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PLANNED OBSOLESCENCE AND THE REGULATORY LOOPHOLE IN INDONESIA: A Preventive Framework Based on *Sadd Al-Żarī'ah*

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Abstract

Planned obsolescence has emerged as a global business strategy that causes multidimensional harms to consumers and the environment by intentionally or systematically shortening product lifespans. Despite its growing significance, this practice has not received an adequate regulatory response within the Indonesian legal system. This study analyses the regulatory loophole concerning planned obsolescence in Indonesia and proposes a preventive regulatory model based on the doctrine of sadd al-żarī'ah, thereby providing a legal framework that is proportionate, equitable, and responsive to the objectives of consumer protection and environmental sustainability. This research employs a doctrinal legal methodology using statutory, comparative, and conceptual approaches. Primary and secondary legal materials were analysed through qualitative-prescriptive methods, revealing that existing consumer protection, environmental, and product-related regulations in Indonesia do not explicitly recognise or regulate planned obsolescence, resulting in limited legal certainty and inadequate protection against the economic and environmental harms associated with such practices. The study further demonstrates that sadd al-żarī'ah offers a persuasive normative foundation for preventive regulation by emphasising the harmful consequences and risk characteristics of a practice rather than relying solely on proof of intent. This

approach supports the development of risk-based and precautionary regulatory measures that balance consumer protection, environmental sustainability, business innovation, and legal certainty. More broadly, the study contributes to global discussions on sustainable consumption and preventive regulation by demonstrating how Islamic legal principles can inform contemporary responses to emerging market risks.

Praktik planned obsolescence telah berkembang menjadi strategi bisnis global yang menimbulkan kerugian multidimensional bagi konsumen dan lingkungan hidup melalui pemendekan usia pakai produk secara sengaja maupun sistematis. Meskipun dampaknya semakin signifikan, praktik ini belum memperoleh respons regulasi yang memadai dalam sistem hukum Indonesia. Penelitian ini bertujuan untuk menganalisis kekosongan pengaturan mengenai planned obsolescence dalam sistem hukum Indonesia serta merumuskan model regulasi preventif berbasis sadd al-żarī'ah yang mampu menghadirkan kerangka hukum yang proporsional, berkeadilan, dan responsif terhadap tujuan perlindungan konsumen serta keberlanjutan lingkungan. Penelitian ini merupakan penelitian hukum doktrinal dengan pendekatan perundang-undangan, perbandingan, dan konseptual. Bahan hukum primer dan sekunder dianalisis menggunakan metode kualitatif-preskriptif. Hasil penelitian menunjukkan bahwa peraturan perundang-undangan yang berkaitan dengan perlindungan konsumen, lingkungan hidup, dan produk di Indonesia belum secara eksplisit mengakui maupun mengatur praktik planned obsolescence, sehingga menimbulkan ketidakpastian hukum serta belum memberikan perlindungan yang memadai terhadap kerugian ekonomi dan lingkungan yang ditimbulkannya. Penelitian ini juga menemukan bahwa metode sadd al-żarī'ah menyediakan landasan normatif yang kuat bagi pembentukan regulasi preventif dengan menitikberatkan pada potensi bahaya dan karakteristik risiko suatu praktik, tanpa bergantung sepenuhnya pada pembuktian unsur kesengajaan pelaku usaha. Pendekatan tersebut sejalan dengan konsep regulasi berbasis risiko dan prinsip kehati-hatian, sehingga mendukung perumusan kebijakan yang menyeimbangkan perlindungan konsumen, keberlanjutan lingkungan, inovasi usaha, dan kepastian hukum. Secara lebih luas, penelitian ini berkontribusi pada pengembangan diskursus global mengenai konsumsi berkelanjutan dan regulasi preventif dengan menunjukkan relevansi prinsip hukum Islam dalam merespons risiko-risiko baru di pasar modern.

***Keywords**: Regulatory Vacuum, Planned Obsolescence, Consumer Protection, Environmental Sustainability, Sadd al-Żarī'ah*

Introduction

Planned obsolescence is a product design strategy that deliberately shortens a product's lifespan by causing it to malfunction, decline in performance, or become difficult to repair before reaching the end of its optimal use.[1] As a structural feature of the modern production and consumption system, this practice fosters a culture of consumerism that generates economic advantages for industrial actors. As a consequence, it gives rise to economic, consumer, and environmental harms that intersect with human rights concerns.

Planned obsolescence has created a systematic economic and ecological domino effect in the cultural domain of global consumerism. This practice refers to a product design strategy that deliberately shortens a product's lifespan to boost repeat purchases.[2] As a result, the benefits of using products for consumers are limited, leading them to repeat purchases and incurring economic losses through premature replacement, while increasing waste production that threatens environmental sustainability. Products designed to be non-durable are no longer market anomalies, but rather an institutionalised part of the business model. This phenomenon shifts the paradigm from durability as a long-term, value-based quality indicator to replaceability as a mechanism to accelerate capital accumulation.[3]

The practice of planned obsolescence is not a novel phenomenon within the modern economic system. The Phoebus Cartel of 1924 is frequently cited as an example, in which a consortium of incandescent lamp manufacturers collectively restricted product lifespans to stimulate

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[1] Mette Kahlin McVeigh, Carl Dalhammar, dan Jessika Luth Richter, "Planned Obsolescence - Built Not to Last," Brussels, Belgium: Stockholm: European Liberal Forum (ELF), 2019, 1–4, https://liberalforum.eu/wp-content/uploads/2021/07/Planed-Obsecluance_84p_110x178.pdf.

[2] Lieselot Bisschop, Yogi Hendlin, dan Jelle Jaspers, "Designed to Break: Planned Obsolescence as Corporate Environmental Crime," *Springer: Crime, Law and Social Chan*ge 78 (Maret 2022): 272–75, https://doi.org/https://doi.org/10.1007/s10611-022-10023-4.

[3] Giles Slade, *Made to Break: Technology and Obsolescence in Ameri*ca (Cambridge: Harvard university press, 2006), https://cursosupla.wordpress.com/wp-content/uploads/2015/12/slade-g-made-to-break-technology-and-obsolescence-in-america-2007.pdf.

consumption.[4] Although its manifestations have evolved over time, comparable practices persist across a range of contemporary products, including printers that cease to function after reaching a predetermined usage threshold,[5] smartphones that exhibit diminished performance following system updates,[6] and electronic devices deliberately designed to resist repair or component replacement.[7] This development has generated increasingly complex legal issues, as numerous jurisdictions, including Indonesia, have yet to establish a regulatory framework that explicitly defines, limits, and allocates responsibility to business actors engaged in planned obsolescence. Consequently, consumer protection, environmental sustainability, and legal certainty within the contemporary consumption cycle continue to face significant problems.

The majority of jurisdictions in various countries lack legal instruments that explicitly prohibit planned obsolescence.[8] France is an exception because it prohibits such practices through the Energy Transition for Green Growth Act 2015 (Loi n° 2015-992), which defines planned obsolescence as "techniques by which the person responsible for placing a product on the market deliberately intends to shorten the life cycle," stipulating criminal sanctions of up to two years' imprisonment and a fine of €300,000 or 5% of the company's annual turnover.[9] However, the implementation of the planned

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[4] Markus Krajewski, "The Great Lightbulb Conspiracy: Planned Obsolescence and the Phoebus Cartel," *IEEE Spectrum*, 24 September 2014, 609–10, https://spectrum.ieee.org/the-great-lightbulb-conspiracy.

[5] Bisschop, Hendlin, dan Jaspers, "Designed to Break: Planned Obsolescence as Corporate Environmental Crime," 282–83.

[6] Mariateresa Maggiolino, "Planned Obsolescence: A Strategy in Search of Legal Rules," *Italian Law Journal* 4, no. 1 (2018): 1–3, https://doi.org/https://doi.org/10.1007/s40319-019-00812-1.

[7] Maggiolino, "Planned Obsolescence: A Strategy in Search of Legal Rules," 1–2.

[8] Jurgita Malinauskaite dan Fatih Buğra Erdem, "Planned Obsolescence in the Context of a Holistic Legal Sphere and the Circular Economy," *Oxford Journal of Legal Studi*es 41, no. 3 (2021): 731–40, https://doi.org/https://doi.org/10.1093/ojls/gqaa061.

