotheses

The first main hypothesis Ho1: There is no statistically significant impact of applying the balanced scorecard in maximizing the profitability of commercial banks listed on Amman Stock Exchange.

Its sub-hypotheses:

Ho1.1: There is no statistically significant impact of applying the financial perspective on maximizing the profitability of commercial banks listed on Amman Stock Exchange.

Ho1.2: There is no statistically significant impact of applying the customer perspective on maximizing the profitability of commercial banks listed on Amman Stock Exchange.

Ho1.3: There is no statistically significant impact of applying the internal processes perspective on maximizing the profitability of commercial banks listed on Amman Stock Exchange.

Ho1.4: There is no statistically significant impact of applying the learning and growth perspective on maximizing the profitability

of commercial banks listed on Amman Stock Exchange.

The second hypothesis Ho2: There is no impact of planning budgets on the relationship between applying the balanced scorecard and maximizing the profitability of commercial banks listed on Amman Stock Exchange.

2- Theoretical framework and previous studies

Many studies have discussed the impact of the balanced scorecard on the profitability of Jordanian commercial banks, which is of great importance to banks. Many researchers also believe that the balanced scorecard may reflect the strength, continuity and success of banks, since determining the balanced scorecard for commercial banks with high efficiency and effectiveness is an important objective of senior management because of its significant impact on the performance and profitability of commercial banks.

2-1 Balanced Scorecard:

The balanced scorecard emerged as a result of the inability of financial standards to monitor the variables resulting from the level of performance, implementation and follow-up of the strategy, and because of the intensity of competition and technology development in various areas such as information and production systems, as a result of which financial indicators and results do not reflect the true picture of the organization's performance (Tari and others, 2016).

The balanced scorecard is one of the tools relied upon to build strategic plans within work institutions; It is thus a very important factor to the management of the organization to evaluate its own activities and performance according to the vision and

strategy on which each organization depends (Porter, 1985).

- a. Financial Perspective:** It is the internal and external measures to determine the extent to which the strategy and its application contribute to financial improvements in profit, loss and financial power, and indicators that can be followed when applying a financial perspective in the field of charitable work include: income, expenditures, expenditure amount, and donations (Bahgat et al., 2015).
- b. Customers Perspective:** is to determine the current and future status of the company from the point of view of the beneficiaries and suppliers, and the most important indicators that can be formulated are: the number of beneficiaries, the number of partners, and satisfaction (Bahgat et al., 2015).
- c. Internal Processes Perspective:** it relates to internal standards that define the internal processes and procedures of the organization and its efficiency, such as the time required to complete key work, performance effectiveness, process improvement rate, and error rate in service delivery. The number of applications submitted, the implementation ratio, the number of items, and the percentage of electronic transactions (Bahgat et al., 2015).
- d. Learning & Growth Perspective:** it focuses on internal and external indicators, demonstrating the potential for infrastructure and human resource development. The main indicators in this perspective focus on the capabilities and investment of the system, the performance of new services, and the permanent development of the performance and skills of individuals,

systems, and procedures (Bahgat et al., 2015).

2-2 Profit Maximization:

Profitability is one of the most important things that business seeks to achieve, and profitability maximization is defined as the ability of a company to use strategies to maximize profit at the lowest possible cost, and it is a short-term or long-term process whereby a company determines price, inputs and output levels leading to the highest profit (Samuelson & Marks, 2003).

The most important indicators of profitability maximization (Al-Mubaideen et al., 2016):

- a. Infrastructure:** It includes the organizational structure of the bank, facilitates many actions and achieves the objectives of the bank.
- b. Competitive advantage:** It creates a competitive advantage among all sections in the bank to distinguish from other banks.
- c. Cost reduction:** it includes all the factors that the bank works on to obtain at the lowest costs, such as storage and transportation costs and others.

