



2023

The Economics of Repair: Fixing Planned Obsolescence by Activating the Right to Repair in India

Dunia Zongwe

Alliance University, dzongwe@yahoo.com

Mahantesh GS

Alliance University

Mamatha R

Alliance University

Follow this and additional works at: <https://repository.nls.ac.in/ijclp>



Part of the [Antitrust and Trade Regulation Commons](#), [Consumer Protection Law Commons](#), and the [Law and Economics Commons](#)

Recommended Citation

Zongwe, Dunia; GS, Mahantesh; and R, Mamatha (2023) "The Economics of Repair: Fixing Planned Obsolescence by Activating the Right to Repair in India," *International Journal on Consumer Law and Practice*: Vol. 11, Article 6.

Available at: <https://repository.nls.ac.in/ijclp/vol11/iss1/6>

This Article is brought to you for free and open access by Scholarship Repository. It has been accepted for inclusion in International Journal on Consumer Law and Practice by an authorized editor of Scholarship Repository.

THE ECONOMICS OF REPAIR: FIXING PLANNED OBSOLESCENCE BY ACTIVATING THE RIGHT TO REPAIR IN INDIA

—*Dunia P Zongwe**, *Mahantesh GS*** & *Mamatha R†*

Abstract *This paper examines the lack of a Right to Repair (R2R) legislation in India, particularly in the technology sector, and proposes key principles for an optimal Right to Repair Act based on competition economics and consumer choice. In the current scenario, electronic devices are often designed with planned obsolescence, leading to limited lifespans and encouraging a cycle of consumption and disposal, which negatively impacts the economy, society, and the environment. The global R2R campaign aims to balance societal rights and corporate interests by empowering consumers with the right to repair their devices.*

Our research is the first to develop core principles for an efficient and sustainable R2R law in India, drawing exclusively on competition policy and consumer autonomy. Unlike previous frameworks, our approach focuses on consumer autonomy, waste reduction, and sustainability. We hypothesize that incorporating these principles into a Right to Repair Act will significantly reduce the costs of planned obsolescence on various stakeholders and the environment.

The paper comprises five sections: (1) an examination of planned obsolescence in the tech sector; (2) an analysis of the R2R concept in general and its application in India; (3) a discussion on sustainability and R2R in the technology sector; (4) a comparison of R2R policies in the EU, France, and the US; and (5) an outline of key principles for an optimal Right to Repair Act, informed by law and economics insights.

Our research holds potential to dramatically decrease the costs of planned obsolescence on consumers, those living in environments

* Associate Professor, School of Law, Alliance University, Bangalore.

** Assistant Professor, School of Law, Alliance University, Bangalore.

† Assistant Professor, School of Law, Alliance University, Bangalore.

degraded by electronic waste (e-waste), and policymakers. The findings can contribute to a more sustainable and equitable tech sector, particularly in developing nations like India, which has recently been recognized as the third largest generator of e-waste globally.

Keywords: Planned obsolescence, Right to repair, Law and Economics, Consumer Choice, Consumer Protection, Sustainable Development, e-waste.

Introduction	98	Right To Repair, Technology, And Sustainability.	112
The Culture of Throwing Things Away	100	The Right to Repair can Help Elevate Sustainability.	112
Planned Obsolescence	100	Software Locks and Repair	113
Chicago Antitrust Policies.	102	Right-To-Repair Laws in Various Jurisdictions.	114
Effects on Consumers and the Environment	103	Europe.	114
The Role of Technology	103	France	115
Consumer Choice	104	The United States.	116
The Environment	105	Principles for a Right-To-Repair Act.	116
The Concept of ‘Right to Repair’	105	Steps Taken Authorities and Businesses.	117
Background	106	Objections and Resistance from Tech Giants	118
The Elements of the Concept	107	What to Incorporate in the Right to Repair Act	118
Place of the Right Within Indian Law	108	Key Principles	119
Planned Obsolescence as an Adverse Effect on Competition	108	Salient Provisions.	120
The Nexus Between Competition and Consumer Protection	109	Conclusion	121
Significance of the Right-To-Repair Movement	110		
Analysing the Indian Scenario.	111		

I. INTRODUCTION

India does not have any law that confers on consumers a right to repair in general or in the technology sector. Yet, while equipment manufacturers and firms market electronic devices as durable or “resistant to daily wear and tear”, the reality is that these businesses design them so as to have limited lifespans. This strategy, known as ‘planned obsolescence’, creates a cycle of consumption and disposal that inflicts incalculable costs on the economy, society, and the environment. Technology companies like Apple and Samsung release updated models of their mobile phones every year, even when their customers need not upgrade their phones. Still, the popularity and excitement around these ‘upgraded’ phones and the larger revenue businesses derive from them have motivated those businesses to keep on ‘improving’ their devices.

Lately, a global ‘Right to Repair’(R2R) campaign has gained momentum to balance the rights of societies and the interests of corporations.¹ On the wings of that movement, we propose in this paper key principles that must feature an optimal Right to Repair Act, using the tech sector as a case study. The theoretical framework for this study rests on law and economics, more precisely competition policy, which in turn underscores consumer sovereignty.

The principles we put forth would steer a R2R framework that boils down to ‘compete, protect, and sustain’.

A review of the legal literature on the right to repair (R2R) or ‘fair repair’ reveals a growing interest in this subject to respond to planned obsolescence and the imperative of sustainable development.² Actually, our paper is the first scholarly research to ever spell out core principles for an efficient and sustainable right-to-repair law in India based on competition economics and consumer choice. Though Pathak and Kapoor do suggest a framework for the right to repair in India,³ their framework straddles several areas of law (that is, intellectual property rights, consumer protection, and competition). By contrast, the principles we advocate in this paper solely draw on competition; hence our undivided focus on consecrating consumer autonomy, alongside the necessity to cut down on waste and ensure sustainability. Particularly, we hypothesize that infusing consumer autonomy into a Right to Repair Act will significantly

¹ See eg, Aaron Perzanowski, ‘Consumer Perceptions of the Right to Repair’ (2021) 96 *Indiana Law Journal* 361 (presenting the results of a survey of consumers of electronic goods in the US and exploring what those results imply for the right-to-repair movement); Leah Chan Grinvald and Ofer Tur-Sinai, ‘Intellectual Property Law and the Right to Repair’ (2019) 88 *Fordham Law Review* 63, 67-68 and 71-82 (describing the right-to-repair movement in the US); Sahra Svensson and others, ‘The Emerging “Right to Repair” Legislation in the EU and the US’ (2018) Paper Presented at Going Green CARE INNOVATION 2018 <https://portal.research.lu.se/files/63585584/Svensson_et_al_Going_Green_CARE_INNOVATION_2018_PREPRINT.pdf> accessed 7August 2023; and Ricardo J Hernandez and others, ‘Empowering Sustainable Consumption by Giving Back to Consumers the “Right to Repair”’ (2020) 12 *Sustainability* 850.

² Perzanowski (n 1)(presenting the results of survey showing that US consumers expect and value the right to repair the products they buy, but that the practices and policies adopted by device makers); Hernandez and others (n 1) (reflecting tentatively on how the 2019 ‘right to repair’ directive by the EU may affect the way people consume products); Grinvald and Tur-Sinai (n 1) (offering an analytical framework that justifies the right to repair in terms of US intellectual property law); Evelyn Terryn, ‘A Right to Repair? Towards Sustainable Remedies in Consumer Law’ (2019) 27 *European Review of Private Law* 851 (scrutinizing repair as one particular means to contribute to a more sustainable consumer law); Svensson and others (n 1) (examining the right to repair and the different or competing perspectives of key stakeholders, both assessed within the context of the circular economy).