[9] Loi n° 2015-992 relative à la transition énergétique pour la croissance verte, art. 99 codified at Code de la consommation § art. L. 441-2 (2015); Anaı¨s Michel, *Product Lifetimes through the Various Legal Approaches within the EU Context: Recent Initiatives against Planned Obsolescence' in Conny Bakker and Ruth Mugge (eds), Product Lifetimes and the Environme*nt, vol. 9 (Delft University of Technology and IOS Press, 2017), https://ebooks.iospress.nl/publication/47882.

obsolescence provisions in various countries, especially France, faces substantial obstacles. To date, no judicial precedent has been established for the criminalisation of planned obsolescence. In contrast, at the European Union level, the adoption of Directive 2024/1799 on the Right to Repair and Regulation 2024/1781 establishing the Ecodesign for Sustainable Products Regulation (ESPR) signals a broader legislative shift toward mandatory product durability and repairability standards, representing the most comprehensive regulatory advances to date in addressing the structural conditions that enable planned obsolescence.[10]

This condition also reflects similar problems in Indonesia, which faces regulatory issues that are no less complex in responding to the phenomenon of planned obsolescence. Law No. 8 of 1999 concerning Consumer Protection prohibits business actors from producing goods that do not comply with the required standards.[11] However, this provision raises a fundamental question: Can a product design with a deliberately shortened lifespan qualify as "non-compliant" when it technically meets the required specifications?[12] Similarly, Law No. 5 of 1999 concerning the Prohibition of Monopolistic Practices and Unfair Business Competition, which focuses on agreements or acts that inhibit competition, raises a dilemma: can unilateral product design strategies that systematically shorten the consumption cycle be

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[10] Directive (EU) 2024/1799 of the European Parliament and of the Council of 13 June 2024 on Common Rules Promoting the Repair of Goods and Amending Regulation (EU) 2017/2394 and Directives (EU) 2019/771 and (EU) 2020/1828 (Text with EEA Relevance), CONSIL, EP (2024), http://data.europa.eu/eli/dir/2024/1799/oj; Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 Establishing a Framework for the Setting of Ecodesign Requirements for Sustainable Products, Amending Directive (EU) 2020/1828 and Regulation (EU) 2023/1542 and Repealing Directive 2009/125/EC (Text with EEA Relevance) (2024), http://data.europa.eu/eli/reg/2024/1781/oj. Instrumen-instrumen ini mewakili respons legislatif Uni Eropa yang paling komprehensif terhadap kondisi struktural yang memungkinkan terjadinya keusangan terencana, dengan mewajibkan kemudahan perbaikan, ketahanan produk, serta ketersediaan suku cadang di berbagai kategori produk.

[11] Pasal 8 ayat (1), Undang-Undang Republik Indonesia Nomor 8 Tahun 1999 tentang Perlindungan Konsumen, 42 Lembaran Negara Republik Indonesia Tahun 1999.

[12] Pasal 8, Undang-Undang Republik Indonesia Nomor 8 Tahun 1999 tentang Perlindungan Konsumen.

concluded as practices that are detrimental to consumers, or are they outside the jurisdiction of competition law?[13]

The absence of jurisprudence specifically addressing the practice of planned obsolescence within Indonesian law raises serious questions concerning the effectiveness of legal protection amid the rising volume of *e-waste* and the economic losses borne by consumers. This regulatory vacuum produces divergent consequences across each relevant legal regime. From a consumer protection perspective, the absence of regulation governing planned obsolescence creates uncertainty about consumers' right to obtain quality, durable, and repairable goods, while also complicating efforts to hold business actors accountable for losses caused by premature product failure. From an environmental law perspective, the lack of specific legal instruments simply increases e-waste and leads to weak producer accountability for the environmental impacts caused and consumer protection is recognised as an inherent component of the evolving modern human rights regime.[14] Meanwhile, within the competition law regime, contemporary planned obsolescence practices are difficult to classify as anti-competitive conduct, given that they are typically pursued unilaterally or through covert coordination rather than explicit agreement.[15] Consequently, this fragmentation across the three regimes leads to legal uncertainty. Therefore,

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[13] Undang-Undang Republik Indonesia Nomor 5 Tahun 1999 tentang Larangan Praktik Monopoli dan Persaingan Usaha Tidak Sehat, 33 Lembaran Negara Republik Indonesia Tahun 1999; Kurnia Togar Simatupang, *Aspek Hukum Periklanan dalam Perspektif Perlindungan Konsum*en (Bandung: Citra Aditya Bakti, 2004). Identifying the limited capacity of the regime of consumer protection in reaching the practice that formally fulfils the technical standard but substantially leads to loss.

[14] In the literature on contemporary human rights, consumer and environmental protection is understood as a manifestation of basic rights ingrained in the rights to a decent standard of life, the right to health, and the right to prosperity. Therefore, these two regimes substantially represent the right-based approach, although when it is not consistently formulated explicitly. David Patterson, "Human Rights-based Approaches and the Right to Health: A Systematic Literature Review," *Journal of Human Rights Practice* 16, no. 2 (Juli 2024): 603–23, https://doi.org/10.1093/jhuman/huad063.

[15] Supreme Court of The United States, "Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP," 2003, https://supreme.justia.com/cases/federal/us/540/02-682/opinion.pdf.

the appropriate regulatory framework and enforcement mechanisms are required to address the practice of planned obsolescence.[16]

The regulatory complexity of planned obsolescence is compounded by the evidentiary dilemma inherent in the structure of practice. Unlike cartels that leave documentary traces of explicit agreements, contemporary planned obsolescence is embedded in proprietary, non-transparent technical design decisions.[17] Proving that the manufacturer "deliberately intends to shorten the life cycle" as required by French law requires proof of corporate mens rea a standard that presents significant evidentiary challenges. Manufacturers may argue that the decline in durability is a trade-off for innovation, cost efficiency, or consumer preference for new features.[18]

This ambiguity gives rise to *a "lawful but awful"* condition, a situation in which a substantively detrimental product design strategy that may impact both consumers and the environment remains formally legitimate because it does not squarely fall within the categories of violation recognised under the applicable legal regime. Therefore, the problem lies not only in moral or economic aspects but also in a doctrinal one: the existing legal framework fails to capture design practices intended to shorten product lifespans, precisely because such practices cannot be established through the elements of violation as defined by the law.[19] Furthermore, the risk of over-criminalisation is a legitimate concern because overly broad regulation can stifle genuine innovation, where the development of new products with superior features inherently makes old products obsolete, a phenomenon that economists refer to as "creative destruction" to allow for technological advancement.[20] The difficulty of distinguishing between artificial (manipulative) obsolescence and

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[16] Nicole Cullen, "From Lightbulbs to #Sheinhauls: Considerations for Planned Obsolescence Regulation in the Modern Era," *Washington Law Review* 99, no. 2 (Juni 2024): 469–70.

[17] Bisschop, Hendlin, dan Jaspers, "Designed to Break: Planned Obsolescence as Corporate Environmental Crime," 276–80.

[18] Bisschop, Hendlin, dan Jaspers, "Designed to Break: Planned Obsolescence as Corporate Environmental Crime," 284–85.

[19] Bisschop, Hendlin, dan Jaspers, "Designed to Break: Planned Obsolescence as Corporate Environmental Crime," 206–87.

[20] Joseph A. Schumpeter, *Capitalism, Socialism and Democracy*, 3 ed. (New York: Harper & Brothers, 1950), https://shorturl.at/l9AAl.

genuine (innovative) obsolescence makes the formulation of prohibition parameters a technical and normative problem that remains unresolved.

The ecological impact of planned obsolescence has reached alarming proportions globally. Data show that global electronic waste (e-waste) reached 62 million tons in 2022, up 82% from 2010, and is projected to reach 82 million tons by 2030. Only 22.3% of e-waste generated in 2022 was formally recycled, with recycling rates expected to decline to 20% by 2030 as e-waste growth far outstrips recycling efforts.[21] In Indonesia, recent projections indicate that national e-waste generation could reach 4.2 million tons by 2040. The same study further estimates that the hazardous material content of this e-waste will rise from 8,486.79 tons in 2020 to 42,045.45 tons in 2040, an increase of approximately 395.42 per cent. This trajectory points to a substantial escalation of environmental risk if the growth in electronic device consumption fails to align with adequate waste management policy.[22] Planned obsolescence bears a direct causal relationship to this environmental crisis. Research demonstrates that 80% of a product's total environmental impact and 90% of its manufacturing cost are determined at the initial design stage, meaning that design decisions intended to deliberately shorten product lifespans directly lead to other issues, such as pollution, resource depletion, and the accumulation of hazardous electronic waste.[23]

Another dimension of this complexity concerns the need to balance consumer and environmental protection against the sustainability of economic activity. It is essential to recognise that economic growth, market innovation, and technological advancement are, in principle, driven by legitimate innovation rather than by the practice of planned obsolescence.

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[21] Forti dkk., "The Global E-waste Monitor 2024: Quantities, Flows, Resources, and the Circular Economy Potential," Edisi 2, Geneva, November 2024, https://ewastemonitor.info/wp-content/uploads/2024/12/GEM_2024_EN_11_NOV-web.pdf.

[22] I. Made Wahyu Widyarsana dan Dinda Annisa Nurdiani, "Identification of Electronic Waste (E-Waste) Generation from the Household and Non-Household Sectors in Indonesia and Its Sustainable Management System," *E3S Web of Conferences* 485 (2024): 5–11, https://doi.org/10.1051/e3sconf/202448505006.

[23] Oladele A. Ogunseitan dkk., "The Electronics Revolution: From E-Wonderland to E-Wasteland," *Scien*ce 326, no. 5953 (Oktober 2009): 670–71.

While accelerated product turnover may generate economic activity, create employment, and stimulate investment,[24] such benefits do not in themselves justify design strategies intended to compel repeat purchases through artificially reduced product durability. Considering this, regulatory interventions such as minimum durability standards or repair obligations must be calibrated proportionately to avoid impeding genuine innovation and healthy competition. This tension suggests that the main problem lies not in choosing between economic growth and consumer protection, but in delineating a clear legal boundary between obsolescence resulting from a legitimate process of innovation (genuine obsolescence) and obsolescence deliberately engineered to accelerate the consumption cycle.[25] Therefore, planned obsolescence regulation should be intended to suppress manipulative practices without impeding legitimate, socially beneficial technological progress.