2-3 Planning budgets:

Planning budget is one of the most important planning and control mechanisms used by companies. The most important functions of planning budgets are Planning, Controlling, Communication, and Coordination (Ali, 2017).

Planning budgets are defined as a detailed plan defined by the actions to be carried out, and this plan is published and distributed to all relevant managers and officials. This plan is an indicative and awareness plan for their actions, and all elements of the plans, such as the expected revenues and expenses of all sections, are clarified, where these plans

show future expectations of profit level (Hajj Omar and Ahmed, 2011).

2-4 Previous Studies:

After reviewing a set of previous Arab and foreign studies relating to the subject of the study, where the study of Judah and Al-Attar (2021) aimed to determine the extent to which planning budgets are applied to banks operating in Jordan and their impact on profitability, and to clarify the relationship between planning budgets and profitability. To achieve the objectives of the study, the study community and sample consisted of all 25 banks in Jordan. The study relied on the descriptive approach. A questionnaire was prepared and distributed, numbering 25 questionnaires distributed over the study sample, where 20 questionnaires were retrieved. The study found that banks operating in Jordan have achieved high relative importance in applying planning budgets through monitoring and coordination, and that banks rely heavily on planning because it helps to plan and predict future plans. Also, it found that the use of planning budgets by banks improves management performance and efficiency and helps the Board of Directors detect deviations because budgets are a tool for monitoring and evaluating staff performance.

The study of (Rahahleh et al., 2019) also examined the role of success factors for planning budgets in improving the financial performance of private organizations operating in the telecommunications sector in Jordan for the year 2013-2015. The study aimed to identify the success factors of the planning budgets through which they improve the financial performance of private organizations in the telecommunications sector in Jordan. The study community consisted of private organizations working in the telecommunications sector in Jordan,

which are 8 private companies. This study relied on the descriptive approach and used a questionnaire. The sample was randomly selected among a group of managers, accountants, heads of departments and employees in the budget department, where 120 questionnaires were distributed and 113 questionnaires retrieved. The study found that general rules must be observed in the preparation of planning budgets, as well as the use of management information systems in this department through the use of appropriate financial reporting programs in preparing financial reports based on the results of the planning budget.

The study of (Al-Momani, 2017) aimed at knowing the planning budgets and their impact on the management function and performance measurement in banks, and showing the impact of planning budgets on decision-making and monitoring process. The study community and sample consisted of Jordanian commercial banks. This study used the inductive and deductive approach. To achieve the objectives of the study, the data and sources collection relied on studies and references relating to the planning budgets, as well as on persons preparing budgets with a view to reaching results and achieving objectives. The study found that the use of planning budgets creates an advantage and competitiveness in Jordanian commercial banks and increases the profitability, and the ability of the Board of Directors to make administrative decisions through reference to planning budgets. It also found that it is important to activate the role of monitoring the performance of commercial bank workers and detect deviations.

The study of (Al-Mubaideen et al., 2016) examined the impact of applying the balanced scorecard on profit maximization in Jordanian telecommunications companies.

The study community consisted of all employees of Jordanian telecommunications companies, which are 3396 employees 340 of whom were randomly selected for a group of 3 telecommunications companies and 10 questionnaires were retrieved from each company. This study aimed to test the impact of the balanced scorecard on profit maximization and contribute to providing an information base for corporate decision makers showing strengths and weaknesses in applying the balanced scorecard and the level of maximizing profitability, which increases the level of high level of service that companies provide to clients. The study found that there is a relative surplus of the dimensions of the balanced scorecard (financial dimension, customer dimension, learning and growth dimension, internal processes dimension), and how to use the liquidity management mechanism to increase future cash flow. In terms of the social dimension, the study found that the company contributes to supporting associations with special needs to benefit from abilities and to support and improve their lives.

