

A Study on The Circular Economy – Benefits and Barriers for the Future

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Abstract:- A viable innovation strategy called the circular economy (CE) has been put out for addressing of pressing issues of ecological degradation & dwindling resources. Reduce, reuse, and recycle are the three R's of the circular economy which supported the healthy society and resources, renewables all materials and rebuild the active support. This study based on an assessment of briskly expanded literature on Circular Economy and also covers all concept, practices & assessing its implementation. The idea of a cyclical economy is also being discussed in contrast to the existing planned economy of obtaining resources, generating things, and discarding garbage. The primary goal of the article is to pinpoint the fundamental issues and difficulties facing CE from an entrepreneurial standpoint. In this study also discuss use of circular economy in India as well as their benefits and barriers for the future generation.

Keywords:- Circle Economy, Ecological Regulation, Entrepreneurial Approach.

I. INTRODUCTION

Environment & economy are strongly tied to one another. The circular economy (CE), which emphasises minimising, reusing, and recycling waste, demonstrates the close connections between the economies and the environment. The idea of circular economy was first developed by Pearce and Turner. They discuss the theories inside and between economics of natural resources, their connections, and the ramifications for the idea of how economics works in their 1990 research, *Economics of Natural Ecological Sustainability*. The basic thermodynamic law stipulates that resources consumed in both manufacturing and consumption are equivalent to waste that enters the environment and cannot be destroyed. Kenneth Boulding (1966), "Economic Impact of Upcoming Spaceship The earth reflects on itself as a closed economics system of which the economics and environment are characterized by a circular relationship where Every input influences every other input." Gemen were the pioneer of this field, having introduced the Cyclic Economy in 1996. The "Act on Waste Management and Closed-Cycle Substances" were also passed concurrently with this. Japan is another country that is making an effort to start implementing CE. The Japanese government has created a thorough statutory framework that will help the nation's transition to a society based on recycling (METI, 2004; Morioka et al., 2005). Quantitative goals for reprocessing and protracted fragmentation of Japanese

society are provided by "The Basic Law for Establishing a Recycling-Based Society," which entered into law in 2002. (Van Berkel et al., 2009). The third nation making significant attempts to enact CE on a massive scale is China. In juxtaposition to the German and Japanese instances, the Chinese government, for a variety of purposes including maintaining competitive edge, plans to originally initiate the CE conceptual model on the micro level throughout a number of preliminary studies so that it has an improved basis for evaluating its big proportion and complete coverage in the long run. This approach is comparable to economic liberalisation, which got its start with free economic zones around the coast. Like Sweden, several other nations have slowly but steadily established various incentive systems throughout time. Through public education, they have also attempted to provide the best circumstances for a steady rise in the amount of recycling. Both officials and environmentalists are pleased with the policy's effectiveness. Sweden, Germany, and other European nations have been able to integrate environmental political groups into their systems of government and decision-making procedures, which has facilitated and promoted the transition to a circular economy. The European Resource Efficiency Platform (EREP) - Declaration and Legislative Proposals is another important initiative of the European Commission (2012).

➤ Definitions of Circular Economy

Liner economy, "raw natural resources are taken, transformed into products and get disposed of". On the other side aims of circular economy is that close the gap between production and the natural ecosystems.

The definition of a circular economy provided by the World Economic Forum

"An industrial system with a circular economy is one that is intended to be restorative or regenerative. It shifts away from the end-of-life concept in favour of restoration, moves toward the use of renewable energy, forgoes the use of hazardous chemicals that prevent reuse and the biosphere's return, and strives to eliminate waste through the superior design of materials, products, systems, and business models".



➤ Fig 1:- Circular Economy

❖ The Circular Economy's Core Values:

➤ Resources and energy Do seem to be Treasure

A circular economy model's primary objective is to eliminate waste via design. In actuality, circular economy-based strategies for reducing waste. To do this, items are built to last (using high-quality materials) and to be broken down and used often, making it simpler to handle, convert, or refresh them. Throughout the end, these short product life phases change overall circular economy system aside from recycling and waste disposal, where significant quantities of work and energy are wasted. The major objective is to build and increase natural capital by managing static stock and regulating the flows of renewable energies.

