

THE IMPACT OF THE STANDARD COSTING SYSTEM ON THE PERFORMANCE OF INDUSTRIAL COMPANIES IN JORDAN

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ABSTRACT

This study investigated the impact of the standard costing system on the performance of industrial companies in Jordan. The study population was selected from 47 industrial companies listed in the Amman Financial Market, a sample of 40 companies was selected for this study, and the questionnaire was adopted as a tool for this study. The results showed that there is a positive relationship between the standard costs and the performance of industrial companies in Jordan. The results suggest that the shareholders and management should learn from the current study that they are responsible for determining the level of performance by using modern methods in management accounting and cost accounting, which would achieve greater profitability for the company and thus improve its performance.

Keywords: Standard Cost, Performance, Cost Accounting, Transaction Cost Theory.

INTRODUCTION

In light of the recent large technological and industrial developments, it has become necessary for industrial companies to implement modern strategies and policies that are compatible with these developments in the local and global arena, as the strategic goal of managing industrial companies is their continuity and maximizing their profitability while taking into account their ability to invest it, and as the traditional cost systems that load the total costs to the final product, that loads the final product costs are not justified or linked to it directly without a standards download process control, and then the difficulty of determining the cost of each product accurately and the difficulty of identifying Profitability and quality measurement. The management of these companies should apply modern cost systems that facilitate the planning, control, and reduction of the cost of the products (Abdullah & Mansour, 2015).

Costing system's standard is one of the modern costs and important systems within the facility seeks to control costs through planning and control the use of resources through planning the arbitrator of the productive process and then the production cost information that facilitates control over the elements of costs through standards for the cost of longer advance by the foundations of a scientific process used as a basis When comparing the actual and the planned costs (Appelbaum et al., 2017).

The growing competition puts industry companies and industrial market before the major challenges if it is to achieve profitability, and maintain the continuity and the level of high-quality production, so these companies to look for appropriate means to reduce costs, due to the shortcomings for cost-systems traditional currently applied in Industrial companies in Jordan,

which carries the total costs on the final product through traditional methods that neglect the causal relationship in the allocation of costs and without cost standards that are prepared in advance to facilitate the cost control process. A major question arose in the researcher's mind, which is: Can the standard costing system enable industrial companies in Jordan to manage and control costs, which helps reduce costs and increase profitability and thus improve the performance of these companies? Is the industrial part companies an important infrastructure in Jordan because it serves all segments of society, and contribute to the national economy of the state, and requires continuing financial stability and better profitability at the lowest cost, and requires that the work of an accounting arbitrator and science through the costs of systems able to manage and control Production costs, which facilitates planning, realization, measurement, and maximization of profitability, especially since the cost systems applied in industrial companies do not achieve this goal (Drury, 2013). Hence the importance of this study is: Examine the extent to which the standard costs system has an impact on performance, which helps the management to plan well and continue to work.

LITERATURE REVIEW

Business and other enterprises need to provide a large amount of information requested by those interested in their affairs, to assist them in making rational economic decisions. These entities include management, current and prospective investors, creditors, government agencies and bodies, and scientific research institutions. Without providing the appropriate information for these entities, the percentage of their wrong decisions increases, so researchers are developing theories that help users of the information study the impact of these theories on various factors, and enable them to carry out their scientific studies in general and their economic studies in particular in the best form, and from these theories Cost theory which will be adopted in this study. Cost measurement of a product is one of the most important issues facing a cost accountant because it helps in financial reporting, inventory costing, product pricing, profit determination, profit planning, cost control, and decision making (Wojtowicz et al., 2019).

Cost theory derives its strength from the concept of cost accounting, where it is difficult to find a brief definition of cost accounting that surrounds its topic, but we will try to clarify its nature and its subject through several definitions, where cost accounting is defined as a branch of accounting science and according to its principles it provides information related to the elements of expenditures and works to record and classify them and analyze it and allocate it or upload it to cost centers or operating orders and different operations to calculate the cost of products, their types, and units, and prepare lists and reports to evaluate the performance through which the administration can exercise its various functions with high efficiency to pressure expenses and reduce waste and waste Conscious and damaged materials used, increase labour productivity, reduce costs and increase profits (Rindfleisch, 2019).