The study of Sadiq and Majid (2015) aimed to find the impact of using the balanced scorecard on profitability. The study relied on the descriptive analytical approach. The study community and sample consisted of Housing and Finance Bank from 2004-2014. To evaluate profitability in the bank, the balanced scorecard was used. The aim of the study was to determine the extent to which the Balanced Scorecard is applied and measured in Housing and Finance Bank, and to find its impact on the profitability of the Housing Bank. Also, the aim of the study was to clarify all the concepts associated with the balanced scorecard, to know the perspectives associated with it and to identify the stages and steps on which the balanced scorecard is built. The study found that the bank achieves

net profits from its banking operations, and that the bank had a high capacity and access to a high market share compared to other banks in the banking business, and the study showed that there is a positive impact of using the balanced scorecard on the implementation of performance.

Another study was conducted by Dargham and Hamad (2012). It aimed at examining the extent to which the Balanced Scorecard (BSC) is used as a tool for evaluating the performance of Palestinian Islamic Bank, a field study from the workers' point of view. The study community consisted of 320 employees in Palestinian Islamic Bank, where 66 employees were selected randomly from the study sample, and 60 questionnaires were retrieved. The study aimed to demonstrate how planning budgets were applied in commercial banks and their impact on maximizing profitability. It also aimed to measure the effectiveness of the correlation between the application of planning budgets and maximizing profitability in commercial banks. This study found that banks are a clear methodology for working towards their objectives and rely heavily on planning for future predictions. It was also found that planning budgets are a monitoring and evaluation tool for management in knowing and identifying deviations that require great attention and improve management efficiency in decision-making. The study recommended that banks should be more dependent on planning budgets for long-term and short-term decisions by management.

The study of Kung & others (2013) examined the relationships between the focus of planning budget and budget planning models and performance. This study aimed at finding the impact of the budget system on the behavior of employees. It also aimed at improving management performance on the basis of assumptions and aimed at focusing

on the relationship between budget and planning budget models and performance. The study community consisted of 1000 industrial companies and the study sample consisted of department managers and sales managers. To achieve this goal, the descriptive approach was used, and a questionnaire was prepared, where 140 of which were distributed and 132 of which were retrieved. The study found that achieving budget goals is by aligning the behavior of employees with organizational goals and thus increasing budget satisfaction, and also found that companies involved in competitive strategies should focus on budgets to achieve short-term goals and reduce costs due to inefficiency. This study recommended the need to meet customer needs by creating distinct products that can bring a competitive advantage and improve performance.

In the Nigerian environment, the study of Munirat & Muslimat (2012) aimed to demonstrate the impact of the budget as a control mechanism in the banking industry. The study community consisted of workers in commercial banks in Nigeria, where 50 questionnaires were distributed to a group of branch employees from the study sample randomly, and 46 questionnaires were retrieved. This study aimed at finding how the Nigerian Bank prepared its budgets and their impact. This study concluded that the budget failed due to poor implementation and forecasting, and because there is also a relationship between budget and control in the banking industries.

2-5 Advantages of this study over previous studies

This study is distinguished from previous studies by showing the impact of the Balanced Scorecard, which is represented in four perspectives (the financial perspective,

the customer perspective, the internal processes perspective, the learning and growth perspective) on profit maximization in the existence of a moderating variable “planning budgets” because of its impact on the relationship between Balanced Scorecard and profit maximization. Commercial banks are considered one of the most important elements of the economy in any country in the world, and this importance lies in their financial information. This study is distinct from previous studies in the selected study community, as this study was applied to the commercial banks listed on Amman Stock Exchange as a study community as it represents one of the main sectors represented by Amman Stock Exchange. This study is also more recent than the previous studies, which will be conducted during 2021. Based on previous studies, this study also differs from the rest of the studies in terms of applying the balanced scorecard and its impact on maximizing profitability.

