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Balanced Scorecard and its Role in Increasing Competitiveness: Applied study on Jordanian Industrial Public Shareholding Companies

بطاقة الأداء المتوازن ودورها في زيادة التنافسية: دراسة تطبيقية على الشركات المساهمة العامة الصناعية الأردنية

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Abstract

The study aimed to identify the impact of Applying Balanced Scorecard on the Competitiveness of Jordanian industrial public shareholding companies.

In Order to achieve the study objectives, analytical and descriptive approaches employed. The study population consists of all managerial and financial managers, assistant managers, director of the department, and the head of department working at Jordanian Industrial Public Shareholding Companies listed in Amman Stock Exchange (ASE). Due to time and cost constraints, a convenience sample was selected. Total of (255) questionnaires were distributed to the sample of the study. (230) questionnaires were returned. (11) Questionnaires were rejected due to multiple skipped questions and missing values, leaving (219) questionnaires were valid and usable for data analysis. Thus, the response rate was (85.8%). The appropriate statistical methods of the (SPSS.20) were used.

The study revealed that the application of the Balanced Scorecard dimensions level was high, and the Competitiveness level was high in the Jordanian industrial public shareholding companies. The findings also indicated that the applying of Balanced Scorecard dimensions positively affects the Competitiveness.

Key Words: Balanced Scorecard, Cost Leadership Advantage, Differentiation Advantage, Focus advantage, Industrial Public Shareholding Companies, Jordan.

ملخص

هدفت الدراسة إلى التعرف على أثر تطبيق بطاقة الأداء المتوازن على زيادة التنافسية في الشركات الصناعية المساهمة العامة الأردنية. ولتحقيق أهداف الدراسة تم استخدام المنهج الوصفي التحليلي، حيث تم بناء استبانة بغرض جمع البيانات، تكون مجتمع الدراسة من جميع المدراء ورؤوساء الاقسام ومساعديهم في الشركات الصناعية المساهمة العامة الأردنية المدرجة في سوق عمان المالي. تم توزيع (255) استبانة على عينة الدراسة، خضع منها (219) استبانة للتحليل الاحصائي بنسبة استجابة بلغت (85.8%). وتم الإستعانه بالأساليب الإحصائية المناسبة ضمن الحزمة الإحصائية للعلوم الاجتماعية (SPSS.20)، لتحليل البيانات واستخلاص النتائج.

توصلت نتائج الدراسة إلى أن مستوى تطبيق بطاقة الأداء المتوازن، ومستوى الميزة التنافسية كان ضمن المستوى المرتفع في الشركات الصناعية المساهمة العامة الأردنية، وتوصلت الدراسة إلى وجود أثر ذو دلالة إحصائية عند مستوى دلالة ($\alpha \leq 0.05$) لتطبيق بطاقة الأداء المتوازن بجميع أبعادها على زيادة التنافسية في الشركات الصناعية المساهمة العامة الأردنية.

الكلمات المفتاحية: بطاقة الأداء المتوازن، قيادة التكلفة، ميزة التميز ، ميزة التركيز ، الشركات الصناعية، الأردن.

. Introduction

When the Balanced Scorecard (BSC) was introduced by Kaplan and Norton, (BSC) became one of the leading frameworks of performance measurement, it represent a technique used in the strategic management of the organizations. It is the comprehensive set of measures that is used to communicate and evaluate achievement of the organizations mission and strategy. (BSC) includes both objective and subjective measures divided into four perspectives: Financial perspective, Customer perspective, Internal Business Process perspective, and Learning and Growth perspective. (Kaplan and Norton, 1997). However, (BSC) has several advantages over the traditional performance measures. Some of these advantages include greater flexibility, evaluation of innovation and learning, and the ability to communicate key factors that drive performance (Zuriekat and Al-Shrari, 2008). The Balanced Scorecard (BSC) is a management tool originally designed for managing the implementation of a firm's strategy by performing measurements in several perspectives. Originally, it was intended to contribute to improved competitiveness for organizations acting in competitive markets (Kaplan and Norton, 1992). The long-term survival of a business is dependent upon meeting market needs through a long- term value creation process, traditional performance measurements have been criticized as being too narrowly on functional level and financial figures such that they fail to capture organization long-term success (Sim, and Koh, 2001). Balanced Scorecard (BSC) provides a multi- dimensional view of organization, linking financial and non-financial measures in a coherent system. It assesses not only the current organization Competitiveness but it also interconnects the individual indicators with the strategic organization management (Kozena, and Chladek, 2012).

With regard to the subject under discussion, this study is trying to test the impact of balanced scorecard in increasing competitiveness of Jordanian Industrial Public Shareholding Companies.

The Problem of the Study:

The study problem aimed to investigate the proposed relationship between balanced scorecard and competitiveness by studying the effect of balanced scorecard perspectives that may affect such relationship.

This study can formulate the following questions:

1. How the balanced scorecard (BSC) is implemented at Jordanian industrial public shareholding companies?

2. How does the balanced scorecard (BSC) influence the competitiveness of Jordanian industrial public shareholding companies?

The Objectives of the Study:

The main objective of this study was to establish how Jordanian Industrial Public Shareholding Companies uses the balanced scorecard (BSC) and how the usage affects the competitiveness. In brief, the study objectives include:

1. To identify the implementation of the balanced scorecard (BSC) at Jordanian industrial public shareholding companies.
2. To determine how the balanced scorecard (BSC) influences competitiveness in Jordanian industrial public shareholding companies.

