



# The Impact of Using Balance Scorecard (BSC) on Measuring Earning in Shareholding Industrial Companies in Jordan

**Omar M. Alhawtmeh**, Associate Professor, The University of Jordan, Jordan, E-mail: [a.alhawtmeh@ju.edu.jo](mailto:a.alhawtmeh@ju.edu.jo)

This Study aimed to determine The Impact of Using Balance Scorecard (BSC) on Measuring Earning in Shareholding Industrial companies in Jordan, (with its different perspectives) The BSC management system that helps to choose the best measurement procedure to reach goals. The study was designed questionnaire to achieve the study objective, the questionnaire was distributed to (48) companies with (96) managers, has recovered from (84) with an adoption rate of (87.5%) for the statistical analysis purposes, the result show that there is indirectly impact of using BSC on measuring earning and revealed that the financial perspective got higher Average, and perhaps this result is normal for assessment measures financial performance measures that affect earning are rooted, in addition to that, the use of the other three perspective measures is a recent development relatively.

**Keywords:** *Balance Scorecard; Earning; Shareholding Industrial Companies in Jordan; Jordan.*



## Introduction

The term Balanced Scorecard (BSC) reflects the balanced between short and long term objectives, between financial and non-financial measures, between lagging and leading indicators, and between external and internal performance perspectives (Kaplan and Norton, 1996). Balanced Scorecard is a measurement system that enables organizations to clarify their vision and strategy and translate them into action. It provides feedback around both the internal business processes and external outcomes in order to continuously improve strategic performance and results (Thomas, Gable, and Dickinson, 2014). BSC is a framework which translates an organization's vision and strategy into a coherent set of performance measures. It helps business to evaluate how well they meet their objectives. The BSC is a performance measurement system using a multi-dimensional scorecard to translate strategy into a balance of financial and non-financial performance measures. BSC is a combination of non-financial and financial measures developed to meet the shortcomings of traditional management control and performance measurement systems. BSC incorporates financial performance measures with non-financial performance measures in areas such as involving customers, internal processes and learning and growth (Mooraj, Oyon, and Hostettler, 2009).

BSC is a conceptual framework for translating an organization's strategic objectives into a set of performance indicators distributed between four perspectives- financial, customer, and internal business process and learning- growth. BSC is a valuation methodology that converts an organization's value drive-such as customers, services, financial performance, operational efficiency and innovation- to a series of defined metrics, records and analyses these matrices to help determine if they are achieving strategic goals'. It explains how the BSC is a system that converts value drivers of the organization into metrics to evaluate strategic goal achievement (Phillips, and Louvieris, 2005).

BSC is a performance measurement system derived from vision-strategy and reflects the most important aspects of the business. BSC is a new management concept which helps managers at all levels to monitor results in their key areas (Khanka, 2012).

It monitors current performance as well as tries to gather information about how well the organization positioned to perform better in future. BSC focuses on the link between business process and decisions and results. It considered as a device to guide formulation, implementation and communication. It also helps in tracking the performance and evaluation. To conclude, it can be said that BSC is a system of combining financial and non-financial measures of performance in one single scorecard. It includes performance measures for four perspectives; financial,



customer, internal business process and learning-growth (Chow, Haddad, and Williamson, 2012).

### **Objectives of the Study**

The importance of this research stems from the fact that it is looking to discuss and determine the concept of balanced scorecard and to assess the impact of using balance scorecard (BSC) on measuring earning in shareholding industrial companies.

Accordingly, the research seeks to achieve the following objectives:

- 1- To discuss the concept of balanced scorecard approach.
- 2- Familiarize yourself with the appropriate environment and the essential ingredients needed to use a balanced scorecard Industrial shareholding companies in Jordan.
- 3- Learn about The Impact of Using Balance Scorecard (BSC) on measuring earning in shareholding industrial companies in Jordan.