³ Gaurav Pathak and Gaurangi Kapoor, ‘Suggested Framework for the Right to Repair in India’ in Ministry of Consumer Affairs, Food and Public Distribution, Government of India, *Consumer Law and Practice: Contemporary Issues and Way Forward (forthcoming)* (on file with the authors).

reduce the costs of planned obsolescence on the economy, society, and the environment.

Our paper contains five substantive sections: (1) a section that explains and exposes planned obsolescence in the tech sector; (2) another section that analyzes the concept of the right to repair in general and in India; (3) a third section that focuses on sustainability and the right to repair in the technology sector; (4) a fourth one that compares the positions of various jurisdictions (EU, France, and US) on this issue; and (5) a fifth section that outlines the key principles based on insights from law and economics that should feature an optimal Right to Repair Act.

This research holds significance as it has the potential to dramatically decrease the costs of engineered obsolescence on multiple stakeholders, including consumers, people living in environments degraded by electronic waste (e-waste), and policymakers. The R2R in India could enable consumers to purchase tools to fix their devices, choose repair facilities, and reduce product lifetime costs. Furthermore, the findings of this study can contribute to a more sustainable and equitable tech sector in developing nations, especially in India, which earned last year the unenviable title of the third biggest generator of e-waste in the world.⁴

II. THE CULTURE OF THROWING THINGS AWAY

The culture of throwing things away that plagues societies today is the fruit of the old marketing practice and concept of ‘planned obsolescence’. This section describes the problem of planned obsolescence that fuels the throwaway culture, frames this programmed malfunction in terms of the economic analysis of law, and explains how obsolescence affects consumers and the environment.

A. Planned Obsolescence

Planning a product’s obsolescence refers to a business strategy whereby firms deliberately design products with a limited lifespan or functionality, thereby encouraging consumers to replace or upgrade them more frequently. The market value of older versions declines after the firms release new versions. Soon enough, internal technical issues start to surface, and the newer versions will induce consumers to either buy even newer upgrades or... throw

⁴ Vishwa Mohan, ‘Why India Needs to Ramp Up e-Waste Collection Now’ (*The Times of India*, 3 December 2022) <<https://timesofindia.indiatimes.com/india/why-india-needs-to-ramp-up-e-waste-collection-now/articleshow/95953025.cms>> accessed 30 April 2023.

their devices away.⁵ This is how firms and device manufacturers extract profits that far exceed the extra improvements that the latest versions of the same device would have otherwise fetched in the market.

A phrase coined by an American industrial designer in the 1950s, planned obsolescence can be implemented in a variety of ways. For instance, a chip within a printer's ink cartridge prevents it from being used after a specific point. Through blog posts, Reddit users expressed in 2017 their dissatisfaction with Apple's habit of purposefully slowing down the processors of iPhones with weak batteries after updating their devices with the newest software. However, a lot of users were content with the fact that upgrading to a new model was the only option to improve performance. Later, Apple acknowledged that, to stop the gadget from unintentionally shutting down, the iOS software automatically identified aging batteries and decreased the CPU speed. Apple Inc finally consented to pay \$113 million in March 2018 to resolve many cases brought against the company.

In essence, planned obsolescence techniques can take on two major forms: performance-reducing software or structurally weak goods. Irreplaceable oximeter batteries and short-life light bulbs exemplify designed obsolescence. This alludes to the fact that manufacturers make or adopt technologies to endure for just a short period before consumers need to replace them, severely straining the environment by wasting resources. Multinational tech giants such as Apple and Samsung have been utilizing scheduled obsolescence as a market strategy.

In, *Apple Inc. Device Performance, In re*⁶ a district court in the United States of America (US) approved a 310 million US dollars class action settlement. The case involved a multi district litigation against Apple Inc. regarding allegations that certain model iPhones had their system performance secretly throttled by Apple to mask battery defects. The court approved the settlement.⁷

Lately, several factors— economic, psychological, socio-cultural, and political⁸ – have reinforced the throwaway culture. First, as the world grapples with the aftermath of the COVID-19 pandemic and embraces both information technologies and a work-from-home culture, the demand for electronic devices has

⁵ See also Prateek Arora, 'Does India Need a "Right to Repair" Legislation?' (*The Daily Guardian*, 13 August 2021) <<https://thedailyguardian.com/does-india-need-a-right-to-repair-legislation/>> accessed 7 August 2023.

⁶ See facts of *Apple Inc. Device Performance Litigation, In re* 50 F 4th 769 (9th Cir 2022).

⁷ Ultimately, the court vacated the settlement approval and remanded the case for reconsideration under the correct legal standard.

⁸ See Tim Cooper and Giuseppe Salvia, 'Fix It: Barriers to Repair and Opportunities for Change' in Robert Crocker and Keri Chiveralls (eds), *Subverting Consumerism: Reuse in an Accelerated World* (Routledge 2018).

surged. Another factor that bolstered the throwaway mentality is the near-ubiquity of electronic consumer goods, a multi-billion industry that has – in recent decades – risen exponentially. This rise flows from the fact, observed by Grinvald and Tur-Sinai, that “almost all consumer products and equipment include some type of technology in the form of an electronic component or computer chip.”⁹ Indeed, nowadays, consumer goods and the tech sector largely intersect.

B. Chicago Antitrust Policies

Unlike earlier studies on the R2R in India that centered on legal or technological considerations, this article uniquely deploys the economics of competition law. This perspective is vital for understanding how economic policies shape consumer choices and industry practices. Central to this is the concept of consumer autonomy (see below), which this article heavily relies on. We posit that consumers should enjoy the freedom to choose how they use, repair, and modify their products, influencing market dynamics, competition, innovation, and economic growth.

The economic interpretation of competition law and policy in India, as detailed in this article, aligns with the so-called Chicago School.¹⁰ This school of legal reasoning has significantly impacted antitrust policies across the globe, including notably India’s Competition Act, 2002.¹¹ *The Chicago School praises regulations that foster competition and maximize consumer choice*, offering a robust framework for preserving an equilibrium between regulatory intervention, market efficiency, and consumer choice within India’s R2R landscape.

Among its tenets, the Chicago scholars concentrate on consumer welfare and market efficiency, affirming that markets will naturally correct themselves. This leads to a belief or faith in minimal government intervention and a skeptical view of antitrust enforcement that might hinder competition. The application of price theory to analyze market behaviors, a concentration on clear abuse of market power, and an emphasis on empirical evidence also characterize this school.

⁹ Grinvald and Tur-Sinai (n 1) 65.

¹⁰ On the Chicago school of thought, see Richard A Posner, ‘The Chicago School of Antitrust Analysis’ (1979) 127 *University of Pennsylvania Law Review* 925; Herbert Hovenkamp and Fiona Scott Morton, ‘Framing the Chicago School of Antitrust Analysis’ (2020) 168 *University of Pennsylvania Law Review* 1843, and William E Kovacic, ‘The Chicago Obsession in the Interpretation of US Antitrust History’ (2020) 87 *University of Chicago Law Review* 459.