The Study Hypotheses

In the light of the study problem and its objectives, the main hypothesis and sub- hypotheses of the study have been proposed in the null hypotheses shape as follows:

Main Hypotheses:

H0: There is no statistically impact at the level of significance ($\alpha \leq 0.05$)of the (BSC) and its perspectives (financial, Customers, Internal Business Process, Learning and Growth) on Increasing Competitiveness in Jordanian Industrial Public Shareholding Companies.

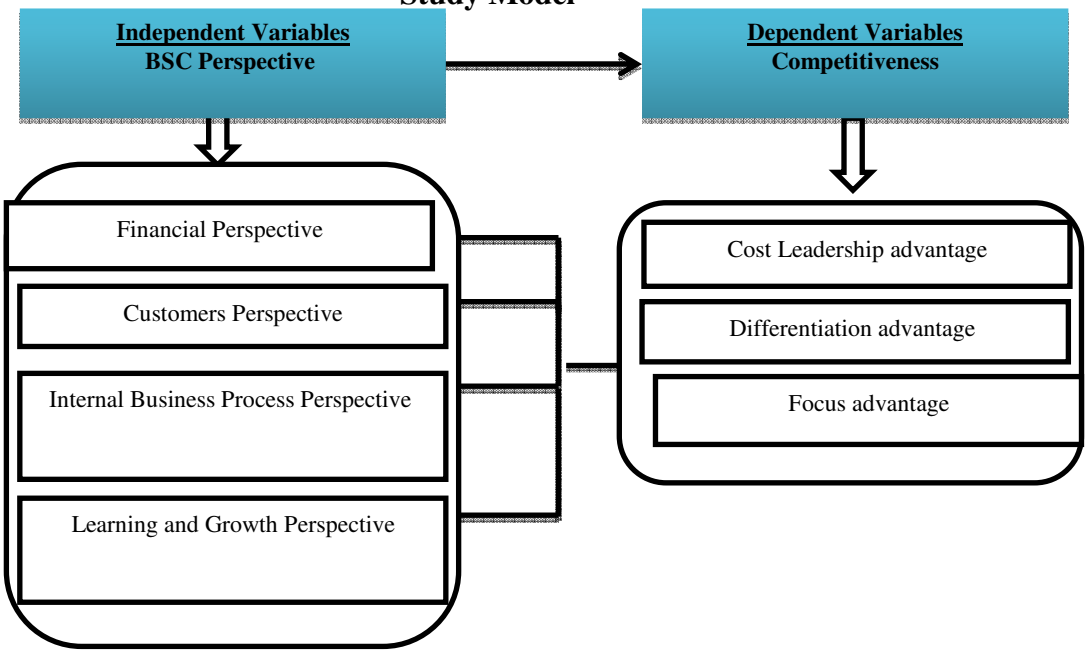
Four sub- hypotheses are emanated from the main hypotheses:

H01. There is no statistically impact at the level of significance ($\alpha \leq 0.05$)of the (BSC) and its perspectives (financial, Customers, Internal Business Process, Learning and Growth) on the cost leadership advantage in Jordanian Industrial Public Shareholding Companies.

H02. There is no statistically impact at the level of significance ($\alpha \leq 0.05$)of the (BSC) and its perspectives (financial, Customers, Internal Business Process, Learning and Growth) on the differentiation advantage in Jordanian Industrial Public Shareholding Companies.

H03. There is no statistically impact at the level of significance ($\alpha \leq 0.05$)of the (BSC) and its perspectives (financial, Customers, Internal Business Process, Learning and Growth) on the Focus advantage in Jordanian Industrial Public Shareholding Companies.

Figure (1)
Study Model



Study limitation

Indeed, this study does not come without limitation; the research limitation can be summarized as follows:

1. Human resources limitation: managerial and financial managers, assistant managers, director of the department, and the head of department working at Jordanian Industrial Public Shareholding Companies.
2. Place limitation: Jordanian Industrial Public Shareholding Companies listed in Amman Stock Exchange (ASE).
3. Time limitation: this study was conducted in year 2018.

2. Theoretical Framework and Literature Review:

The Balanced Scorecard (BSC) Concept

Balanced scorecard (BSC) is a strategic management system that translate an organization's mission and strategy into a comprehensive set of performance measures that provides a framework for a strategic measurement and management system (Kaplan and Norton, 1996). It has attracted much attention by management accounting researchers as an approach of integrating financial and non-financial performance measures. This approach to strategic evaluation was developed by Kaplan and Norton in the early 1990s. The balanced scorecard (BSC) became well-Known and

generally accepted and used extensively in business and industry, non-profit organizations and government worldwide to align business activities to the vision and strategy of the organization, improve external and internal communications, and monitor performance against strategic goals thus creating a competitive advantage (Modell, 2009; Voelpel, et.al, 2006).

This approach has been considered as a very useful tool in enhancing the understanding of organizational dynamics in terms of cause- effect relationships, and in improving an organization's efficiency (Voelpel, et.al, 2006).

The Balanced Scorecard (BSC) contributes to the implementation of the goals of the organizations in multidimensional system of indicators and parameters that measure the organization's performance on the base of perspectives (Hladchenko, 2015). The new measurement approach organizes performance objectives and measures in four perspectives (Kaplan, 2005):

1. The financial perspective: describes the tangible outcomes of the strategy in traditional financial terms, such as return on investment, profitability, lower unit cost, shareholder value, and revenue growth.

2. The customer perspective: defines the drivers of revenue growth. It includes generic customer outcomes, as satisfaction, acquisition, and growth, as well as the differentiating value proposition the organization intends to offer to generate sales and loyalty from targeted customers.

3. The internal process perspective: identifies the operating, innovation, customer management and social process objectives and regulatory for creating and delivering the customer value proposition and improving the productivity and the quality of operating processes.