In the context of this regulatory dilemma, this study seeks to formulate a regulatory approach that protects both consumer and producer rights, based on the principle of proportionality. The perspective of Islamic law is used as a conceptual framework, particularly through the *sadd al-żarī'ah* method, which offers an ethical-normative basis for the preventive and proportionate regulation of planned obsolescence. *Sadd al-żarī'ah*, which literally means "to close the path to destruction", is a method of ijtihad that prohibits acts that are formally *mubah* but have the potential to cause greater damage.[26] Ibn Qayyim al-Jauziyyah, as one of the main exponents of this doctrine, established three conditions for the application of *sadd al-żarī'ah*: (1) the potential harm that arises must be real and greater than the benefit; (2) the act

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[24] Jeremy Bulow, "An Economic Theory of Planned Obsolescence," *Quarterly Journal of Economic*s 101, no. 4 (1986): 729–50, https://doi.org/https://doi.org/10.2307/1884176. 730–743, discussing planned obsolescence as a rational strategy of monopolistic and oligopolistic corporations in the context of durability choice, entry, and the implication for welfare, without developing aggregate macroeconomic analysis.

[25] Malinauskaite dan Buğra Erdem, "Planned Obsolescence in the Context of a Holistic Legal Sphere and the Circular Economy," 721–44.

[26] Panji Adam Agus Putra, "The Concept Of Sadd Al-Dzarî'ah According To Ibn Qayyim Al-Jauziyyah And Its Application In Sharia Economic Law (Mu'âmalah Mâliyyah)," *Al-Afkar: Journal For Islamic Studi*es 7, no. 1 (2024): 1139–44.

is not a recurring need in people's lives; and (3) its application must not contradict the *nash shar'i* or the fundamental objectives of sharia (*maqāṣid al-syari'ah*).[27] Critically, *sadd al-ẋarī'ah* functions not merely as a normative Islamic prohibition, but as an analytical method for designing preventive and proportionate regulation: by employing a structural-objective assessment of probable harm rather than requiring proof of subjective intent, it provides a jurisprudential basis for bridging the evidentiary gap that has rendered existing positive law instruments ineffective in addressing the regulatory loophole on planned obsolescence in Indonesia.[28]

Although planned obsolescence is not a novel field of inquiry, the existing literature remains fragmented across several legal and theoretical domains. First, within the consumer protection and criminalisation literature, Mario Maggiolino characterises planned obsolescence as a "strategy in search of legal rules" through a comparative analysis of the Apple-Samsung case in Italy and French criminal law.[29] His study demonstrates that regulatory intervention has primarily targeted misleading commercial practices rather than planned obsolescence itself, thereby exposing a normative gap in the substantive regulation of product-life reduction strategies. Second, from a competition law perspective, Maggiolino further argues that existing legal frameworks struggle to address planned obsolescence because many harmful practices fall outside traditional antitrust categories and remain formally lawful despite their adverse effects on consumers. Third, studies addressing the circular economy and the right to repair foreground the environmental and sustainability dimensions of planned obsolescence. Malinauskaite and Erdem examine the issue through the European Union's Circular Economy framework and conclude that existing instruments, including the Unfair Commercial Practices Directive, Ecodesign Directive, and Waste Electrical and Electronic Equipment Directive, remain fragmented and predominantly

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[27] Adam Agus Putra, "The Concept Of Sadd Al-Dzarî'ah According To Ibn Qayyim Al-Jauziyyah And Its Application In Sharia Economic Law (Mu'âmalah Mâliyyah)," 1143–44.

[28] Wahbah Zuḫaylī, *Uṣūl al-fiqh al-Islā*mī, versi al-Ṭab'ah 1., al-Ṭab'ah 1. (Dimashq, Sūrīyah: Dār al-Fikr, 1986), 1035–1039.

[29] Maggiolino, "Planned Obsolescence: A Strategy in Search of Legal Rules."

transparency-oriented.[30] Similarly, Ataíde and Rodrigues conceptualise planned obsolescence as a violation of consumer rights associated with repairability,[31] while Shofwan underscores the importance of the right to repair, environmental information disclosure, and oversight of greenwashing within a circular economy framework.[32] Fourth, within Islamic legal theory, Putra analyses *sadd al-ẓarı'ah* as a method of preventive ijtihad aimed at averting harm in *muamalah* transactions. However, this study does not extend to planned obsolescence as a contemporary form of economic conduct that may warrant preventive legal intervention. Overall, these studies indicate that the existing literature has approached planned obsolescence from the perspectives of consumer protection, competition law, criminalisation, the circular economy, and Islamic legal theory.[33] Nevertheless, no study has yet systematically integrated the doctrine of *sadd al-ẓarī'ah* into the analysis of planned obsolescence as a foundation for developing preventive regulatory instruments. This study addresses that gap by examining the regulatory loophole concerning planned obsolescence in Indonesia and proposing *sadd al-ẓarı'ah* as a jurisprudential framework for preventive legal regulation.

Building on the foregoing discussion, this research departs from the premise that planned obsolescence is a complex phenomenon situated amid law, economics, and public policy. The practice poses distinct regulatory issues, as it is likely to harm consumers and exacerbate environmental degradation while simultaneously demanding a proportionate legal approach that does not impede legitimate innovation. Accordingly, this study poses two principal research questions: 1) What are the implications of the regulatory loophole for the enforcement of consumer protection law and environmental

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[30] Malinauskaite dan Buğra Erdem, "Planned Obsolescence in the Context of a Holistic Legal Sphere and the Circular Economy."

[31] Rui Ataíde dan António Barroso Rodrigues, *Consumer Protection in the European Union Regarding Planned Obsolescence and the Right to Repair*, (Rochester, NY), 22 Maret 2023, 3–21, https://doi.org/doi:%2010.2838/457132.

[32] Naufal Shofwan, "The Role of Consumers in The Circular Economy: A Literature Review On Consumer Protection Regulations and Sustainability," *Multidisciplinary Indonesian Center Journal (MICJO)* 3, no. 1 (Januari 2026): 1767–75, https://doi.org/10.62567/micjo.v3i1.2124.

[33] Adam Agus Putra, "The Concept Of Sadd Al-Dzarî'ah According To Ibn Qayyim Al-Jauziyyah And Its Application In Sharia Economic Law (Mu'âmalah Mâliyyah)."

sustainability in addressing the practice of planned obsolescence? 2) How might the *sadd al-ẓarī'ah* method serve as a normative basis for formulating a preventive regulatory framework proportionate to the practice of planned obsolescence? This research argues that integrating the *sadd al-ẓarī'ah* method with contemporary law can yield a conceptual framework that balances consumer protection, environmental sustainability, and legal certainty for business actors. Such an approach can also supply normative parameters for distinguishing obsolescence of legitimate innovation (genuine obsolescence) from obsolescence deliberately engineered to boost the consumption cycle (artificial obsolescence). This article systematically maps regulatory loopholes regarding planned obsolescence within the Indonesian legal system and operationalises *sadd al-ẓarī'ah* as a legal instrument to develop a preventive and proportionate regulatory framework that addresses issues in consumer protection, environmental sustainability, and responsible innovation.

Research Methods

This article employs a doctrinal legal research method with a prescriptive orientation, aiming to reconstruct the regulatory framework governing planned obsolescence as a manifestation of modern business strategies that directly impact consumer protection and the sustainability of the legal system. As a prescriptive discipline, legal science not only explains what law is but also establishes what law should be, making doctrinal research an appropriate methodological choice for generating normative recommendations for regulatory reform. [34]

This study is guided by two research questions: 1) What are the implications of the regulatory gap regarding planned obsolescence for the enforcement of consumer protection and environmental sustainability laws? 2) How can the *sadd al-ẓarī'ah* method serve as a normative foundation for a proportionate preventive regulatory framework addressing planned obsolescence? To answer these questions, this research employed legal, comparative, and conceptual approaches.

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[34] Peter Mahmud Marzuki*, Penelitian Huk*um (Jakarta: Kencana, 2019), 29.

The legal approach addresses the first research question by systematically reviewing Indonesian laws on consumer protection, competition, and producer liability to identify the extent of the regulatory gap and its consequences for law enforcement. The comparative approach builds on this mapping and also addresses the first research question by testing it against foreign jurisdictions to identify transferable best practices. France, Italy, Austria, the United Kingdom, and Canada (Quebec) were selected because, based on the author's review, these jurisdictions currently have the most advanced and explicit legal frameworks specifically addressing planned obsolescence, ranging from specific legal definitions and sanctions (France) to regulations on eco-design and the right to repair (the United Kingdom) and specific consumer protection legislation against planned obsolescence (Quebec). This approach compares the substance, scope, and enforcement mechanisms of each jurisdiction's laws against the Indonesian framework. The conceptual approach addresses the second research question by formulating a proportional and fair regulatory framework using the *sadd al-żarī'ah* method as a normative-ethical basis, distinguishing between prohibited and permissible practices and establishing preventive parameters that anticipate harm to consumers and the public interest. The result is a conceptual framework that integrates *sadd al-żarī'ah* with contemporary positive law, balancing consumer and environmental protection with economic stability. The second category consists of comparative foreign legal material: the French Consumer Code (Code de la consommation); Italian Legislative Decree No. 206 of September 6, 2005 (Codice del Consumo); The Austrian Environmental Support Act (Umweltförderungsgesetz); the United Kingdom's Eco-Design Regulation for Energy-Related Products and Energy Information 2021; and Quebec's Bill 29, an Act to Protect Consumers from Planned Obsolescence and to Promote the Durability, Repairability, and Maintainability of Goods. The third section consists of principles of international environmental law: the 1992 Rio Declaration on Environment and Development.