¹¹ Competition Act 2002, Act 12 of 2003.

Further principles of the Chicago school involve regarding monopolies as often temporary and possibly an outcome of efficiency, rather than inherently damaging. The school concerns itself more with horizontal agreements between competitors than with vertical ones, scrutinizing immediate impacts on consumer choice. Lastly, it applies a conservative interpretation of anti-trust laws, weighing the potential advantages to consumers against possible anti-competitive harms, always keeping consumer choice at the forefront of consideration.

C. Effects on Consumers and the Environment

Planned obsolescence and related practices by firms and manufacturers have inflicted huge costs on consumers, the environment, the economy, and society as a whole. By enforcing their intellectual property rights and imposing vertical restraints, these firms and manufacturers curtail both the ability of consumers to choose which goods and services, including repair services, they can purchase; and the ability of independent shops to render repair services.¹²

(a) *The Role of Technology*

Also, these practices, coupled with high technology, make it hard or almost impossible for consumers, do-it-yourselfers, and independent repair shops to fix their consumer goods effectively and legally. Consumers can no longer simply unscrew their devices with a few simple tools; they now need specialized knowledge and tools to make even minor repairs.¹³ Likewise, manufacturers integrate repair businesses vertically into their operations and, in that manner, they prevent independent shops to repair consumer goods cheaply and legally.¹⁴ In integrating their businesses vertically or entering into vertical agreements in that kind of way, manufacturers may lessen or suppress competition from independent shops.

In *Kataria*, the Competition Commission of India (CCI) linked the market for spare parts and repair services to the automobile market.¹⁵ It found that repairing cars requires access to specialized diagnostic tools, fault codes, technical manuals, and training – all assets that independent shops lacked; and the lack of which ‘substantially handicapped’ them from fixing cars.¹⁶ The CCI concluded that the network of the impugned agreements allowed the car

¹² See Grinvald and Tur-Sinai (n 1) 66-69.

¹³ See *ibid.*, 66.

¹⁴ *ibid.*

¹⁵ *Shamsher Kataria v Honda Siel Cars India Ltd* 2014 SCC OnLine CCI 95 [20.5.57].

¹⁶ *ibid* [20.5.103].

manufacturers to monopolize the after markets for their model of cars, to create entry barriers, and to foreclose competition from independent shops.¹⁷

Technology enables device manufacturers to entrench their dominance. Today, manufacturers control repairs more than before as these goods rely more and more on cloud-based software code for them to basically function. They also keep charges for repairs high to induce consumers to replace their goods. They thus leave consumers with little choice but to throw away their products because of costly, irreparable or irreplaceable parts powered by chips.

(b) *Consumer Choice*

Planned obsolescence affects consumer choice in a similar fashion. ‘Consumer choice’ denotes the ability of consumers to decide and select among options in the marketplace. Nihoul defines this concept as “the possibility, and the right, for customers, to choose freely the products/services best corresponding to their needs, and the economic partners they want to deal with”.¹⁸ Tied to ‘consumer sovereignty’,¹⁹ consumer choice is achieved when consumers enjoy access to a range of options and when they can make informed choices based on their preferences and needs.²⁰ The concept of consumer choice underpins the free-market economy, where the aggregate signals of consumer demand should guide the economy rather than government directives or individual business preferences.²¹

Crucially, consumer choice pertains to planned obsolescence and the R2R. *Planned obsolescence limits consumer choice by reducing the availability of durable and long-lasting products.* The right to repair closely relates to consumer choice as it empowers consumers to extend the lifespan of their products and make informed decisions about repair or replacement.

Consumer choice in the context of intentional obsolescence and the right to repair pivots on several factors. For one thing, limited access to spare parts and repair information restricts consumers’ ability to choose repair over replacement, as they may not possess the necessary resources or knowledge to repair their products. For another, the absence of transparency regarding

¹⁷ *ibid* [20.6.38-.

¹⁸ Paul Nihoul, ‘Freedom of Choice: The Emergence of a Powerful Concept in European Competition Law’ (2012) *Concurrences* 55. See also Inge Graef, ‘Consumer Sovereignty and Competition Law: From Personalization to Diversity’ (2021) 58 *Common Market Law Review* 471, 477.

¹⁹ See Graef (n 18) 477-478.

²⁰ See Neil W Averitt and Robert H. Lande, ‘Consumer Sovereignty: A Unified Theory of Antitrust and Consumer Protection Law’ (1997) 65 *Antitrust Law Journal* 713.

²¹ *Ibid*, 715-716.

product lifespan and durability hinders consumers' capacity to make informed choices about the longevity of their purchases. Lastly, the dominance of certain manufacturers in the market can limit consumer choice by decreasing competition and innovation, leading to a narrower range of options for consumers. Hence the absolute necessity for government agencies, lawmakers, and the courts to intervene and protect consumer sovereignty in the face of planned obsolescence.

(c) *The Environment*

Planned obsolescence affects the consumer's R2R and leads to e-waste resulting from the extraordinarily huge amount of consumption of electronic products caused by intentional defects in the product design. These masses of e-waste have led to alarming degrees of environmental degradation, especially in India, which has officially become the world's third biggest generator of e-waste.

Built-in obsolescence contributes significantly to the amount of e-waste that harms the environment, thereby creating health issues for people and wasting natural resources. Not to mention that manufacturing electronic gadgets pollutes the environment massively. For example, according to data made public by Apple, the mining and production of iPhones account for 83 percent of pollutants that trap heat in the atmosphere. Since no legislation prohibits or outlaws planned obsolescence, the R2R emerged to reduce such strains on the environment by creating space for reusing the products, banning the strategy of planned obsolescence, and cultivating a circular economy.²²

III. THE CONCEPT OF 'RIGHT TO REPAIR'

Practically speaking, this right designates laws allowing consumers to access both hardware and software tools from manufacturers, giving them the autonomy to decide whether they want to utilize a company service center, buy a new item, or fix the product themselves.²³ The underlying principle of the R2R is seemingly straightforward: complete ownership of a purchased product should grant the individual the freedom to modify, mend, or service it

²² Sakshi Shrivastava, 'The Right to Repair & Planned Obsolescence: New Horizons in the Indian IP Landscape' (*NMIMS Law Review Blog*, 8 September 2021) <<https://lawreview.nmims.edu/the-right-to-repair-planned-obsolence-new-horizons-in-the-indian-ip-landscape/>> accessed 7 August 2023.

²³ See Venkatesh Gorantla, '[Explained] Right to Repair: What is it and how Will it Be Beneficial for Indian Customers?' (*MySmartPrice Gear*, 19 July 2022) <<https://www.mysmartprice.com/gear/right-to-repair-explained/>> accessed 7 August 2023.

without interference or restrictions from the manufacturer.²⁴ However, those who attempt to repair electronic devices independent of the original manufacturer frequently encounter obstacles, as many manufacturers block consumers from accessing essential repair resources such as parts, tools, diagnostics, documentation, and firmware.²⁵ This opacity extends to the actual costs of repairs, pushing consumers towards purchasing new products if the repair costs become hefty. This propensity to discard and replace rather than repair contributes to a significant increase in electronic waste, drawing severe criticism from environmentalists and proponents of a circular economy, where manufacturers could design goods so that people can reuse and easily repair them.