4. The learning and growth perspective: identifies the intangible assets that are most important to the strategy. The objectives in this perspective identify which jobs (the human capital), which systems (information capital), and what kind of climate (the organization capital) are required to support the value creating internal processes.

Competitiveness

Since the early 1980s, Porter's strategic typology has been one of the most widely accepted methods of categorizing, discussing and selecting organization strategy. According to Porter, strategies can be classified into three generic types: Cost Leadership, Differentiation and Focus, Porter contends that by implementing one of these strategies, an organization will have a competitive advantage and earn above average industry returns (Obasi, et.al, 2006).

Porter's argue that superior performance can be achieved in a competitive industry through the pursuit of a generic strategic, which he defines as the development of an overall cost leadership, differentiation and focus approach to industry competition. If an organization does not pursue on of these strategy types, it will be stuck- in- the- middle and will experience lower performance when compared to organizations that pursue a generic strategic (Porter, 1980).

Competitive methods consist of skills and resources that are available for use by organization in a competitive industry. Superior resources is defined in terms of physical resources that are available for strategic implementation including location, operating scale, brand equity, or manufacturing or processing assets, and comprehensiveness of distribution system. Superior skills are defied in terms of staff capability, marketing savvy, or systems not possessed by competitors. Establishing Porter's generic strategic based positional advantage in the marketplace will provide an organization with superior performance (Day and Wensley,1988; Powers and Hahn, 2004).

Competitive advantage can be developed from particular capabilities and resources that the organization possesses that are not available to competitors, the transformational of available resources and skills into strategic position can only take place under conditions that provide a customer benefit and requires the transformation of multiple competitive methods. The ability to implant a cost leadership, differentiation, or focus strategy is dependent on organization's ability to develop a specific set of competitive methods. This becomes the basis for the achievement of above average industry performance (Powers and Hahn, 2004).

Porter's generic strategies

1. Cost Leadership*:* focuses on gaining competitive advantage by having the lowest cost in the industry. In order to achieve a low cost, an organization must have a low cost leadership strategy, low cost manufacturing with rapid distribution and replenishment, and workforce committed to the low cost strategy. The organization must be willing to discontinue any activities in which they do not have a cost advantage and should consider outsourcing activities to other organizations with a cost advantage. For an effective cost leadership, an organization must have a large market share. There are many ways to achieve cost leadership such as mass production, mass distribution, product design, technology, economics of scale, input cost, capacity utilization of resources, and access to raw materials (Obasi, et.al, 2006; Allen and Helms, 2006).

2. Differentiation*:* when using this strategy, an organization focuses its effort on providing a unique products or services. Since the products or services are unique, differentiation strategy provides high customer loyalty. Product differentiation fulfills a customer need and involves tailoring the products or services to the customer. Differentiation strategy allows organization to charge a premium price to capture market share. Organizations following this strategy can charge high prices on their products based on products characteristics, the quality of services, the delivery system, and the distribution channels. The key factor is to determine what makes an organization different from competitors, factors including market sector, the size of organization, quality of works, graphical reach, the image, involvement in client organizations, delivery system, products, and the market approach have been suggested to differentiate an organization (Obasi, et.al, 2006; Allen and Helms, 2006).

3. Focus: In this strategy an organization targets a specific segment of the market. The organization can choose to concentrate on a select customer group, product, and geographical area. Focus strategy is based on adopting a narrow competitive scope within an industry that large organizations may have overlooked. It aims at growing markets share through operating in niche segment or narrow market more effectively than larger competitors. This strategy allows the organization to direct its resources to certain value chain activities to build its advantages (Obasi, et.al, 2006; Allen and Helms, 2006).

Literature Review:

Al-Nsour (2018) aimed to identify the impact of Applying Balanced Scorecard on the Competitive Advantage of Jordanian industrial public shareholding companies, and to identify the differences of the impact due to demographic variables. Analytical and descriptive approaches employed. A questionnaire was developed to collect the required data. The researcher contacted (47) companies out of (63) Jordanian industrial public shareholding companies listed in Amman Stock Exchange. A stratified random sampling was used to distribute (380) questionnaires to high and middle level management employee working in these companies. The study revealed that the application of the Balanced Scorecard dimensions level was high, and the Competitive Advantage level was high in the Jordanian industrial public shareholding companies. The findings also indicated that the applying of Balanced Scorecard dimensions positively affects the Competitive Advantage. However, the study found that there is no a significant statistical difference in the impact of the application of the

Balanced Scorecard dimensions on Competitive Advantage of Jordanian industrial public shareholding companies attributable to demographic factors.

Ismail and Reddy, (2017) aimed to analyze the impact of balanced scorecard on the Competitiveness in the Jordanian telecommunication companies. Descriptive approach was adopted by using a questionnaire as a study tool. The results of the study showed that there is a statistically significant differences at the level of significant ($\alpha = 0.05$) of the impact of applying balanced scorecard on the Competitiveness in the Jordanian telecommunication companies with its four dimensions (financial, customer, internal process, and learning and growth). The study suggested that to conduct more researches in the field of what factors do affect the Competitiveness.

Zebdeh and Abu-Eiadeh (2016) aimed to identify to which extent the administrations of the banks operating in Palestine using the (BSC) approach in evaluating their performance. A questionnaire was distributed to the staff and director of the banks in Tulkarem province. The study found that, the banks operating in Palestine using the (BSC) in their daily operations, but without employee participating in policy and procedures making, and there are many obstacles facing implementing (BSC) in performance measurement. The study recommended that there is urgent need to use (BSC) in all banks because of its positive impact in achieving strategic goals.