Secondary legal materials consist of textbooks, journal articles, and previous research directly related to planned obsolescence, consumer

protection, and *sadd al-żarī'ah*,[35] selected based on their relevance, currency, and reliability, and obtained through a literature review. All legal materials were analysed qualitatively using legal interpretation techniques combined with prescriptive-argumentative analysis to formulate a regulatory model for responsive, proportionate planned obsolescence intended to prevent harm to consumers and the environment.

Discussion

The Implications of the Regulatory Loophole on Consumer Protection and Environmental Sustainability

Planned obsolescence is a deliberate business strategy in which manufacturers engineer artificially shortened product lifespans through fragile components, software-imposed limitations, or designs that anticipate rapid technical obsolescence, thereby sustaining continuous repurchase cycles independent of genuine functional decline.[36] Although routinely justified as an innovation necessary for competitiveness, this framing obscures the practice's coercive structure and the absence of meaningful regulatory constraint.[37] As a result, several interlocking consequences follow: First, compressed lifespans generate cumulative electronic waste, intensifying environmental degradation through accelerated disposal. Second, premature obsolescence drives inefficient extraction and consumption of finite natural resources, hastening depletion. Third, recurring forced replacement imposes recurring financial burdens on consumers, externalising costs that manufacturers avoid bearing. Fourth, consumers purchase amid information asymmetry, with no disclosure of the actual product lifespan, which undermines autonomous, informed decision-making. Fifth, design choices obstruct repairability, foreclosing the right to repair and degrading product sustainability. Finally, firms exploiting

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[35] Irwansyah dan Ahmad Yunus*, Penelitian Hukum: Pilihan Metode & Praktik Penulisan Artik*el (Yogyakarta: Mirra Buana Media, 2020).

[36] Bisschop, Hendlin, dan Jaspers, "Designed to Break: Planned Obsolescence as Corporate Environmental Crime," 272–75.

[37] Malinauskaite dan Buğra Erdem, "Planned Obsolescence in the Context of a Holistic Legal Sphere and the Circular Economy," 719–22; Alan Nemirovski, "Designing fair competition: A market solution to planned obsolescence," *Studies in Philosophy, Politics and Economics,* 7, no. 1 (2025): 1–6.

shortened lifecycles gain unearned competitive advantage, distorting market structures and conditions that collectively warrant targeted legal intervention.[38]

The Relevance of Planned Obsolescence Regulations in Indonesia

In Indonesia, no regulation explicitly regulates the ethical boundaries and responsibilities of business actors for planned obsolescence. This gap hampers the law from reaching such practices that are detrimental to consumers and are often considered reasonable innovations, even though they have the potential to violate the principles of fairness and consumer protection.[39] As a result, market risk tends to be passed on to consumers while profits are concentrated on producers. Therefore, regulatory mapping is needed to assess whether existing norms have regulated planned obsolescence or still leave a legal loophole. The following table identifies and compares several consumer protection regulations in Indonesia.

Table 1. Regulations on Consumer Protection in Indonesia

No	Regulation	Relevance to Planned Obsolescence
1	Law No. 8 of 1999 concerning Consumer Protection	Law No. 8 of 1999 concerning Consumer Protection does not explicitly regulate planned obsolescence. This Law, however, set out the prohibition for business actors to sell goods that do not meet the standards as per the Law and goods that are damaged, defective or used,

[38] Sustainability Directory, *Planned Obsolescence Critiq*ue, 8 Maret 2025, https://sustainability-directory.com/term/planned-obsolescence-critique/.

[39] The regulation concerning consumer protection in Indonesia requires revision to adjust to the current development and modern business trends along with their current challenges; such a problem is evident in online shopping the Consumer Protection Law has not comprehensively governed, particularly regarding rights and obligations of both producers and consumers. Even worse, the planned obsolescence is labelled with innovation to lure consumers into buying more, as producers tend to design the products to be unrepairable and not to last long. See, Yustina Dhian Novita dan Budi Santoso, "Urgensi Pembaharuan Regulasi Perlindungan Konsumen di Era Bisnis Digital," *Jurnal Pembangunan Hukum Indones*ia 3, no. 1 (Januari 2021): 51–55, https://doi.org/https://doi.org/10.14710/jphi.v3i1.46-58.

		and polluted without providing complete information (Article 7 and Article 8).
2	Law No. 7 of 2014 concerning Trade	Law No. 7 of 2014 concerning Trade does not explicitly regulate planned obsolescence, but it only regulates the standardisation of goods for sale that must meet the the Indonesian National Standard (SNI) set by the minister without explaining the benchmark of goods that are suitable for trade. This will cause uncertainty of standardisation and will have an impact on planned obsolescence. (Article 57-Article 59).
3	Law No. 20 of 2014 concerning Standardisation and Conformity Assessment	Law No. 20 of 2014 concerning Standardisation and Conformity Assessment regulation also does not explain the standard for products that are suitable for trade; it only explains the measurement mechanism.
4	Government Regulation No. 58 of 2001 concerning the Development and Supervision of the Implementation of Consumer Protection	Government Regulation No. 58 of 2001 concerning the Development and Supervision of the Implementation of Consumer Protection does not regulate planned obsolescence, but it just regulates the mechanism of coaching and supervision.
5	The Government version of the Consumer Protection Bill 2021	The Government version of the Consumer Protection Bill 2021 looks more progressive than previous regulations, as it encourages business actors to include the expiration of a product and provide spare parts for goods that have at least 1 year of use; it also strictly regulates sanctions for business actors failing to fulfill their obligations. However, there is no specific regulation

		related to planned obsolescence (Article 8-Article 18).
6	The 2023 Consumer Protection Bill of the House of Representatives	The 2023 Consumer Protection Bill version of the House of Representatives does not regulate planned obsolescence; it only encourages business actors to include the expiration of a product and the procurement of spare parts for goods whose use is at least one year (Article 8, paragraph (3) letter i and Article 10 letter b).
7	The Government's version of the 2025 Consumer Protection Bill	The Government's version of the 2025 Consumer Protection Bill does not regulate planned obsolescence; it only encourages business actors to include the expiration of a product and the procurement of spare parts for goods whose use is at least one year (Article 10, paragraph (1) letter k and Article 11 letter b).

Source: Author's Processed Results (2025)

A systematic review of Table 1 reveals a fundamental normative gap because no legal instrument in Indonesia explicitly addresses planned obsolescence. Existing provisions fail to address design-based obsolescence because they operate at the wrong regulatory stage, product standards target safety compliance rather than durability performance, disclosure obligations are limited to hazard warnings and expiry dates for consumables without extending to repairability indexes or technical lifespans, and after-sales obligations address the consequences of product failure rather than their engineering causes. Draft provisions on expiry labelling and spare parts availability remain unratified and still do not address the upstream design stage where obsolescence is embedded. This structural ambiguity has a direct evidentiary consequence. Without mandatory disclosure of design intent or technical lifespans, establishing intent (mens rea) in unfair trade practice

claims becomes nearly impossible, rendering producer liability ineffective even when consumers are proven to have suffered harm.[40]

When goods fail prematurely, producers exploit limitations on contractual liability to structurally shift risk onto consumers a classic moral hazard reinforced by weak mandatory standards.[41] Rational producers optimising for turnover rather than durability perpetuate a regime of planned obsolescence whose social costs, including financial burdens, eroded consumer trust, and waste accumulation, are externalised onto consumers, while private gains remain concentrated.[42] This dynamic is structurally sustained by information asymmetry because consumers cannot assess product durability ex ante, and market signals fail to penalise low-quality producers, eliminating competitive incentives for durable production. Reactive supervisory agencies with inadequate investigative authority cause these failures.[43] Therefore, Effective reform requires mandatory service-life disclosure, enforceable right-to-repair guarantees, strict liability thresholds, and expanded supervisory powers, without which the structural imbalance between producers and consumers remains uncorrected.

The absence of strict norms and the difficulty of proving intentionality create obstacles to the application of planned obsolescence. In the absence of minimum service-life standards and design disclosure obligations, supervisory authorities lack both the legal basis and the evidentiary instruments required to investigate violations. This gap, arising from inadequate investigative

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[40] Carl Dalhammar dan Eleonore Maitre-Ekern, "Regulating planned obsolescence: a review of legal approaches to increase product durability and reparability in Europe," *Review of European, Comparative & International Environmental Law (RECIE*L) 25, no. 3 (November 2016): 380–83, https://doi.org/10.1111/reel.12182.

[41] *Moral hazard* represents a situation when a person or party tends to risk something, as they feel protected from negative consequences.

[42] Malinauskaite dan Buğra Erdem, "Planned Obsolescence in the Context of a Holistic Legal Sphere and the Circular Economy," 731–40.

