

Squaring the Circular Economy

As newer and newer technologies come, it becomes easier for the citizens to make their voices heard. But that always rattles the governments of the day and there are always renewed efforts to censor those voices

*There once was a CEO named Jack,
 He wanted to make his company green and black.
 He invested in circular models,
 And reduced his waste and fossils,
 But he still drove a gas-guzzling Cadillac.*

If that limerick made you smile, these statistics should make you think: The circular economy could generate US\$4.5 trillion of additional economic output by 2030, according to Accenture. "Current business practices will contribute to a global gap of eight billion tons between the supply and demand of natural resources by 2030," Accenture estimated in a book, *Waste to Wealth*, published in 2015. "This is equal to the total resource usage in North America in 2014 and translates to US\$4.5 trillion of lost economic growth by 2030 and as much as US\$25 trillion by 2050."

Those are staggering numbers. So is the concept of the circular economy. But then, what's a circular economy? It is a model of production and consumption that aims to minimize the use of the world's resources, cut waste, and reduce carbon emissions. It is based on three principles: One, design products and processes that do not generate harmful or polluting materials. Two, keep the products in use for as long as possible, by repairing, recycling, and repurposing. Three, take steps to regenerate and reinvigorate nature by restoring and enhancing natural systems and resources.

LINEAR TO CIRCULAR

A circular economy is an alternative to the traditional linear economy, where we grab resources, make products, consume them, and discard them. This gobbles up finite raw materials and produces vast quantities of waste. There is now enormous pressure on companies to be environment-friendly and those that don't heed this call risk losing customers and reputation. No wonder circular economy-based products and services are top-of-mind.

Gartner predicts that by 2026, 60% of global enterprises will drive profitable growth through

circular supply chain practices. However, the path to profitability won't be easy, and supply chain managers will need to adjust their strategies to succeed in the new ecosystem.

"To be clear, there are investment costs in implementing a circular program to support the systemic shifts needed in structure, processes, and partnerships," says Anne Michelle Avolio, a Gartner senior director and analyst. "However, many companies see revenue gains outpacing related costs. Most global enterprises will see profit gains as a result of their circular supply chain capabilities by 2026."

The EC (European Commission) adopted a circular economy package in 2014, and several EU members set about developing their own national roadmaps. According to a report by the Ellen MacArthur Foundation, a UK-headquartered charity that seeks to help create a circular economy, four countries in Europe have led the way:

- **Germany:** Has robust recycling systems and high levels of innovation in circular economy sectors. It adopted a resource efficiency program in 2016; this aims to decouple economic growth from resource consumption.
- **Holland:** Has an ambitious project to be fully based on a circular economy by 2050.
- **France:** Passed a law on energy transition and green growth in 2015. This sets targets for waste prevention, recycling, and reuse.
- **Italy:** Has implemented measures to support circular businesses and green public procurement.

So far so good. But there's always a flip side. In 2021, the EC released the results of a study on "greenwashing". That's the practice by which companies claim they are doing more for the environment than they actually are. The study analyzed green online claims from the garments, cosmetics, and household equipment sectors.

THE FLIP SIDE

"National consumer protection authorities had reason to believe that in 42% of cases the claims were exaggerated,

false or deceptive and could potentially qualify as unfair commercial practices under EU rules," the study reported. "Greenwashing has increased as consumers increasingly seek to buy environmentally sound products."

Why is this relevant? Because companies that are perceived to be greenwashing suffer about 1.34% drop in their customer satisfaction score. "This number is economically significant," the *Harvard Business Review* reported in June 2022. "Prior studies have found that even small changes in a firm's customer satisfaction score can have significant implications for corporate performance. A change of merely one unit in customer satisfaction has been estimated to result in 0.032 units of change in net earnings per share and 0.40 units of change in return on investment."

Why then do companies resort to greenwashing? Managers may be unable to implement the necessary changes, or be incompetent, or they may lack the resources, or they may be intentionally overstating their environmental credentials. Ambitious and unattainable goals may also serve corporate executives' agendas, rather than the interests of the corporation.

The crux? Despite the bombardment of green messaging, customers can't know or understand exactly why companies fail to implement their environmental goals. "That's why they look at corporate environmental commitments with skepticism and have a hard time trusting companies to act in the best interests of society," HBR reported. "Customers may be willing to forgive companies that tried and legitimately failed to implement their goals. But customers might also be less forgiving towards companies that attempted to cheat their way by exaggerating their credentials."

ASIAN ANGLE

What about Asia? Do Asian countries care about the circular economy? Here's a snapshot from the Ellen MacArthur Foundation:

- **India:** Has a strong recycling mindset and a digital backbone that can support the transition to a circular economy. India has adopted measures to foster circularity in sectors such as agriculture, textiles, mobility, and electronics. It has set policies such as the National Policy on Biofuels, the National E-Waste Management Rules, and the National Electric Mobility Mission Plan.
- **Japan:** Has a long history of promoting circular economy principles, such as the 3Rs (reduce, reuse, recycle) and *mottainai* (a concept of avoiding waste).

Japan has also several policies and programs to support circularity, such as the Basic Act for Establishing a Sound Material-Cycle Society, which sets goals and indicators for resource efficiency, waste reduction and recycling.

- **South Korea:** Has been a leader in developing a circular economy strategy and legislation, such as the Act on Resource Circulation of Electrical and Electronic Equipment and Vehicles, which sets targets for collection, recycling, and reuse of products. It has also set up the Eco-Industrial Park Program, which facilitates industrial symbiosis among businesses.
- **China:** Has been a pioneer in implementing circular economy policies and practices, especially in waste management, resource efficiency, and industrial symbiosis. China has also launched several initiatives to promote circular economy in its cities, such as the Sponge City Program, which aims to improve urban water resilience and reuse.
- **Singapore:** Launched a national strategy in 2019 to become a "Zero Waste Nation" by 2030. It sets targets and measures for waste prevention, recycling, and reuse in three major waste streams – food waste, packaging waste, and electronic waste. Its Eco-Industrial Park Program encourages sharing resources, exchanging by-products, and co-locating complementary activities.

Can we ever square the circular economy? A circular economy is a paradigm shift that can transform our linear "take-make-waste" model into a regenerative and restorative one. It can help reduce our environmental impact, mitigate climate change, and create more equitable and resilient societies. We need to rethink how we produce and consume food, clothing, electronics, plastics, metals, and cement.

Since I started this column with a "green" limerick on Jack, let me end with another on Jill:

*There once was a manager named Jill,
She was eager to reduce her landfill.
She bought only second-hand,
And composted her food and sand,
But she still used plastic bags at will.* 

Raju Chellam is a former editor of Dataquest and is currently based in Singapore, where he's the chief editor of the AI Ethics & Governance Body of Knowledge and chair of Cloud & Data Standards.

