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Attitudes towards managing post-industrial apparel cuttings waste

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ABSTRACT

By its origin, textile waste can be divided in two broad categories: post-consumer waste and post-industrial waste generated during the manufacturing process. The division of the clothing supply chain between developed consumer markets and developing countries where apparel production capacities are outsourced implies that post-consumer waste is present in the former countries, whereas the later generates more post-industrial waste. The purpose of this exploratory study was to determine how the attitudes of top management towards managing apparel cuttings waste influence their willingness to introduce apparel waste sorting. The proclivity to sort apparel cuttings was strongly influenced by two key factors – the ease and costs of introducing sorting operations and impediments to sorting such as lack of workforce, technology or market. Combining these two factors leads towards negative attitudes to introducing apparel sorting. Perception of impediments in the process of sorting leads towards negative attitudes regarding the ease of introducing sorting operations; however, it does not influence adversely the proclivity to sort.

Introduction

According to the 2011 FAO/ICAC survey issued by the United Nations (FAO/ICAC, 2011), the world fibre consumption, and therefore the consumption of final product made of fibres, e.g. clothing, home textiles or industrial textiles, has grown nearly 30 times since the 1950s. The growing consumption of textile products is an indicator of the growing amount of textile waste generated in the world today. Waste is considered to be a problem for many reasons, of which the harm to the environment and human health, limited space for landfills, and increasing costs to use existing and replace landfills are dominant. As textiles present a non-hazardous solid waste, their recycling is often side lined. Even though all contemporary waste management systems consider landfills disposal as the worst option, they remain the preferred manner of textile waste removal (Sakthivel et al., 2012).

By its origin, textile waste can be divided in two broad categories requiring diverse approach in waste management. On one hand, there is the post-consumer or household waste, while on the other, the so-called post-industrial waste generated during the manufacturing process. The division of the clothing supply chain between developed consumer markets and developing countries where apparel production capacities are outsourced, implies that household waste is present in the former countries, whereas the later generates more post-industrial waste.

In the developed world, increasing environmental awareness, as well as social responsibility, reinforced by strict legislations, has led to creating more efficient waste management practices. Contemporary waste management strategies as a hierarchy follow the trilogy of reducing, reusing and recycling, examples of which can be found throughout literature. Although environmental awareness is increasing, Kim and Damhorst (1998) reported a limited level of environmentally responsible apparel consumption by consumers. Second-hand clothing markets were noted as the usual manner of reusing clothing. In the USA, the largest volume of apparel goods (48%) was sorted for second-hand clothing markets, primarily for export markets in developing countries or disaster relief (Hawley, 2006). Similarly, Sweden reuses around 17% of annually purchased clothing by donations to Africa and Eastern Europe (Palm, 2011). Recycling of post-consumer textile waste was introduced by creating innovative products. For instance, post-consumer textile waste is recycled into insulation materials in the EU, by companies such as the German Soex Group, the French Matériaux Naturels, and the British Bonded logic. Nonetheless, the use of landfills is not completely abandoned. For instance, in the UK, 70% of textile waste was disposed of on landfills (Allwood, Laursen, de Rodriguez, & Bocken, 2006).

However, on the producer side of the supply chain, particularly among apparel producers, recycling post-industrial waste is not common (Kazakevičiūtė, Ramanauskien, & Abraitienė, 2008; Tomovska & Zafirova, 2010). An excellent illustration point is Turkey, as the country has well-developed fibre, basic textiles and apparel capacities. Whereas fibre and yarn waste were largely recycled, the majority of apparel manufacturers disposed the apparel cutting waste together with community waste on landfills (Altun, 2012). Countries with predominant apparel industries, for instance, Lithuania or South Africa dispose of 60–70% of the waste in landfills (Kazakevičiūtė et al., 2008; Larney &