[43] Rio Priambodo, Siti Rifqa Raihani, dan Slamet Tri Wahyudi, "Rekonstruksi Penyelesaian Sengketa Konsumen Melalui Penguatan Kelembagaan Perlindungan Konsumen sebagai Perwujudan Bela Negara," *Media Hukum Indones*ia 4, no. 1 (2025): 710–21, https://doi.org/https://doi.org/10.5281/zenodo.17919120.

capacity, creates persistent risks of harm to consumers.[44] As long as the instruments for identification and enforcement are inadequate, the producer remains dominant while the consumer bears the losses. While this practice is not only economically detrimental, it accelerates the consumption cycle and increases waste, particularly hazardous electronic waste; it also increases the exploitation of resources and energy at an ecological cost imposed on society and the state.[45] This condition is clearly contrary to the principles of sustainability and strengthening the circular economy.

The data presented in the preliminary section, showing an increase in the volume of waste from year to year, indicates that Indonesia not only faces the problem of excessive consumption, but also contributes to a very significant amount of waste.[46] This condition illustrates that the production rate and usage patterns of goods are not proportional to the available waste management capacity. This condition shows that there is an economic system that encourages fast consumption cycles, one of which is the practice of planned obsolescence a strategy implemented by manufacturers who consciously design products to have a limited service life, encouraging consumers to continue buying new goods.[47]

The Relevance of Planned Obsolescence Regulations in Various Countries

Planned obsolescence is attracting attention in consumer protection

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[44] Sonja Leyvraz, "Right to Repair and the Fight against Planned Obsolescence," botpopuli*, Analyzing the environmental impacts of planned obsolescen*ce., 27 Desember 2023, https://botpopuli.net/right-to-repair-and-the-fight-against-planned-obsolescence/.
France was the first country to criminalise planned obsolescence in 2015, with a penalty of two years' imprisonment and a 300,000-euro fine. However, it was not easy to enforce this regulation, as consumers would have to prove that producers deliberately shortened the product lifespan as a strategy to boost sales.

[45] Penelope Andrea Theresa Ramdayal, "A Systemic Review of the effects of Planned Obsolescence in the Consumer Electronics Industry: A focus on American Consumerism" (University Of Bedfordshire, 2023); Adeline Jerome dkk., "Product Lifetime Approaches in Life Cycle Assessments of Circular Economy," *The International Journal of Life Cycle Assessme*nt, 2025, 1–16, https://doi.org/https://doi.org/10.1007/s11367-025-02486-z.

[46] Lastuti Abubakar dan Tri Handayani, "The Environmental Fund Management Model in Indonesia: Some Lessons in Legal Regulation and Practice," *Environmental Policy and Law* 53, no. 2–3 (Juni 2023): 205–17, https://doi.org/10.3233/EPL-230013.

[47] Dalhammar dan Maitre-Ekern, "Regulating planned obsolescence," 381–86.

discourse due to its potential to intentionally shorten product lifespans and harm consumers. The lack of specific regulations in Indonesia regarding this practice creates a legal loophole that leads to significant normative uncertainty around consumer protection, environmental sustainability, and producer accountability. This raises a key question: are existing regulatory frameworks worldwide truly preventative, designed to prevent harm in the first place, or merely reactive, addressing violations only after they occur? The table below maps regulatory approaches in selected countries to assess the extent to which normative efforts protect consumers from this practice.

Table 2. Planned Obsolescence Regulatory Models in Various **Countries**

No	Country	Regulation	Regulatory Model
1	France	Code de la consommation	It was regulated in the Energy Transition for Green Growth regulation in 2015 with a criminal penalty of up to two years in prison and a fine of €300,000, or up to 5% of the company's average annual turnover. In this case, France makes planned obsolescence a criminal offense.
2	Italy	Decreto Legislativo 6 settembre 2005, n. 206	Use competition authorities and consumer protection laws to fine unfair practices with an administrative approach.
3	Austria	Umweltförderungsgesetz – UFG (168/ME)	Austria launched a national Repair Bonus scheme in April 2022, which allows consumers to reclaim half the cost of repairing old electronic devices. The approach used is economic incentives, not punishments.

4	United Kingdom	The Eco-design for Energy-Related Products and Energy Information Regulations 2021	The UK adopted a "Right to Repair" regime through the Eco-Design for Energy-Related Products and Energy Information Regulations 2021, which came into effect on July 1, 2021. The regulations require manufacturers of certain household appliances to provide spare parts and repair information for up to ten years after the product model is no longer on the market. However, its scope remains limited, as smartphones, laptops, microwaves, and various consumer electronics devices were initially exempted.
5	Canada	Bill 29 or An Act to protect consumers from *planned obsolescence* and to promote the durability, repairability and maintenance of goods	The provisions of Article 14 in the amendment of the Consumer Protection Act Québec through Bill 29 prohibit any person or business actor from trading goods that contain planned obsolescence, i.e. goods that are deliberately designed to reduce their normal lifespan. The manufacturer is considered to be in violation of the law, and the prohibition applies whenever the goods are offered or agreed upon to the consumer. Violations are subject to criminal penalties of $2,500–$62,500 for individuals and $5,000–$125,000 or up to 5% of the previous fiscal year's global turnover for corporations, with the possibility of increase for repeated violations.

Source: Author's Processed Results (2026)

Based on this data, Italy, Austria, and the United Kingdom take different approaches to addressing product sustainability and electronic waste. Italy emphasises administrative enforcement through a competition regime and consumer protection,[48] Austria prioritises economic incentives to encourage repairs,[49] while the United Kingdom develops a right-to-repair framework with an obligation to provide spare parts and repair information, although it remains limited in scope.[50] This difference shows that efforts to limit the impact of planned obsolescence have not yet reached the formulation of proportionate and preventive regulation, including through the *sadd al-żari'ah* method to discontinue such practices in the first place.

Unlike Italy, Austria, and the United Kingdom, France and Quebec have adopted the most explicit legal prohibitions against planned obsolescence. In France, the Code de la consommation establishes specific offences with tiered sanctions, including civil penalties, administrative enforcement, and, in aggravated cases, criminal liability for individuals and companies. Quebec's amendments to the Consumer Protection Act (Bill 29) also combine civil remedies with the threat of criminal fines, targeting both manufacturers and corporate actors. However, it is important to note that in both jurisdictions, producing short-lived goods does not automatically trigger criminal prosecution. Criminal sanctions are the apex of the enforcement pyramid, applied if deliberate or systematic behaviour is proven, while administrative and civil mechanisms bear the main regulatory burden.[51] This

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[48] DECRETO LEGISLATIVO 6 settembre 2005, n. 206 - Normattiva, 206, retrieved 18 June 2026, https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legislativo:2005-09-06;206!vig=2025-03-24.

[49] Umweltförderungsgesetz – UFG (168/ME), 168 ME, retrieved 18 June 2026, https://www.parlament.gv.at/dokument/XXVII/ME/168/fname_1089910.pdf. Repair Bonus is not further elaborated as legal rights under UFG; it is rather regulated as a funding programme established according to the authority to provide fund as granted by UFG.

[50] The Ecodesign for Energy-Related Products and Energy Information Regulations 2021, 745 (2021), https://wwhttps://assets.publishing.service.gov.uk/media/5f746115d3bf7f287448a4d5/consultation-draft-ecodesign-for-energy-related-products-energy-info-regs-2021.pdf.

[51] Bill 29, An Act to Protect Consumers from Planned Obsolescence and to Promote the Durability, Repairability and Maintenance of Goods, 29 Bill (2023), https://www.publicationsduquebec.gouv.qc.ca/fileadmin/Fichiers_client/lois_et_reglements/LoisAnnuelles/en/2023/2023C21A.PDF.

layered enforcement structure reflects a strong commitment to consumer and environmental protection, although it raises legitimate questions about proportionality. Overly broad application of criminal liability risks putting manufacturers on the defensive, potentially hampering innovation and upsetting the balance between consumer protection and industry sustainability. This balance, which distinguishes preventive prohibitions from punitive sanctions, aligns with the principles of prevention and proportionality inherent in the *sadd al-ẓarī'ah* framework that underpins this research.

For example, Apple's planned obsolescence case in France arose in 2017, when users of older iPhone models reported significant performance degradation after installing an iOS update. Apple later admitted that the update intentionally reduced device performance to prevent unexpected shutdowns caused by battery degradation. However, the company failed to adequately inform consumers about the impact of this update, leading to accusations that it encouraged premature device replacement. Following a complaint filed by the consumer organisation Halte à l'Obsolescence Programmée, French authorities found that Apple had not transparently disclosed the performance consequences of the update. As a result, in February 2020, Apple was fined 25 million euros for entertaining consumers and engaging in unfair commercial practices.[52]

Then there was the Italian case of Apple and Samsung, decided by the Italian Competition Authority (AGCM) in 2018. The investigation found that the two companies had encouraged consumers to install software updates on older smartphone models without adequately informing them of the potential impact on device performance. According to the AGCM, certain firmware updates caused significant performance degradation and operational failures, thus forcing consumers to replace their devices that were still functional. The authority further concluded that consumers were not provided with sufficient information about the compatibility of the updates or effective ways to restore

[52] Bisschop, Hendlin, dan Jaspers, "Designed to Break: Planned Obsolescence as Corporate Environmental Crime."

their devices' original functionality.[53] As a result, the AGCM imposed administrative fines of 10 million euros on Apple and 5 million euros on Samsung for engaging in unfair commercial practices under the Italian Consumer Code. This case is significant because it was one of the first instances in which a national competition authority explicitly linked software update practices to planned obsolescence and used consumer protection law as a regulatory tool to address it.[54]

Unlike France and Italy, which have addressed planned obsolescence primarily through enforcement actions after consumer harm has occurred, Austria and the United Kingdom have focused on preventative regulatory measures. Austria has not been involved in any major enforcement cases related to planned obsolescence. Instead, policy discussions and academic studies have emphasised the importance of extending product lifespans, improving repairability, and promoting circular economy principles as mechanisms to reduce premature product replacement.[55] Similarly, the United Kingdom introduced Right to Repair regulations in 2021, requiring manufacturers of certain household appliances to provide spare parts and repair information for a longer period. These measures reflect a preventative approach that seeks to address the risk of planned obsolescence before it occurs, by promoting product durability, facilitating repairs, and reducing unnecessary waste, rather than relying solely on sanctions imposed after consumers are harmed.[56]

Canada has not yet seen a significant enforcement case comparable to the Apple litigation in France. However, the Province of Quebec has emerged as a pioneer in addressing planned obsolescence through legislative reform.