The cost accounting system is considered one of the most important subsystems of the management information system in the establishment, as it provides cost information to the administration in a manner that enables it to make the best use of the available resources and take administrative action. The definitions of cost accounting varied according to researchers and their viewpoints due to its comprehensiveness in terms of its keeping pace with developments. Where the definition of cost accounting by Al-Bayati (2016) as *“the science that deals with the definition and measurement and analysis of the elements of costs in the lists and reports show the cost of this item produced or service provided to assist management in making administrative*

decisions and impose control over the cost elements and policy-making and improve the level of performance by comparing actual costs with costs in advance of planned Determining and treating the causes of deviation". This definition dealt with the role of cost accounting in analyzing the cost elements, determining the cost of the produced commodity, and assisting the management in tightening control and setting policies, but it neglected the method of costing. While (Talib, 2018) defined it as *"that branch of accounting, which is interested in the estimation of the collection, recording, and distribution, analysis and interpretation of data related to cost, and these data-related materials, labour and manufacturing costs indirect related to the production of goods or services to measure the cost of these activities and the imposition of the control and rationalization of administrative decisions"*.

Cost accounting is considered one of the sciences whose rules and theories have taken root in the modern era, but its roots extend to the depths of history (Appelbaum et al., 2017). Another researcher believes that *"these are costs specified in advance of what the unit cost of the product should be in the coming period, and these costs are usually determined using scientific methods, it aims to assist the management in the purposes of planning, control, and decision-making"*. So that the standard costs can serve their purposes, the standards must be in line with the conditions of the establishment in the present and the future. Otherwise, these criteria would be inappropriate as if they were about another entity (Al-Bayati, 2016).

Standard cost accounting depends on defining the cost elements in advance for a future period in more accurate ways than the traditional costs (estimated), where cost standards are set scientifically and practically that determines the cost elements, that is, what the cost should be on, not what the cost would be expected to be.

Performance is defined by Feldstein & Coussons (2020) as *"a reflection of how an institution uses financial and human resources and exploits them efficiently and effectively, in a manner that makes it capable of achieving its objectives"*. We note from the above that the definition is based on two main elements: Organization, and we mean the efficiency factor, and the results of that use, that is, the effectiveness factor. Turner et al. (2006) define performance as: *"Judging the social legitimacy of a particular activity"*. Performance in this perspective is linked to social action and knowledge, leading to social acceptance of the organization's activities as well as economic legitimacy (Gopalakrishnan et al., 2015). To ensure the so-called 'performance balance' within the organization, activities are integrated with the performance process, generating a nested and interactive chain of processes: performance planning, performance management, performance monitoring, performance evaluation, performance improvement, empowerment, and compensation of performers. Performance management through which the organization seeks to achieve the objectives for which it was established and the most important of these goals is to bridge the performance gap, which is the real problem of management, and to reduce this gap can be achieved in two ways, the first positive and achieve the goal, which is the actual performance to reach the target performance, and the second negative and is to reduce the performance of the target to equate with actual performance (Chan et al., 2010).

Referring to performance, we find the basis of performance management work and is intended as a comprehensive definition: «All processes and studies that seek to determine the level of the relationship between the resources available and the efficiency of use by the economic unit, with the development of the relationship study during successive periods, or a specific period the way to make comparisons between what is achieved and what is targeted, and the goals achieved based on a certain scale and criteria » (Lin, 2010). The performance process is defined as: *"the process by which management at all levels provides information on the*

performance of activities within the organization, through which performance is judged by the criteria in the budgets, plans and objectives” (Gopalakrishnan et al., 2015).