➤ Nature's Cycle and Designs

Makes a difference amongst technological and biological cycle of the circular economy model plays a very important role, biological cycle happens only in consumption. A situation where biologically based products (such food, linen, or cork) are intended to be recycled into the environment through composting and anaerobic digestion.

These cycles rejuvenate biological systems that give the economy renewable resources, such the land and the oceans. Through techniques like recycling, restoration, reconditioning, or repurposing, technological cycles in turn recover and retrieve items (such as washing machine), parts (such as motherboard), and material (such as limestone).

Last but not least, the circular economy's primary goal is to increase resource yields by continuously reusing goods, parts, and materials in both technological and organic cycles.

➤ Objective of Study:-

- Role of cyclical economy in INDIA.
- Find the benefit of cyclical economy
- Find the barrier faced by the circular economy.

"Paris or no Paris, it is our conviction that we have no right to snatch from our future generations, their right to a beautiful and clean earth. We do not believe in exploitation of the natural world since it is ingrained in our way of thinking. We people do not have the right to take more than necessary from nature."

— Honorable Prime Minister of India, Shri Narendra Modi St Petersburg International Economic Forum, 2017

Today, most developed countries of the world are intentionally making an effort to change from linear to circular economies; India is composed at the threshold of selecting and embarking on a growth path that is refreshing and regenerative by design.

According to studies, if India implemented a circular economy strategy, it may gain annually to the tune of 40 lakh crores, or roughly US\$ 624 billion, by 2050. After this the greenhouse effect reduce 44% along with reduction in pollution. For the circular economy now government of India is formulating many policies and promoting project/scheme for the environment.

Circular Economy According to the UN Sustainable Development Goals in 2016, considering the rate that we are depleting natural resources on earth, an equivalence of 2 and 3 planets would be required to meet the needs of human population by 2030 and 2050, respectively. The "Take-Make-Dispose" philosophy followed by linear economic

model is not being able to cope up with the demand and supply balance in consumption of natural resources. This imbalance is not only affecting the sustainability of the countries and enterprises but also affecting the global supply chain. This imbalance in demand and supply chain is resulting in socioeconomic and environmental risks and volatility. Keep in mind the scarcity of natural resources in coming future, the current linear economy model is giving way to the circular economy model, which focuses at careful alignment & management of resource flow across the value chain by combining business, design innovation, collaborative ecosystems, and reverse logistics model innovation. (Goyal, Esposito, Kapoor, 2018) Green and ecological supply chain management practices have been developed in the last few decades, as an initiative to spread environmental concerns into organizations by cutting inadvertent negative consequences on the environment of production and consumption processes. Parallelly, the circular economy discourse has been proliferated in the industrial ecology literature and practice. Circular economy forces the frontiers of environmental sustainability to move forward by the idea of transforming products in such a manner that there are workable relationships. Theoretical and Literature Review between ecological systems and economic growth. That is why, circular economy is not just limited to the use of the environment as a sink for junk but in fact with the creation of self-sustaining production systems where materials can be used time after time. There are studies that states, an incorporation of circular economy ideologies within maintainable supply chain management can give clear advantages from an ecological point of view (Genovese, Acquaye, Figueroa & Koh, 2017) One more factor which focuses on embedding CE values in consumer Retail Reverse Logistics (RRL) operations is also one the many plus points in positive direction towards circular economy it supports the adoption of CE values within RRL operations. From one the research - it was found that embedding CE values within RRL necessitates the adoption of a multi-faceted approach. (Bernon, 2018) To facilitate and empower the circular economy a thorough understanding is needed not just for the environmental benefits but also on the economic. Benefits of it, Circular economy will need a society-level recovery system that takes all parts into account. A major component of how the circular economy functions is reverse logistics. How to manage recovery of waste that includes mobile phones, package waste, and inkjet cartridges from lakhs of homes and consumers and bring it back to the global material pool where the residual value of waste is captured Just some of the many needs of reverse logistics include asset tracking, materials recovery, dismantling, and toxic waste handling.

