Resources, Recycling, Regulations, and Reputation in the Comparison of Operations Sustainability Techniques

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INTRODUCTION

Sustainability as a Strategy Sustainability is a growing concern and challenge for companies around the globe. Batra (2012), McDonagh and Clark (1995), Menon, Menon, Chowdhury, and Jankovich (1999), and Moisander (2007) attribute this challenge to the over-consumption of the Earth's resources, especially in developed countries, and the unexpected rapid increase in the world's population throughout the last century. Many corporate management have realize that in a world with decreasing resources and increasing population, that it is imperative to consider sustainability in their own operations (Simintiras, Schlegelmilch, & Diamantopoulos, 1994; Straughan & Roberts, 1999; Thogersen, 2006; Van Liere & Dunlap, 1981; Vesilind, Heine, & Hendry, 2006). When evaluating sustainability in production processes the four "R's" of sustainability is a useful tool. These are the resources used by the production process, the recycling of production materials and product components, the regulations that apply, and the firm's reputation (Hooley, Saunders, & Pierry, 1998; Iyer & Banerjee, 1993; Jain & Kaur, 2006). A company can assess their organization and use the four "R's" to determine where improvements can be made. Companies are often unaware of the advantages sustainability can bring. Searcy (2009) points out that there were few published examples of indicators being used either in Board-level and strategic decision-making, or in managing supply chains or even business units. The world would benefit if more corporations began implementing sustainability processes.

Resources are used primarily by the firm's operations segment. This suggests that there are many opportunities to use human, financial, and material resources in a sustainable manner (Kayas, McLean, Hines, & Wright, 2008; Kilbourne, 1995; Kroes & Ghosh, 2010; Laroche, Bergeron, & Barbaro-Forleo, 2001). Reducing resources is the most common way companies implement the four "R's". When a firm reduces the amount of resources used, costs will also be lowered. Low costs and resource use help increase the company's profit margins while also incorporating a sustainable approach. There are many different ways that a company can reduce their resource consumption. One common approach is to lower energy and water costs. Another example is reducing the amounts of materials used in a process. Advancing technology allows firms to become more efficient in their materials use.

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BACKGROUND

Waste Management

Waste is another aspect of sustainability that every company must deal with. There are only 3 things that can be done with waste: burn it, bury it, or reuse it (Hooley, et al. 1998; Jain & Kaur, 2006). Burning waste is not a sustainable practice because it pollutes the atmosphere and increases greenhouse gasses. Burying creates even more problems; we have a limited amount of space that will eventually run out and it also pollutes ecosystems and can have dangerous consequences. Therefore, it is essential that management attempt to design products and services that utilize the cradle to cradle approach. In this process design, we can follow the product from creation to destruction while having no effect on the environment. There are numerous ways that a firm can recycle whether plastic; glass, or metals, and there are always opportunities for a firm to become more sustainable in the recycling arena.

Laws and regulations affecting transportation, waste, and noise are proliferating and can be as much of a challenge as reducing resource use (Kroes & Ghosh, 2010; Laroche, et al., 2001). Regulations may impact a company negatively but they are necessary in a world with finite resources. Governmental agencies are aware that we will not be able to take from the environment indefinitely and are attempting to correct the imbalance. Companies can face fines or taxes for not complying with regulations; therefore, it is in the best interest of the company as well as the environment for firms to attempt to curb pollution as much as possible. This is often referred to as a carbon footprint reduction and represents the firm's impact on the environment.

Another evaluation criterion of sustainability is the firm's reputation. Many companies today are realizing that sustainability can be an advantageous marketing technique. Consumers are becoming more aware of sustainability practices and will do business with companies that reflect these values (Granzin & Olsen, 1991; Haanpää, 2007; Hooley, Saunders, & Pierry, 1998; Iyer & Banerjee, 1993). Although firms are not required to commit to sustainable values, they often gain market share because they embrace the techniques. A comment made in a recent Harvard Business Review article stated, "Impressive as the cost efficiencies are, more intriguing is the growth that companies in emerging markets have gained by extending their sustainability efforts to the operation of their customers. Companies are building unique business models by boosting customers buying power and, in the process, creating interdependencies that are difficult for competition to copy" (Haanaes et al., 2013). Seeing that sustainability is unlikely to disappear, firms would be suited to use this marketing technique to their advantage.

Purpose of Study

This paper will use the case study approach to evaluate two different firms and the sustainability of their operations. The first company is the University of Pittsburgh Medical Center (UPMC), which is a global nonprofit health enterprise. They are considered one of the leading healthcare providers in the U.S. and one of the largest employers in the Pittsburgh region. The second company is Seneca Resources Corporation (SRC), which is a subsidiary of National Fuel Corporation. Seneca Resources handles the prospecting for, development of, and purchase of natural gas and oil reserves. Their primary focus is on the Marcellus Shale in Pennsylvania. The paper will analyze these companies in terms of general characteristics, operations sustainability and compare these two different companies.

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