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[53] Andrea Giannaccari, "Apple, obsolescenza tecnologica (programmata) e diritti dei consumatori," *Mercato Concorrenza Regole*, no. 1/2019 (2019): 143–49, https://doi.org/10.1434/94240.

[54] Consumer Code, 206, https://www.g-regs.com/downloads/ITConsumerCode206_2005.pdf.

[55] Iris Etzinger dan Marc Reimann, "What, How and Who? Consumers' View on Necessary Measures to Promote Repair in Austria," *Circular Economy and Sustainability* 6, no. 2 (Maret 2026): 3–25, https://doi.org/10.1007/s43615-026-00829-y; Umweltförderungsgesetz – UFG (168/ME).

[56] The Ecodesign for Energy-Related Products and Energy Information Regulations 2021, vol. 745.

In 2023, Quebec enacted Bill 29, an Act to protect consumers from planned obsolescence and to promote the durability, repairability, and maintainability of goods. This legislation prohibits techniques intended to reduce the normal lifespan of products, strengthens consumers' right to repair, and requires manufacturers to provide spare parts, repair services, and maintenance information. Rather than relying solely on ex post sanctions after harm has occurred, Quebec's framework seeks to prevent planned obsolescence through ex ante obligations designed to enhance product durability and repairability. As such, Quebec represents one of the most comprehensive approaches to preventing planned obsolescence currently found in North America.[57]

Comparative experience across jurisdictions reveals two primary approaches to regulating planned obsolescence. France and Italy have largely adopted a repressive stance, imposing sanctions only after consumer harm has occurred, while Austria and the United Kingdom have moved toward preventative regulation by promoting product durability, repairability, and consumer access to repair services, although these frameworks remain limited in scope and require further refinement. Canada, through Quebec's Bill 29, is advancing a more comprehensive model by regulating planned obsolescence across the product lifecycle, encompassing design, manufacturing, after-sales obligations, and consumer access to repair information. These developments collectively demonstrate a growing global shift toward preventative regulation. However, existing frameworks continue to rely heavily on punitive mechanisms imposed on producers and fail to strike an adequate balance among consumer protection, legal certainty for producers, technological innovation, and industry sustainability. These limitations underlie the justification for the regulatory framework proposed in this study, which is based on the *sadd al-żarī'ah* method of regulation formation, which seeks to

[57] Bill 29, An Act to Protect Consumers from Planned Obsolescence and to Promote the Durability, Repairability and Maintenance of Goods.

prevent harmful practices before they occur while maintaining proportionality between the rights and obligations of consumers and producers. [58]

Analysis of Planned Obsolescence through the *Sadd Al-Żarī'ah* Method: Formulation of Proportionate Preventive Regulations

To the best of the authors' knowledge, no prior publication has specifically integrated the phenomenon of planned obsolescence with the principle of *sadd al-ẓarī'ah* within the framework of Indonesian positive law (i.e., enacted law in force). The studies of Maggiolino (2019)[59] and Malinauskaite and Erdem (2021) do not engage with Islamic legal perspectives. Therefore, this study represents an original scholarly contribution at the intersection of these two discourses, adopting a dual methodological approach: the *sadd al-ẓarī'ah* method as an ethic-normative framework for *dar' al-mafāsid* (the prevention of harm), and a human rights perspective specifically, consumer rights as a positive-law foundation that carries directly binding normative force on the state.

The method of *sadd al-ẓarī'ah* is an analytical procedure in *ushul fiqh* that systematically identifies and closes gaps (*dharī'ah*) that may lead to damage (*mafsadah*), even when the initial action appears legitimate.[60] As a legal method rather than a merely abstract principle, *sadd al-ẓarī'ah* provides an operational framework for implementing the basic principle of *dar' al-mafāsid* (resisting damage). Al-Syatibi, in al-Muwafaqat, developed a tiered classification based on the strength of the causal relationship between action and damage: *qaṭ'ī*

[58] Jesús Soto Pineda dan María Prada Salmoral, "A Juridical 'Theory' of Planned Obsolescence," SSRN Scholarly Paper no. 2966052 (Rochester, NY: Social Science Research Network, 10 Mei 2017), https://doi.org/10.2139/ssrn.2966052.

[59] Mariateresa Maggiolino, "Planned Obsolescence: A Strategy in Search of Legal Rules," *IIC - International Review of Intellectual Property and Competition* Law 50, no. 4 (Mei 2019): 405–7, https://doi.org/10.1007/s40319-019-00812-1.

[60] Samira Hasan Elbalazi, Nor Fahimah Mohd Razif, dan Shahidra Abdul Khalil, "Sadd al-Dharāʾiʿ and Its Role in Achieving the Maqasid of Preserving Life: An Applied Fiqhi Study Based on Maliki Fatāwā," *International Journal of Fiqh and Usul al-Fiqh Studies* 10, no. 1 (Januari 2026): 117–30, https://doi.org/10.31436/ijfus.v10i1.394.

(certain), *ghalibah* (dominant), *qalīlah* (rare), and *nādirāh* (very rare).[61] This classification is not just a theoretical categorisation, but a risk assessment mechanism that determines the proportionate intensity of legal intervention.[62]

There are at least three normative legal obligations that render the regulation of planned obsolescence imperative. First, at the international level, Article 11 of the ICESCR, ratified through Law No. 11 of 2005, guarantees every person's right to an adequate standard of living; compelling consumers to repurchase products that remain technically functional constitutes a direct diminution of household purchasing power and, accordingly, arguably amounts to a violation of this right. Article 25 of the UDHR reinforces this guarantee: consumers' access to goods whose value is commensurate with the price paid is a component of the right to an adequate standard of living. Second, at the constitutional level, Article 28H(1) of the 1945 Constitution guarantees the right to a sound and healthy environment, a right directly threatened by the accumulation of electronic waste containing lead, mercury, and cadmium as an inevitable consequence of planned obsolescence. Third, at the level of consumer law, the right to accurate information (Article 4(c) of Law No. 8 of 1999) is violated when the engineered non-durability of products is concealed from consumers, while the right to redress (Article 4(h)) cannot be effectively operationalised due to the normative loophole identified in the preceding sections. Given these three normative layers, the development of a regulatory framework addressing planned obsolescence is not a matter of policy discretion but a constitutional obligation that the government is bound to fulfil.

The underlying logic is that the law should not be purely formalistic, but should consider the substantive consequences of an action against the five fundamental objectives of sharia: the protection of religion (*ḥifẓ al-dīn*), life (*ḥifẓ al-nafs*), reason (*ḥifẓ al-'aql*), progeny (*ḥifẓ al-nasl),* and property (*ḥifẓ al-*

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[61] Intan Arafah, "Pendekatan Sadd Adz-Dzari'ah Dalam Studi Islam," *Al-Muamalat Jurnal Hukum Dan Ekonomi Syari*ah 5, no. 1 (September 2020): 68–86, https://doi.org/10.32505/muamalat.v5i1.1443.

[62] Abu Ishaq al-Syatibi*, al-Muwafaqat fi Usul al-Syari'*ah, ed. Abdullah Darraz, Jilid 4 (Beirut: Dar al-Kutub al-'Ilmiyyah, 1997), 199–202.

māl).[63] Specifically, *ḥifẓ al-māl* is directly linked to the economic losses incurred by consumers forced to replace products prematurely, thereby systematically shifting market risks from producers to consumers. *Ḥifẓ al-nafs* is threatened by toxic compounds such as lead, mercury, and cadmium released by discarded electronic waste, posing a real health risk, particularly to low-income communities that bear a disproportionate burden of e-waste disposal. Beyond these two aspects, the expansion of *maqāṣid* proposed by Jasser Auda through *ḥifẓ al-bi'ah* captures the dimension of intergenerational justice: environmental degradation resulting from accelerated consumption cycles not only harms current consumers but also bequeaths a degraded ecological foundation to future generations.[64] This framework offers a normative justification for preventive regulation that does not wait for negative impacts to fully manifest, but rather closes the path to damage from the product design stage. Furthermore, the parameters developed in the discourse of *sadd al-żarī'ah,* such as the degree of certainty of negative consequences (*qaṭ'ī*, *ghalabat al-ẓann*, or *mawhūm*), proportionality between *mafsadah* and *maṣlaḥah*, as well as the consideration of *ḥājah* (the real needs of society), can be translated into operational criteria for distinguishing planned obsolescence, which must be prohibited from obsolescence arising from legitimate innovation.

