Drivers to sustainable manufacturing practices and circular economy: a perspective of leather industries in Bangladesh


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Abstract
Sustainable manufacturing practices and the circular economy have recently received significant attention in academia and within industries to improve supply chain practices. Manufacturing industries have started adopting sustainable manufacturing practices and a circular economy in their supply chain to mitigate environmental concerns, as sustainable manufacturing practices and a circular economy result in the reduction of waste generation and energy and material usage. The leather industry, in spite of it contributing remarkably to a country’s economic growth and stability, does not bear a good image because of its role in polluting the environment. Therefore, the leather industries of Bangladesh are trying to implement sustainable manufacturing practices as a part of undertaking green supply chain initiatives to remedy their image with the buyer and to comply with government rules and regulations. The main contribution of this study is to assess, prioritize and rank the drivers of sustainable manufacturing practices in the leather industries of Bangladesh. We have used graph theory and a matrix approach to examine the drivers. The results show that knowledge of the circular economy is paramount to implementing sustainable manufacturing practices in the leather industry of Bangladesh. This study will assist managers of leather companies to formulate strategies for the optimum utilization of available resources, as well as for the reduction of waste in the context of the circular economy.

Keywords: Sustainable manufacturing practices; circular economy; sustainability driver; leather industry; graph theory; matrix approach.

1. Introduction

The awareness that business is growing with the ongoing and rapid worldwide industrialization indicates the importance of implementing sustainable manufacturing practices and a circular economy. Sustainability is defined by the World Commission on Environmental and Development as “development that meets the needs of the present
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