LIFE CYCLE ASSESSMENT AND LIFE CYCLE COST ANALYSIS IN ONLINE AND OFFLINE MARKETING FOR T-SHIRT CUSTOMIZATION

Name : NUNIK AMBARSARI
NRP : 2507 100 055
Department : Industrial Engineering FTI-ITS
Supervisor : Dr. Maria Anityasari, S.T., M.E

Abstract

The fast movement of economic and technology has increased public life style and consumption pattern. This condition causes the producer to change marketing media and increase service by offering customization option to the customer. On the other hand, customer needs is also increasing. Therefore, to increase customer satisfaction, a mass customization service supported with online and offline marketing is provided.

This research is conducted to analyze environmental impact and the offline and online marketing cost for customize shirt from the customer and producer perspective. This research uses Life Cycle analysis (LCA) and Life cycle Cost (LCC) method. The LCA method will be used to identify environmental impact caused by the activity of purchasing and marketing through offline and online mechanism. The LCC method will be used to calculate the expenses of using offline and online media from the perspective of customer and producer.

From this research, it was found that the biggest impact on online marketing is the order receiving process, which scores 5.6 Pt. While on offline marketing, the biggest impact is the distribution process which scores 0.16 Pt. On online purchasing, the biggest impact is the browsing process, which scores 2.71 Pt. On offline purchasing, all process gives the same score of 0.191 Pt. The LCC result of this research is that offline marketing requires the cost of Rp 3,421,195/month and online marketing requires Rp 2,245,400/month. The online purchasing requires Rp 18,616,013/month and offline...
purchasing using car and motor cycle requires Rp 12,412,94 and Rp 3,307,06 each.

**Keywords:** mass customization, life cycle assessment (LCA), life cycle cost (LCC), online and offline marketing