### **Literature Review and Theoretical framework**

In our research, we chose shareholding industrial companies; because they are one of the largest Gross Producers of Domestic Products (GDP) in the country with regard to automation of this industry, it needs innovative motivation and the work of modern management tools. BSC methodology remained

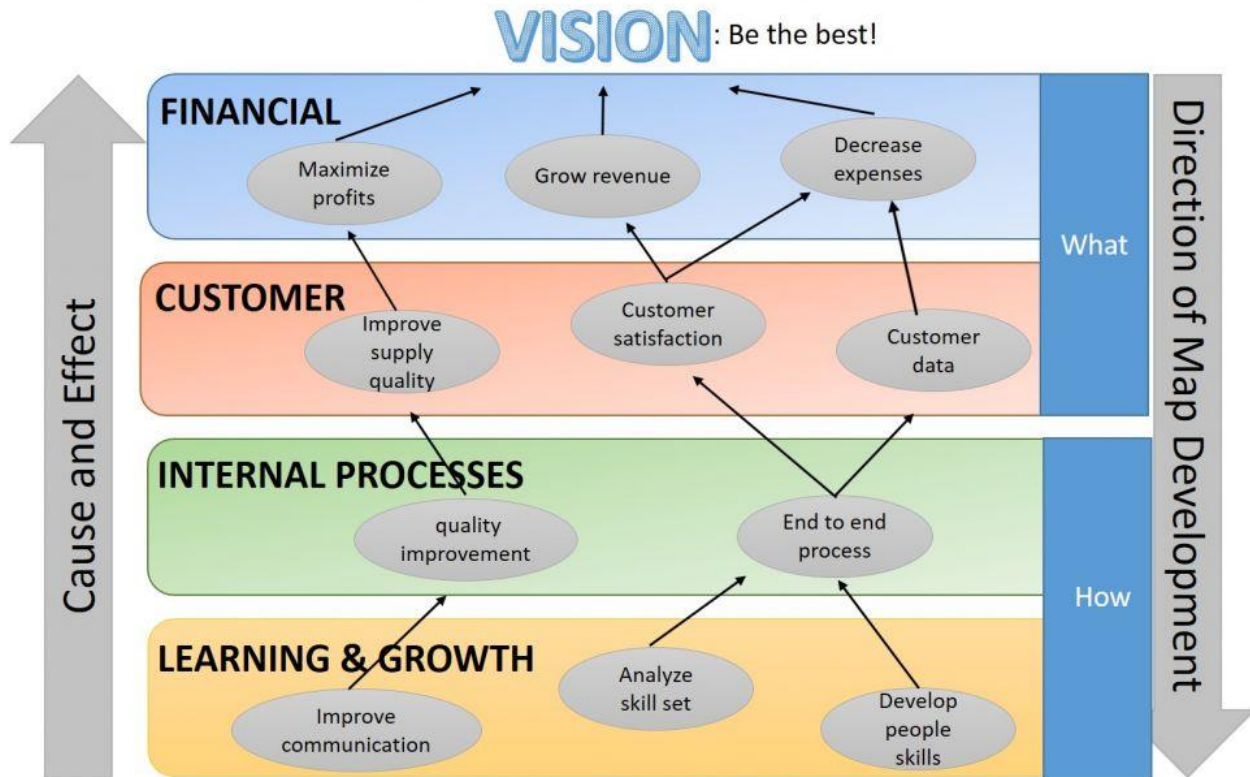
The subject of the study for a period of time, but because of the increasing need for innovations

In financial and non-financial indicators, we consider it suitable for earning measurements

The trend, like industry automation, spurred us to research Balanced Scorecard Methodology in industrial establishments ( Manová et all, 2018).

The rapid changes and developments in the modern business environment have affected the quantity and quality of information needed by the companies, to measure and appraise the performance in order to achieve their strategic goals. There was an urgent need for developing the traditional measures of financial performance due to its shortcomings to match the rapid changes of ITT, besides the globalization and extreme competition among companies ,which seek to achieve competitive advantages, that enable them to accomplish their strategic, operational and ultimate goals effectively and efficiently (Doudin, Ahmad 2009).

Industrial enterprises seek to continuously improve in all areas of business and take advantage of opportunities, whether financial or non-financial in their favor



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As we mention above the perspective of BSC include the following:

### First: Financial Perspective

Financial Perspective consider the main perspective of BSC, This was despite the fact that most researchers criticize the financial perspective and support the non-financial perspective. It is worth mentioning that many of them consider that the ultimate goal of organization is to achieve financial goals (Niven, 2006; Alshaikh, 2007), this perspective described in different literature review such as **Umar and Olatunde (2011)**, in their study on "Performance Evaluation of Consolidated banks in Nigeria by using Non-Financial measures", evaluated the performance of four consolidated banks in Nigeria. They identified the 7 non financial measures of bank performance out of 43 measures through factor analysis and assessed the overall performance of banks. Simple Random Sampling was used to select samples (customers of 4 Banks). Structured disguised Questionnaires were used to collect the data from 303 customers. Barlett test of Sphericity for testing hypothesis and Kaiser-Meyer-Olkin method was used to measure sampling adequacy and multiple regression was used to find out variation caused by Non-financial measure in banks performance. They recommended that identified seven non-financial measures named: Cost of transaction, Information technology, service delivery, quality of service, bank



offering, loan application and customer satisfaction should be adopted to fundamentally improve financial performance of consolidated banks.