A. Background

The necessity of a R2R arose from the fact that consumers the world over have to disburse large sums to fix defective products. In 2012, the state of Massachusetts passed the Motor Vehicle Owners' Right to Repair Act, where the R2R concept first emerged. This legislation compelled manufacturers to disclose the records and information required for anyone to fix their automobiles.

For a long time, people have deplored that manufacturers fervently undermine the 'right to repair' on the pretext of protecting their intellectual property rights (IPRs). Recently the debate on this issue has gained new momentum in India because of the idea of the LiFE movement through sustainable consumption introduced by Prime Minister Narendra Modi during the United Nations Climate Change Conference in 2021.²⁶ Naturally, the right-to-repair concept, vital for sustainable consumption, has drawn people's attention in the context of sustainability.

The R2R movement originated in the 1950s, during the heyday of the computer era. Governments in countries all across the world have recently prompted their legislatures to pass effective right-to-repair laws. The movement hopes to convince businesses to make spare parts, tools, and information on

²⁴ For a similar argument, see also Aaron Perzanowski, *The Right to Repair: Reclaiming the Things We Own* (Cambridge University Press 2022).

²⁵ 'Spotlight on the Right-to-Repair Movement and IP Rights in India' (*World Trade Review*, 7 July 2022) <<https://www.worldtrademarkreview.com/article/spotlight-the-right-repair-movement-and-ip-rights-in-india#:~:text=However%2C%20the%20movement%20is%20currently,righ%20and%20creating%20brand%20dilution.>> accessed 12 August 2023 (hereinafter referred to as '*World Trade Review*').

²⁶ Press Information Bureau, Government of India, 'PM Launches "LiFE Movement" for Adoption of Environment-Conscious Lifestyle: Global Leaders Applaud India for Focusing on Individual Behaviour Change Towards Climate Change' (5 June 2022) <<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1831364>> accessed 7 August 2023.

how to repair gadgets available to their consumers to lengthen the lifespan of products and to reduce the cost of repairs for products no longer covered by warranties and replacement policies.

B. The Elements of the Concept

We can define the R2R as the capacity of consumers to fix their electronics and other products.²⁷ This right encompasses the hardware and the device's battery, memory, and computing speed.

Based on the sources consulted for this study, it appears that the concept of the 'right to repair' comprises five elements, at a minimum. These include consumer ownership, access to information, availability of spare parts, design, and protection against anti-repair measures. We can briefly explain these elements as under:

- *Consumer ownership and control:* The right to repair emphasizes that consumers have the right to own and control the products they purchase, including the ability to repair them themselves or choose an independent repairer.²⁸
- *Access to repair information and tools:* The right to repair advocates for consumers' access to repair information, such as manuals and diagnostic tools, to facilitate repairs. It also emphasizes the importance of manufacturers making this information readily available.²⁹
- *Availability of spare parts:* The right to repair highlights the need for manufacturers to provide consumers and independent repairers with access to spare parts, ensuring that repairs can be carried out effectively.³⁰
- *Design for repair ability:* The right to repair calls for products to be designed in a way that allows for easy repair and maintenance, promoting repair ability as a key consideration in the design process.³¹
- *Protection against anti-repair measures:* The right to repair addresses the issue of anti-repair measures, such as technological protection measures (TPMs) or software locks that restrict consumers' ability to repair

²⁷ 'What is the "Right to Repair" Movement' (*InsightsIAS*, 12 July 2021) <<https://www.insightsonindia.com/2021/07/12/what-is-the-right-to-repair-movement/>> accessed on 7 August 2023.

²⁸ Nicholas A Mirr, 'Defending the Right to Repair: An Argument for Federal Legislation Guaranteeing the Right to Repair' (2020) 105 *Iowa Law Review* 2393.

²⁹ Svensson and others (n 1); and Karin Bradley and Ola Persson, 'Community Repair in the Circular Economy – Fixing More Than Stuff' (2022) 27 *Local Environment* 1321.

³⁰ Svensson and others (n 1).

³¹ *ibid*; Bradley and Persson (n 29).

their products. It argues for the removal of such measures to enable repairs.³²

These elements are commonly mentioned in the scholarly literature and reflect the core principles of the right to repair movement. They emphasize the importance of consumer rights, access to information and tools, and the design of products that support repairability.

That said, the necessity to repair does not solely arise from planned obsolescence. Because consumers sometimes mishandle their phones, they end up damaging their screens. These broken screens account for 71% of phone repairs in India and 50% of phone screen repairs in the US.³³

C. Place of the Right Within Indian Law

This section views planned obsolescence in terms of the Indian legal system, competition law, and consumer protection law. In doing so, it analyses the ways in which competition and consumer protection interact through the consumer sovereignty principle.

(a) *Planned Obsolescence as an Adverse Effect on Competition*

When viewed through the lens of competition law, the R2R carries profound implications for freedom of trade, a constitutional right protected under Article 19(1)(g) of the Constitution. This clause confers on every citizen the right to “practise any profession, or to carry on any occupation, trade or business.” This right emphasizes the ability of consumers and independent repair shops to access the information, tools, and parts necessary to fix products. It seeks to level the playing field, reducing monopolistic control over repairs by manufacturers and encouraging free and fair competition within the market.

However, the R2R is not absolute, especially when it comes to IPRs. According to Article 19(6) of the Constitution, the state may impose “reasonable restrictions” on freedom of trade, and intellectual property considerations apparently qualify as such restrictions. Section 3(5) of the Competition Act, 2002,³⁴ admits that restrictions imposed by a person to prevent third parties from infringing that person’s intellectual property rights may be ‘reasonable’;

³² S. Kyle Montello, ‘The Right to Repair and the Corporate Stranglehold Over the Consumer: Profits Over People’ (2020) 22 *Tulane Journal of Technology and Intellectual Property* 165.

³³ See ‘Screen Damage Accounts for 71% of Smartphone Problems: Report’ (*CNBC-TV18*, 11 April 2020) <<https://www.cnbc.tv/18.com/technology/screen-damage-accounts-for-71-of-smartphone-problems-report-5668661.htm>> accessed 12 August 2023.

³⁴ Competition Act, 2002. S 3(5)(i) of this Act reads as follows:

“Nothing contained in this section shall restrict—

and, as such, they may qualify as reasonable restrictions under Article 19(6). In light of this provision, original equipment manufacturers (OEMs) could plead that their exclusive agreements with authorized repair shops safeguard their IPRs, thus justifying limitations on the broader R2R. The CCI itself in *Kataria* acknowledged that OEMs can utilize contracts with authorized dealers to preclude third parties from violating their IPRs.³⁵

On the other hand, the concept of planned obsolescence is of particular concern in competition law. Although not illegal per se, planned obsolescence will contravene the Competition Act if it exerts to an appreciable adverse effect on competition (AAEC).³⁶ By intentionally limiting the life of a product, manufacturers could force consumers to purchase replacements more frequently, stifling competition and innovation among independent repairers and potentially leading to monopolistic practices.

It follows from the foregoing that laws surrounding the R2R are complex and multifaceted. While R2R realizes the important constitutional right to freedom of trade, lawyers and judges must balance it against IPRs and other lawful restrictions. They must therefore approach this balancing act carefully so that they can implement the R2R in a nuanced manner that spurs competition without infringing upon other critical rights and principles. The Competition Act's provisions and the constitutional framework should guide them in navigating these intricate and often competing interests.