3-1 Study Methodology

This study relied on the analytical descriptive approach, as it is one of the most important approaches to human and social studies. It helps to explore, analyze, interpret and compare the problem of the study along the lines of scientific methodology and to achieve valuable results and meaningful generalizations that increase the knowledge (Benson et al. al., 2019), by studying the relationship and the effect between all the main and sub-variables, by developing a questionnaire according to the requirements of this study and distributing it to the study sample observations, with a view to collecting the study data and testing its hypotheses to reach the results and recommendations; A questionnaire was developed for this purpose and distributed to the study sample during 2021.

3-2 Study community and sample

The study community consists of (13) commercial banks listed on Amman Stock Exchange. with respect to the sample study being a comprehensive survey of the entire study community, and with regard to the sample observations, the researchers intentionally selected the study sample by selecting employees, managers and heads of departments, working in the financial management department of commercial banks listed on the Stock Exchange, and thus enabling researchers to distribute (156) questionnaires by (12) questionnaires for each of the commercial banks operating in the capital Amman. The questionnaire was distributed through the use of Google Forms, and the researchers retrieved (121) questionnaires that were answered, and excluded (13) questionnaires because they were not complete or the respondents were not serious about filling them out. The final study sample represented by (108) questionnaires, with a percentage of (69.2%) of the study sample observations.

3-3 The apparent validity of the study tool

The researchers presented the study tool to a group of faculty members from government and private universities for arbitration. Some of the contents of the questionnaire paragraphs were modified, where paragraphs were added, others were removed and all necessary adjustments were made in order to achieve stability and balance between the paragraphs of the study tool.

4. Statistical analysis and hypothesis testing

This section presents the practical aspect of this study on planning budgets and their

impact on the relationship between the application of the balanced scorecard and maximizing profitability in the commercial banks listed on Amman Stock Exchange. All data related to the study model were collected through the questionnaire that was distributed to Jordanian commercial banks based on multiple linear regression and hierarchical regression tests in order to reach and discuss the results.

4-1 Stability of the study tool and descriptive statistics for the study sample and its variables

The researchers relied on the test-retest reliability method by conducting an initial test of the study tool on a miniature sample consisting of (16) observations of the sample in the month of 10 of the year (2021), and after re-testing, it was found that the match of sample answers was 84.3%, indicating a high degree of validity in the questionnaire. The researchers also used Cronbach's Alpha test to ensure that the paragraphs of the questionnaire are consistent with their respective fields, as follows:

The answer rates for the study variables questions were shown based on the fifth Likert Scale, where the length of the period is calculated first by (4 divided by 5), where 4 represents the number of distances, 5 represents the number of choices, and the output is 0.80 (Pérez-Vicente & Ruiz, 2009). The results of the stability tests and the descriptive statistics of the study sample and its variables are as follows, as the arithmetic averages of the answers of the study sample observations and the standard deviation of the answers were calculated, as well as the degree of approval for each of these variables, as in the following table:

Table No. (1): Test the study tool and descriptive statistics

Variable	Mean	Std. Dev	Impotance	Cronbach's Alpha	KMO (Sig)	Kaiser-Meyer-Olkine (KMO)
Financial Prespective	3.611	0.386	High	0.853	0.000	0.872
Customer Prespective	3.454	0.522	High	0.903	0.000	0.882
Internal Operations Prespective	3.835	0.488	High	0.809	0.000	0.807
Growth And Development Prespective	3.467	0.326	High	0.764	0.000	0.795
Profitability Maximization	3.319	0.347	Medium	0.701	0.000	0.721
Planning Budgets	2.620	0.392	Medium	0.805	0.000	0.776

