How does the world adapt to the circular economy model?

Saulė Svidenytė

Yarmouth Consolidated Memorial High School

April 30, 2023

Summary

The essay discusses the differences between linear economy, recycling industry, and circular economy. It shows how sustainable each of those is, and why circular economy is presented as a solution for the problem of environmental crisis the world is going through right now. It reflects the main principles of circular economy and gives examples of small and large-scale adaptations to our lives. *Natura* in Brazil and *Tradle* in Canada are very different companies seeking the same goals towards the circular economy. The essay suggests how the circular economy model can be applied in communities, provinces, or countries. It highlights the importance of educating young people about the circular economy and its principles, as they are responsible for the future of our planet.

These days, when the world is hanging on the edge of being inevitably destroyed, we are trying to preserve it by changing one of the most critical aspects of our lives: the economy. The world has been using the linear economy since the industrial revolution, which completely changed the idea of production by allowing it to produce enormous quantities of items. Even though companies benefit from producing more things, the world's resources are finite. Additionally, our planet can take a limited amount of waste without falling apart.

The linear economy, also known as the "take-make-waste" economy, is a system that extracts resources to create products that, after use, become waste. In this system, materials are not used to their fullest potential and only have one use without the possibility of extending their life or recycling. Because of the mismanagement of resources and land, the natural resources are depleting and putting our future in danger. People have realized that a linear economy is unfortunate and that we should change something to prevent a catastrophe. That is how the recycling industry became one of the solutions. The point of recycling is to use waste materials to manufacture new products. It can be recycled internally or externally, which means it can be fully used for a new product or some can be extracted for a "new life". Even though this idea reduces the amount of waste by remaking things, it degrades the quality of materials over time and does not focus on the idea of sustainability and getting rid of the waste completely. And that is the beginning of the idea behind the circular economy.

In contrast to the linear economy model, the circular economy has the goal of producing zero waste. Its first principle is to "eliminate waste and pollution" by sharing, maintaining, reusing, repairing, etc. The second principle of the circular economy is "circulate products and materials", which means keeping materials in use by reusing them or using some of them as raw materials again. By doing that instead of recycling instantly, the value of the product remains the same, and in a whole economy, it even creates more value because there is no need to spend so much money on new items. The third principle is to regenerate nature by returning valuable nutrients to the soil or using renewable energy instead of fossil fuels. This

can be done in the last stage, where biodegradable materials are returned to the ecosystem and what is left is recycled. Those principles are theories, but how can they be adapted to our daily lives? There are some examples of large-scale and small-scale applications of the circular economy.

Natura is the biggest cosmetic company in South America and the fifth largest beauty company in the world, which means they have an enormous impact on the world's economy and preservation. *Natura* produces a variety of daily-used products, meaning it is impossible to stop making them. That is why they are trying to adapt their businesses in a way that would help preserve nature. They believe "a tree has much more economic value standing up than being cut down". Therefore, they created a supply chain with local farmers to work with them. "The company's supply chain includes almost 40 types of 'biodiversity assets' (plant-derived ingredients) and the involvement of about 7000 families." This thinking helped to save 2 million hectares of the Amazon rainforest, to make it 3 million by 2030. Instead of using wood from a grown tree, they offer farmers the opportunity to harvest the seeds of the trees so the company can use them for their products. By growing the seeds for *Natura*, farmers earn three times more than by harvesting timber. Thus not only farmers and the company benefit but also nature. This is a model of designing products with a forward-thinking approach to sustainability and regeneration.

A smaller-scale example of using a circular economy would be a baby clothes rental business called *Tradle* based in Vancouver, BC. *Tradle's* mission is to create a circular economy with minimal to zero waste. Because children grow fast, they constantly need new clothes. The linear economy offers cheap but poor-quality clothes that end up in landfills and pollute the planet. Over 500 000 tonnes of clothes are dumped every year in Canada. Businesses like *Tradle* cooperate with famous Canadian brands to create good-quality baby clothes. Later, the clothes are rented to parents so they do not have to buy poor-quality clothes.

Used clothes are cleaned or repaired and rented again. If the clothes are unrepairable, they are recycled or returned to nature, as materials are made for that.

Those were some examples worldwide, but we need some solutions locally. The example of *Tradle* could be an example of a sharing economy model. Sharing items like cars, bikes, phones, or clothes can help to reduce the amount of resources used. Producing fewer items but of better quality and distributing them to society would be an example of applying a circular economy to the community. Another thing that could be done is to develop the food industry in a region by providing more local products, which would reduce the amount of transportation or packaging needed. Knowledge of local farmers and cooperation with scientists can lift agriculture to another level. Finally, the whole circular economy is based on the right design of products. Governments and communities should encourage local businesses to design more sustainable, easy-to-repair, and reusable products. On a larger scale, circular models can be applied in different ways. One of the most important things that should be done is to educate the young generation about the circular economy. These young people are responsible for our future, and they do not get enough information about the problem or how to deal with it. Education could also involve public campaigns or big brands promoting sustainability and ecology. All those things raise the public's awareness of the issue. Another way the government could contribute to spreading a circular economy is through tax incentives. Extra money or reduced tax should be offered to businesses considering sustainability, reusing, and recycling.

In conclusion, the linear economy has changed our society drastically and has brought convenience to our lives, but it has also created a threat to the environment. The recycling industry has provided some solutions, but the circular economy offers better waste and pollution management solutions. The circular economy principles are focused on eliminating waste and pollution, circulating products and materials, and regenerating nature. This type of economy can be adapted on both large and small scales, as seen in the examples of Natura and Tradle. By designing products with a forward-thinking approach to sustainability and regeneration,

encouraging businesses to be more sustainable, and providing education to young people, we can ensure a sustainable future for future generations.

References

Chan, C. (2019, October 15). *Vancouver startup Tradle rents clothes as baby grows*. Vancouver Sun. Retrieved April 30, 2023, from https://vancouversun.com/news/local-news/vancouver-startup-tradle-rents-clothes-as-baby-grows/

Circular economy introduction. Ellen MacArthur Foundation. (n.d.). Retrieved April 30, 2023, from https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview

Creating a regenerative economy in the Amazon forest. Creating a regenerative economy in the Amazon Forest. (n.d.). Retrieved April 30, 2023, from https://ellenmacarthurfoundation.org/circular-examples/natura-brazil

Encyclopædia Britannica, inc. (2023, April 28). *Recycling*. Encyclopædia Britannica. Retrieved April 30, 2023, from https://www.britannica.com/science/recycling

Korhonen, J., Honkasalo, A., & Seppälä , J. (2017, July 12). *Circular economy: The concept and its limitations*. Ecological Economics. Retrieved April 30, 2023, from https://www.sciencedirect.com/science/article/abs/pii/S0921800916300325?via%3Dihub