The application of the *sadd al-żarī'ah* method to planned obsolescence follows a three-stage procedure, as outlined in the framework below:[65]

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[63] Dale F. Eickelman, "Shatibi's Philosophy of Islamic Law. By Muhammad Khalid Masud," *Journal of Law and Religi*on 15, no. 1/2 (2001): 389–91.

[64] Bambang Wahyudi dkk., "Ecological Justice in Islamic Family Law: Integrating Maqasid al-Shari'ah with Environmental Ethics in Post-Pandemic Societies," *Islamic Law and Social Issues in Socie*ty 1, no. 2 (Oktober 2025): 160–84, https://doi.org/10.64929/ilsiis.v1i2.24.

[65] Muhammad Nazir Alias dkk., "The Position of Maqasid Al-Shariah within Islamic Legal Sources: A Comprehensive Analysis," *Samarah: Jurnal Hukum Keluarga Dan Hukum Isl*am 9, no. 2 (Juli 2025): 937–64, https://doi.org/10.22373/q4byre51.

Table 3. Criteria and Indicators for *Mafsadah*-Based Risk Assessment in Planned Obsolescence Prohibition

No	Stage	Key Question	Indicator
1	Identification of causal relationship	Do product design decisions directly produce environmental or economic harm?	Empirical evidence that short-lived products predominantly result in the accumulation of toxic waste
2	Availability of alternatives	Are safer alternatives technically and economically feasible?	Existence of modular design approaches, component standardisation, or transparent product lifespan disclosure
3	Risk classification	How certain is the link between a given practice and *mafsadah* (harm)?	Categorisation into *qaṭ'iyyah* (certain), *ghālibah* (probable), *qalīlah* (unlikely), or *nādirāh* (rare) as the basis for determining the intensity of legal intervention

Source: Author's Processed Results from Various Sources (2026)

This three-stage procedure ensures that regulatory responses remain proportionate: practices that structurally and inevitably generate harm warrant strict prohibition, while those that may cause harm only contingently call for transparency obligations or disclosure mechanisms.

The methodological strength of "*sadd al-ẓarī'ah*" lies in the distinction made by al-Qarafi between the evaluation of the action (*al-fi'l*) and that of the

actor (*al-fā'il*). In this method, the analysis focuses on the objective structure of commercial practices, rather than on the subjective intentions of the actors. This distinction is particularly well-suited to framing corporate design decisions, which generally result from a succession of technical, commercial, and managerial choices distributed across different departments and links in the supply chain. In such a context, attributing a single malicious intent to an individual actor, a prerequisite in the classical doctrine of mens rea, is not only difficult to prove but also conceptually insufficient. The harm does not result from the fraudulent intent of a single person, but from the systemic design logic that structurally shortens product lifespans for commercial profit. The Apple case in France perfectly illustrates this point: although it was proven that software updates reduced the performance of older iPhones, Apple successfully argued that this measure was intended to prevent the devices from suddenly shutting down due to battery degradation. In a legal framework based on mens rea, this defence, grounded in intent, is difficult to refute. Within the framework of *sadd al-żarī'ah*. Apple's case in France illustrates the difficulty of proving intent: although it is established that software updates slow down older iPhones, Apple argues that the measure was taken to prevent sudden blackouts caused by battery degradation.[66] Rather than requiring proof of fraudulent intent, the *sadd al-żarī'ah* method demands only a showing that the product design objectively generates an artificially obsolescent structure to the detriment of consumers and the environment. Al-Qarafi adduced an analogy: the prohibition of *khalwah* is applied not because every individual party is presumed to harbour malicious intent, but because the situation structurally creates conditions conducive to forbidden acts.

The graded classification of *żarī'ah* establishes a three-tiered regulatory taxonomy. The *żarī'ah qat'iyyah* covers practices in which harm is structurally inevitable, including software locks that prevent independent repairs, the intentional use of substandard components, and the premature discontinuation of spare parts production, and it justifies an absolute ban

[66] Library of Congress, "France: Watchdog Agency Fines Apple for Deceitful Practice," web page, Library of Congress, Washington, D.C. 20540 USA, retrieved 22 May 2026, https://www.loc.gov/item/global-legal-monitor/2020-02-28/france-watchdog-agency-fines-apple-for-deceitful-practice/.

accompanied by administrative and civil penalties. *Żarī'ah ghalibah* covers practices where harm is predominant but not inevitable, as demonstrated by data from complaints or technical audits, including performance-degrading updates with no rollback option and components designed to fail prematurely, and requires mandatory disclosure of lifespan, software support, and parts availability. *Żarī'ah qalīlah/nādirāh* covers practices where harm is marginal and reversible and offset by a documented benefit to the user, including genuine updates related to cybersecurity or efficiency, and is governed by disclosure and opt-in/opt-out mechanisms without direct penalties.

The method of *sadd al-ẕarī'ah* does not operate in a vacuum, but as an instrument to realise *maqāṣid al-syarī'ah*. Al-Ghazali defines *maṣlaḥah* as the attraction of benefits and the avoidance of harm, limiting it to five aspects: the protection of religion, soul, intellect, heredity, and property.[67] In the context of planned obsolescence, two *maqāṣids* become relevant: *ḥifẓ al-māl* (protection of property) and *ḥifẓ al-bi'ah* (protection of the environment). Jasser Auda proposed expanding the contemporary *maqāṣid* to include environmental protection, as environmental damage fundamentally threatens human existence.[68] The practice of planned obsolescence, which is characterised by the deliberate design of rapidly perishable products, embodies *ghabn* (hidden fraud) and *iḍrār* (causation of loss), both of which are contrary to the obligation to preserve wealth from waste (*isrāf*). Transactions containing *ḍarar khafī* (hidden losses) become *ẕarī'ah,* leading to wider economic damage, as is the rule of *Lā ḍarara wa lā ḍirāra* (not to harm oneself and others).

Ibn 'Ashur emphasised the concept of *al-maṣlaḥah al-'āmmah* (public interest) as the primary goal of sharia that protects individual, collective, and intergenerational interests.[69] The application of the *sadd al-ẕarī'ah* method to planned obsolescence identifies intergenerational *mafsadah*: environmental

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[67] Abu Hamid al-Ghazali, *al-Mustasfa min 'Ilm al-Us*ul, Jilid 1 (Beirut: Dar al-Kutub al-'Ilmiyyah, 1993), 174–75.

[68] Jasser Auda, *Maqasid al-Shariah as Philosophy of Islamic Law: A Systems Approa*ch (London: The International Institute of Islamic Thought, 2008), 47–52.

[69] Muhammad Tahir Ibn 'Ashur, *Maqasid al-Shari'ah al-Islamiyy*ah, ed. Muhammad al-Tahir al-Misawi (Amman: Dar al-Nafa'is, 2001), 297–305.

degradation that threatens sustainability, resource depletion that harms future generations, economic injustice to low-income consumers, and market distortions that harm ethical producers. In line with the principle of *dar'u al-mafāsid muqaddam 'alā jalb al-maṣāliḥ* (rejecting harm over profit), this method provides a justification for preventive regulation that closes the *qaṭ'ī/ghalibah category of żarī'ah* even though it may limit the freedom of innovation of producers.

The *sadd al-żarī'ah* method does not merely resemble risk-based regulation and the precautionary principle but operates in mutual reinforcement with them. Risk-based regulation, as Julia Black explains, allocates regulatory resources through prospective risk assessment rather than reactive proof of violation.[70] The precautionary principle, codified in Principle 15 of the Rio Declaration, affirms that the absence of full scientific certainty does not justify inaction where serious or irreversible harm is at risk.[71] Both share with *sadd al-żarī'ah* a foundational commitment to preventive, prospective, and proportionate intervention. The distinctive contribution of *sadd al-żarī'ah*, however, is additive: where risk-based regulation provides a procedural scheme, and the precautionary principle supplies an environmental normative threshold, *sadd al-żarī'ah* provides a tiered causal ontology that classifies why and to what degree a given practice structurally generates harm, thereby giving substantive content to risk categories. Together, the three frameworks form the epistemological basis for a hybrid regulatory model that is normatively grounded in *maqāsid al-shari'ah*, procedurally structured through risk-based tiering, and environmentally anchored through the precautionary principle.

Based on the analysis of the *sadd al-żarī'ah* method, three preventive regulatory recommendations were formulated. First, revising Law No. 8 of 1999 by adding a special chapter that prohibits planned obsolescence in the category of *żarī'ah qaṭ'iyyah/ghālibah*, such as software locks, designed-in

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[70] Julia Black, "The Emergence of Risk-Based Regulation and the New Public Management in the United Kingdom," *Public L*aw 2005, no. Autumn (2005): 512–48.

