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The Extent of Applying Modern Techniques of Managerial Accounting in the Jordanian Electric Companies

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Abstract
This research aims to explore the extent of Appling modern techniques of managerial accounting, the techniques included: balance score card and benchmarking, the sample of this study took for one of the largest electric companies from three electric companies in Jordan called Jordanian Electric Power Company Limited, Data were collected through questionnaires forming a representative sample, A total of 190 questionnaires were distributed for all employees of Supreme Administrative and Central Administrative in the Jordanian Electric Power Company Limited. the findings indicated that there is statistical application of BSC and benchmarking as a managerial accounting tool in the Jordanian Electric Power Company Limited.
Keywords: balance score card, benchmarking

1. Introduction

Managerial accounting is the internal business function responsible for allocating business costs to goods or services produced by companies and analyzing other financial information resulting from business operations. This accounting method is also referred to as cost accounting. Cost accounting is the specific process of allocating raw material, labor and overhead costs to consumer products. Managerial accounting often expands on this function to include forecasting, budgets and assessing the profitability of current business operations (Qidwai,2009).

Managerial accounting tools help a company manage its financial information for internal purposes. Among the most common tools are costing methods, budgets, standard costing, variance analysis, capital analysis and accounting workflow management (Abernethy,2005). A major difference between financial accounting and management accounting is the latter does not need to follow and external standards or principles. As long as companies use managerial accounting tools that are reasonable and accurately track financial information, the company's system is acceptable. Companies can also change to different tools if they discover their current tools are not providing the most accurate reporting.

2. Literature

2.1 Balanced Scorecard

The balanced scorecard (BSC) is a strategy performance management tool - a semi-standard structured report, supported by design methods and automation tools that can be used by managers to keep track of the execution of activities by the staff within their control and to monitor the consequences arising from these actions. It is perhaps the best known of several such frameworks (it was the most widely adopted performance management framework reported in the 2010 annual survey of management tools undertaken by Bain & Company). Since its original incarnation in the early 1990s as a performance measurement tool, the BSC has evolved to become an effective strategy execution framework. The BSC concept as put forth by Drs. Robert S. Kaplan and David P. Norton (Qidwai,2009) is now seen as a critical foundation in a holistic strategy execution process that, besides helping organizations articulate strategy in actionable terms, provides a road map for strategy execution, for mobilizing and aligning executives and employees, and making strategy a continual process.

2.1.1BSC Characteristics

The characteristic of the balanced scorecard and its derivatives is the presentation of a mixture of financial and non-financial measures each compared to a 'target' value within a single concise report. The report is not meant to be a replacement for traditional financial or operational reports but a succinct summary that captures the information most relevant to those reading it. It is the method by which this 'most relevant' information is determined (i.e., the design processes used to select the content) that most differentiates the various versions of the tool in circulation. The balanced scorecard also gives light to the company's vision and mission. These two elements must always be referred to when preparing a balance scorecard.

As a model of performance, the balanced scorecard is effective in that "it articulates the links between leading

inputs (human and physical), processes, and lagging outcomes and focuses on the importance of managing these components to achieve the organization's strategic priorities."

The first versions of balanced scorecard asserted that relevance should derive from the corporate strategy, and proposed design methods that focused on choosing measures and targets associated with the main activities required to implement the strategy. As the initial audience for this was the readers of the Harvard Business Review, the proposal was translated into a form that made sense to a typical reader of that journal - one relevant to a mid-sized US business. Accordingly, initial designs were encouraged to measure three categories of non-financial measure in addition to financial outputs - those of "customer," "internal business processes" and "learning and growth." Clearly these categories were not so relevant to non-profits or units within complex organizations (which might have high degrees of internal specialization), and much of the early literature on balanced scorecard focused on suggestions of alternative 'perspectives' that might have more relevance to these groups.

Modern balanced scorecard thinking has evolved considerably since the initial ideas proposed in the late 1980s and early 1990s, and the modern performance management tools including Balanced Scorecard are significantly improved - being more flexible (to suit a wider range of organizational types) and more effective (as design methods have evolved to make them easier to design, and use). In the latest book by Kaplan & Norton related to the BSC, "The Execution Premium", the BSC forms only a part of a broader Execution Premium Process (XPP) to implement and monitor strategy.