### **Second: Customer Perspective**

This perspective aims to answer questions on how costumers view the organization (AL Bishtawi, 2001). It is the essence of non-financial perspective (Niven, 2006). This perspective focuses on providing measures to achieve the specific goals regarding customers' satisfaction and to meet their requirements in obtaining high quality products and reasonable prices through market share analysis (Kaplan & Norton, 1996). In addition, the main focus of this perspective is to select strategies that meet customers' satisfaction and expand target market in order to enhance the competitive opportunity (Kaplan et al., 2004), this perspective described in different literature review such as : **Ombuna et.al (2013) conducted by entitled, “Impact of Balanced Scorecard Usage on the Performance of Commercial Banks”** explored the effect of balance scorecard usage on the performance of commercial banks in Nakuru District, Kenya. The sample size of the study was 72 respondents which include operations managers, human resource managers, branch managers and customer service mangers. The author applied Pearson's correlation to test the relationship between variables. The study revealed that the effectiveness of BSC usage lies on the organizations dynamics, execution, monitoring and evaluation procedures. Besides, it was revealed that BSC usage has a positive impact on the performance of commercial banks and it helps organizations in clarifying their vision and strategy. The authors suggested that banks should develop products and services that have competitive advantage in order to get competitive advantage and to satisfy the needs of customers.

In addition, **Northcott (2011)** conducted a study entitled “Using the Balanced Scorecard to Manage Performance in Public Sector Organizations – Issues and Challenges (practical case in the local government organizations in New Zealand).” However, the results of this study indicated that there is a decline in the use of the Balanced Scorecard by public sector organizations involved in the study. The study figured out the most important obstacles in applying the Balanced Scorecard in the public sectors. Thus, these obstacles include the fact that the traditional perspective of the Balanced Scorecard is inadequate to the public sector, especially the customer perspective. Also, it entails the inability to identify the effective relationship between cause and effect which is related to determining the performance measures.

### **Third: Internal Business Process Perspective**

It is the perspective that related to the internal business process of the organization in which they meets the expectations of customers and ultimately shareholders, It identifies the critical processes, skills, competencies and technologies that add value to the expectation of customers and the success of the firm (Atkinson, 2006).



As in **Irbihat & Ashraf (2017)** in their research paper entitled, “*Impact of Balanced Scorecard Usage on the Organizational Performance: A Case Study of Jordan International Insurance*” examined the impact of balanced scorecard approach on the organizational performance of Jordan International Insurance. Data was collected with the help of a well structured questionnaire from 175 employees working in Jordan International Insurance. Besides, linear regression was used to test the hypotheses. The findings showed that customer perspective, internal business process perspective, learning and growth perspective, and financial perspective have a significant impact on the organizational performance because significant value in each variable was less than 0.05. Therefore, the research concluded that balanced scorecard approach has a significant impact on the organizational performance in Jordan International Insurance.

#### **Forth: Learning and Growth Perspective**

This perspective related to the organization employees Managers should perceive measures to answer the following question: How we will sustain our ability to change and improve to achieve our vision?

This is what we can see in **Wu et al. (2009)** in their study on “A Fuzzy MCDM Approach for evaluating banking performance based on Balanced Scorecard” identified 23 evaluation indexes from 55 indexes suitable for banking performance in terms of BSC perspective through expert opinions. Four BSC perspectives were ranked in the relative importance in the order Customer then Finance then learning & Growth and last internal process using FAHP process. Customer satisfaction, return on assets, earning per share, customer retention rate and profit per customer were found as top five evaluation indexes. U bank, C Bank and S bank respectively were ranked on the basis of performance using MCDM analytical methods. They suggested that there is no one performance evaluation index to fit all so it should be tailored to meet organization’s overall goals as well as the objectives of each individual unit. The performance evaluation indexes of the BSC perspective may not be mutually independent so other analytical methods can be employed to solve the interactive and feedback relations among indexes.

