

EXPLORING THE POTENTIAL OF REMANUFACTURING IN INDIAN INDUSTRIES FOR SUSTAINABILITY AND ECONOMIC GROWTH

HARI VASUDEVAN¹, VILAS KALAMKAR², VIVEK SUNNAPWAR³ & RAVI TERKAR⁴

¹Principal, D. J. Sanghvi C. O. E, University of Mumbai, Vile Parle, Mumbai, India

²Associate Professor, Department of Mechanical Engineering, VNIT, Nagpur, India

³Research Director & Professor, Lokmanya Tilak College of Engineering, University of Mumbai, Navi Mumbai, India

⁴Associate Professor, Department of Mechanical, MPSTME, University of NMIMS, Bile Parle, Mumbai, India

ABSTRACT

This research work explores the potential for utilization of Remanufactured products in the Indian context. Business in the remanufacturing sector, dealing with products such as computers, cartridges, machinery and mobile phones all over the world, indicate significant potential for similar opportunities elsewhere. Indian markets, though in an infancy stage, too have a huge potential for remanufactured products. According to the Automotive Parts Remanufacturers Association, the Indian regulatory authorities should move rapidly to change their position in trade of the remanufactured products as well as promote the creation and expansion of a remanufacturing industry in their country. In this paper, a case study is analyzed and information from different manufacturing industries involved in remanufacturing was collected through a questionnaire from middle and top-level management authorities of various manufacturing firms. The statistical analyses of data and findings are complemented by similar views and approaches related to remanufacturing expressed by professional bodies such as APRA, ASSOCHAM and ICRRA. The analysis of case study of Indian Railways has proved that the cost incurred in remanufacturing is less as compared to new products. Correlation between Product Cannibalization and Willingness To Pay (WTP), as well as with Price of remanufactured product and Quality were analyzed to establish concrete results with regard to the Cannibalization issue. This paper fulfils the need to explore and study the remanufacturing sector and its related issues in detail in India. Economic aspects and environmental concerns, especially in the context of sustainable development also support and promote the idea of utilization of remanufactured products.

KEYWORDS: Remanufacturing, Product Cannibalization, End-of-Life Product, Willingness to Pay, Sustainability, Economic Growth, Product Life Cycle