[71] "Rio Declaration on Environment and Development," conf. paper presented pada United Nations Conference on Environment and Development, 1992, https://gdrc.org/u-gov/precaution-7.html.

failure, and premature termination of spare parts. This practice predominantly causes *mafsadat* in the form of economic losses, structural dependence, and increased e-waste, thereby warranting an explicit prohibition accompanied by proportionate criminal sanctions calibrated to the scale of consumer harm and ecological impact.[72] For the *żarī'ah ghālibah* category, a preventive approach is taken through transparency obligations, including disclosure of the estimated service life, the duration of software support, and the availability of spare parts. This model is in line with *maqāṣid al-syarī'ah*, especially *ḥifẓ al-māl*, and affirms the regulatory function that is not only repressive but also preventive in protecting consumers and the environment.[73]

Second, Extended Producer Responsibility (EPR) needs to be substantially strengthened as an upstream preventive measure against planned obsolescence. Government Regulation No. 27 of 2020 concerning the Management of Special Waste and Other Waste,[74] issued pursuant to Law No. 18 of 2008 concerning Waste Management, establishes post-consumer obligations for producers;[75] however, its scope is limited to the logistics of collection, transportation, and disposal. Expanding its scope to include product durability, reparability, and life-cycle transparency would require targeted amendments to Government Regulation No. 27 of 2020 or ministerial regulations that operationalise these upstream dimensions within the existing EPR framework. From the perspective of *sadd al-żarī'ah*, such an expansion prevents environmental and economic damage at the production stage by mandating the long-term availability of spare parts (5–7 years from the sale of the last unit), measurable recycling targets, and eco-friendly design

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[72] Malinauskaite dan Buğra Erdem, "Planned Obsolescence in the Context of a Holistic Legal Sphere and the Circular Economy," 719–149.

[73] Robert Brian Smith dan Nucharee Nuchkoom Smith, "Right-to-Repair, Product Durability and Obsolescence: A Legal Perspective," *Journal of Indonesian Legal Studi*es 9, no. 2 (2024): 767–98, https://doi.org/https://doi.org/10.15294/jils.v9i2.1895.

[74] Peraturan Pemerintah Nomor 27 Tahun 2020 tentang Pengelolaan Sampah Spesifik (2020), http://peraturan.bpk.go.id/Details/138876/pp-no-27-tahun-2020.

[75] Undang-UndangNomor 18 Tahun 2008 tentang Pengelolaan Sampah (2008), http://peraturan.bpk.go.id/Details/39067/u.

requirements that ensure products are durable, repairable, and recyclable, which directly supports both *ḥifẓ al-māl* and *ḥifẓ al-bi'ah*.[76]

Third, effective enforcement of the ban on planned obsolescence depends on the ability to uncover design practices hidden within corporate structures, where manufacturers control technical evidence asymmetrically. Law No. 3 of 2026 concerning the Protection of Witnesses and Victims provides a procedural framework, but this law is primarily oriented toward criminal proceedings and direct personal harm, which is insufficient to address systemic corporate design decisions. A more institutionally coherent approach would draw upon Law No. 8 of 1999 concerning Consumer Protection, which has recognised unlawful business practices, as well as Law No. 32 of 2009 concerning Environmental Protection and Management, which regulates public participation in reporting environmental violations. *Lex specialis* provisions, whether included in the revised consumer protection law or issued as separate government regulations, must provide procedural protections to individuals reporting planned obsolescence practices, including confidentiality of identity, immunity from retaliatory dismissal, and compensation mechanisms in the event of retaliation. In the context of *sadd al-żarī'ah*, this prevents the continuation of *mafsadah* made possible by institutional inaction, thereby transforming whistleblower protection from merely an instrument of criminal justice into a mechanism for enforcing the law.

The resulting framework strikes a balance between the two extremes highlighted by the comparative analysis. France and Quebec have opted for explicit criminalisation, a model whose prosecution logic requires proof of intent a standard that can be systematically challenged by manufacturers, as evidenced by the absence of any court rulings imposing penalties over the past decade under French law. Indonesia's current legal landscape represents the opposite failure, leaving consumers to bear the entire burden of market risk in the absence of enforceable norms. The *sadd al-żarī'ah* method offers a third way an approach that is structurally objective in its assessment of damages,

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[76] Richard F. Hartl, Peter M. Kort, dan Stefan Wrzaczek, "Reputation or warranty, what is more effective against planned obsolescence?," *International Journal of Production Research* 61, no. 3 (Februari 2023): 939–54, https://doi.org/10.1080/00207543.2021.2020929.

tiered in its regulatory response, and grounded simultaneously in *maqāṣid al-shari'ah*, risk-based regulatory theory, and international environmental law.

To build an effective regulatory framework in preventing planned obsolescence, normative prohibitions need to be formulated in a specific, measurable manner and based on the principles of consumer protection and environmental sustainability. Here are some types of practices that are rationally feasible to be prohibited in the Law following up on the previous three recommendations:

Table 4. Substance Recommendations for Planned Obsolescence Practice Prohibition Arrangements

No	Stage	Consolidate Prohibited Practices	Legal Rationale
1	Product Design	1. Non-modular or permanently closed designs, proprietary-only components, and non-replaceable embedded batteries that prevent repair without technical justification. 2. Firmware pairing that rejects non-official parts, excessive component integration forcing whole-unit replacement, and deliberate engineering of premature component failure.	Resource efficiency; right to repair; prevention of artificial technical barriers; reasonable durability standards; protection of consumer rights; prohibition of intentional reduction of useful life.
2	Production and Distribution	1. Artificial restriction or premature termination of spare parts supply where production capacity exists. 2. Discriminatory access to repair manuals and services, and silent product specification	Prohibition of market manipulation; guaranteed service life; equal access to remediation; integrity of market information.

		downgrading without consumer notice	
3	Digital Update and Software Ecosystem	1. Disproportionate software locks, performance-degrading updates without transparency, and engineered incompatibility between product generations. 2. Unilateral withdrawal of technical or security support without an adequate consumer transition period	Prevention of excessive technical control; prohibition of hidden losses; healthy competition; consumer legal certainty.
4	Informating and Marketing Strategy	1. Unverified durability or lifetime claims and concealment of update or spare-part support periods. 2. Psychological obsolescence marketing that frames functionally adequate products as outdated without substantive functional change.	Prohibition of misrepresentation; consumer right to information; trading ethics.
5	Contractual Scheme	1. Warranty clauses that void consumer protections upon independent or third-party repair, and contractual restrictions on disassembly or modification. 2. Post-purchase conversion of essential product functions into mandatory paid subscriptions without prior disclosure.	Contractual fairness; consumer freedom of remedy; transaction transparency.
6	Environment	Product designs that obstruct disassembly for recycling or	Sustainability principles; ecological

	al Sustainability	incorporate non-separable mixed materials without technical justification.	responsibility.	
7	Product Model Strategy and Pseudo-Innovation	Minor cosmetic upgrades without functional differentiation and accelerated model replacement cycles without guaranteed long-term support commitments.	Prevention of consumption manipulation; sustainable market stability.	

Source: Author's Processed Results (2026)

The regulatory recommendations reflect the *sadd al-żarī'ah* method, which is to close off possibilities that could cause *mafsadah* before losses occur. In the context of planned obsolescence, *mafsadah* encompasses consumer losses, market distortions, resource waste, and environmental degradation. This approach is not to hinder production or innovation, but to ensure that innovation is *genuine* and oriented towards quality and utility, not just accelerating the consumption cycle, so that market stability is maintained in healthy and fair competition. Reinforcement through minimum durability standards, repairable design, transparency of software support life, and guaranteed parts availability confirms the preventive nature of this approach. Anti-obsolescence policies in France, as well as the development of right-to-repair and eco-design in Austria and the United Kingdom, show that interventions from the design stage to after-sales are effective in closing the gap in planned obsolescence. Thus, this regulatory construction aligns with consumer protection and the circular economy and is consistent with the paradigm of preventive Islamic law, which seeks to preserve benefits before broader damage occurs.

Conclusion

This study finds that Indonesia currently faces a regulatory loophole concerning planned obsolescence. Existing consumer protection, environmental, and product-related regulations do not explicitly recognise or regulate practices designed to shorten product lifespans, resulting in limited legal certainty and inadequate protection against the economic and environmental harms they generate. Consequently, current legal instruments

remain insufficient to address the structural risks arising from planned obsolescence in contemporary markets. The study further demonstrates that the *sadd al-żari'ah* method provides a persuasive normative basis for preventive regulation. Rather than relying exclusively on proof of intent, which often poses a major obstacle in enforcing planned obsolescence cases, this approach focuses on the potentially harmful consequences and risk characteristics of a practice. Such a perspective enables the development of proportionate regulatory responses based on the degree of harm and the likelihood of harm to consumers and the environment. Finally, *sadd al-żarī'ah* offers a regulatory framework that is compatible with modern preventive legal approaches, including risk-based regulation and the precautionary principle. Its application supports the formulation of legal measures that balance consumer protection, environmental sustainability, business innovation, and legal certainty, providing a relevant foundation for future regulatory reform within Indonesia's pluralistic legal system.

Future research should examine comparative regulatory models addressing planned obsolescence, particularly those adopted in jurisdictions such as the European Union and France, to identify regulatory mechanisms that can be appropriately adapted to the Indonesian legal framework. In addition, subsequent studies should seek to develop more precise legal indicators and evidentiary standards for identifying planned obsolescence through a risk-based and harm-oriented approach grounded in the doctrine of sadd al-żarī'ah, thereby reducing reliance on the often burdensome requirement of proving a manufacturer's subjective intent. Empirical research involving consumers, business actors, and regulatory authorities would also be valuable in assessing the practical feasibility, economic implications, and regulatory effectiveness of preventive legal measures. Such inquiries would contribute to the development of a more comprehensive and evidence-based framework for legislative reform, capable of balancing consumer protection, environmental sustainability, technological innovation, and legal certainty within Indonesia's pluralistic legal system.

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