Forum: Sustainable Development Committee (SDC)
Issue: Seeking strategies to promote the transition into circular economy models
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Introduction

As the world develops into high levels of industrialization, countries have shaped their economic policies into what is known as a linear economy. Linear economy, which is a "take-make-use-dispose" system. This principle results in the disposal of the products after they are processed into finished products and consumed by the consumer. This economic thinking has been around for centuries, and it has been the dominant economic model for the whole world in the 20th century.

As capitalism took over the world, mass consumption skyrocketed, and this resulted with the crucial damage to nature and global economy. In order to make products and offer services for the lowest price, companies and factories have chosen the destructive way. Uncontrolled extraction of the raw materials, greenhouse gas emissions are some of the major problems that occur due to the linear economy model. Disposal of the products after first hand usage highly harms the opportunity for the product to be reused. On a global scale, this results with billions of dollars of waste in the economy.

In order to put an end to the destruction caused by the linear economy, a new type of economic model has been developed and acknowledged. This new model is called a "circular" economy, where the concept is to reduce waste and maximize resource efficiency by promoting practices such as recycling, reusing, and remanufacturing. Compared to the linear economy model, circular economic principles revolve around more environmentally friendly conditions, as well as the production of long-lasting quality products.

Transitioning into circular economy models is becoming increasingly crucial. As the world gets polluted and damaged, it is a must to take economic steps that

help the world. With embracing the circular economy principles, there occurs a potential for economic growth, improved competitiveness, and job creation while also contributing to environmental preservation and meeting Sustainable Development Goals (SDGs).

Definition of Key Terms

Scarcity

Scarcity is basically the lack of resources needed. In the world, we have limited resources to use. With a linear economy, we uncontrollably overuse the resources. In comparison, the circular economy acknowledges the scarce resources, and tackles the issue of scarcity by encouraging the refurbishment and reusing.

Recycle

It is the process of returning the disposed, already used products to its original materials, in order to produce another product. As this process does cost a lot more than the normal process of production from scratch, it is inferior to other methods in the circular economy.

Reuse

As the word itself states, reusing means being able to use products again. This generally works for technological devices or materials, as they can be repaired and continued to use.

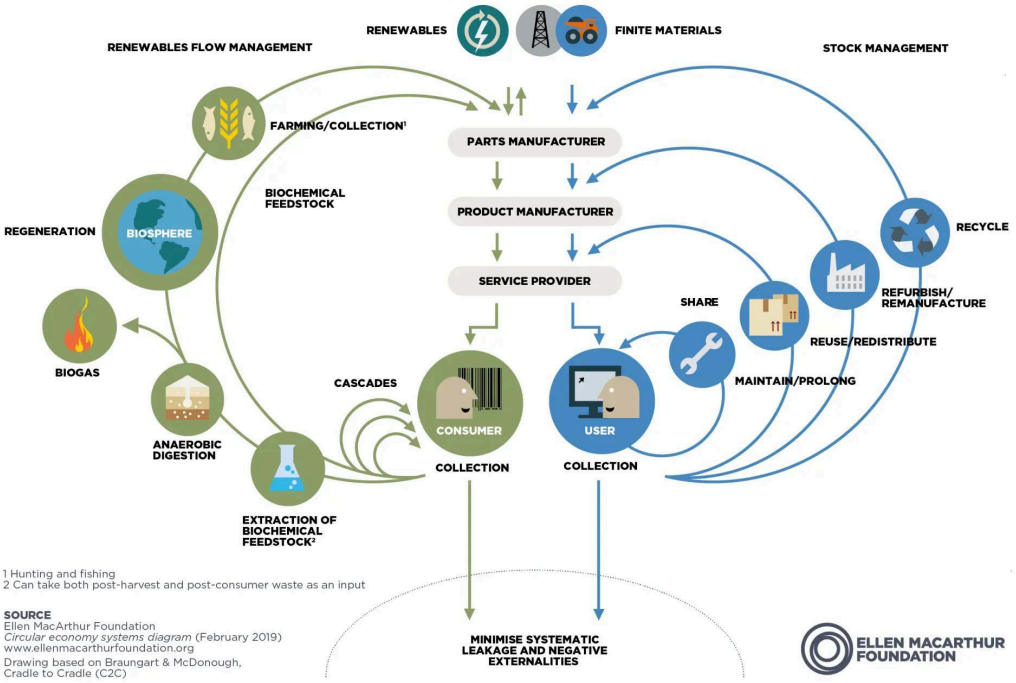
Refurbish / Remanufacture

Remanufacturing and refurbishing are two similar yet different concepts. Remanufacturing is the industrial process of disintegrating the materials of a used product, in order to produce it again or to produce a “better version” of the product. Refurbishment is the process of repeated repairing of a product to be able to use it again and again. Think of refurbishment as putting a tape on a broken electric cord, and remanufacturing as dissecting the electric cord to its pieces and making a whole new electric cord.