(b) The Nexus Between Competition and Consumer Protection

Competition and consumer protection closely intersect as they share the fundamental goal of empowering consumers. In the words of Averitt and Lande, these two fields of law form “an overarching unity” called ‘consumer sovereignty’.³⁷ They then distinguish the two fields by highlighting that competition

-
- (i) the right of any person to restrain any infringement of, or to impose reasonable conditions, as may be necessary for protecting any of his rights which have been or may be conferred upon him under—
 - (a) the Copyright Act, 1957 (14 of 1957);
 - (b) the Patents Act, 1970 (39 of 1970);
 - (c) the Trade and Merchandise Marks Act, 1958 (43 of 1958) or the Trade Marks Act, 1999 (47 of 1999);
 - (d) the Geographical Indications of Goods (Registration and Protection) Act, 1999 (48 of 1999);
 - (e) the Designs Act, 2000 (16 of 2000);
 - (f) ...”

³⁵ *Kataria* (n 15) [20.6.13].

³⁶ For provisions prohibiting persons from causing an AAEC through an agreement, dominance, or a combination, see Competition Act, 2002, ss. 3(1) (anti-competitive agreements), 4(1) (abuse of dominance), and 6(1), respectively.

³⁷ Averitt and Lande (n 20) 713.

law keeps markets competitive so that they can make available to consumers a meaningful range of options whereas consumer protection ensures that consumers can effectively choose among those options.³⁸

With respect to consumer law, one could argue that ‘consumer rights’ as detailed in Section 2(9) of the Consumer Protection Act, 2019,³⁹ implicitly encompasses the R2R. And, although India has not yet enacted any specific legislation on this matter, two cases have nonetheless clarified the scope of this right within the existing consumer law. In *Kataria*, the CCI pointed out that the OEMs, or car makers, also monopolized the secondary spare parts market, thereby hindering independent and non-authorized repairers from accessing it.⁴⁰ Moreover, in the case of *Sanjeev Nirwani v HCL*,⁴¹ the District Consumer Disputes Redressal Forum (East) noted that ‘services’ include the provision of spare parts and consumables like batteries for laptops, even after the warranty period has expired. The forum declared that actions that limit or hinder a customer’s right to repair should be recognized as a “unfair trade practice” under the Consumer Protection Act,⁴² emphasizing the importance of ensuring access to necessary repairs.

D. Significance of the Right-To-Repair Movement

As people depend more and more on electronic gadgets, so does the R2R movement promise to directly benefit consumers and the environment if it accomplishes its goals. However, the movement has been greeted by the fierce resistance of manufacturers, who insist that legislation will compel them to divulge trade secrets, threatening IPRs and diluting their brands.⁴³

This movement continued well into 2020 with Ron Wyden introducing the Critical Medical Infrastructure Right to Repair Bill in the US Senate.⁴⁴ The bill

³⁸ *ibid* 713-714.

³⁹ Consumer Protection Act 35 of 2019, s 2(9) ‘consumer rights’ includes, — (i) the right to be protected against the marketing of goods, products or services which are hazardous to life and property; (ii) the right to be informed about the quality, quantity, potency, purity, standard and price of goods, products or services, as the case may be, so as to protect the consumer against unfair trade practices; (iii) the right to be assured, wherever possible, access to a variety of goods, products or services at competitive prices; (iv) the right to be heard and to be assured that consumer’s interests will receive due consideration at appropriate fora; (v) the right to seek redressal against unfair trade practice or restrictive trade practices or unscrupulous exploitation of consumers; and (vi) the right to consumer awareness;

⁴⁰ *Kataria* (n 15) [20.5.38].

⁴¹ CC/618/2014.

⁴² *ibid*, “Note that consumers could also plead that such actions constitute an abuse of dominance, as set out in Section 4(2)(a) of the Competition Act, 2002.”

⁴³ *World Trade Review* (n 25).

⁴⁴ Shrivastava (n 22).

focused on protecting consumers from any copyright infringement action while repairing critical medical equipment utilized during the COVID-19 pandemic.

The R2R movement has expanded globally, and its crusades bear fruits especially when applied in the areas of automobiles and consumer electronics. To be sure, on 3 June 2022, the State of New York passed a R2R law specifically for electronics. The Digital Fair Repair Act requires OEMs to make diagnostic and repair information for digital electronic parts and equipment available to independent repair providers and consumers if such parts and repair information are also available to repair providers authorized by OEMs.⁴⁵

E. Analysing the Indian Scenario

In the European Union (EU), the discourse surrounding the right to repair primarily emphasizes the effects of e-waste on the environment and the necessity for sustainable manufacturing. This perspective presupposes that individuals can regularly acquire updated devices. Contrastingly, in India, people have started utilizing smartphones and similar gadgets fairly recent, while usage of second-hand devices and unauthorized software for tasks such as word processing and design is a common practice.

The pandemic has prompted Indians to adopt smartphones by millions, and their usage significantly diverges from practices in Europe. In India, they often employ ‘light’ versions of applications, face linguistic challenges in app interfaces, and encounter connectivity problems affecting performance. Just as often, family or groups share a single device, potentially leading to more wear on the device and issues with software licensing.

While it does not provide for any R2R, Indian law allows planned obsolescence. Indeed, a firm can resort to planned obsolescence under the Copyright Act of 1957.⁴⁶ Also, the Copyright Act permits ‘digital rights management’ (DRM), which authorizes manufacturers to induce obsolescence post-sale by restricting repairs when a product needs a software. Nonetheless, under the existing laws, a consumer may seek remedies for planned obsolescence by relying on Section 10 of the Consumer Protection Act, 2019, which defines ‘defects’ or ‘shortcomings’ in products. In *Jaswant Rai v Abnash Kaur*,⁴⁷ the court utilized a ‘reasonable expectations’ criterion: To determine whether to grant damages to a buyer for physical faults, the court must ascertain whether

⁴⁵ See the Digital Fair Repair Act (S4104-A/A7006-B). See also Keshia Clukey, ‘NY Becomes First State With Electronics Right to Repair Law’ (*Bloomberg Law*, 29 December 2022) <<https://news.bloomberglaw.com/tech-and-telecom-law/ny-becomes-first-state-to-pass-electronics-right-to-repair-law>> accessed 7 August 2023.

⁴⁶ Copyright Act 14 of 1957.

⁴⁷ 1973 SCC OnLine Del 212.

the buyer would have refrained from entering into a contract if the seller had disclosed to him or her the true quality of the thing sold.

The provisions of the Copyright Act enabling programmed obsolescence and DRM underscore the urgency for embedding the R2R within Indian legislation to safeguard consumers' interests and conserve the environment. Even though India does not explicitly recognize the R2R, the CCI's ruling in *Kataria*⁴⁸ constitutes a watershed. It set a precedent when it found 14 auto manufacturers guilty of abusing their dominant position and engaging in anti-competitive behavior by only selling spare parts to authorised dealers rather than to independent markets. The CCI's order in that decision judgment makes it possible for customers to choose between independent mechanics and authorised dealers, it assists independent mechanics in offering after market services, and it promotes healthy market competition.

