



Overcoming Obstacles to a Sustainable Economy

The goal of a “circular economy” is important, but the road is long.

Today, business models are mostly linear. Companies take resources and make products; customers use them and dispose of them. At the end of the conveyor belt is a growing pile of waste. Despite efforts to make business more sustainable and waste management more efficient, there is still some element of environmental damage in the creation of products.

But the “circular economy” presents an alternative. The concept is a grand, sweeping vision for an industrial economy that produces no waste or pollution, **in two ways**. First everything that is natural is recycled and secondly, everything that is technical is reused or redistributed/resold and eventually recycled as well.

The basic aim of the circular economy is to decouple economic growth from the consumption of the earth’s resources. Just as well, because in the next 20 years we’re expected to consume three times what the earth can give us. In the face of enormous population growth (and the growth of the middle class), we need to be careful when tinkering with the levers of production and economic growth drivers. This is why a move toward a circular economy requires profitable business models.

Over the years I’ve pointed out some possible ways in which businesses can plan for recyclable, reusable products. As I recount in 15 years of closed-

loop supply chain research with Daniel Guide in **The Evolution of the Closed-Loop Supply Chain Research**, a business model perspective is necessary to make a profitable business out of a product that the first customer no longer wants.

Easier said than done

Big transformations such as those proposed by the circular economy must keep business models in the centre of the dialogue. A tenet of the circular economy is product reuse, which could take the form of leasing. A washing machine for instance, could be leased numerous times over a 20 year lifespan to reduce its environmental impact when the first buyer wants to dispose of it. But there are numerous considerations to making this work, such as building a durable machine in the first place, getting it to different homes and making it easy to repair.

Companies may need to reconsider testing of washing machines because current tests are run in an “ideal world” setting but washing machines that are reused and not technically the property of the consumer may face more use and less customer care.

Contracts for leasing will have to be prepared and collections will be necessary for customers who don’t pay on time. Warranties must be arranged and

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repairs organised. The biggest consideration of all is what happens at the end of the product life for the washing machine when it's returned.

The cost of recycling for companies used to be hefty, with the act of recycling making up 80 percent of recycling costs, with 20 percent to logistics. Now, the cost to business is nearly 50/50. Recycling is much more efficient than it used to be and is now relatively cheap. Logistics costs, however, have gone up and this must be taken account when putting the model together. Another consideration is relationships with existing retail markets: some retailers may view leasing as missed sales opportunities and may not continue to sell the company's existing product stock with the same enthusiasm.

The manufacturer will also have to discover how much more customers are willing to pay for leasing, but this is complex. Although the customer is only paying a little bit every month, with less overall hassle because the repair costs go to the company, the total cost of ownership is higher when leasing. Today's customers are still frequently better off buying rather than leasing. The small amount of research we've done indicates that customers really don't want to pay more.

A leasing model also needs to consider how customers may feel about limited choices and a possible slowdown in technological improvements. If washing machines are reused, fewer are designed and manufactured.

If companies start down the road of leasing before all this is established, it's possible those businesses – although well-meaning – may not be profitable, leading to job losses and a slowdown in commitment to sustainability.

If the whole loop isn't considered, businesses may turn away from the model and we will lose sustainability champions.

How the regulation can help

Another aspect which is vital to success of the circular economy is regulation. The European Union has faced issues with the **WEEE** directive which addressed electronic waste, starting in the early 2000s. Portions of the directive worked well but others did not. While it made producers responsible for end-of-life products, for example, it did not detail how this was supposed to work in practice.

While directives should be effective, they cannot be too detailed because this could lead to a straitjacket situation when the dynamics start to play on the efficiency of waste markets. It is clearly better to have general binding principles and frameworks

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that can be adapted to the dynamically changing situation.

The process for directives in the EU can be complex. The EU, for instance, sets the directive, then 28 countries make their own laws which cannot go against the directives, and then there is implementation – which is another matter. Some countries are quick to legislate but are slower on implementation. A company operating throughout the EU could face 50 different implementations (including county-level laws), making compliance expensive and cumbersome.

The **EU Action Plan for the Circular Economy** has been more open for discussion. It is focused on product lifecycles, and clear legislative targets for waste management and recycling. The plan aims to “ensure favourable conditions for innovation” in the single market. Another important, and welcome, aspect is to “remove obstacles stemming from European legislation or inadequate enforcement” from impinging on the circular economy.

Proponents of the circular economy, such as the **Ellen MacArthur Foundation**, are making important additions to the sustainability conversation. Their focus on four “essential building blocks” of the CE includes new business models, as well as design, reverse cycles, and enablers and favourable system conditions. It is important that, in changing the economy, drivers of the economy – industries – are considered partners in the move away from overconsumption of resources.

Companies need to have a clear idea of the whole supply chain before they make the changes necessary to achieve the circular economy.

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