The study of Helles and Obeid (2016) aimed to identify the possibility of application of the balanced scorecard as a tool for evaluating the performance of the Gaza Electricity Distribution Corporation (GEDC). The study based on the analytical descriptive methods. A questionnaire was distributed to the staff of (GEDC) with all its branches. The study indicates that, there is a possibility of application of the (BSC) with its four dimensions with varying degree but the learning and growth had a negative impact, also the (GEDC) applies reliable financial and non-financial performance measures. The study recommended that, the corporation must support and adopt the application of the balanced scorecard as a comprehensive and integrated system through forming specialized teams capable to implement the balanced scorecards.

Mubaydeen et.al. (2016) conducted a study aimed to examine the impact of applying balanced scorecard on profit maximization in Jordanian telecommunication companies, the study depend on analytical descriptive approach, where a questionnaire was designed to collect data. The study

sample was (340) employees. The study has concluded that there is impact for the dimensions of balanced scorecard (financial, customer, internal process, learning and growth, and social and environmental) on profit maximization in Jordanian telecommunication companies. The study recommended the need to implement training programs about balanced scorecard application in these companies.

The study of Maloain (2015) aimed to evaluate and develop the balanced scorecard approach adopted by Saudi commercial banks for the sake of improving the strategic performance; the study relied on a questionnaire to collect data from various managers of different Saudi commercial banks. The results of study showed that Saudi commercial banks are committed to implement balanced scorecard with all of its four dimensions (financial, customer, internal process, and learning and innovation) and the necessary components to make the implementation of balanced scorecard are provided in Saudi commercial banks.

The study of Jrairah (2014) examines the extent of the evaluation of performance by using the dimensions of balanced scorecard in shareholding companies for food industries in Jordan. A questionnaire of 24 items was distributed. The study has concluded that the shareholding companies for food industries in Jordan use financial and non-financial performance measures to evaluate their performance and these measures are related to financial perspective, customer perspective, internal business process perspective, innovation and learning perspective with referring to that the perfect use of this cards has been amorphous.

AbdulRahman and Ghafeer (2014), aimed to determine the impact of balanced scorecard in strengthening competitiveness in engineering industries companies operating in each of provinces of Damascus countryside and Aleppo. The required data was collected using a questionnaire. Based on a sample of 53 companies, the results showed that there is a good positive and direct relationship between the balanced scorecards and enhancing cost advantage, quality advantage and environmental advantage. The study concluded some recommendations including the necessity of supporting and paying attention of senior management to apply balanced scorecard to achieve their strategic goals and strengthen competitiveness.

Al-Ghraib (2012) conduct a study aimed to know the extent to which it is possible to use the balanced scorecard to evaluate the performance of the Libyan commercial banks and to know the major obstacles facing its application. A questionnaire was distributed to the study sample which

consist of (120) employees and administrations directors at those banks. The results showed that the Libyan commercial banks are ready to apply the balanced scorecard, also the study reached that applying the balanced scorecard leads to linking between the organization strategy and performance measure. The study ended with a set of recommendations, the most important is: the necessity to completely apply the balanced scorecard in performance evaluation because it considered an important element for competition between local and global banks.

A study conducted by Al-Khatatneh and Al-Sa'aydeh (2010) developed a modified balanced scorecard model composed of five key dimensions which are financial, customer, internal process, learning and growth, and company's environment for measuring and evaluating strategic performance for the Jordanian public shareholding industrial companies. The main results showed that all managers highly appreciate the use of all balanced scorecard measures in strategic planning and performance evaluation, also, the modified balanced scorecard model variables have been highly evaluated by the study sample except some of the variables related to company's environment. The study concluded that it is necessary to adopt modified balanced scorecard dimensions by managers of Jordanian public shareholding industrial companies in order to tight together strategic goals with performance drivers and measures.

Another study which was conducted in Jordan by Zuriekat and Al-Shrari (2008) aimed to measure the use of the balanced scorecard performance measurement system in Jordanian commercial banks and insurance companies, and to examine the relationship between business strategy and market competition and the use of balanced scorecard. The required data was collected using a questionnaire. Based on a sample of 42 companies, the results showed that 40% of the responding companies using the balanced scorecard, also the results using logistic regression indicate that business strategy and market competition significantly influence the use of the balanced scorecard in these companies. The study recommended that conducting future researches to examine the benefits and assumptions of using balanced scorecard.

3. Research Methodology

This study follows the descriptive and analytical approach. This approach is based on description of the study population and collection of real data from this population through designing a questionnaire by reference to the previous studies in order to test hypotheses and to achieve objectives of the study. The questionnaire was distributed to collect data;

this method is considered an appropriate method and less expensive than many others.

Study Population and its Sample

The study population of this study consists of all managerial and financial managers, assistant managers, director of the department, and the head of department working at Jordanian Industrial Public Shareholding Companies listed in Amman Stock Exchange (ASE). Due to time and cost constraints, a convenience sample was selected. Total of (255) questionnaires were distributed to the sample of the study. (230) questionnaires were returned. (11) Questionnaires were rejected due to multiple skipped questions and missing values, leaving (219) questionnaires were valid and usable for data analysis. Thus, the response rate was (85.8%).

Data Collection Tools

The study utilized both primary and secondary methods of data collection:

Secondary Data: secondary data was drawn from both print and electronic sources that varied between articles, books, websites, thesis etc.

Primary Data: A self-administered questionnaire was used for collecting data for this study.

Study Tool

For the purposes of data collection, a questionnaire consisted of three sections was used. The first section includes necessary demographic information about the respondent (Gender, Age, Education, Specialization, Job Title, and Experience). The second section included (30) paragraphs measuring the Balanced Scorecard Perspectives (Financial, Customers, Internal Business Process, Learning and Growth). The third section measured competitiveness, and included (25) paragraphs covering the four dimensions of competitiveness (Cost advantage, Differentiation advantage, Focus advantage).