➤ *Benefits of the Circular Economy Model*

After industrial revolution, linear model of production and consumption has been followed by the people. Raw materials have been converting into goods that are afterward sold, used and turned into waste that has been many times fortuitously discarded and managed.

On the opposite, the circular economy is an industrial model that is recreate by intention and plan and aims to upgrade resources' performance and challenge the

inconstancy that climate change might bring to businesses. It has benefits that are operational as well as strategic and brings together a huge potential for value creation within the economical, business, environmental and societal are.

➤ *Fewer Greenhouse Gas Emissions –*

Main goals of circular economy have to helpful effect on the planet's ecosystems and to fight the imprudent desecration of natural resources. Decrease the greenhouse gas and raw materials use utilized agricultural productivity and decrease the negative externalities brought by the linear model. A circular economy can be helpful, after minimize the greenhouse gases effect a circular economy can be helpful. Because it is an energy that can be renewable and long running in less polluting.

There reusing and dematerializing, fewer materials and production processes are needed to provide good and functional products.

➤ *Employment Growth –*

- According to the 'world economy forum, " the development of a circular economy model, together with a new regulation (including taxation) and organization of the labor markets, can bring greater local employment in entry-level and semi-skilled jobs".
- After Recycling and repairing practices an engineers or designers can be done easily disassembled product materials after transformation.
- After spending the lower price we can increase consumption or increase new business by innovation process.

➤ *New Profit Opportunities –*

- Lower costs of inputs and in some cases create fully new profit run that can be achieved by businesses that move to the circular economy model. In this circular sphere, profit opportunities may come from playing in new markets, minimum cost off with waste and energy reductions and the promise of continuity of supply.
- Now china has fellow a new policy that will ban plastic, it can be doing good for environment.
- In the last if we want to make business more flexible we have to use circular economy. or in other words, make them more durable and prepared to deal with unexpected changes.
- Top management has a significant impact on the ability of personnel from across all departments and levels to make well-developed decisions.
- Regardless of the type of product, the cyclical economy model appears to support business models where clients rent or lease things for varying lengths of time.

➤ *Implementation Roadblocks for the Circular Economy Model:*

- Prices do not take into account social and environmental factors, favouring financial market signals above those of people and the environment when making economic choices.

- Rates for raw materials fluctuate, making alternative, high-quality secondary resources uncompetitive at cheap prices.
- Economic circularity Business models are more difficult to build since the majority of investors still use the logic of the linear economy and because occasionally upfront investments are needed.
- The market for circular goods and substitutes is currently rather tiny.
- There aren't many trained experts who have understanding of technological fields like "information and communication technology" (ICT).
- The development and implementation of new business strategies may be difficult due to rules and regulations that aren't designed to accommodate these kinds of changes.
- Numerous firms rely on established and/or powerful alliances, making it more difficult to forge new partnerships and hence complete loops.
- While the cyclical economy strategy is a protracted value creation approach, many businesses always have goals and assessment systems that are focused on short-term value generation.
- The absence of environmental and social externalities from the GDP index discourages the production of output in both of these areas.
- The last hurdle to a circular economy is technical in nature and relates to the requirement for redesigning items and production/take-back processes. Concerns concerning the capacity to meet these objectives while maintaining product quality and competitiveness result from these needs.

II. CONCLUSIONS

The circular economy is a regenerating process wherein resource input, wastage, emissions, and resource permeability are reduced by decelerating, sealing, and enlarging material and energy loops, according to our most recent study. This may be done by using durable design, upkeep, and repair, as well as reusing, reprocessing, reconditioning, and recycled. Secondly, we defined sustainable development as the thoughtful balancing of environmental resilience, social inclusion, and economic performance for the benefit of both present and future generations.

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