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The Incorporation of Sustainability Indicators into a Performance Measurement System

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Abstract

Sustainability indicators have emerged as a key element in a market where customers are interested in the environmental impacts of the products they consume. Companies are trying to incorporate them into their Performance Measurement System (PMS). However, there is little information available to managers to guide them on the incorporation. Hence, this paper presents the results of an action research carried out to improve the PMS of a Brazilian consumer goods company with the incorporation of sustainability indicators. The findings illustrate that is possible to incorporate them into the PMS as long as there are stakeholders interested in establishing strategic objectives for sustainability.

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1. Introduction

As customer demands are changing rapidly in terms of sophistication of products and services they require, organizations need to become more responsive to customer and market needs. In fact, the integrated management of product related information through the entire product lifecycle - known as product lifecycle management (PLM) - is a key element for companies in creating sustainable value. Thus, in order to proactively respond to these new demands, managers require up-to-date and accurate performance information on its business [1,2,3].

This performance information needs to be integrated and accessible to support the monitoring and the improvement of the performance of an organization and its business processes. Thus, a performance measurement system (PMS) is a vital part of a company's managerial system. The PMS of an organization can be defined as a set of indicators used to quantify the efficiency and/or the effectiveness of their actions [2].

After the Brundtland Commission first introduced the concept of sustainable development, a growing number of national and international organizations, governments, communities and companies are embracing sustainability. In

this way, companies are facing tough challenges to succeed in a global competitive market especially to address this issue of sustainability [3]. It has inspired many researches and practitioners to search for ways to use tools for measuring and evaluating their progress. In this context, sustainability indicators have emerged as one widely accepted tool [3,4,5].

Therefore, an increasing number of voluntary initiatives and companies have begun developing and using sustainability indicators [6]. Such indicators might be used to improve a company's public image and thus create a competitive advantage through product/service differentiation. As a result, companies around the world have recognized the need to respond appropriately to the sustainable development challenge and, consequently, many have changed their business activities in product development [7,8]. This increasing upsurge of incorporation of sustainability in the processes to all phases of a product's life resulted into the need of assessment of its performance.

Over the past decade, several articles on corporate performance measurement system (PMS) related to sustainability have been published in a wide variety of journals [5]. A robust PMS can help decision makers overcome the challenges of corporate sustainability by helping them to better understand their current situation and

their desired end state. The majority of researches on indicators have focused on design of sets of corporate sustainability indicators. However, despite several contributions, many corporations still struggle to develop, implement, use, and improve PMS [5,6].

Hence, there is an important gap since a robust PMS is required for a company to assess how well it is doing in meeting its sustainability priorities. This underscores the need for more research and the on the theoretical and practical aspects of PMS [5]. In this way, a study concerning performance measurement system addressing the processes to all phases of a product's life can contribute to the fulfillment of this gap.

Furthermore, to improve performance, managers have recognized that is necessary a better understanding and incorporation of sustainability indicators [9]. However, systems that present appropriate sustainability indicators are not common as well [10]. Indeed, managers need assistance in incorporating indicators that address the needs of both their internal and external stakeholders in terms of sustainability [3,5].

This paper aims at updating and improving a performance measurement system with the incorporation of sustainability for a Brazilian consumer goods company. Innovative tools and templates such as a list of performance indicators support this update and improvement. Because of their substantial size, they are not included in this paper. In this way, the paper begins with a brief discussion the main concepts of performance measurement and sustainability in the research background. Then follows a presentation of the research method adopted. The findings of the action research are later presented. The paper concludes with a summary of lessons learned and possible contributions to update and improve a PMS for a company.

2. Research background

As indicated previously, performance measurement is the process of quantifying efficiency and effectiveness of actions. To this end, performance indicators should be chosen, implemented, and monitored. Performance indicators are the metric used to quantify the efficiency and/or effectiveness of actions of part or of an entire process or a system in relation to a pattern or target [2]. These performance indicators are essential elements for planning and strategic control cycles [11].

The Balanced Scorecard (BSC) is the most known and frequently applied PMS used by companies worldwide to translate strategic objectives into a set of actions and performance indicators. The BSC arranges the indicators in four perspectives: 1) financial; 2) customers; 3) internal processes, and 4) innovation and learning [12].

The PMS should always be related to strategy and, consequently, to many processes within the companies. In this paper, the PMS should address the PLM approach which is defined as the integrated management of product related information through the entire product lifecycle, from the definition of an initial concept to the product's end-of life processes. This approach is a key element for companies in

creating sustainable value. It became a competitiveness factor in a market where customers are interested in the environmental impacts of the products they consume [29,30]. In this way, the PLM requires the incorporation of sustainability indicators.

The sustainability indicators address the sustainable development among the companies. The most common definition of sustainable development was introduced by the Brundtland Report [15]. It defines sustainable development as the development that meets the needs of the present without comprising the ability of future generations to meet their needs [16,17].

Accordingly, the Triple Bottom Line (TBL) has emerged as the concept of sustainability as the integration of economic, environmental and social dimensions [18]. The TBL is a critic concept for many organizations because it implies that the firm's responsibilities are much wider than simply those related to the economic aspects of producing products and services that customers want, to regulatory standards, at a profit [10]. The TBL adds social and environmental indicators of performance to the economic indicators typically used in most organizations performance.

In accordance with this view, the Global Reporting Initiative (GRI) is an important initiative that works towards a sustainable global economy by providing sustainability reporting guidance in the TBL dimensions [20]. GRI has pioneered and established a comprehensive sustainability reporting for voluntary use. This is the world's most widely used sustainability reporting tool [16, 21] and the performance indicators listed therein are used to measure and report their economic, environmental, and social performance [22]. Also a wide range of sustainability performance indicators are also found in standards and like ISO 14000 (International Organization for Standardization), the latest in social responsibility ISO 26000 and OHSAS18000 occupational health and safety (Occupational Health and Safety Assessment Services) [16]. All of these standard and report can be used as sources to develop a list of performance indicators.

The interest in the incorporation of features of sustainability in PMS is increasing due to the substantial strategic and integration of non-financial indicators for the organization [12]. Although the BSC does not explicitly address the environmental variable, its use as a tool for managing social and environmental issues has been suggested by different authors [9, 10, 23, 24].

In order to incorporate the sustainability performance indicators into a PMS, such as the BSC, there are three different approaches [23, 24, 25]. The first approach lies in the restructuring of the existing perspectives in order to incorporate sustainability issues; the second refers to a new key perspective and the third is based on the creation of a specific environmental and/or social BSC.

The first approach to integrating sustainability into the BSC does not modify the arrangement of the four perspectives. Research and case studies have shown that this approach allows incorporating all sustainability issues that have direct relevance to the financial market and the customer market [24]. The financial perspective should describe not

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