It is noted from the above table that all perspectives of the balanced scorecard have got a high degree, and that the two variables (profit maximization and planning budgets) got a medium degree, according to the fifth Likert Scale from the point of view of employees, heads of departments, and managers of commercial banks working in the financial management department, where it was found that the internal processes perspective had the highest degree of approval based on the arithmetic mean value of (3.835) and a high degree of approval, then followed by the financial perspective with an arithmetic mean value of (3.611) and a high degree of approval, followed by the learning and growth perspective with an arithmetic mean value of (3.467) and a high degree of approval, and then followed by the customer perspective with an arithmetic mean value of (3.454) and a high degree of approval, while the profit maximization variable had an arithmetic mean value of (3.319) with a medium degree of approval, and the planning budgets variable had an arithmetic average of (2.620) with a medium degree of approval. The internal consistency coefficient ratios measured through by Cronbach's alpha test

indicate that there is a high degree of stability for all study variables, where the alpha coefficient for all variables was statistically accepted as it was higher than (70%) (Taber, 2018; Tavakol & Dennick, 2011). According to (Ara, 2016), the value of the (Kaiser-Meyer-Olkine (KMO)) test must be higher than (70%), to indicate the suitability of the entire structure of the questions within the variable and to determine the coherence of the data for this variable, and by looking at the results of the Kaiser-Meyer-Olkine test for all variables, it is clear that they are higher than 70% at the level (KMO (Sig) < 0.05 = 0.000), which is statistically significant at a significant level of (95%).

4-2 Test the suitability and validity of the study sample observations data for statistical analysis

A set of tests was conducted to ensure the validity and suitability of the data obtained from the study tool. Researchers tested the normal distribution of data for the study models by relying on the Kolmogorov-Smirnov test. The test results for each of the models examined were as follows:

A. The normal distribution test for the study model

Table No. (2): Normal distribution of the study model

Standardized residual	Kolmogrov-Smirnov		
	Statistic	df	Sig
	0.062	108	0.200

The Kolmogorov-Smirnov test results presented in the table above can be used to judge the normal distribution of data in the study model, where the value of (Sig = 0.200) is higher than (0.05), according to (Fang & Chen, 2019).

The predictability of the study models was also examined to ensure that there was no self-correlation problem in the study models

or a linear interference problem between the perspectives of the balanced scorecard in the existence of planning budgets as a moderating variable. The Multicollinearity Test was used, and the results were as follows:

B. Multicollinearity Test

Table No. (3) The results of the self-correlation and linear interference test

Financial Prespective		Customer Prespective		Internal Operations Prespective		Growth And Development Prespective		Planning Budgets	
VIF	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF	Tolerance
1.459	0.686	1.722	0.581	1.137	0.880	4.752	0.210	3.803	0.263
Durbin-Watson =1.972									

The results of the above analysis indicate that the value of (VIF) for each variable is less than 10, according to (Kraha et al., 2012), as well as the ability of all variables to remain within the study model, where the value of (Tolerance) for each variable is greater than (10). %) (Salmerón et al., 2019).

The results of the analysis also show that there is no inflation in the study model based on the Durbin-Watson test, where the value of (Durbin-Watson test = 1.972) which is suitable (between 1.5-2.5) (Lee, 2016).

Based on previous tests, it can be judged that the study sample model is free of any

problem that the researcher may face in the process of prediction and interpretation, and thus the ability to reach results that can be generalized to the study population.

4-3 Study hypotheses test

The first main hypothesis Ho1: "There is no statistically significant impact of applying the balanced scorecard on profit maximization of commercial banks listed on Amman Stock Exchange".

Table No. (4) Multiple regression test results for the impact of applying the balanced scorecard on profit maximization of commercial banks

Adjusted R-square	0.575	Prob(F-statistic)	0.000		
R-squared	0.591	F-statistic	37.157		
R	0.769	S.E. of regression	0.226		
Variable	Std. Error	Sig.T	Coefficient	B	T-Statistic
Constant	0.334	0.340	-----	0.321	0.959
Financial Prespective	0.068	0.000	0.237	0.305	4.480
Customer Prespective	0.050	0.045	0.153	0.102	2.033
Internal Operations Prespective	0.047	0.000	0.471	0.334	7.047
Growth And Development Prespective	0.091	0.000	0.592	0.630	6.961

Based on the value of ($F=37.157$; $\text{Sig.F} < 0.05 = 0.000$); It is clear that the validity of the impact of applying the balanced scorecard on profit maximization of commercial banks is accepted, and based on the value of ($\text{Sig.F} = 0.000$), it is clear that there is a statistically significant impact of applying the balanced scorecard on profit maximization of commercial banks listed on Amman Stock Exchange.