IV. RIGHT TO REPAIR, TECHNOLOGY, AND SUSTAINABILITY

A. The Right to Repair can Help Elevate Sustainability

The right to repair can play a crucial role in enhancing sustainability by reducing e-waste and contributing to a circular economy. However, manufacturers often restrict repair processes, limiting consumers' choices. The recent shift in the debate, emphasizing environmental concerns, has bolstered consumers' rights.

India's Department of Consumer Affairs (hereinafter referred to as 'the Department') is developing a R2R framework expected to impact product sustainability and create employment opportunities by permitting third parties to repair manufactured products.⁴⁹ Software development and deployment also bear implications for repair rights. The Copyright Act of 1957 permits DRM controls, enabling manufacturers to enforce planned obsolescence even post-sale. Two current trends, licensing over sales and the consideration of software as licensed, make DRM potentially harmful.

A product with an artificially limited life⁵⁰ or a product that a consumer or repairer cannot fix adds to the already unmanageable piles of e-waste. Meanwhile, countries around the globe feel the necessity to manage the life

⁴⁸ *Kataria v Honda* (n 15).

⁴⁹ Press Information Bureau, Government of India, 'Department of Consumer Affairs Sets Up Committee to Develop Comprehensive Framework on the Right to Repair' (14 July 2022) <<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1841403#:~:text=During%20the%20deliberations%2C%20it%20was,of%20the%20product%20in%20sale.>> accessed 12 August 2023.

⁵⁰ Halte à l'Obsolescence Programmé (HOP), *The French Repairability Index: A First Assessment – One Year After Its Implementation* (Halte à l'Obsolescence Programmé

cycle electronic goods and eradicate the ever-increasing e-wastes. At the same time, making products durable and easy to repair will empower consumers to contribute to a circular economy. Nonetheless, businesses avoid publishing manuals and usually design the obsolescence of goods so as to induce or force consumers buy their latest products. The manufacturer's monopoly on repair processes limits the consumer's 'right to choose' as well.⁵¹

Until recently, the debate on the R2R pitted the manufacturer's right against the consumer's, and would frequently favor the former. Today, however, the *Kataria* decision and a better appreciation of the adverse consequences of engineered obsolescence for markets and the environment have convinced many an expert that consumer rights should trump manufacturers' interests.

India ranks third globally in terms of e-waste production, after the US and China. Before the pandemic, metropolitan regions were the main producers of e-waste, but the widespread use of mobile phones in rural areas has increased the amount of rubbish already present. Since 2011, India has had a legal framework in place to handle the e-waste issue. The e-waste (management and handling) laws include provisions for the waste's transportation, storage, and recycling in addition to addressing how to handle it in an environmentally responsible manner. But these rules have had little effect, and rigorous legislation is required for effective execution.

B. Software Locks and Repair

The R2R implies that manufacturers must develop and deploy software differently to enable consumers and repairers to fix their products. New legal mechanisms give software manufacturers greater control over how consumer use their software, even after they purchase the products.⁵² Software copyright holders can now authorize consumers to modify their software, or block them from either copying or modifying it. Indian copyright law under the Copyright Act of 1952 permits such controls and the DRM mentioned earlier in this article.

One phenomenon is endangering consumer sovereignty and shrinking consumer choice: the trend towards more licensing and fewer sales. Nowadays,

2022) <<https://www.halteobsolescence.org/>, <https://www.halteobsolescence.org/wp-content/uploads/2022/02/Rapport-indice-de-reparabilite.pdf>>.

⁵¹ Press Information Bureau (n 49). See also Susmit Kundu and others, "Right to Repair" – A Concept and the Indian Road Ahead' (*Explosion*, 19 October 2022) <<https://explosion.in/right-to-repair-a-concept-and-the-indian-road-ahead/>> accessed 7 August 2023.

⁵² Jai Vipra and Shrinidhi Rao, "Right to Repair", the Legislation India Needs to Save Money, Minimize e-Waste' (*The Federal*, 13 March 2021) <<https://thefederal.com/analysis/updates-electronic-device/>> accessed 7 August 2023.

entertainment and even educational content are increasingly being streamed rather than sold.⁵³ As firms start incorporating software and digital intelligence into more products, these goods bring with them these new methods of closed digital structures and planned obsolescence.⁵⁴

Vipra and Rao assert that this trend makes it imperative for India to consider incorporating principles of free and open-source software into laws, providing freedoms to run, study, modify, and distribute software.⁵⁵ While these principles may not always suffice, they serve as benchmarks to avoid unnecessary software locking.⁵⁶

V. RIGHT-TO-REPAIR LAWS IN VARIOUS JURISDICTIONS

In the past few years, nations worldwide have been working to implement effective R2R laws. For instance, in the US, President Joe Biden signed an order directing the Federal Trade Commission (FTC) to restrict manufacturers from limiting consumer repairs while the United Kingdom (UK) adopted R2R regulations to simplify purchasing and repairing common electronic devices like televisions and washing machines. Indian policymakers should learn from the experience in these jurisdictions and devise R2R norms that suit the unique circumstances of India.

A. Europe

The European Union (EU) focused on minimizing e-waste by prolonging consumer appliance life. In October 2019, the EU initiated the “right to repair” directive,⁵⁷ aiming for a sustainable, clean, and competitive tech market. The EU enacted that directive in March 2021, upholding consumer rights, countering planned obsolescence, and promoting repair and reuse. Active legislation is still underway, and countries like France are adopting measures like repair ability scores⁵⁸ (see below).

In 2021, the EU’s Eco-Design Directive extended R2R provisions but excluded smartphones and laptops. These laws aim to extend electronic product lifespans for at least 10 years, rooted in the 2020 Circular Economy Action Plan for environmental conservation.⁵⁹

⁵³ *ibid.*

⁵⁴ *ibid.*

⁵⁵ *ibid.*

⁵⁶ *ibid.*

⁵⁷ For a discussion of that Directive, see Hernandez and others (n 1).

⁵⁸ Gorantla (n 23).

⁵⁹ A New Circular Economy Action Plan for a Cleaner and More Competitive Europe, 2020, COM/2020/98 <<https://eur-lex.europa.eu/resource.html?uri=cellar:9903b325-6388-11ea-b735-0>

The R2R law in the UK took effect on July 1, 2021, compelling manufacturers to make replacement parts accessible to customers and independent repair professionals. The regulations increase item lifespans, cover various appliances, and represent a positive move toward reducing e-waste.

Legal cases like *British Leyland Motor Corp. v. Armstrong Patents Ltd.*⁶⁰ have dealt with the R2R, prioritizing repair over replacement. An issue emerged when a consumer infringed the copyright on exhaust pipes while attempting to repair a car made and sold by British Leyland. The court observed that the manufacturer's use of its intellectual property rights to restrict access to spare parts in the market was not permissible. It also commented on the common practice of companies leveraging their monopoly rights to hasten the obsolescence of products, a strategy that the court stated it could not support.⁶¹ Ultimately, the court's ruling emphasized that the law permitted repairs, but not outright replacement of the product.⁶²

The UK Government's new Eco-design for Energy-Related Products and Energy Information Regulations, 2021, lays out manufacturers' obligations, such as:⁶³

- making spare parts available to professional repairers for 10 years,
- providing access to repair and maintenance information, and
- standardizing product designs and ensuring they conform to regulations.

