



E-Waste, Money, and Electronics Repairability



How “right to repair” legislation in Pennsylvania
can save consumers money and decrease
electronic waste



The Problems



One problem is e-waste

- Stands for electronic waste
- Harmful to environment and people
- Very expensive
- Repairing would decrease e-waste

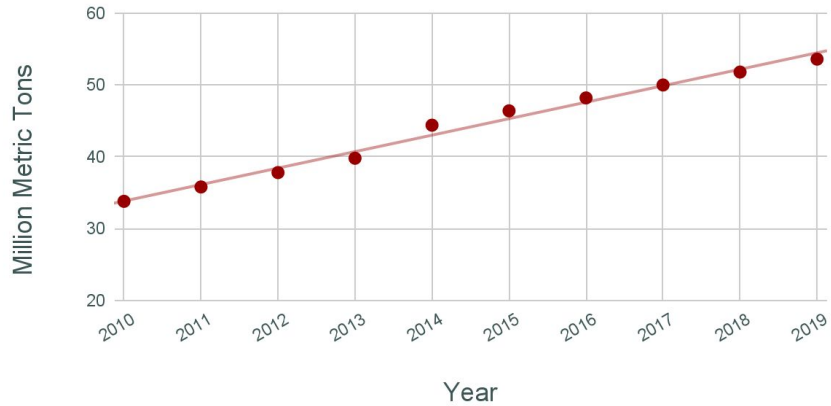


\$5.9M

...is how much money e-waste costs PA every year

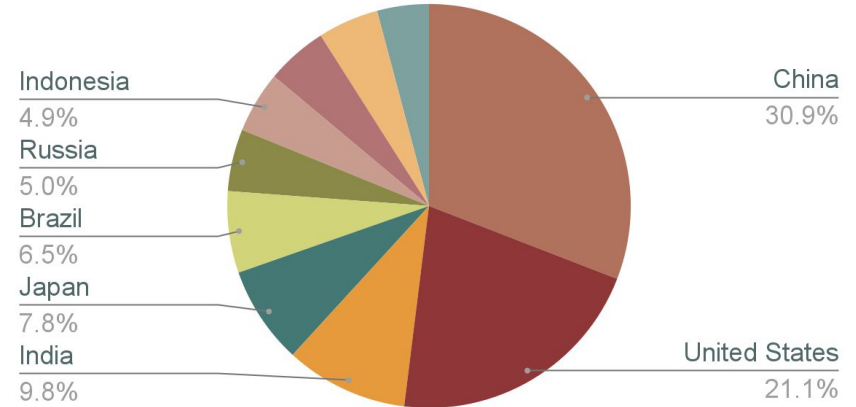
Amount of Global E-Waste Over Time

Data from <https://www.statista.com/statistics/499891/projection-ewaste-generation-worldwide/>



Amount of E-Waste per Country

Data from <https://www.statista.com/statistics/499952/ewaste-generation-worldwide-by-major-country/>



E-waste is a big problem for the US

Another problem is consumer cost

- Repairing and buying new electronics is expensive
- Consumers forced to pay for companies to repair
- Would be cheaper if consumers could repair themselves



\$1,408

...is how much the average US household spends on electronics every year

The Solutions



What actions, if any, should **Jim Marshall and Brad Roae**, the Chairs of the **Pennsylvania Committees** of Consumer Affairs and Commerce, take to respond to concerns that **the lack of right to repair** results in unnecessary **e-waste** and **higher consumer cost** in Pennsylvania?

The Options

The Status Quo

- No repair protections
- Lots of e-waste
- High cost to consumers

The Repairability Index Act

- Make companies give every product a repairability score
- Based on French system
- Uses market incentive increase repairability

The Digital Fair Repair Act

- Makes companies offer tools, documentation, and parts
- What many advocates lobby for
- Direct intervention

More Progressive Policy



The Digital Fair Repair Act is the most effective.

Status Quo

- ✓ Allows OEMs to ensure quality repairs
- ✗ Consumers and independent repair businesses unable to conduct repairs

The Repairability Index Act

- ✓ Repairability scores influence consumer behavior
- ✗ Hard to get high quality, self-declared scores from companies

The Digital Fair Repair Act

- ✓ Directly addresses right to repair
- ✗ Could be circumvented

Effectiveness

The Repairability Index Act should be considered, it has a positive benefit-cost difference.

Benefit	\$ (Low-Med-High)	Costs	\$ (Low-Med-High)	Non-Monetary Considerations	Uncertainties
Consumer Savings	Med	Hosting website and database	Low	Promotes a circular economy, which has many mixed effects	How much e-waste is reduced
Stimulated local economy through support of small businesses	Med	Enforcement of regulation	Low		How much right to repair benefits local economies
Reduction of e-waste, e-waste is expensive	Med	Costs government sales tax	Low		How much it costs to enforce

$$\text{Benefits-Costs} = (2+2+2) - (1+1+1) = \boxed{3}$$

The Digital Fair Repair Act should be considered, it has a positive benefit-cost difference.

Benefit	\$ (Low-Med-High)	Costs	\$ (Low-Med-High)	Non-Monetary Considerations	Uncertainties
Consumer Savings	High	"enshrines circular economy", circular economies can decrease jobs	Low	Dissent from companies	How much e-waste is reduced
Stimulated local economy through support of small businesses	Med	Enforcement of regulation	Med		How much right to repair benefits local economies
Reduction of e-waste, e-waste is expensive	High	Costs government sales tax	Low		How much it costs to enforce

$$\text{Benefits-Costs} = (3+2+3) - (1+2+1) = \boxed{2}$$

Both The Repairability Index Act and The Digital Fair Repair Act are equitable.

Status Quo

Winners

Large tech companies

Wealthy Consumers

Losers

Most consumers

Repair businesses

The Repairability Index Act

Winners

Most consumers

Those affected by e-waste

Losers

Small businesses

Electronics companies

The Digital Fair Repair Act

Winners

Most consumers

Those affected by e-waste

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Equity

The Repairability Index Act is more political acceptable, both policies “are likely to pass.”

The Repairability Index Act

75%

The Digital Fair Repair Act

63%

PRINCE Analysis

Conclusion

	Effectiveness	Efficiency	Equity	Ease of Political Acceptability
Status Quo				
Repairability Index Act				
Digital Fair Repair Act				

Brad Roae, the chair
of the PA commerce
committee, should
approve **The Digital
Fair Repair Act.**