The explanatory power of this model was based on the value of (Adjusted R-square = 0.575), which indicates the ability to explain 57.5% of profit maximization of commercial banks through the changes that occur in the application of all perspectives of the balanced scorecard of commercial banks listed on Amman Stock Exchange.

According to the study of (Sarstedt et al., 2017; Hair et al., 2019), where they classified the explanatory power into four categories to determine the explanatory power, where the value less than (0.15) was considered weak and unreliable in the process of prediction and interpretation, if the value falls between (0.15 to 0.19), the value is considered weak, but it can be used a little in the prediction and interpretation process, if the explanatory

power value falls between (0.20 to 0.34), the value is medium and reliable in the prediction and interpretation process, if the value falls between (0.35 to 0.89), the value is strong and reliable in the prediction and interpretation process, and if the explanatory power value is higher than (0.90), the value is close to ideal in the prediction and interpretation process. Based on the explanatory power classifications, it was found that the value of the adjusted coefficient is strong and reliable in the process of prediction and interpretation of profit maximization of commercial banks listed on Amman Stock Exchange.

a. Ho1.1: There is no statistically significant impact of applying the financial perspective in profit maximization of commercial banks listed on Amman Stock Exchange.

Based on the value of ($\text{Sig.T} < 0.05 = 0.000$); It is clear that there is a statistically significant impact of applying the financial perspective in profit maximization of commercial banks listed on Amman Stock Exchange. The value of the correlation

coefficient (Coefficient = 0.237) indicates that profit maximization of commercial banks is positively affected by applying the financial perspective, and the financial perspective ranks third in terms of the impact on profit maximization of commercial banks listed on Amman Stock Exchange among the perspectives of the balanced scorecard examined by the study.

b. Ho1.2: There is no statistically significant impact of applying the customer perspective in profit maximization of commercial banks listed on Amman Stock Exchange.

Based on the value of (Sig.T < 0.05 = 0.045); It is clear that there is a statistically significant impact of applying the customer perspective in profit maximization of commercial banks listed on Amman Stock Exchange. The value of the correlation coefficient (Coefficient = 0.153) indicates that profit maximization of commercial banks is positively affected by applying the customer perspective, and the customer perspective is the least influential perspective of the balanced scorecard on profit maximization of commercial banks listed on Amman Stock Exchange.

c. Ho1.3: There is no statistically significant impact of applying the internal processes perspective in profit maximization of commercial banks listed on Amman Stock Exchange.

Based on the value of (Sig.T < 0.05 = 0.000); It is clear that there is a statistically significant impact of applying the internal processes perspective in profit maximization

of commercial banks listed on Amman Stock Exchange. The value of the correlation coefficient (Coefficient = 0.471) indicates that profit maximization of commercial banks is positively affected by applying the internal processes perspective, and the internal processes perspective ranks second in terms of the impact on profit maximization of commercial banks listed on Amman Stock Exchange among the perspectives of the balanced scorecard examined by the study.

d. Ho1.4: There is no statistically significant impact of applying the leaning and growth perspective in profit maximization of commercial banks listed on Amman Stock Exchange.

Based on the value of (Sig.T < 0.05 = 0.000); It is clear that there is a statistically significant impact of applying the leaning and growth perspective in profit maximization of commercial banks listed on Amman Stock Exchange. The value of the correlation coefficient (Coefficient = 0.592) indicates that profit maximization of commercial banks is positively affected by applying the leaning and growth perspective, and the leaning and growth perspective is the most influential perspective of the balanced scorecard on profit maximization of commercial banks listed on Amman Stock Exchange.