Based on the above, a firm's performance is considered to be a major driving force behind any wealthy nation. It is one of the indicators that top management uses to monitor firms' activities to keep the firms and their strategies in the correct direction. According to this concept, companies worldwide continuously work to enhance their performance through many continuous improvement techniques. Therefore, a firm's performance considers the indices of success, growth, prosperity, failure, strategy implementation, and goal achievements to assist in decision-making. Performance, in particular, is a critical determinant of an organization's future, on the condition that the organization will use relative, reliable, credible, and informative measurements to help in predicting tomorrow while learning from yesterday. The same measures were used by Zheng et al. (2014) who revealed that when companies aligned their accounting Modern standard costing strategies requirements, they have a greater possibility to yield better organizational performance.

The companies that have adopted the application of standard costing system have improved the performance of the company, where these methods are used in the production process in its various stages, this contributes to lower costs, improve product quality and satisfy customers' desires. Organizations that use Modern standard costing strategies can provide them with a strong and distinctive ability resulting from combining cost reduction while maintaining quality. The use of these methods allows companies to achieve a competitive advantage and high performance. Due to the rapid development and competition in international markets, companies must adopt such methods, they have shifted to using the best management accounting tools and techniques, to help them develop their business and stay in the market (Drury, 2013).

Several previous studies showed a positive relationship between Modern standard costing strategies adoption and firms' performance. According to Jadid (2015), the study examined the standard costs system and its role in monitoring and evaluating performance in the oil industry companies in Syria. The study aimed at introducing the importance and objectives of standard costs and the role of transactions and the role that can be played in control. The study is based on the assumptions that the standard cost system can achieve effective control over oil production costs, and that the application of the developed standard cost system enables the evaluation and evaluation of performance goals. The study found that the reality of the applicable system cost company hi product does not keep pace with environment modern manufacturing, and system cost of standard developer company can be applied to achieve good control over the costs of oil production, and that costs a system of standard application that provides information to enable the evaluation of performance through performance compared the actual outline.

Abdullahj et al. (2016) examined the impact of standard costing on MTN's profitability to identify the impacts on the profitability of standard costing techniques, the relationship between standard costs and the rentability of telecommunications undertakings, as well as determine if standard costing techniques and rules are being implemented Results have been found that accounting records are maintained and are important for the company's management. The fact that the company uses standard costs in its product and decisions with standard information about costs obtained in the company is taken. It prepares and submits accounting reports to the management of the company and immediately takes action on the information provided in the report. This efficient use of standard costs has an impact on the company's profitability. That the company benefits substantially by using standard costing in particular for-profit improvement.

Januarie (2016) examines the rationale for the use of standard costs in modern production organizations. Researchers argue that the current concept of continuous improvements is not easily matched by the standard price. In the production companies of Eastern Cape, the advantages and limitations of standard costing and other modern alternative approaches are studied. Besides, the factors which influence the accuracy of standards will be examined, standard costing is used in manufacturing organizations in Eastern Cape and has very important significance as shown in the result and many organizations using standard costs.

Hussein (2017) study examined the role of the standard cost system in the control and financial decisions of Sudanese industrial companies and represented the study the problem of the suffering of most industrial companies Sudanese from the use of actual costs in measuring the efficiency of the operational processes of industrial, which leads to the inability to calendar accurate performance and hence the need for the method of standard costs which enables the monitoring and evaluation of performance through a comparison between the actual and the planned. The study aimed to shed light on the importance of the standard costs method and measure the effect of applying it on the control process and its effect on rationalizing financial decisions in industrial enterprises. The study is based on the assumption that there is a statistically significant relationship between the application of the standard costs system and the level of control over the financial performance of industrial establishments. The study concluded that the standard costs are pre-set costs based on studies based on scientific foundations that help to measure the planned performance correctly, and imposing effective control on costs, and applying the standard costs system helps in making rational decisions and reducing indirect costs in the facility.