All items were measured using a five-point Likert-type Scale, ranging from "Strongly Agree" to Strongly Disagree as follows:

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
(5)	(4)	(3)	(2)	(1)

Relative importance, assigned due to (Sekaran, 2003). Where cut degree was calculated as follows:

Class Interval = (Maximum Class- Minimum Class) / Number of Level

Class Interval = ((5- 1) / 3= 1.33). The three levels of evaluation are as follows:

Low Degree	Average Degree	High Degree
1- 2.33	2.34- 3.67	3.68- 5

Validity of Study Tool

To investigate the validity of the questionnaire, the researcher presented the questionnaire to a number of academic colleagues who are technically and academically qualified. Based on their notes some paragraphs were modified and some paragraphs were deleted or combined with other paragraphs. Thus, content validity is established in this study.

Reliability of Study Tool

The Cronbach's Alpha is used to investigate the reliability (internal consistency) of the questionnaire's paragraphs and all variable dimensions. A reliability coefficient of 0.70 or greater is considered acceptable in most research situations (Field, 2009). The Cronbach's Alpha of all scales included in this study ranged between (0.754) and (0.943) which indicates good reliabilities of the scale. As it is shown below in table (1):

Table (1) The Reliability of Study Tool (Cronbach's Alpha)

Variables	Cronbach's Alpha	N of Items
Financial	0.811	8
Customers	0.799	7
Internal Business Process	0.825	8
Learning and Growth	0.831	7
Total	**0.943**	**30**
Cost Leadership advantage	0.809	9
Differentiation advantage	0.754	8
Focus advantage	0.779	8
Total	**0.844**	**25**

Statistical Treatments Methods

The data collected from the respondent were used through Statistical Package for Social Science (SPSS.20) in order to answer the study questions and to test the study hypothesis. The researcher used suitable statistical methods that consist of:

1. Cronbach's Alpha coefficient to test the internal consistency of the questionnaire's paragraphs and all variable dimensions.
2. Descriptive Statistic to describe features of study sample using frequency and percentage.
3. Variance Inflation Factor (VIF) and Tolerance to ensure that Multicollinearity is not noticed between the independent variables.
4. Skewness- kurtosis test to ensure data is normally distributed.

5. Pearson Correlations Coefficient to evaluate the strength and the direction of relationships association between dependent and independent variables.
6. Multiple Regression Analysis to test the effect of the independent variables on the dependent variables.
7. Stepwise Multiple Regression Analysis to determine the degree of importance of each independents variable in the Regression model.
8. Independence of Errors: to test this assumption, Durbin-Watson test is conducted. If the value of the test is ranged between (1.5) and (2.5), then the assumption is met. This indicates that the residuals are not correlated with each other; therefore the independence of errors is not violated.

4. Data Analysis and Results

Sample Characteristics

Table (2) depicts the demographical distribution of the study sample according to their (Gender, Age, Education, Specialization, Job Title, and Experience). As table (2) indicates, (63%) of the respondents were male and (37%) were female. The majority of the respondents (40.6%) were in the age group 30- less 40 years, whilst the rest of respondents were aged between 40 and less 50 years (34.7%), less 30 years (16.9%), and more than 50 years (7.8%). In terms of education level, (4.1%) of the respondents held diploma degree, (77.2%) held bachelor degree, (16.4%) held master degree, and (2.3%) held PHD degree. Most respondents have specialized in accounting (49.8%), whilst the rest of respondents have specialized in administrative science (14.6%), Financial (15.5%), and other (20.1%). Respondents held a variety of positions in the business, the majority respondents were director of the department (41.1%), manager (4.1%), assistant manager (6.8%), Head of Department (17.8%), and other positions (30.1%). About (48.8%) of respondents have an experience of more than 15 years, (17.4%) have an experience of 10- less 15 years, (23.7%) have an experience of 5- less 10 years, and (10.5%) of respondents have an experience of less 5 years.

Table (2) demographic distribution of the study sample

Variables		Frequency	Percent
Gender	Male	138	63%
	Female	81	37%
Total		**219**	**100%**
Age	Less 30	37	16.9%
	30- less 40	89	40.6%
	40- less 50	76	34.7%
	More than 50	17	7.8%

Total		**219**	**100%**
Education	Diploma	9	4.1%
	Bachelor	169	77.2%
	Master	36	16.4%
	PHD	5	2.3%
Total		**219**	**100%**
Specialization	Accounting	109	49.8%
	Administrative Science	32	14.6%
	Financial	34	15.5%
	Other	44	20.1%
Total		**219**	**100%**
Job Title	Manager	9	4.1%
	Assistant Manager	15	6.8%
	Director of the Department	90	41.1%
	Head of Department	39	17.8%
	Other	66	30.1%
Total		**219**	**100%**
Experience	Less 5	23	10.5%
	5- less 10	52	23.7%
	10- less 15	38	17.4%
	More than 15	106	48.8%
Total		**219**	**100%**

Descriptive Analysis

Table (3) and Table (4) present the results of descriptive analysis (Means and Standard deviation) for all variables included in the study; independent and dependent variables.

Table (3) shows that the average means of the respondent's attitude toward the implementation of BSC Perspectives were ranging from (1.70) to (3.94), with standard deviation that ranges from (0.332) to (0.394). The highest mean score (0.394) is given to Financial Perspective and the lowest mean score (0.332) is given to Learning and Growth Perspective. The overall result indicates that there is a positive attitude with average range toward the implementation of BSC Perspectives in Jordanian Industrial Public Shareholding Companies.