The second main hypothesis Ho2: There is no impact of planning budgets on the relationship between the application of the balanced scorecard and profit maximization of commercial banks listed on Amman Stock Exchange.

Table No. (5) The results of the hierarchical regression test of the planning budgets contribution model on the relationship between the application of the balanced scorecard and profit maximization of banks

Before listing		After listing		
F-Statistic	37.157	F-Statistic		35.933
R	0.769	R		0.799
R ²	0.591	R ²		0.638
Adjusted R ²	0.575	Adjusted R ²		0.620
Sig. F-Statistic	0.000	Sig. F-Statistic		0.000
Sig Δ F = 0.000		Δ R² = 0.047		
Δ F = 13.294				
Variable	Coefficient (β)	T-Statistic	Std. Error	Sig.T
Constant	-----	-3.291	1.303	0.001
Financial Prespective	0.257	5.327	0.065	0.000
Customer Prespective	0.392	2.369	0.110	0.020
Internal Operations Prespective	0.496	7.814	0.045	0.000
Growth And Development Prespective	0.964	7.420	0.138	0.000
Planning Budgets	0.807	3.646	0.196	0.000

Table No. (5) shows a decrease in the value of Sig.F from the significant level of ($F = 51.286$; $\text{Sig.F} < 0.05 = 0.000$); indicating that planning budgets contribute to the relationship between applying the balanced scorecard and profit maximization of commercial banks listed on Amman Stock Exchange. Also, it was found that planning budgets changed the appropriate level of the proposed model, as the value of the change between the two models was ($\Delta F = 13.294$), which is a significant at a level of (0.05), where it reached ($\text{Sig } \Delta F = 0.000$), and the introduction of planning budgets improved the explanatory power of the model, with a value of ($\Delta R^2 = 0.047$). The explanatory power of this model was based on the value of ($\text{Adjusted } R^2 = 0.620$), indicating the ability to explain 62.0% of profit maximization of commercial banks through changes that occur in the application of the balanced scorecard in the presence of

planning budgets as a moderating variable. Based on the explanatory power classifications, it was found that the value of the Adjusted coefficient is strong and reliable in the process of prediction and interpretation. Based on the previous, the second null hypothesis is rejected and the alternative hypothesis accepted, which states that “there is an impact of planning budgets on the relationship between applying the balanced scorecard and profit maximization of commercial banks listed on Amman Stock Exchange.

5. Discussing findings and recommendations

5-1 Study Results

After conducting the necessary statistical analysis tests; Researchers reached a number of results, the most important of which are:

1. There is an impact of applying the balanced scorecard in profit maximization of commercial banks listed on Amman Stock Exchange. According to the researchers, this is due to the nature of the balanced scorecard, which is considered one of the most important modern methods of evaluating the financial and non-financial performance of commercial banks, and transforming changes and developments into opportunities for banks to achieve their goals efficiently and vitally. The balanced scorecard also represents a strategy through which the bank and companies aspire to strengthen their presence, ensure their continuity and emphasize the professionalism and efficiency of their performance in achieving strategic and operational goals. This result was similar to the findings of the study of Sadiq and Majid (2015), Dergham and Hamad (2012), and Al-Mubaideen et al., (2016).
2. There is an impact of applying the financial perspective in profit maximization of commercial banks listed on Amman Stock Exchange. According to the researchers, this is due to the importance of the financial perspective, which is one of the most important perspectives in measuring strategic performance and measuring and evaluating performance, and it is also a measure of achieving goals and achieving profit levels in accordance with the Bank's strategy. This result was similar to the findings of the study of Sadiq and Majid (2015), Dergham and Hamad (2012), and Al-Mubaideen et al., (2016).
3. There is an impact of applying the customer perspective in profit maximization of commercial banks listed on Amman Stock Exchange. According to the researchers, this is due to the importance of customers and their desires, requirements and needs as an important point for the bank's success, superiority and continuity, which makes it important for the bank's strategy to include this perspective in our time of rapid evolution and change in order to improve the bank's financial performance. This result was similar to the findings of the study of Sadiq and Majid (2015), Dergham and Hamad (2012), and Al-Mubaideen et al., (2016).
4. There is an impact of applying the internal processes perspective in profit maximization of commercial banks listed on Amman Stock Exchange. According to the researchers, this is due to the emphasis placed by the internal processes perspective on the important internal procedures and factors that enable the bank to effectively implement its strategy, leading to efficient and effective achieve the needs and requirements of customers, thus providing good financial results for shareholders. This result was similar to the findings of the study of Sadiq and Majid (2015), Dergham and Hamad (2012), and Al-Mubaideen et al., (2016).
5. There is an impact of applying the learning and growth perspective in profit maximization of commercial banks listed on Amman Stock Exchange. According to the