Background Information

1: PRINCIPLES of the Circular Economy

Circular economy is based on three major principles: eliminating waste and pollution, circulating products and materials, and regenerating nature. The first principle suggests the decrease in polluting the environment, and decrease in usage of harmful materials on products. In order to limit the pollution, steps regarding the control of greenhouse gasses, toxic materials and continuous recording of air, water, soil and other pollution levels in order to ensure improvement in the industry regarding elimination of pollution and waste material. The second principle suggests to keep the disposed materials actively used in the economic cycle. In order for this principle to work, recycling, reusing and remanufacturing are key. As the circular economy doesn't believe in waste material and suggests everything can be used again, disposed products can be re-integrated to the economy via these processes, so that they are not wasted. This principle also pioneers for producers to create long-lasting products, as it would be more efficient for the model to work. In order for all principles to work, energy is a must. If the energy is not gained by renewable resources, then it risks the chance of the whole system. This being the case, the third principle suggests the transformation into fully renewable energy sources. Not using non-renewable resources are expected to help the natural sources to gather up and re-form the balance in the soil, thus supporting regeneration.



(Figure 1: the cycle of circular economy.)

In a circular economy, there are biological and technical cycles. For example, food consumption is a part of the biological cycle. After composting, the biological "waste" regenerates the living systems such as marine ecosystems and soil. On the other hand, technical cycles are returned to society through several methods: recycling, remanufacturing, repairing and reusing.

It is important to not confuse the circular economy with recycling. Recycling is a part of the circular economy, however this economic model is much more than recycling. In recycling; labor, energy, and resources are consumed. Circular economy encourages the production of long-lasting (durable) goods that are practical and easy to reuse. In a circular economy, the products are expected to be recycled with minimum effort, as well as they are highly encouraged to be reused.

2: BENEFITS of Circular Economy Model

As mentioned in the introduction, the linear economy model has caused damage to two major titles: environment and economy. The countries that have started to enhance the circular economy model are observed to make it an advantage for themselves in the same two titles. Circular economy highly helps to tackle the issue of pollution and minimizes the damage that can occur due to industrial reasons. The Ellen MacArthur foundation states that if the whole world were to practice circular economy, the greenhouse gas emissions would decrease by 50% by 2030. By using renewable energy and recycling, it is possible to reach such numbers of emissions.

It takes time and money for countries to practice circular economy, as it is normal to do. However, it is for sure that a circular economy would boost the GDP of the countries in the long run, as the revenues would be cheaper, and cost of production would decrease. Circular economy saves resources, as it doesn't use a lot compared to the current linear economy. This benefits countries as they will have more resources compared to countries that don't practice circular economy. Globally, the economy would benefit 2 trillion dollars a year if the circular economy is practiced. Circular economy would minimize the negative

externalities in the markets as well. A negative externality is the negative cost that a third party has to pay due to a problem caused by two parties. For example, air pollution of a factory would cause people to have healthcare problems. Circular economy also will increase job opportunities, as it will require new personnel with new skills for the newly created sectors and fields.

3: CHALLENGES of Building a Circular Economy

The most important challenge the circular economy faces is the economic barriers. Transformation costs a lot of money to countries, investors and enterprises. As the advantages of the circular model cannot instantly outweigh the investments regarding the transformation, as it is a newly emerged model, it becomes a burden for investors and enterprises. The current lack of qualified workers is another problem. The lack of human capital and human resources result with problems in the technological developments regarding the industry. Also, citizens don't see this model actively in their life due to the fact that they have been so used to the linear economy, where they have not ever recycled or reused any product. Education is necessary for both the workers in order to be qualified and citizens for raising awareness.

Current laws and regulations are also another hardship for the circular economy to be practiced by countries. It's crucial to consider whether current laws and regulations are equipped to support the transition from a linear to a circular economy. The transformation must be supported by legal frameworks in order to ensure success. It is important to recognize that some countries have started to make some progress regarding circular economy in their law, there is still a huge need for further change in order to fully embrace the circular economy model in the countries.

Major Countries and Organizations Involved

The European Union (EU)

The European Union, which generates 2.5 tonnes of waste annually, updated its waste management legislation to promote more sustainable practices. These changes aim to encourage environmentally friendly products,

strategies for replacing waste, and protections for consumers. Priority is given to sectors that heavily rely on resources by the EU. The European Green Deal was endorsed in December 2019, followed by the approval of the Circular Economy Action Plan in March 2020, with the goal of fostering carbon-neutral, non-toxic, and circular economic models. Countries like the Netherlands, France, Italy, and Germany have been leading the transition to a circular economy for years, while others are just starting. This discrepancy underscores the varying levels of progress towards eco-friendly economic practices within the EU.