Ahmad (2018) studied the standard costs system and its role in controlling costs. The problem of the study is represented in the inability of the grain mills to control costs in light of the complex economic, environmental, and industrial conditions in Sudan. The study aimed to identify the extent of the use of the standard cost system in grain mills in Sudan and to shed light on the obstacles in using this system and to study the ability of the grain companies to set accurate standards by the scientific principles of costs, explain the effect of using the standard costing system on the efficiency and quality of cost control. The study is based that there is a statistically significant relationship between the application of the standard costs system and the efficiency of cost control in grain mills in Sudan. That there is a statistically significant relationship Statistical significance between the application of the standard costs system and the profitability of the grain mills in Sudan. The study reached several results, the most important of which is that applying the standard costing system is an indicator of the quality of cost control and that the standard costing system helps the management to direct its attention to deficiencies and identify its causes.

Raghavan (2019) compares two techniques of cost management to evaluate the impact of lean implementation and to monitor lean system progress. The standard costs and activity-based costs are the two methods of costing. By simulating a manufacturing environment following the implementation of lean principles the product costs are evaluated through overhead costs calculations and throughput, which leads to many organizational choices. In this study, It was seen that the overhead cost had the most effect on the overall product cost while other costs had an impact. The lean main implementation controlled and changed the overall allocation. This study has also concluded that part of the overall costs can be allocated as part of the process cycle time. The core idea of the lean implementation is therefore to reduce the cycle time that will reduce the cost of the system. The lean principles are also focused on just delivery time,

higher inventory turns and the achievement of kaizen techniques can increase the output and effectively reduce waste and cycle time within the system.

Kianian et al. (2019) examines the Life Cycle Assessment (LCC) and compare it with a performance partial costing model based on in-depth analytics and cost-sustainability assessment integration criteria. A case study was selected by a Swedish equipment manufacturer where the company examines new production technology. Because such a decision requires a large amount of investment. The results demonstrated that LCC has a significant impact on a part cost of performance. According to Ekerkil & Göde (2020), the success of the hotel business is being measured by supply chain management and standard costing techniques. A five-star hotel has four years of information to achieve this goal. For the four-year data of the hotel, which reflects the activity period of the hotel, the study initially estimates and updates the total energy consumption and energy cost as well as the fixed and varying costs. Use this data set to evaluate performance per night with room and customer data. The second part of this study deals with electricity consumption, total electricity costs, and fixed and variable costs. Performance assessment can be performed at room and customer level per night. Therefore, it is possible to analyze the extent to which the performance assessment in each part of the hotel affects the total performance of the hotel. Based on the above, the following hypothesis was developed:

With the above-mentioned financial capacity, the researchers have hypothesis following:

H₁ There is a positive relationship between standard costing systems and performance for industrial firms in Jordan.

METHODOLOGY

Research Design

The design of research has simply been described as the methods and structures of an investigation, which the researcher chooses to follow the norm for the collection and analysis of data. In any search, search design is essential. This phase involves taking decisions on the intent, place, sort, processing, check and level of analysis (Sekaran, 2003) and it helps to draw up a checklist which can direct the researchers' activities and processes in achieving scientific research aims and checking the validity of assumptions.

This study used a survey method, a technique widely used among researchers. This type of method is mostly used in descriptive and causal research designs. Hair et al. (2014) explained that the survey method distinguishes itself differently from other types of methods because of how search data is collected. Surveys can deal with a huge amount of data from selected samples including survey participants. Moreover, the two main reasons for the popularity of the surveys are their importance and relevance. The first property appears when researchers cannot control search variables. The second feature appears when participants in studies cannot be selected, assigned, and controlled, as they do in empirical research. Also, the questionnaire method is most appropriate for the current study as this technique allows for accurate and comprehensive responses from respondents.

Based on the above, in this study, an independent variable, which is standard costing systems, was adopted, and the effect of this variable on performance was measured as a dependent variable.

