

Summary of “Right to Repair: Pricing, Welfare, and Environmental Implications”

Overview

In their research, Chen Jin, Luyi Yang, and Cungen Zhu address how manufacturer responses to right to repair legislation may have consequences on the market and environment if consumer right to repair is expanded. Manufacturers argue that they oppose this legislation because of privacy and safety concerns, however, it is believed by many that the opposition is instead due to the potential loss of profit. In that sense, this research argues that the perspective of how manufacturers will react in their pricing decisions is being largely overlooked in policy discussions and should be fully considered in any proposed legislationⁱ. To assess the possible impacts, this research uses an economic model in which the authors evaluate how a reduction in independent care costs would affect how manufacturers would adjust prices in order to maintain a profit margin.

Findings

Right to repair laws would lower the prices of independent repair services. The authors found that how manufacturers would adjust the prices of products and services to make up for lost revenue varies depending on the production cost of the product. If the production cost is low, manufacturers would likely lower the price of new products to encourage consumers to buy new products rather than seeking repair servicesⁱⁱ. The authors also note that the associated increased output of new products could lead to more used products in the aftermarket at lower prices, “thereby disincentivizing repair”ⁱⁱⁱ. When there is a moderate production cost, the model finds that the price of products will decline initially with independent repair costs, but then will increase once independent repair costs reach a certain threshold^{iv}. When manufacturers raise the price of a product to a certain extent, they are then likely to include free-repair services, therefore giving more consumer valuation to the product and allowing for greater price increases^v. The model finds that manufacturers will similarly attach free repair and raise prices for products that initially have high production costs^{vi}. When production costs are low, right to repair legislation leads to increased consumer surplus and social welfare however it could have negative environmental impacts as consumers would be encouraged to buy a replacement product rather than repairing an old one, therefore flooding the aftermarket with used products^{vii}. When production costs are intermediate, consumer surplus and social welfare would initially increase but then would decrease when manufacturers must increase prices to make up for profit losses^{viii}. The environmental impact of products in this range has more variability. If a product deteriorates at a fast rate when the price is raised, the used product volume increases which means that the environmental impact increases as well. If the product has a low failure rate, then the environmental impact would initially increase, but then decrease as manufacturers begin offering free-repair services. Regarding the environmental impact, the authors determined that while right to repair legislation does overall reduce negative environmental impacts, the potential price reaction of manufacturers may have negative impacts by increasing production and “disposable impacts”^{ix}.

ⁱ Chen Jin, Luyi Yang, and Cungen Zhu, “Right to Repair: Pricing, Welfare, and Environmental Implications”, *Management Science* 69, no. 2 (2023): 1018, doi: <https://doi.org/10.1287/mnsc.2022.4401>.

ⁱⁱ Jin, Yang, and Zhu, “Right to Repair”, 1027.

ⁱⁱⁱ Jin, Yang, and Zhu, “Right to Repair”, 1027.

^{iv} Jin, Yang, and Zhu, “Right to Repair”, 1027.

^v Jin, Yang, and Zhu, “Right to Repair”, 1027.

^{vi} Jin, Yang, and Zhu, “Right to Repair”, 1027.

^{vii} Jin, Yang, and Zhu, “Right to Repair”, 1028.

^{viii} Jin, Yang, and Zhu, “Right to Repair”, 1028.

^{ix} Jin, Yang, and Zhu, “Right to Repair”, 1030.