And in **Ibrahim (2015)** conducted a study entitled “Investigating the Use of the Four Perspectives of Balanced Scorecard (BSC) as a Technique for Assessing Performance by Nigerian Banks”. This study was carried out in an attempt to discover the use of BSC as a tool for measuring the performance of Nigerian banks. It is intended to fill a gap concerning the little attention to the use of BSC in Nigeria. The concepts of performance and its measurements, financial and non-financial measures of performance and the concept of BSC have been discussed. The preliminary population of the study encompassed 21 banks operating in Nigeria, and the use of a judgmental/purposive sampling technique reduced the sample to eleven banks. To collect data, a survey technique using questionnaires was used. The descriptive statistics and



Kruskal- Wallis ANOVA and descriptive statistics have been used to analyze the data. The study concluded that Nigerian banks depend on financial and customer performance measures as a technique to assess their performance. A comprehensive view of the performance of Nigerian banks cannot be assured without incorporating all the four perspectives of BSC. Ibrahim recommended that Nigerian banks should improve their performance measurement systems by harmonizing their performance measures within the four views of BSC.

### **Earning and BSC Perspective**

As we mention above there are four perspective of BSC: Financial Perspective, Customer Perspective, Internal Business Process Perspective, and Learning and growth Perspective. And as we see that the Financial Perspective directly affected Earning Measurement as it consider main perspective and essentially The more we maintain the financial perspective ( by Maximizing Profit, Growth Revenue, and Decreases Expenses) , the more we achieve companies goal which is reflex on the Earning.

And the other three perspective (Customer Perspective, Internal Business Process Perspective, and Learning and growth Perspective) indirectly affected Earning as following:

- 1- Customer Perspective: Improve Supply Quality, Customer satisfaction, Customer Data.
- 2- Internal Business Process Perspective: Quality Improvement, End to end process.
- 3- Learning and growth Perspective: Improve Communication, Analyze skill set, Develop People Skills.

### **Hypotheses of the Study**

To achieve the purpose of the study the researcher has proposed Main hypotheses:

**H0:** There is no impact of using four perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies

**H0-1:** There is no impact of using financial perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies

**H0-2:** There is no impact of using Customer perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies

**H0-3:** There is no impact of using Internal Business Process Perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies

**H0-4:** There is no impact of using Learning and Growth Perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies

**Table (1): T-test results to verify the impact of using four perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies**

Major Hypothesis	NO.	Arithmetic Mean	Standard Deviation	DF	Calculated T- Value	Tabulated T - Value	Sig
There is no impact for applying four perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies	84	3.916	0.501	85	13.612	1.046	0.000

Demonstrated by the results shown in the table (1), using four perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies at the significance level ( $\alpha \leq 0.05$ ), The calculated T- value function is 13.612 and the indication level is given as  $\alpha \leq 0.05$  when compared with Tabulated T -Value (1.046). The table also shows the same level indication (0.000). As a result, using four perspective of balanced scorecard affected Earing indirectly.

The premise of nihilism (zero) is accepted and the alternative hypothesis is rejected if the calculated value is less than the tabular value and the moral (Sig) is greater than 0.05. In addition, the null hypothesis (HO) is rejected if the calculated value is greater than the tabular value. On the other hand, if the value of the moral (Sig) is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis. Thus, this hypothesis states that:

"There is an impact of using four perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies indirectly"



**Table (2): T-test results to verify the impact for applying financial perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies**

First Sub- Hypothesis	NO .	Arithmetic Mean	Standard Deviation	DF	Calculated T- Value	Tabulated T - Value	Sig
There is no impact for applying financial perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies	84	4.212	0.498	85	16.412	1.522	0.000

Demonstrated by the results shown in the table (2), using Financial perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies at the significance level ( $\alpha \leq 0.05$ ), The calculated T- value function is 16.412 and the indication level is given as  $\alpha \leq 0.05$  when compared with Tabulated T -Value (1.522). The table also shows the same level indication (0.000). As a result, using Financial perspective of balanced scorecard affected Earing directly .

