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# **THE CONCEPT OF CIRCULAR SUPPLY CHAIN MANAGEMENT (CSCM)**

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## **INTRODUCTION**

Seventeen Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development has been signed by the by world leaders in September 2015 and officially commenced on 1st January 2016. It is expected that in the next fifteen years, each of the countries will intensify their efforts to combat poverty, the battle for discriminations and tackle the environmental issues. Concerning this, Goal 12 of SDGs clearly described the objective towards sustainable consumption and manufacturing operations, to promote the efficiency in resource and energy usage, infrastructure viability, accessibility to the vital services, environmental and productive employment and well-being for the people. The adoption of SDGs enables a country to achieve development targets, mitigate economic, ecological and social costs, enhance the financial performance and lower the poverty. As such, there is a need to focus on supply chain effectiveness in manufacturing, from producer to the final consumer. This requirement resonates the critical application of circular supply chain management (CSCM) in manufacturing operations. Unlike the closed-loop supply chain (CLSC) in the circular economy, firms collaborate with another firm in the same as well as different industry to maximize the salvage value and zero waste. Nevertheless, it was discovered that CSCM topic had been insufficiently discussed in the literature, as in principle, the field is still new under the domain of circular economy. In Malaysia, there is no proactive effort to recover or recycle end-of-life products and the returns in CSCM. On a similar extent, in Thailand, the management of natural resources and the environment has been ineffective, exacerbated the natural resources depletion and degradation of environmental quality. This circumstance will put the countries in difficulties to achieve the SDG goals.

## **PURPOSE/AIM & BACKGROUND**

To explore the concept of CSCM from the existing literature and study in the field.

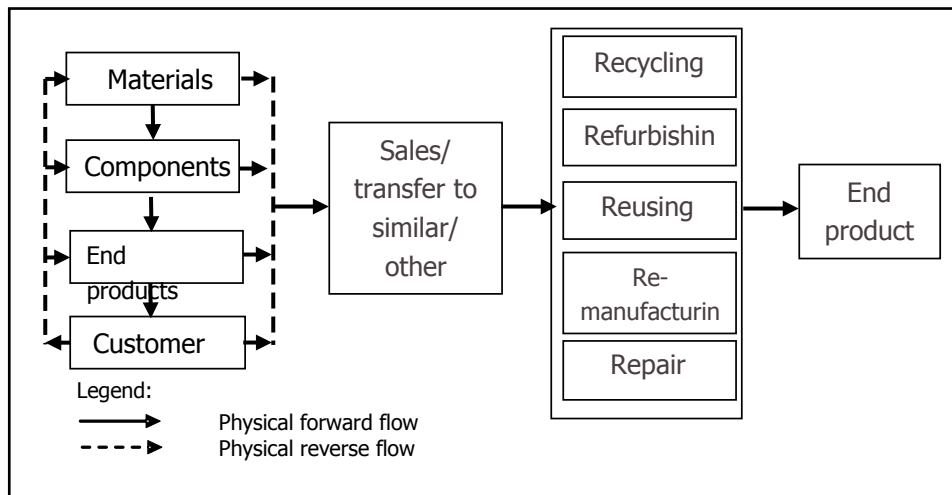
## **METHODOLOGY**

This study is mainly exploratory in nature. Given that CSCM is a new area of research and practice, and little is known about it, the exploratory part of the study is necessary to explore and describe the concept of CSCM adoption. This study also argues of the importance to pursue exploratory study in CSCM for the significant reason of the scanty research, with the lack of theory development and gaps in the previous study. For this reason, the study conducted an initial review of literature from the extant study from various journals published under Elsevier and Emerald publishers, particularly in the environmental science study.

## FINDINGS/RESULTS

Based on the review of literature, the initial concept of CSCM is different from the linear and closed-loop supply chain model. Linear model does not implicate with the zero waste, whilst the closed-loop supply chain is confined to the responsibility of the original producer. In this case, CSCM enhances the green supply chain management and sustainability in the supply chain management concept by its renew and exacerbate sustainable dimensions. In fact, CSCM advances the new understanding and knowledge in the circular economy environments.

Figure 1: Flow of CSCM



As shown in Figure 1, CSCM starts with a manufacturer's supply chain. Materials supply to the production and delivery of end products to the customer are moved through the forward flow. The reverse flow involved the customer, distribution and manufacturing returns. These returns are later sold/transferred to the similar/other industries for further recovery process. The recovery depends on the usage and can be in the form of recycling, refurbishing, reusing, remanufacturing or repair, which eventually produced the end products. The notion of CSCM is the integration of the whole system to produce zero waste through recovery of the used materials/returns and turn into another product for sales in the primary or secondary markets.

## CONCLUSIONS

CSCM is a new concept and efforts are needed to explore for the benefits of researcher, academician, practitioner and industry. With minimal information and scant literature available, the present study attempts to provide a base for future researchers to examine any aspects of theory building and verification in the field of CSCM. Implementation and success of CSCM will lead the country to achieve the SDG Goal 12, as it minimizes the negative environmental, social, and economic impacts.

**Keywords:** CSCM, SDG, Recovery, Goal 12, Zero Waste, Sustainability

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