United Nations Industrial Development Organization (UNIDO)

UNIDO, a branch of the United Nations, leads the global transition to a circular economy. Through initiatives like eco-industrial parks and programs such as Resource Efficient and Cleaner Production (RECP) and Chemical Leasing, UNIDO aims to improve resource efficiency and promote the production of more recyclable and durable products. For instance, the RECP program implemented in Belarus in 2014 helped 30 companies reduce their costs of production and minimized their environmental impacts. UNIDO also focuses on resource disposal, refurbishment, and remanufacturing projects. UNIDO also encourages the shift from non-renewable to renewable energy sources and provides member states with guidelines for managing energy resources more effectively.

People's Republic of China

China's transition to a market-driven economy in the 2000s resulted with rapid economic growth but also brought environmental challenges. Concerns over these issues prompted China to adopt a state-level approach to promoting a circular economy. In 2005, a national strategy was to focus on the 3R method: reduce, reuse, and recycle. China has since supported this transition through successive Five-Year Plans. Initiatives such as banning plastic bag usage in Shanghai and restricting plastic waste imports in 2018 demonstrate China's commitment to circular economic principles. However, despite these efforts, it's worth noting that China remains one of the world's leading importers of waste.

United States of America (USA)

Unlike the European Union and China, the United States has yet to fully embrace a circular economy at the federal level. Although some progress has been made at the local and state levels, federal action began in the 2010s. However, companies and local jurisdictions are enthusiastic about transitioning to a circular economy. While lots of businesses recognize recycling, other principles like design, product life extension, and product as a service are less recognized in the USA. The federal government could accelerate this transition by incentivizing the adoption of these principles.

Timeline of Events

January 2009	China's Circular Economy Promotion Law came into force.
December 2015	The European Commission adopted the first circular economy action plan.
January 2016	The United Nations Sustainable Development Goals (SDGs), including circular economic principles, are put into force.
11 March 2020	European Commission adopted a new circular economy action plan
7 July 2021	China's "Development Plan for the Circular Economy" is released for 2021-2025
7 March 2022	UNEA adopted a resolution regarding circular economy

Relevant UN Resolutions and Other Documents

- Sustainable Development Goals

The Sustainable Development Goals (SDGs), adopted by the UN General Assembly in 2015, align closely with the principles of the circular economy. These goals span a 15-year period and consist of 17 objectives. The SDGs 7, 9, and 12 focus on Affordable and Clean Energy; Industry, Innovation and Infrastructure; and Responsible Consumption and Production, respectively. These SDGs serve as promises made by member states to achieve sustainability within a timeframe.

- 7 March 2022 UNEA Resolution

This resolution, named as “Enhancing Circular Economy as a contribution to achieving sustainable consumption and production” tackles the question of circular economy and its effect on sustainability.

- The first circular economy action plan adopted by the European Commission in March 2020

This document is one of the major steps taken regarding the transformation to a circular economy model, as it is the most detailed guideline set by an international institution regarding the circular economy.

Previous Attempts to Solve the Issue

Circular economic principles are gaining acceptance, as can be seen from the relevant UN Resolutions and Documents section. As it is a newly emerged model, there are no major attempts. However, recent data suggests that the adoption of circular economic principles has not met expectations in the short term. According to a report by a Dutch think-tank called "Circular Gap," the Global Circularity rate has fallen from 9.1% in 2018 to 7.2% in 2023. Which means, more raw materials are being used, in 2023 than in 2018. On the contrary, the report says that government-level discussions on the circular economy has tripled itself. Interestingly, the report notes that governments tend to prioritize renewable energy, energy efficiency, and forest preservation over circular economic principles, despite the fact that circular principles encompass these concepts.

With all this data, delegates can address the challenges associated with establishing a circular economy through potential solutions.

Possible Solutions

Circular economy model is a newly emerged model, and it is promising. However it is not that easy to change the whole global economy to a circular model from the linear model. As the delegates, you must acknowledge this in order to have strong resolutions. Delegates may consider finding solutions to hardships to the transformation to the circular economic model, or they may elaborate the principles of it. For producers, subsidies may be given to encourage investments. Qualified personnel and citizens may be educated, as well as new laws can be decided upon in order to support the circular economy. Delegates must keep it in mind that any action taken, comes with consequences, and with an opportunity cost to the governments.

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