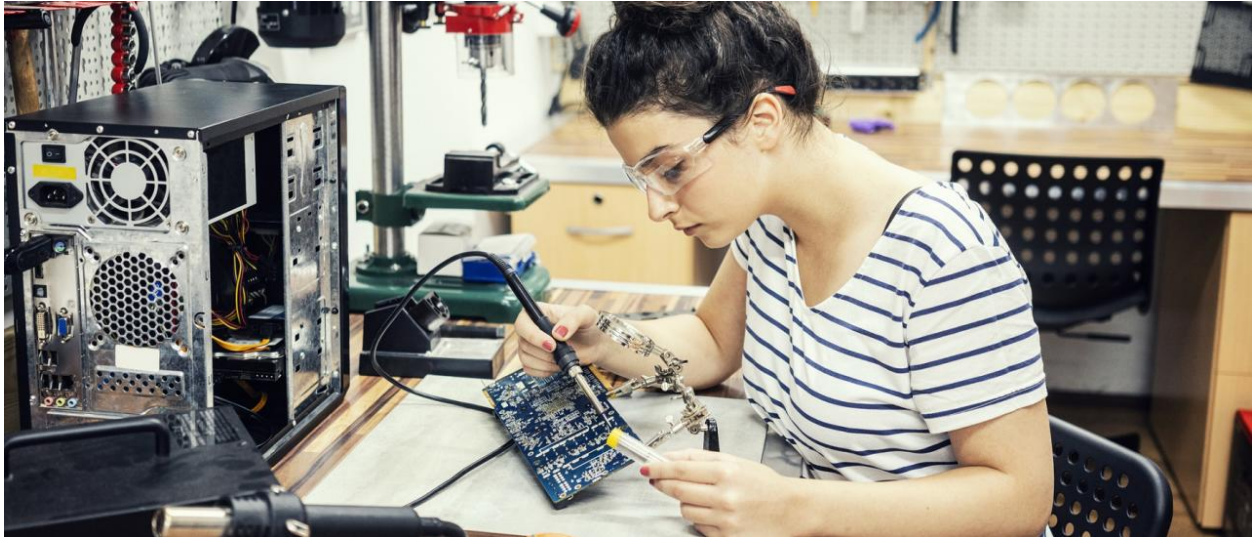




## Stakeholder Perspectives on Right-to-Repair Laws



By Ece Guliz Gulserliler , Atalay Atasu and Luk Van Wassenhove , INSEAD

**Laws to protect consumers and the environment could be a game-changer for businesses and prompt change in business models.**

A wave of grassroots consumer movement is unfolding. At the centre of the right-to-repair (RTR) movement are **farmers** who use John Deere tractors. Indignant at being “forced” to take their broken tractors to authorised dealers for repair, they revolted – turning instead to old tractors from the 70s that they could easily fix themselves.

In the mass consumer market, consumer advocacy groups contend that some producers are limiting the rights of users to repair their own products – ranging from iPhones and Mac computers to Nikon cameras. Some argue that companies are **preventing independent repairs** by restricting access to spare parts, using software updates to quietly render products repaired outside the network obsolete and even suing independent repairers.

For years, consumer advocates have been pushing for RTR protection that makes it easier and more affordable to restore broken products. They challenge that upon purchasing a product, the consumer should be able to decide on its use and repair. By this argument, a producer who sells a product also sells the authority to make repair decisions and must therefore supply the necessary information and parts for repairs. Moreover, environmental groups have been arguing that RTR laws would also help to reduce the environmental impact associated with production by reducing consumption, prolonging product lifetimes, increasing second-hand use and reducing waste.

Some companies, like Dell and Fairphone, have responded voluntarily in favour of RTR demands from advocacy groups. Many others, like Apple, have long lobbied against RTR, citing concerns like safety, brand image, intellectual property and incentives to innovate. In our recent research, we found that things take a different turn when companies are mandated to extend RTR to consumers by law.

### **Legislators respond with right to repair laws**

RTR regulations, meant to protect consumers and the environment, require producers to design easy-to-repair products and supply information and parts for consumers to independently undertake repairs.

In the United States, [34 states](#) have introduced RTR legislations for digital electronic equipment, though only the [Fair Repair Act in New York state](#) – the first in the US – has passed to date, and will be enacted in 2023. At the federal level, President Biden has [issued an order](#) directing the Federal Trade Commission to draft regulations limiting manufacturers' ability to restrict independent repairs. In the [European Union](#), RTR laws have applied to household appliances since 2021 and are expected to be extended to mobile phones and laptop computers.

In RTR debates, intellectual property rights (IPR) is arguably the most contentious topic. In fact, some countries bypass producers' rights to intellectual property in favour of consumers' rights to repair. In [Germany](#), the proposed law allows third parties to produce any car part used for repair without being subject to intellectual property limitations. Similarly, the [Promoting Automotive Repair, Trade and Sales Act](#) was introduced in the US Congress in 2017. In [France](#), if a spare part is unavailable but can be produced with 3D printing, the producer must make the design available to

third parties by law.