2.2 Benchmarking

Benchmarking is the process of comparing one's business processes and performance metrics to industry bests or best practices from other industries. Dimensions typically measured are quality, time and cost. In the process of best practice benchmarking, management identifies the best firms in their industry, or in another industry where similar processes exist, and compares the results and processes of those studied (the "targets") to one's own results and processes. In this way, they learn how well the targets perform and, more importantly, the business processes that explain why these firms are successful.

Benchmarking is used to measure performance using a specific indicator (cost per unit of measure, productivity per unit of measure, cycle time of x per unit of measure or defects per unit of measure) resulting in a metric of performance that is then compared to others.

Also referred to as "best practice benchmarking" or "process benchmarking", this process is used in management and particularly strategic management, in which organizations evaluate various aspects of their processes in relation to best practice companies' processes, usually within a peer group defined for the purposes of comparison. This then allows organizations to develop plans on how to make improvements or adapt specific best practices, usually with the aim of increasing some aspect of performance. Benchmarking may be a one-off event, but is often treated as a continuous process in which organizations continually seek to improve their practices.

2.2.1 Benefits of Benchmarking

In 2008, a comprehensive survey on benchmarking was commissioned by The Global Bench marking Network, a network of benchmarking centers representing 22 countries. Over 450 organizations responded from over 40 countries. The results showed that:

1. Mission and Vision Statements and Customer (Client) Surveys are the most used (by 77% of organizations of 20 improvement tools, followed by SWOT analysis (72%), and Informal Benchmarking (68%). Performance Benchmarking was used by 49% and Best Practice Benchmarking by 39%.
2. The tools that are likely to increase in popularity the most over the next three years are Performance Benchmarking, Informal Benchmarking, SWOT, and Best Practice Benchmarking. Over 60% of organizations that are not currently using these tools indicated they are likely to use them in the next three years.

2.3Previous Studies

- Stephen Nzuve, Gabriel Nyaega, (2013), "Application of Balanced Scorecard in Performance Measurement at Essar Telecom Kenya Limited.

A case study was conducted to establish the application of Balanced Score Card (BSC)in performance

measurement at Essar Telkom Kenya Ltd with data being collected by use of personal interviews with the heads of departments mainly the technical, information technology, customer experience, finance, human resource, sales and marketing. The study revealed that the company primarily uses Balanced Score Card (BSC) for strategy implementation and as a performance measurement tool and recommends that the company should provide enough resources especially for funding further comprehensive sensitization on the importance of Balanced Score Card (BSC) in relation to strategic implementation. There is also need for vigorous capacity building program to improve the appreciation and usage of the Balanced Score Card (BSC) to tap on the gains so far made.

-Asea Sharaf Qidwai, (2009), "Impact of Balanced Score Card: A Study of BHEL, India.

This Study was undertaken to consider the viewpoints of the Senior Executives, (Universe: 250, Stratified Random Samples: 40, Place: BHEL, Bhopal, India), who use Balanced Scorecard as a part of their Performance Planning Process.BSC in BHEL has given rise to features like effective team-playing etc, but its implementation needs further refinement. A quarterly review should be included as it would provide better monitoring and also help identify loopholes more often thereby making the implementation smoother. HR dept. is required to play a positive supporting role in facilitating the process of performance management, as inter-departmental dependencies come up as uncontrollable factor at times, that could adversely affect the achievement of targets.

-Rene et al. 2009, "Benchmarking Report: Strategic Foresight in Multinational Companies"

The results of this study indicate that companies have built strong capabilities for collecting information. However, their ability to interpret information, disseminate gained insights and trigger management reactions leaves room for improvement: Only 23% of the participants state that SF insights are rapidly diffused, which implies that future insights might not reach relevant decision-makers. Only 54% of the analyzed companies choose methods deliberately. This indicates that 46% of companies take the risk of having inadequate method portfolios, endangering their ability to interpret information. Only 28% of companies regularly challenge basic assumption, implying a low level of alertness towards discontinuous change. The comparison of top performing companies with all participating companies shows that top performers invest significantly more resources in gathering data from restricted sources, utilize more qualitative methods, and more often select methods deliberately. Furthermore, top performing companies engage in more bottom-up triggered foresight activities, which should raise the overall level of alertness as well as their scanning reach and scope. Compared to findings from previous studies a continuing enhancement of corporate foresight systems can be attested. However, towards the ubiquitous installment of systems that allow systematically detecting discontinuous change and triggering appropriate actions, there is still a long way to go.