The premise of nihilism (zero) is accepted and the alternative hypothesis is rejected if the calculated value is less than the tabular value and the moral (Sig) is greater than 0.05. Also, the null hypothesis (HO-1) is rejected if the calculated value is greater than the tabular value. On the other hand, if the value of the moral (Sig) is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis. Thus, this hypothesis states that:

"There is an impact of using financial perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies directly"

**Table (3): T-test results to verify the impact for applying customer perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies**

Second Sub- Hypothesis	N O.	Arithmetic Mean	Standard Deviation	DF	Calculated T- Value	Tabulated T - Value	Sig
There is no impact for applying Customer perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies	84	3.551	0.611	85	8.757	1.669	0.000

Demonstrated by the results shown in the table (3), using Customer perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies at the significance level ( $\alpha \leq 0.05$ ), The calculated T- value function is 8.757 and the indication level is given as  $\alpha \leq 0.05$  when compared with Tabulated T -Value (1.669). The table also shows the same level indication (0.000). As a result, using customer perspective of balanced scorecard affected Earing indirectly .

The premise of nihilism (zero) is accepted and the alternative hypothesis is rejected if the calculated value is less than the tabular value and the moral (Sig) is greater than 0.05. Also, the null hypothesis (HO-2) is rejected if the calculated value is greater than the tabular value. On the other hand, if the value of the moral (Sig) is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis. Thus, this hypothesis states that:

"There is an impact of using customer perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies indirectly"

**Table (4): T-test results to verify the impact for applying Internal Business Process perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies**

Third Sub- Hypothesis	NO .	Arithmetic Mean	Standard Deviation	DF	Calculated T- Value	Tabulated T - Value	Sig
There is no impact of using Internal Business Process perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies	84	4.049	0.639	85	9.573	1.382	0.000

Demonstrated by the results shown in the table (4), using Internal Business Process perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies at the significance level ( $\alpha \leq 0.05$ ), The calculated T- value function is 9.573 and the indication level is given as  $\alpha \leq 0.05$  when compared with Tabulated T -Value (1.382). The table also shows the same level indication (0.000). As a result, using Internal Business Process perspective of balanced scorecard affected Earing indirectly.

The premise of nihilism (zero) is accepted and the alternative hypothesis is rejected if the calculated value is less than the tabular value and the moral (Sig) is greater than 0.05. Also, the null hypothesis (HO-3) is rejected if the calculated value is greater than the tabular value. On the other hand, if the value of the moral (Sig) is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis. Thus, this hypothesis states that:

"There is an impact of using Internal Business Process perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies indirectly"

**Table (5): T-test results to verify the impact for applying Learning and growth perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies**

Fourth Sub- Hypothesis	NO .	Arithmetic Mean	Standard Deviation	DF	Calculated T- Value	Tabulated T - Value	Sig
There is no impact of using Learning and Growth perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies	84	3.862	0.723	85	10.286	1.011	0.000

Demonstrated by the results shown in the table (5), using Learning and Growth perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies at the significance level ( $\alpha \leq 0.05$ ), The calculated T- value function is 10.286 and the indication level is given as  $\alpha \leq 0.05$  when compared with Tabulated T -Value (1.011). The table also shows the same level indication (0.000). As a result, using Learning and Growth perspective of balanced scorecard affected Earing indirectly.

The premise of nihilism (zero) is accepted and the alternative hypothesis is rejected if the calculated value is less than the tabular value and the moral (Sig) is greater than 0.05. Also, the null hypothesis (HO-4) is rejected if the calculated value is greater than the tabular value. On the other hand, if the value of the moral (Sig) is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis. Thus, this hypothesis states that:

"There is an impact of using Learning and Growth perspective of balanced scorecard to measure earning of Shareholding Jordanian industrial companies indirectly"



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## **Results and Recommendations**

The answers of the study sample came to all BSC perspective (Customer Perspective, Internal Business Process Perspective, and Learning and growth Perspective) based on the average emphasizes that all perspective of BSC positively affect earning.

The results of the study revealed that the financial perspective got higher Average, and perhaps this result is normal for assessment measures financial performance measures that affect earning are rooted, in addition to that, the use of the other three perspective measures is a recent development relatively.

Depending on the above results, the research recommends:

- 1- The awareness of managers of Shareholding Industrial company in Jordan should be increased to using measures Non-financial performance evaluation, along with financial metrics which is reflect on the earning.
- 2- The managers of industrial companies should follow the development and any applicable methods in management their companies, especially with regard to management accounting Increase the effectiveness of its role, especially BSC, and use it as a method for strategic translation of the company through financial and non-financial standards.
- 3- The need to review Strategic planning methods, and in a way that ensures high utilization of Non-financial standards that are adopted by management the company, taking advantage of these metrics to assess the performance.



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