Producers who oppose the RTR movement argue that these laws would eventually hurt producers, consumers and the environment. To understand the spectrum of consequences of RTR laws, we need to take a multi-stakeholder perspective, including how producers may react. In our [research](#), we study the economic and environmental consequences of RTR regulations by considering producers' potential strategic response in the form of business model change.

### **Business response to intellectual property risks**

RTR legislations can pose an existential threat to businesses. Supplying spare parts and repair information could reveal a product's proprietary architecture or trade secrets and inadvertently invite cloning by third parties. Producers argue that RTR laws [compromise their legal protection](#) and conflict with patent exclusivity, and could potentially lead to a surge of counterfeits.

From the producer's perspective, RTR regulations may call for a re-examination of business models. This is especially the case since proponents of the circular economy have been advocating a fundamental change in the transaction between producer and consumer to lower the overall environmental impact. Instead of the traditional selling model, they promote non-ownership models in which the [producer retains ownership](#) and the consumer leases, rents or pays for the usage of the product, which the producer would repair, refurbish and recycle to extend its product life.

Indeed, some companies have been [experimenting with a shift](#) from a product-oriented business model to a service-oriented model, known as [servicising](#), or changed their business model from ownership to non-ownership models such as leasing. Limited research on the response of producers to this change in business model meant that legislators and consumers often did not understand the unexpected consequences.

In our [study](#), we sought to understand under what conditions RTR regulations would incentivise a producer to sell or lease products. We examined the impact of RTR on a producer's choice between leasing and selling, and the environmental and economic implications. To this end, we studied the interactions between a producer of a durable product, a (low-end) competitor and consumers. Our study questions assumptions on the

positive environmental and economic consequences of RTR laws and highlight the importance of understanding the potential strategic response of producers to RTR regulations.

### **Mind the unintended effects of RTR**

Overall, RTR regulations mainly affect the market in two ways: prolonging the life of products and making proprietary product information and spare parts available. When product life is extended, the increase in used products in the second-hand market can cannibalise new product sales. In addition, the availability of proprietary information and spare parts allows competitors to use them to improve their products – or even produce a counterfeit.

Our research findings show that producers may change their business models and opt to retain product ownership (e.g. by leasing) instead of selling in order to avoid the risk of cannibalisation and imitation. This is especially true for producers operating in markets with relatively low production costs, such as the mobile phone market. However, this potential switch in business model is not necessarily good news for the environment or consumers. Why? Retaining ownership allows producers to take a product off the market at will – even well before the end of its useful life. Due to the relatively low production costs, we may also find new products of shorter lifetimes flooding the market. These outcomes are contrary to the environmental goals of RTR laws.

That said, RTR laws can benefit producers of consumer durables with high production costs, such as washing machines. RTR laws allow firms to charge higher prices, since consumers would be willing to pay more for products that they can use for a longer time through independent repairs. However, if there is a high risk of imitation by competitors, the producer may switch to a non-ownership model instead.

RTR laws would lower the environmental impact in situations where the second-hand market was negligible prior to the enactment, such that the laws bring a positive net effect through product life extension. Otherwise, pushing producers towards retaining ownership and control of product lifecycle can backfire should producers prematurely retire perfectly functional used products. Other than poor environmental outcomes, consumers may be faced with lower product availability and higher prices.

Moreover, our analyses suggest that RTR can undermine innovation especially if, as producers argue, RTR accelerates imitation, allowing competitors to imitate a new product shortly after its release. Consequently, this might reduce the individual company's – or even the industry's – incentive to innovate.

### **Who wins when?**

RTR regulations can indeed benefit consumers, the environment and even producers – but not all at the same time. Consumers of Deere tractors would certainly be pleased to be able to extend the useful life of their tractors if they were able to repair them themselves.

Our results suggest that producers might be able to mitigate the loss in profits due to RTR laws by considering new business models. But for the case of mobile phones, the switch to non-ownership business models can be good for the environment only if the availability of second-hand mobile phones was low before RTR laws were enacted. However, this comes at a cost to consumers who would likely have to pay higher prices.

For products such as washing machines, producers can benefit from the increase in consumer willingness to pay for machines that can be used for a longer period. However, a longer lifetime is not necessarily good for the environment, since the environmental impact of washing machines is mostly attributed to usage, as opposed to production and disposal.

Outcomes for each stakeholder ultimately depend on the product type, costs associated with production and ownership, availability of products in the secondary market and the risks of imitation due to compromised intellectual property rights. On the legislative front, we caution against blanket regulations for all products, as is the **current model** in the US, and instead recommend a case-by-case analysis.

At the end of the day, there are economic and environmental implications of circular business models and environmental regulations that may not always be apparent. But they are too costly – to the producers, consumers and the environment – to ignore.

### **Find article at**

<https://knowledge.insead.edu/operations/stakeholder-perspectives-right-repair-laws>

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## About the research

**“Business Model Choice under Right-to-Repair: Economic and Environmental Consequences”** is a working paper.

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