Table (3) Means and Standard deviation of BSC Perspectives

BSC Perspective	Means	Standard deviation	Rank	Perception degree
Financial	3.94	0.394	3	High

Customers	4.11	0.360	2	High
Internal Business Process	4.24	0.384	1	High
Learning and Growth	1.70	0.332	4	Low
	3.49	**0.207**	**-**	**Average**

Table (4) shows that the average means of the respondent's attitude toward the competitiveness dimensions were ranging from (3.84) to (4.15), with standard deviation that ranges from (0.445) to (0.532). The highest mean score (0.532) is given to Cost advantage and the lowest mean score (3.84) is given to Innovation advantage. The overall result indicates that there is a positive attitude with high range toward the competitiveness dimensions in Jordanian Industrial Public Shareholding Companies.

Table (4) Means and Standard deviation of competitiveness dimensions

competitiveness	Means	Standard deviation	Rank	Perception degree
Cost Leadership advantage	4.15	0.532	1	High
Differentiation advantage	3.93	0.541	3	High
Focus advantage	4.06	0.504	2	High
	3.99	**0.419**	**-**	**High**

Hypotheses Testing

Before starting to use parametric statistical tests such as multiple regressions, there are some assumptions that should be verified and met to do such tests; the assumptions of multiple regressions are carefully examined according to statistical methodologies. These assumptions are as follows:

Normality Test

Data should be normally distributed in order to run regression analysis successfully. To make sure that such a prerequisite for regression analysis is satisfactorily met, Skewness- kurtosis test was employed, a value that is ranged between ($\pm$ 2.58) at ($p \leq 0.01$) for each Skewness and kurtosis is considered acceptable to ensure data is normally distributed (Hair et.al, 2010). Table (5) shows that all BSC perspectives follow the normal distribution. This is established by values of Skewness- kurtosis, were all these values are within the acceptable limits.

Table (5) Normality Test

BSC perspectives	Skewness	kurtosis

Financial	0.656	0.236
Customers	0.217	-0.226
Internal Business Process	0.330	-0.469
Learning and Growth	-0.099	-0.485

Multicolliniarity test

Multicolliniarity test used to ensure that there is no perfect linear relationship between two or more of the predictors. So the predictors should not correlate too highly (Field, 2009), one of the collinearity diagnostics methods is to use Variance Inflation Factor (VIF) and Tolerance which indicates weather independent variable has a strong relationship with the other independent variable. The (VIF) value of a variable should not exceed (10). Table (6) shows that the (VIF) values are less than (10) and Tolerance values are more than (0.1) which means there is no Multicolliniarity problem and it could be safely said that the study model is an appropriate one.

Table (6) Multicolliniarity test

BSC perspectives	Multicolliniarity test	
	Tolerance	VIF
Financial	0.672	1.489
Customers	0.606	1.651
Internal Business Process	0.484	2.068
Learning and Growth	0.668	1.498

Correlation analysis

The correlation analysis amongst all the study variables was conducting using bivariate Pearson correlation analysis as shown in table (7). All variables showed significant correlations ($p \leq 0.01$).

Table (7) Pearson Correlations Matrix

		Financial	Customers	Internal Business Process	Learning and Growth
Financial	Pearson Correlation	1			
	N	**219**			
Customers	Pearson Correlation	0.506**	1		
	N	**219**	**219**		
Internal Business Process	Pearson Correlation	0.504**	0.568**	1	
	N	**219**	**219**	**219**	
Learning and Growth	Pearson Correlation	-0.259**	-0.383**	-0.569**	1
	N	**219**	**219**	**219**	**219**
competitiveness	Pearson Correlation	0.508**	0.631**	0.710**	-0.454**
	N	**219**	**219**	**219**	**219**

**** Correlation is significant at the 0.01 level (2-tailed).**

After making sure that all required conditions are satisfactory met, the study hypotheses were tested using multiple regression analysis in order to examine the impact of BSC Perspectives on competitiveness. As follows:

First: Testing the main hypothesis

H0: There is no statistically impact at the level of significance ($\alpha \leq 0.05$)of the BSC and its perspectives (Financial, Customers, Internal Business Process, Learning and Growth) on increasing competitiveness in Jordanian Industrial Public Shareholding Companies.

Table (8) Summary of Multiple Regression Analysis of the relationship

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Durbin-Watson
1	0.769	0.591	0.586	0.26961	117.274	0.000	2.255

between competitiveness and Independent Variables

a. Predictors: (Constant), Learning and Growth, financial, Customers, Internal Business Process

b. Dependent Variable: competitiveness

The results showed in table (8) above indicate that Financial, Customers, Internal Business Process, Learning and Growth altogether explain 59.1% of the difference in the competitiveness, where (R Square = 0.591). The model is statistically significant, where (F = 117.274, Sig. = 0.000), and this assures that there is a relationship between the independent variables and the dependent one. Also, Durbin-Watson test is conducted where (DW= 2.255), between 1.5 and 2.5, this indicates that the residuals are not correlated with each other; therefore the independence of errors is not violated.

Table (9) Significant Test of Regression Weights of Independent Variables- Dependent Variable is competitiveness

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.116	0.288		0.401	0.688
Financial	0.124	0.046	0.117	2.692	0.007*
Customers	0.341	0.053	0.293	6.429	0.000*
Internal Business Process	0.497	0.056	0.455	8.917	0.000*
Learning and Growth	-0.066	0.055	-0.052	-1.203	0.230

*** Statistically significant at the significance level ($\alpha \leq 0.05$)**

From the results showed in table (9), Financial, has significant effect on competitiveness, where (Beta = 0.117, Sig. = 0.007). Since (t = 2.692, p < 0.05). Customers, has significant effect on competitiveness, where (Beta = 0.191, Sig. = 0.000). Since (t = 3.713, p < 0.05). In addition, the results found that Internal Business Process has significant effect on competitiveness, where (Beta = 0.567, Sig. = 0.000). Since (t = 9.846, p < 0.05). Furthermore, the results found that Learning and Growth has no significant effect on competitiveness, where (Beta = -0.052, Sig. = 0.230). Since (t = -1.203, p > 0.05).