B. France

France has introduced the 'Repairability Index' to incentivize consumers to select more repairable products, and prompt manufacturers to enhance their products' repairability.⁶⁴ This index mandates that manufacturers label their electronic products with five criteria that inform consumers whether the products are 'repairable', 'difficult to repair,' or 'not repairable at all.' Government agencies can adopt a variety of strategies to enforce laws against planned obsolescence. For example, similar to the court in *In Re Apple Device Performance Litigation*, France's competition commission fined Apple (i.e., €25 million) for not disclosing that it had used software updates to slow down older iPhone

1aa75ed71a1.0017.02/DOC_1&format=PDF>.

⁶⁰ *British Leyland Motor Corp. v. Armstrong Patents Ltd* (1986) 67 NR 178 (HL).

⁶¹ *ibid.*

⁶² *ibid* (quoting with approval the holding in *Sirdar Rubber Company Ltd v Wellington Weston & Co.* (1907) 24 RPC 539, 543).

⁶³ Kundu and others (n 51).

⁶⁴ *ibid.*

models. This slowing down ensured that people could not keep using old devices, even if the previous versions still worked.

C. The United States

On July 9, 2021, US President Joe Biden signed an Executive Order on the *Promotion of Competition in the American Economy*, instructing the FTC to pass and execute regulations that would provide for the R2R.⁶⁵ Swiftly, the FTC unanimously adopted a policy statement focusing on restoring R2R and combating antitrust practices.⁶⁶

By 2021, nearly all 50 U.S. states had proposed R2R laws, though only Massachusetts had enacted one in 2012, namely the Motor Vehicles Owners' Right to Repair Act. This 2012 law obliges automakers to provide necessary documents for outside mechanics to repair customers' vehicles. As for the rest of the US, proposed bills vary by state, focusing on agricultural equipment in Florida and South Carolina, medical equipment in California. Some businesses oppose the law and potential revisions, fearing cyber security risks. Still, last year, the New York State Legislature passed the Digital Fair Repair Act, which imposes a duty on manufacturers to provide parts, tools, information, and software to consumers and independent repair shops for motor vehicles or their equipment.⁶⁷

VI. PRINCIPLES FOR A RIGHT-TO-REPAIR ACT

In this section, we set out and delve into the fundamental principles that India should enact to realize the right to repair. After explaining the steps that consumer authorities have taken to implement measures relating to the R2R and how the R2R will benefit consumers in India, we discuss those principles and argue that they should feature India's consumer protection laws.

Because the rationales for R4R legislation stem from consumer protection, competition, and the environment,⁶⁸ any proposal to equip India with a R2R should seriously encompass these three areas of law.

⁶⁵ Executive Order No. 14,036, 3 C.F.R. 609 (2022).

⁶⁶ 'FTC Restores Rigorous Enforcement of Law Banning Unfair Methods of Competition' (*Federal Trade Commission*, 10 November 2022) <<https://www.ftc.gov/news-events/news/press-releases/2022/11/ftc-restores-rigorous-enforcement-law-banning-unfair-methods-competition>> accessed 12 August 2023.

⁶⁷ See also Jeffrey D Neuburger, 'New York Enacts First State "Right-to-Repair" Law' (2023) 13 *National Law Review* <<https://www.natlawreview.com/article/new-york-enacts-first-state-right-to-repair-law>> accessed 7 August 2023.

⁶⁸ Grinvald and Tur-Sinai (n 1) 68.

A. Steps Taken Authorities and Businesses

India has reportedly begun the process of legislating on the R2R, singling out four sectors: farming equipment, mobile phones, consumer durables, and automobiles.⁶⁹ It will also look at the product life extension and carbon footprint reduction.

The Department of Consumer Affairs (‘the Department’) hosted a meeting on July 13, 2022, to identify key sectors for implementing the ‘right to repair.’ It declared that:

“The aim of developing a framework on the right to repair in India is to empower consumers and product buyers in the local market, harmonize trade between the original equipment manufacturers and the third-party buyers and sellers, emphasize on developing sustainable consumption of products and reduction in e-waste. Once it is rolled out in India, it will become a game-changer both for the sustainability of the products and as well as serve as a catalyst for employment generation through Aatmanirbhar Bharat by allowing third-party repairs.”⁷⁰

In other words, the Indian government intends to empower consumers, promote sustainable consumption, reduce e-waste, and boost employment through Aatmanirbhar Bharat by allowing third-party repairs. The government is considering global models to bring this right into Indian law, and the same would help establish a circular economy for electronics in India. At the same time, the government recognizes that manufacturers do have proprietary rights over their spare parts to prevent a third party and unauthorized spare markets from infringing on their rights. It thus admits issues such as digital warranty cards and unclear user manuals.⁷¹

As for businesses, those opposing the R2R acknowledge the environmental necessity for such laws and aim to make their products more resilient. For example, Apple has committed to supplying certified third-party technicians with genuine parts and tools. This will expand Apple’s repair business globally. After facing backlash for previous battery designs, Apple updated the battery and hard drive in its third-generation laptops. Some companies are striving for carbon neutrality and implementing innovative business models to enhance service delivery, increase revenue, enhance customer satisfaction, and improve operational efficiency.

⁶⁹ See Kundu and others (n 51).

⁷⁰ Press Information Bureau (n 49).

⁷¹ See *ibid.*

B. Objections and Resistance from Tech Giants

The biggest obstacle to the R2R emerges from manufacturers' objections. Manufacturers have objected to the R2R by claiming that such right would impinge on their IPRs, arguing that existing Indian law supports this right only in a limited way.

Over time, technology giants such as Apple and Microsoft have strongly resisted the R2R movement. They argue that sharing their intellectual property with third-party repair services or hobbyists might result in exploitation and compromise the safety and security of their devices. In similar vein, they maintain that such actions endanger data security and cyber security.

Tech behemoths like Apple and Samsung protect their internal product designs as intellectual property. Opening this area to third-party accessories might lead to the creation of an underground market for these. Nonetheless, it remains uncertain whether upcoming right-to-repair laws will legitimize this sector, possibly altering warranty and customer policies.

Apple's co-founder Steve Wozniak has supported the right to repair, but critics have lampooned Apple for monopolizing repairs. Companies contend that customers and third parties can repair hardware, but that they have restricted access to software due to safety and environmental standards. Permitting unqualified or unauthorized parties may cause severe communication issues and affect connectivity networks, and altering software might endanger users and violate safety regulations.

As mentioned above, Indian law does not fully buttress the R2R. Section 52 of the Copyright Act allows people to alter software for non-commercial reasons but fails to address repair concerns. However, since they work for profit, independent repairers do not qualify as non-commercial entities. The DRM regulations under India's Copyright Act also constrain the R2R, granting software manufacturers undue control over the technology's usage and effectively rendering repair work related to software as unlawful.

C. What to Incorporate in the Right to Repair Act

This section lays bare the governing principles of the Right to Repair Act that we propose. It also briefly explains a few other salient provisions that could bolster the proposed Act.