-Dirk Bergemann, Urich Hege, (2002)" The Value of Benchmaking"

The current study considers the provision of venture capital in a dynamic model with multiple research stages, where time and investment needed to meet each benchmark are unknown. The allocation of funds is subject moral hazard. The optimal contract provides for incentive payments linked to attaining the next benchmark, which must be increasing in the funding horizon of each stage. Benchmarking reduces agency costs, directly by shortening the agent's guaranteed funding horizon, and indirectly via an implicit incentive effect of information rents in future financing rounds. The ex ante need to provide incentives and the venture capitalist's desire to cut information rents ex post create a hold-up conflict, which can be overcome by providing all funds in every stage in a single up-front payment. Empirical patterns of the evolution of financing rounds and research intensity over the lifetime of a project are explained as optimal choices: The optimal capital allocated and the funding horizon are increasing from one stage to the next. This emphasizes the notion that early stages are the riskiest in an innovative venture.

3.Methodology

3.1 Paper Problem

The Importance of managerial accounting techniques come from being as resources of information about planning, controlling and evaluation. So we can present the problem of current research by the following question:

- Extent of Applying Modern Techniques of Managerial Accounting (BSC and Benchmarking) in the Jordanian Electric Power Company Limited?

3.2Paper Objectives

- Identify Extent of Applying Modern Techniques of Managerial Accounting (BSC and Benchmarking) in the Jordanian Electric Power Company Limited.

3.3Paper Importance

- The current research explores the actual attitudes of adoption managerial accounting techniques in the Jordanian Electric Power Company Limited.

- Jordanian Electric Power Company Limited play a crucial role in both industrial and service public sectors.

3.4 Paper Hypotheses

H01: There is no statistical application of BSC as a managerial accounting tool in the Jordanian Electric Power Company Limited.
H02: There is no statistical application of Benchmarking as a managerial accounting tool in the Jordanian Electric Power Company Limited.
H03: There is no statistical differences in perspectives of application managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title.
We have two sub hypotheses from the above hypothesis:

H03-1: There are no statistical differences in perspectives of application BSC as a managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title.

H03-2: There are no statistical differences in perspectives of application benchmarking approach as a managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title.

3.5 Study Methodology

Study population represented by all employees of Supreme Administrative and Central Administrative in the Jordanian Electric Power Company Limited. There are (190) managers and co-managers in the company. The research sample includes all managers and co-managers. Data will collect by survey questionnaire targets the administrative managers of the sample companies. The researches distributed (190) questionnaires, but (170) had been gotten back, with reasonable percentage (89.5%).

3.6 Data analysis and Statistical tools

Collected data will be processed by the following statistical methods

- Cronbach's Alpha scale to test the reliability of study tool.

- Means and standard deviations of each paragraph of questionnaire and each variables of study.

- One-Sample t-test.

- Independent-Sample t-test.

4.STATISTICAL ANALYSIS

4.1 Introduction

In this chapter we started by the description of demographic variables, study variables, and hypotheses testing.

4.2 Demographic Variables Description

Variables	Freq.	Percent%
Age		
Less than 30 years	20	11.76
From 30 to 39	40	23.53
From 40 to 49	60	35.29
50 years and above	50	29.41
Total	170	100
Position		
Manager	42	24.71
Co-manager	128	75.29
Total	170	100
Certification		
BSc.	123	72.35
MSc.	37	21.76
PhD	10	5.88
Total	170	100%
Experiences		
Less than 5 year	15	8.82
From 6 to10 years	103	60.59
From 11 to 15 years	37	21.76
15 years and above	15	8.82
Total	170	100%

According to the percentages and values of variables above we notice that study sample is a representative sample of the population, which increases the reliability of study instrument.

4.3 Study Variables

First: Balanced Scored Card Adoptions

No.	Instrument	Mean	Std.	Rank
1	Customer Perspectives: company present services to satisfy customers' needs	4.21	1.10	1
2	Internal Processes Perspectives: company seeks to achieve high level of operational process, and make decision to improve continuously.	3.98	0.72	2
3	Growth & Learning Perspectives: improve the academic and professional level of employee is the most important aim of management.	3.22	1.30	4
4	Financial Perspectives: company achieves profit, and has variety of fund resources.	3.80	1.05	3
All		3.81	0.94	

Above table shows the mean of Balance score card adoption is (3.81), with standard deviation (0.94). The customer perspective is the most important dimension of BSC adoption, this refer to the nature of function of company as a service one. The last dimension is growth and learning, with mean (3.22) and standard deviation (1.30).