Second: Testing the Sub- Hypotheses

Testing the first Sub- Hypothesis

H01. There is no statistically impact at the level of significance ($\alpha \leq 0.05$)of the BSC and its perspectives (Financial, Customers, Internal Business Process, Learning and Growth) on the cost leadership advantage in Jordanian Industrial Public Shareholding Companies.

Table (10) Summary of Multiple Regression Analysis of the relationship between Cost Leadership Advantage and Independent Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Durbin-Watson
1	0.693	0.480	0.473	0.38657	74.713	0.000	2.277

a. Predictors: (Constant), Learning and Growth, financial, Customers, Internal Business Process

b. Dependent Variable: cost

The results showed in table (10) above indicate that Financial, Customers, Internal Business Process, Learning and Growth altogether explain 48.0% of the difference in the cost advantage, where (R Square = 0.480). The model is statistically significant, where (F = 74.713, Sig. = 0.000), and this assures that there is a relationship between the independent variables and the dependent one. Also, Durbin-Watson test is conducted where (DW= 2.277), between 1.5 and 2.5, this indicates that the residuals are not correlated with each other; therefore the independence of errors is not violated.

Table (11) Significant Test of Regression Weights of Independent Variables- Dependent Variable is Cost Leadership Advantage

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.424	0.413		-1.025	0.306
Financial	0.013	0.066	0.010	0.196	0.845
Customers	0.282	0.076	0.191	3.713	0.000*

Internal Business Process	0.787	0.080	0.567	9.846	0.000*
Learning and Growth	0.019	0.079	0.012	0.238	0.812

*** Statistically significant at the significance level (α ≤ 0.05)**

From the results showed in table (11), Financial, has no significant effect on cost advantage, where (Beta = 0.010, Sig. = 0.845). Since (t = 0.196, p > 0.05). Customers, has significant effect on cost advantage, where (Beta = 0.191, Sig. = 0.000). Since (t = 3.713, p < 0.05). In addition, the results found that Internal Business Process has significant effect on cost advantage, where (Beta = 0.567, Sig. = 0.000). Since (t = 9.846, p < 0.05). Furthermore, the results found that Learning and Growth has no significant effect on cost advantage, where (Beta = 0.012, Sig. = 0.812). Since (t = 0.238, p > 0.05).

Also, we utilized the Stepwise Multiple Regression Analysis to determine the degree of importance of each independents variable in the Regression model (see table 12).

Table (12) Stepwise Multiple Regression Analysis: Independent Variables on Cost Leadership Advantage

Model	R	R Square	Adjusted R Square	t	(Sig.)	Independents Variables
1	0.674	0.454	0.453	16.502	0.000*	Internal Business Process
2	0.693	0.480	0.476	3.980	0.000*	Customers

*** Statistically significant at the significance level (α ≤ 0.05)**

As shown in table (12), Internal Business Process came first and explains 45.4% of the difference in the cost advantage. Customers were second in rank and explain together with operation about 48.0% of the difference in the cost advantage. Financial and Learning and Growth were excluded from the Stepwise Multiple Regression Analysis. As it were not found to be significant in the former multiple regression analysis as shown in table (11) above.

Testing the second Sub- Hypothesis

H02. There is no statistically impact at the level of significance (α ≤ 0.05)of the BSC and its perspectives (Financial, Customers, Internal Business Process, Learning and Growth) on the differentiation advantage in Jordanian Industrial Public Shareholding Companies

Table (13) Summary of Multiple Regression Analysis of the relationship between Differentiation Advantage and Independent Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Durbin-Watson
1	0.764	0.583	0.578	0.35192	113.275	0.000	2.397

a. Predictors: (Constant), Learning and Growth, financial, Customers, Internal Business Process

b. Dependent Variable: differ

The results showed in table (13) above indicate that Financial, Customers, Internal Business Process, Learning and Growth altogether explain 58.3% of the difference in the differentiation advantage, where (R Square = 0.583). The model is statistically significant, where (F = 113.275, Sig. = 0.000), and this assures that there is a relationship between the independent variables and the dependent one. Also, Durbin-Watson test is conducted where (DW= 2.397), between 1.5 and 2.5, this indicates that the residuals are not correlated with each other; therefore the independence of errors is not violated.

Table (14) Significant Test of Regression Weights of Independent Variables- Dependent Variable is Differentiation Advantage

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-2.456	0.376		-6.527	0.000*
Financial	0.281	0.060	0.205	4.673	0.000*
Customers	0.545	0.069	0.363	7.871	0.000*
Internal Business Process	0.609	0.073	0.432	8.371	0.000*
Learning and Growth	0.274	0.071	0.168	3.830	0.000*

*** Statistically significant at the significance level ($\alpha \leq 0.05$)**

From the results showed in table (14), Financial, has significant effect on differentiation advantage, where (Beta = 0.205, Sig. = 0.000). Since (t = 4.673, $p < 0.05$). Customers, has significant effect on differentiation advantage, where (Beta = 0.363, Sig. = 0.000). Since (t = 7.871, $p < 0.05$). In addition, the results found that Internal Business Process has significant effect on differentiation advantage, where (Beta = 0.432, Sig. = 0.000). Since (t = 8.371, $p < 0.05$). Furthermore, the results found that Learning and Growth has significant positive direct effect on differentiation advantage, where (Beta = 0.168, Sig. = 0.000). Since (t = 0.238, $p < 0.05$).

