Sustainable Packaging: Regulations and Operational Challenges in a Manufacturing SME

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ABSTRACT

The issue of sustainability has attracted considerable attention over the last decade and has been accompanied by the development of stringent packaging material legislation for firms. Drawing on a single case approach, this paper examines the operational challenges faced by manufacturing SMEs as they strive to meet the expectations and requirements of increasingly demanding sustainable packaging regulations. The findings highlight the internal costs and complexities that are faced by manufacturing firms when complying with the regulations. It suggests that some firms may face financial and technical constraints that prevent them from reporting the significant efforts that they are making to improving packaging materials. More significantly it identifies the seemingly insurmountable problems that are faced by SMEs when confronted with powerful upstream or downstream supply chain partners that are resistant to improvement initiatives. This can result in organisations acting in a self-interested manner and consequently, the cumulative environmental impact of the supply chain is greater than it may be if organisations were more environmentally cooperative.

Keywords: Manufacturing SME, Packaging Materials and Regulations, South Wales, Supply Chain, Sustainable Packaging

1. INTRODUCTION

Sustainability has been a major area of academic focus in recent years (Gunasekaran & Spalanzani, 2013; Jayal, et al., 2010; Sarkis, 2001). The Brundtland Report (1987) defined sustainability as the ability to meet the needs of the present without compromising the needs of the future. The report has influenced many of the prominent organizational initiatives, pushing the concept of sustainability into mainstream management discourse and transforming the manner in which value creation is structured, managed and evaluated (Moore & Manning, 2009; Figge & Hahn, 2008; Möller & Törrönen, 2003). This and subsequent reports also spurred the introduction of a broad range of legislation to ensure that organisations contribute to efforts to reduce their immediate and long-term impact upon the environment. Following EU Directive DOI: 10.4018/IJSESD.2015070103
94/62/EC made in 1992, the UK implemented the Producer Responsibility Obligations (Packaging Waste) Regulation 1997 and Packaging (Essential Requirements) Regulation 1998. Administered by the Environment Agency (EA) in England and Wales and the Scottish Environmental Protection Agency (SEPA) in Scotland, the regulations aim to drive the reduction and recovery of packaging materials by packaging producers and by those organisations that use packaging to transport product (Environment Agency, 2013). The control and minimisation of packaging materials and packaging waste is therefore a key component of an organisation’s sustainability initiatives.

The UK produces around 10 million tonnes of packaging waste per annum, much of which is ultimately disposed of via landfill but which could be recycled (Gateway, 2013). As environmental issues continue to be of concern to the wider public (DEFRA, 2013) the reduction of packaging waste is likely to be an important and demonstrable aspect of an organisation’s commitment to be socially responsible. Successive revisions to the regulations have sought to make targets for waste reduction more challenging but also to reduce the impact of the regulations on small to medium enterprises (SMEs): currently, only those businesses with a turnover in excess of £2 million and over 50 tonnes of packaging handled per annum are required to comply. It remains though a complicated undertaking for many organisations to which the regulations still apply. SMEs are a significant and highly heterogeneous sector of commerce. Discounting micro-enterprises of less than ten employees, small and medium-sized organisations accounted for around 88% of UK enterprises in 2008 (URS, 2010). They are often constrained by factors that are not just related to their size, but also by issues that can be sub grouped within this sector, such as their ownership status and whether they are for-profit or non-profit making (White, Samson, Rowland-Jones and Thomas, 2009; Hillary, 2004). As such, SMEs present a complex and disparate array of organisations and circumstances that require considerate analysis (Hillary, 2004).

The purpose of this paper is to examine some of the key operational challenges faced by a manufacturing SME in the UK in meeting the requirements of the current packaging regulations. We argue that the challenges posed by packaging requirements on manufacturing are highly complex and have far reaching consequences for SME’s and their supply chains. Consequently, our paper opens up the possibility for rethinking the influence and vicissitudes of regulations on industrial packaging and the operations of SMEs. We develop our contribution based on the operations of a South Wales based subsidiary of a manufacturing company hereafter named ‘Truckstop’. TruckStop is a leading solutions provider of high performance and severe-duty brake, clutch and transmission applications to OEM and aftermarket customers. With ten manufacturing facilities positioned around the world, and employing over 1,800 employees, TruckStop serves over 100 leading original equipment manufacturers in 55 countries. With an annual turnover of around £20 million, the company employs 94 personnel and is ISO14001 and ISO9000 certified.

2. PACKAGING MATERIALS AND REGULATIONS

Packaging materials have become an essential part of high performance manufacturing. As observed by Hise and McNeal (1988), packaging materials have a much broader purpose than simply attracting consumers. Packaging is frequently designed to facilitate stackability, to enhance product lifespan and to protect contents from damage (Marsh & Bugusu, 2007; Jetten, 1999). Surprisingly, while the focus of sustainability has been on the design and environmental impact of packaging intended for consumers, the packaging of materials that are transported between industrial organizations has not received a great deal of attention (Verghese and Lewis, 2007; Qalyoubi-Kemp, 2009). As argued by Yamamoto & Lambert (1994), historical debates and decisions surrounding the design and packaging of industrial products were reduced...
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