Second: Benchmarking approach adoption

No.	Instrument	Mean	Std.	Rank
1	Company compare performance with other companies in a continuous manner	3.44	0.88	2
2	Management seeks to discover weakness points to solve, and strength point to enhance.	3.59	1.45	1
3	Company always tries to learn from other companies' experiments.	3.26	0.73	3
4	Management evaluates the employees' performance in the basis of employees' performance in other companies.	2.95	0.65	4
All		3.30	0.55	

Above table shows the mean of benchmarking adoption is (3.30), with standard deviation (0.55). First paragraph is "Management seeks to discover weakness points to solve, and strength point to enhance.", with mean (3.59) and standard deviation (1.45). While last is "Management evaluates the employees' performance in the basis of

employees' performance in other companies.", with mean (2.95) and standard deviation (0.65).

4.4 Hypotheses Test

In this hypothesis we use one sample t-test to test the significant of mean difference from the reference mean (3)

H01: There is no statistical application of BSC as a managerial accounting tool in the Jordanian Electric Power Company Limited.

	Mean	Stdev	Difference	t-value	Df	Sig
BSC Adoption	**3.81**	**0.94**	**0.81**	**4.22**	**169**	**0.000**

The above table shows that the mean difference (0.81) is significant where t-value (4.22) and (sig = 0.000) less than 0.05, so we reject null hypothesis and accept that "There is statistical application of BSC as a managerial accounting tool in the Jordanian Electric Power Company Limited."

H02: There is no statistical application of Benchmarking as a managerial accounting tool in the Jordanian Electric Power Company Limited.

	Mean	Stdev	Difference	t-value	Df	Sig
BSC Adoption	**3.30**	**0.55**	**0.30**	**2.09**	**169**	**0.043**

The above table shows that the mean difference (0.30) is significant where t-value (2.09) and (sig = 0.043) less than 0.05, so we reject null hypothesis and accept that "There is no statistical application of Benchmarking as a managerial accounting tool in the Jordanian Electric Power Company Limited."

H03: There are no statistical differences in perspectives of application managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title.

For the following hypothesis we use independent sample t-test. The results were as following:

H03-1: There are no statistical differences in perspectives of application BSC as a managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title.

		Mean	Difference	t-value	Sig
BSC	**Managers**	**3.10**	**0.40**	**2.59**	**0.032**
	Co-managers	**3.50**			

The above table shows that the mean difference (0.40) is significant where t-value (2.59) and (sig = 0.032) less than 0.05, so we reject null hypothesis and accept that "There are statistical differences in perspectives of application BSC as a managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title."

We notice that co-managers agree that there is an application of BSC in the company more than managers, the reason for that may be because co manager near to routine operations happened in company and know work details more than managers.

H03-2: There are no statistical differences in perspectives of application benchmarking approach as a managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title.

		Mean	Difference	t-value	Sig
Benchmarking	**Managers**	**3.77**	**0.08**	**0.92**	**0.365**
	Co-managers	**3.85**			

The above table shows that the mean difference (0.08) is not significant where t-value (0.92) and (sig = 0.365) less than 0.05, so we accept null hypothesis and reject that "There are statistical differences in perspectives of application benchmarking approach as a managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title."

This may considered as an indicators that the application of benchmarking is still in its beginning stage, and this make it difficult to managers and co-managers to determine the level of application.

5. Results

1- There is statistical application of BSC as a managerial accounting tool in the Jordanian Electric Power Company Limited.

2- There is statistical application of Benchmarking as a managerial accounting tool in the Jordanian Electric Power Company Limited.

3- There are statistical differences in perspectives of application BSC as a managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title.

4- There are no statistical differences in perspectives of application benchmarking approach as a managerial accounting tools in the Jordanian Electric Power Company Limited attributed to job title.

6. Recommendations

1- Management of Jordanian Electric Power Company Limited should put a plans to applications all BSC dimensions to ensure that the operations during the companies done to achieve strategic goals of company.

2- Management should adopt Benchmarking approach in high scaled companywide application, in order to increase the level of service quality, and to improve company reputation and create an image.

3- BSC and benchmarking implementation outputs should be the basis of management evaluation.

4- Auditors should take benchmarking application outputs as an auditing evidence to plan for auditing process.

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