Also, we utilized the Stepwise Multiple Regression Analysis to determine the degree of importance of each independents variable in the Regression model (see table 15).

Table (15) Stepwise Multiple Regression Analysis: Independent Variables on Differentiation Advantage

Model	R	R Square	Adjusted R Square	t	(Sig.)	Independents Variables
1	0.647	0.419	0.417	15.352	0.000*	Customers
2	0.730	0.533	0.530	8.907	0.000*	Internal Business Process
3	0.751	0.564	0.560	4.853	0.000*	Financial
4	0.764	0.583	0.578	3.830	0.000*	Learning and Growth

*** Statistically significant at the significance level ($\alpha \leq 0.05$)**

As shown in table (15), Customers came first and explains 41.9% of the difference in the differentiation advantage. Internal Business Process was second in rank and explains together with agent about 53.3% of the difference in the differentiation advantage. Financial was third in rank and explains together with agent and operation about 56.4% of the difference in the differentiation advantage. Learning and Growth was the last in rank and explains together with agent, operation, and financial about 58.3% of the difference in the differentiation advantage.

Testing the third Sub- Hypothesis

H03. There is no statistically impact at the level of significance ($\alpha \leq 0.05$)of the BSC and its perspectives (Financial, Customers, Internal Business Process, Learning and Growth) on the focus advantage in Jordanian Industrial Public Shareholding Companies

Table (16) Summary of Multiple Regression Analysis of the relationship between Focus Advantage and Independent Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Durbin-Watson
1	0.479	0.230	0.220	0.44549	24.156	0.000	2.027

a. Predictors: (Constant), Learning and Growth, financial, Customers, Internal Business Process

b. Dependent Variable: focus

The results showed in table (16) above indicate that Financial, Agent, Operation, and Growth altogether explain 23.0% of the difference in the focus advantage, where (R Square = 0.230). The model is statistically significant, where (F = 24.156, Sig. = 0.000), and this assures that there is a relationship between the independent variables and the dependent one. Also, Durbin-Watson test is conducted where (DW= 2.027), between 1.5 and 2.5, this indicates that the residuals are not correlated with each other; therefore the independence of errors is not violated.

Table (17) Significant Test of Regression Weights of Independent Variables- Dependent Variable is Focus Advantage

Independent Variables	Unstandardized	Standardized	t	Sig.

	Coefficients		Coefficients		
	B	**Std. Error**	**Beta**		
(Constant)	3.043	0.476		6.388	0.000*
Financial	0.094	0.076	0.073	1.229	0.220
Customers	0.178	0.088	0.127	2.025	0.044*
Internal Business Process	0.156	0.092	0.119	1.691	0.092
Learning and Growth	-0.434	0.090	-0.286	-4.793	0.000*

*** Statistically significant at the significance level (α ≤ 0.05)**

From the results showed in table (17), Financial, has no significant effect on focus advantage, where (Beta = 0.073, Sig. = 0.000). Since (t = 1.229, p < 0.05). Customers, has significant effect on focus advantage, where (Beta = 0.127, Sig. = 0.044). Since (t = 2.025, p < 0.05). In addition, the results found that Internal Business Process has no significant effect on focus advantage, where (Beta = 0.119, Sig. = 0.092). Since (t = 1.691, p > 0.05). Furthermore, the results found that Learning and Growth has significant effect on focus advantage, where (Beta = -0.286, Sig. = 0.000). Since (t = -4.793, p < 0.05).

Also, we utilized the Stepwise Multiple Regression Analysis to determine the degree of importance of each independents variable in the Regression model (see table 18).

Table (18) Stepwise Multiple Regression Analysis: : Independent Variables on focus Advantage

Model	R	R Square	Adjusted R Square	t	(Sig.)	Independents Variables
1	0.421	0.177	0.175	-8.393	0.000*	Learning and Growth
2	0.464	0.215	0.210	3.960	0.000*	Customers

*** Statistically significant at the significance level (α ≤ 0.05)**

As shown in table (18), Learning and Growth came first and explains 42.1% of the difference in the focus advantage. Customers were second in rank and explain together with growth about 21.5% of the difference in the focus advantage. Financial and Internal Business Process were excluded from the Stepwise Multiple Regression Analysis. As it were not found to be significant in the former multiple regression analysis as shown in table (17) above.

5. Conclusions and Recommendations

The study aimed to identify the impact of Applying Balanced Scorecard (BSC) on the Competitiveness of Jordanian industrial public shareholding companies. The study revealed that the application of the Balanced Scorecard dimensions level was high, and the Competitiveness level was high in the Jordanian industrial public shareholding companies. The

findings also indicated that the applying of Balanced Scorecard dimensions positively affects the Competitiveness.

The results showed that Financial, Customers, Internal Business Process, Learning and Growth altogether explain 59.1% of the difference in the competitiveness, where (R Square = 0.591). These results support the idea that the industrial companies are using different types of balanced scorecard dimensions that mainly cope with their objectives.

On the basis of the above conclusion, the following recommendations are made:

1. The use of Balanced Scorecard (BSC) as a strategic tool for the performance measurement and evaluation is strongly recommended, given that organizations seek to gain competitiveness.
2. Managers must pay more attention to analysing and linking the Balanced Scorecard (BSC) perspectives with strategy in order to increase and enhance their organization's ability to achieve the required strategic goals and objectives.
3. The basic idea of the Balanced Scorecard (BSC) is that learning is necessary to improve internal process; improving internal process is necessary to improve customer satisfaction; and improving customer satisfaction is necessary to improve financial results, therefore managers should pay more attention to tracing both financial and non-financial performance indicators in order to achieve competitiveness.

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