(a) *Key Principles*

Based on the research conducted for this article, we could sum up the recommendations for legislating the R2R in India in five points:

- The optimal Right to Repair Act should embody *consumer sovereignty*. As we have explained earlier, this two-pronged principle entails maintaining a range of meaningful options for consumers through competition and empowering consumers to practically choose among those options (i.e., goods, services and suppliers) through consumer protection.⁷²
- The R2R legislation for which we advocate must reprise the test and the factors examined by the CCI in *Kataria* to determine *whether a particular instance of planned obsolescence adversely affected competition* in the relevant market. Specifically, in ascertaining whether an AAEC occurred, the CCI, a consumer forum, or a court must consider whether the disputed agreement bars or hinders new firms from entering the relevant market; drives out existing competitors; benefits consumers; and whether it promotes technical, scientific, and economic development.⁷³ Alternatively, if the firm engaged in predetermined obsolescence dominates the relevant market, then the CCI, the consumer forum, or the court must probe the question whether that firm caused an AAEC by imposing on consumers unfair contractual terms.⁷⁴
- Manufacturers and firms must *design* their goods and services for repairability. They should design their products in a way that allows for easy repair and maintenance, making repairability a key consideration in the design process.
- The R2R Act should *protect consumers against anti-repair measures*. The R2R addresses the issue of anti-repair measures, such as technological protection measures or software locks, that curtail consumers' ability to repair their products. It argues for the removal of such measures to enable repairs.
- The legislation should lay down *responsibility periods* for viable repair avenues for consumers, possibly following international models, and issue regulations to prevent third-party repair obstacles. And, since Indian law does not forbid planned obsolescence as such, these periods may involve setting lifetime years within which the law honors the R2R, aimed at reducing e-waste and organizing product refurbishing.⁷⁵

⁷² See Averitt and Lande (n 20) 713-714.

⁷³ See Competition Act, 2002, s 19(3). This provision lists the factors that the CCI or a forum must consider when assessing whether an agreement has caused an AAEC.

⁷⁴ See Competition Act, s 4(2)(a).

⁷⁵ Kundu and others (n 51).

The above ‘compete, protect, and sustain’ principles seek to boost competition, enhance consumer protection, promote sustainability, and foster a more equitable tech sector in India. Further more, the contemplated R2R Act must result from *amendments to existing laws*. Amendments to the Indian Copyright Act of 1957⁷⁶ and the Information Technology Act of 2000 are necessary to promote open software use, enabling the prolonged use of ‘older’ devices, irrespective of corporate preferences. An exception should be carved for software locks in repairs, allowing consumers to copy or modify software to maintain or repair their devices.

(b) Salient Provisions

In addition to those amendments to accompany the above-mentioned key principles, the anticipated Right to Repair Act in India should oblige tech companies to give consumers and third-party repairers manuals, schematics, updates, parts, and tools. A key part of the regulation, issued by the Department’s statement, said:

“Tech companies should provide complete knowledge and access to manuals, schematics, and software updates and to which the software license shouldn’t limit the transparency of the product in sale. The parts and tools to service devices, including diagnostic tools, should be made available to third parties, including individuals so that the product can be repaired if there are minor glitches.”⁷⁷

Next, the R2R legislation should guarantee that minimum requirements for app downloads align with the needs of the average Indian user. This entails offering regional language options and support for older devices.

While the multifaceted tech space in India favorably compares to the levels achieved in leading nations in East Asia, Europe, and North America, a large segment of the Indian population cannot access even basic technologies. For legislators aiming to introduce R2R provisions in India, reforming existing laws appears most viable. Particularly, removing access barriers could propel local manufacturing and software development, curb predatory practices, and stimulate innovation. As Vipra and Rao enthused, “[i]t is indeed time to let a hundred flowers — native ones at that — bloom.”⁷⁸

In the EU, businesses have adhered to amended community rules demanded by regulators. No reason exists to believe that businesses would not comply

⁷⁶ Copyright Act 14 of 1957.

⁷⁷ Press Information Bureau (n 49).

⁷⁸ Vipra and Rao (n 52).

with R2R regulations imposed by the world's second-biggest consumer market⁷⁹ and fifth-largest economy. Several Indian agencies, including the CCI and the Ministry of Electronics and Information Technology, should swiftly collaborate to adopt the recommended provisions for implementing the R2R.

VII. CONCLUSION

This research article has identified key principles based on insights from law and economics that lawmakers in India should consider inserting into an optimal Right to Repair Act. Overriding all these principles or recommendations is the principle of consumer sovereignty, which requires policymakers and lawyers to approach planned obsolescence first from the perspective of competition law before considering it through the lenses of consumer protection. The recommendations for providing the R2R in India then include designing products with repairability in mind, protecting against anti-repair measures such as software locks, defining responsibility periods for repair avenues, and amending existing laws like the Indian Copyright Act and the IT Act to promote open software.

Moreover, the legislation should cover competition, consumer protection, and environmental issues to support the R2R comprehensively. These principles collectively – the ‘compete, protect, and sustain’ framework we propose in this article – aim to shield relevant markets from the adverse effects of programmed obsolescence and consumers from exploitation, while encouraging sustainability in India.

The study has demonstrated the urgency of addressing planned obsolescence in the tech sector to mitigate its detrimental impact on the economy, society, and the environment. Our analysis of several jurisdictions (EU, France, and US) yielded valuable lessons for the development of a comprehensive legal framework to support the R2R. Notably, India, as an emerging nation with a rapidly growing tech sector, has much to gain from adopting such legislation, both in terms of sustainability and consumer choice.

Importantly, despite the global momentum surrounding the R2R movement, the Indian Parliament has not yet explicitly included R2R in competition and consumer protection laws. Nevertheless, the R2R does not necessitate that lawmakers expressly introduce it in the Competition Act, 2002,⁸⁰ because, as

⁷⁹ See HomiKharas and Wolfgang Fengler, ‘Which will Be the Top 30 Consumer Markets of this Decade? 5 Asian Markets Below the Radar’ (*Brookings*, 31 August 2021) <<https://www.brookings.edu/articles/which-will-be-the-top-30-consumer-markets-of-this-decade-5-asian-markets-below-the-radar/>> accessed 11 August 2023.

⁸⁰ Competition Act 2002, Act 12 of 2003.

showed by the *Kataria* case, the Act already envisages planned obsolescence insofar as it causes an appreciable adverse effect on competition (AAEC) in India. However, the same does not necessarily hold true for consumer protection law. To redress this situation, the Indian Parliament could either amend the Consumer Protection Act of 2019 to incorporate the R2R or pass a R2R-specific statute. In either case, the legislature must factor in the principles we have traversed in this paper.

By doing so, India would not only enhance consumer choice and protection but also promote a more sustainable tech sector, benefiting its citizens, the environment, and the economy as a whole. In this regard, the findings of this study serve as a timely and valuable resource for policymakers, manufacturers, and consumers alike, underscoring the necessity of a concerted effort to enshrine the R2R in legislation.

Looking ahead, implementing the comprehensive R2R framework set out in this article holds profound implications for the future of the tech sector, consumer rights, and sustainable development. Embracing R2R will likely encourage innovation, as manufacturers would need to design devices that are more durable, easily repairable, and upgradable, thus increasing product longevity and reducing e-waste. With regard to the latter point, from a sustainability perspective, R2R has the potential to significantly reduce the impact of e-waste on the environment by extending the useful life of electronic devices and decreasing the extraction of natural resources required to manufacture new devices. Therefore, as the world faces growing challenges looming from climate change and resource depletion, the right to repair emerges as a crucial component in the pursuit of a more sustainable and resilient future.