

Circular economies key to commodity growth



By [Hermann Erdmann](#)

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Today, the world has 1.8-billion middle-class consumers; within the next 20 years it will be home to 5-billion consumers. There is already a shortage of commodities on Earth, so where will all these new middle-class consumers get their washing machines? The only source of materials for that will be what we now think of as waste - so the sooner we start revisiting the way we look at 'waste', and the more concerned we become about commodity efficiency, the better.

Environmental insurance

Environmental protection and scarce resources demand a new way of thinking about how we consume our resources.



Manufacturers are happy to make products and consumers are happy to buy products, but the full monetary cost of a product is being understated because the selling price today does not take into account the cost of dealing with the product's end-of-life. At the end of a product's life, there is no-one to take responsibility for it and it becomes waste that is dumped, which is both a waste of resources and an expense to society in environmental harm and landfill costs.

Consumers are ultimately the ones who pay the price as the cost to society can only be recovered from them, and society is subsidising manufacturers who are not driven to develop improved processes to manage their products' end-of-life, reduce emissions, and reduce reliance on raw materials. We pay the price indirectly through air pollution, environmental

degradation, overflowing landfills, and the resulting health and amenity impacts.

What we need is an insurance policy for the environment - one which ensures that those who create the end environmental problem pay to mitigate it and factor this into their cost of manufacture. The benefit of this approach is that a product's total cost to society is made visible to manufacturers and consumers alike; manufacturers are incentivised to make more environmentally friendly, longer-lasting products, built to be recycled, and with recyclable packaging. The lower the environmental impact of a product, the less environmental 'insurance' the manufacturer will need to pay in the long term.

This approach is called extended producer responsibility and it is not a new concept. What is new, is the way in which it has been brought to life.

Instead of making a product for consumers to throw away, we need to extend the life of the product or its constituents beyond the consumer stage by recovering, recycling and reintroducing it or its components or raw materials into the economy.

South Africa is the only country in the world that has made this a reality with an industry participating 100%, using waste tyres as a proof of concept. Since 2013, the environment has been 'insured' against the negative impact of waste tyres.

The waste tyre management fee paid by the tyre producers is how the cost of dealing with end-of-life tyres is incorporated into the manufacturing cost of the tyres. The money is directly and specifically applied to dealing with waste tyres, in an audited and accountable fashion, making it far more effective than a tax-based system where funds sink into the general Treasury. It's simple, pure economics. And it works.

Challenges

One of the biggest challenges in the country is educating people about the opportunities that can be found in and created from waste, all by creating a circular economy, of which extended producer responsibility forms a part.

If it were easy to recover and re-use materials profitably, then business would be doing so. We argue that, at a national level, it is not only a necessity but also profitable once you take into account all the externalities that effectively subsidise a linear economy (the classic make, use, dispose economy).

For example, plastic water bottles that become waste have to be collected and managed by 'someone', typically local or regional governments. Thus the utility of the plastic bottle is being subsidised by these organisations. In addition, uncollected waste becomes an environmental and health hazard, resulting in medical and amenity costs.



Solutions through collaboration

Organisations need to work together to analyse the world's most important socio-economic problems and formulate innovative strategies to deal with these challenges. The focus needs to be on partnerships that do more than 'just' work.

As an organisation we have shown the power of collaboration thanks to the legislative framework set out by the Department of Environmental Affairs which made the REDISA Plan possible – and our results speak for themselves. Statistics show that before REDISA existed, South Africa was only dealing with 4% of the total tyres being generated as waste. Within three years, REDISA has been able to increase this to 70%. Imagine how much more we could achieve if we worked closely with other organisations.

Through continued collaboration and work with partners in government and business, and with consumers and NGOs, we will be able to build more sustainable, efficient and long-term socio-economic solutions.

While it is important for consumers to be more aware and to consider what they throw away, the manufacturers of products also need to ensure that they are designing products that can be re-used, or easily recycled, when they reach the end of their initial life-cycle.

ABOUT HERMANN ERDMANN

Hermann Erdman is CEO at REDISA (Recycling and Economic Development Initiative of South Africa). An entrepreneur and businessman, Erdmann has extensive experience in the manufacturing and retail sectors having served on a number of industry-related boards. His interest in environmental sustainability, transformation and empowerment of the previously disadvantaged resulted in the establishment of REDISA, and the development of the first approved Industry Waste Management Plan.

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