researchers, this is due to the importance of learning and growth perspective, which is the Bank's set of rules for the preparation of improvements and growth and its impact on internal processes, customer satisfaction and the financial aspect of achieving long-term objectives, thus ensuring that its ability to survive in competition and survival is determined in the light of an open and large global market. This result was similar to the findings of the study of Sadiq and Majid (2015), Dergham and Hamad (2012), and Al-Mubaideen et al., (2016).

6. There is an impact of planning budgets on the relationship between the application of the balanced scorecard and profit maximization of commercial banks listed on Amman Stock Exchange. According to the researchers, this is due to the nature of planning budgets, which is an important tool in evaluating the performance of bank management, as well as their importance in identifying strengths and weaknesses, identifying and addressing deviations, as well as providing decision makers with appropriate, objective and timely information to achieve the desired objectives, leading to more efficient and balanced scorecard and thus increasing their impact on maximizing the profitability of commercial banks. None of the previous studies had reached this conclusion.

5-2 Study recommendations

Based on the findings of the study, the following recommendations were made:

1. The need for commercial banks to ensure that all perspectives of the balanced scorecard are applied, through training programs for commercial bank employees on the application of the balanced scorecard, to introduce them to it and how their data can be used in forming the estimated dimensions of future performance.
2. The need for all commercial banks to pay attention to the application of the balanced scorecard rather than the traditional methods of evaluation, as it has a positive impact on profit maximization.
3. Based on what was found in this study that the financial perspective impacts on profit maximization of commercial banks, the study recommends that commercial bank administrations follow investment diversification policies to maintain a good return, in order to maximize the wealth of bank shareholders.
4. Based on what was found in this study that the customer perspective impacts on profit maximization of commercial banks, the study recommends that commercial bank administrations balance the available organizational capabilities and the target market share in order to achieve the desired profit and customer satisfaction.
5. Based on what was found in this study that the customer perspective impacts on profit maximization of commercial banks, the study recommends that commercial bank administrations continue to evaluate available resources and compare

- them with bank targets, as well as to increase the quality of banking services in order to maintain customers and attract new customers, which is reflected positively in profit maximization of commercial banks.
6. Based on what was found in this study that the internal processes perspective impacts on profit maximization of commercial banks, the study recommends that commercial bank administrations set a special section to receive customer suggestions and complaints in order to maintain customers and attract new customers.
 7. Based on what was found in this study that the learning and growth perspective impacts on profit maximization of commercial banks, the study recommends that commercial bank administrations develop internal procedures periodically by linking the development of bank procedures to the customer satisfaction, and by giving employees appropriate training courses for their practical qualifications and the nature of their work in the bank.
 8. Based on what was found in this study that there is an impact of planning budgets on the relationship between the application of the balanced scorecard and profit maximization of commercial banks, the study recommends that commercial banks should activate the role of a strategic planning department in each bank in order to achieve its strategic objectives efficiently and effectively.
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