Population and Sampling

The study community consists of all the industrial companies listed on the Amman Stock Exchange (ASE) (2018), which number until the end of the December of 2018 (47) industrial company According to the records of ASE. The majority of the Jordanian industrial companies are located in Amman, according to the annual company's guide (www.ase.com.jo). The sample of the study consisted of managers in 40 industrial companies. Five questionnaires were distributed for each company. The total questionnaires were distributed to 200 questionnaires:

DATA ANALYSIS AND RESULTS

Data Screening

Data screening and cleaning procedures were carried out for errors or outliers to ensure that the data was entered correctly and that the distribution of the variables to be analysed is natural. The outlier is linked to data that has a meaning beyond the usual range, according to Zikmund-Fisher (2013). Any individual item with a D2 value greater than Chi-square will be considered multivariate outliers (Hair et al., 2014; Zikmund-Fisher, 2013). In this report, all things have been screened carefully to identify any errors in data entry using descriptive statistics. The results of the descriptive test, which included: mean, minimum and maximum values, suggested that in most responses only four cases display extreme values. (Case number: 28, 73, 89 and 151). Hence, 189 questionnaires were retrieved, the final usable cases for analysis were 185.

Descriptive Statistics

The values of the mean, deviation, and minimum and maximum values were as shown in Table 1.

Variables	Mean	Median	SD	Min	Max
Standard cost	62.40	61.53	5.23	52.30	76.92
Performance	5.18	6.00	6.00	1.52	2.00

Multicollinearity Test

Multicollinearity is an important assumption in addition to other premises that there is no multicollinearity. Diagnoses of collinearity were made to check and identify the multicollinearity problems of the predictors. The tolerance value and inflation factor (VIF) can be calculated for this. The tolerance levels ranged from 0-1 according to (Hair et al., 2014). A value of 1 demonstrates that the variable is not connected to other variables and a value of 0 means that the two variables tested are positively correlated. The VIF also has a standard cut-off value of 10 and VIF values should be below 10 in all predictors. The results of the cross-linearity measurements are shown in Table 2.

Table 2		
CROSS-LINEARITY MEASUREMENTS		
Variables	Collinearity Statistics	
	Tolerance	VIF
Standard cost	0.436	3.345
Dependent Variable: Performance		

Results of Linear Regressions

As a guarantee that each linear regression assumption was fulfilled sufficiently, this study employed the linear regression analysis in investigating the relationship between Standard costing and performance. The examination was carried out on the significance of the regression coefficients of the hypothesized predictors. This was to ascertain the support for the hypotheses. The following sub-sections describe the regression model's results. Table 3 shows the linear regression results.

Table 3			
STANDARD COST AND PERFORMANCE REGRESSION			
Model	<i>t</i>-test	Sig.	Hypothesis Result
Constant	55.59	0	
Standard costing à performance	2.52	0.008	<i>H1</i> Supported

In the table above, ($t = 2.522$, P -value is 0.008 which is <0.05), based on this result the hypothesis is supported, in other words, there is a positive relationship between standard cost and performance for Jordanian industrial companies.

CONCLUSION

As a guarantee that the linear regression assumption was fulfilled sufficiently, this study employed the linear regression analysis in investigating the relationship between standard cost and performance, based on this result obtained the hypothesis H_1 was supported, in other words, there is a positive relationship between standard cost and performance for Jordanian industrial companies.

This research highlights the development as well as testing of a structural model for performance. The model that this study had devised is grounded on the cost theory in addition to the applicable constructs obtained from the secondary data as well as the studies on performance. Tests were executed against the model using the data obtained from questioners, and these data were gathered from the questioners distributed on the industrial companies listed companies in Amman Stock Exchange at the end of 2018 from 47 listed companies as the industrial sector. Finally, the shareholders and management should learn from the current study that they are responsible for determining the level of performance by using modern methods in management accounting and cost accounting, which would achieve greater profitability for the company and thus improve its performance.

As already highlighted, to some extent, the outcomes generated in this study are affirmations to the outcomes obtained by the past works. Nonetheless, several issues have surfaced during the progress of this research which should be promptly addressed for the perusal of future work. Where the study recommended conducting more future research related to modern management accounting methods about costs in different contexts and countries, in addition to that, the study recommends conducting future research's that includes intermediate

factors to demonstrate their impact on the performance of companies, as well as conducting research using different independent and dependent factors to generalize the results as much as possible.

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