Planned Obsolescence:

An Analysis of why Regulation will Ultimately Fail in its Intended Goals

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Abstract: This paper examines the concept of planned obsolescence, challenging its portrayal as a market failure and exposing the shortcomings of regulatory interventions aimed at addressing it. Drawing on historical and contemporary policies and case studies, including the Phoebus Cartel and the European Union's Circular Economy Action Plan, the analysis demonstrates that government policies targeting planned obsolescence often disregard the decentralized mechanisms of market dynamics and consumer-driven innovation. Employing insights from economists such as Hayek, Kirzner, and Mises, the paper argues that product durability reflects a balance between consumer preferences, innovation cycles, and production costs rather than deliberate exploitation by manufacturers. The findings highlight that policies emphasizing regulation of product design risk stifling entrepreneurial discovery and technological progress. While acknowledging the potential for minimally invasive measures such as recycling initiatives to yield environmental benefits, the paper ultimately reframes planned obsolescence as a natural outcome of competitive markets and consumer sovereignty, advocating for solutions that align with sound economic principles.

I. Introduction

The experience is all too familiar: A consumer goes to purchase the latest electronic device such as the newest model of smartphone, only to find that its performance begins to deteriorate within a year or two. The battery may drain faster, the processor slows down, or a brand new model offering enticing features has already entered the market rendering the last model obsolete. The common conception of this experience is that certain goods are produced with a predictable, shortened lifespan in order to cause products to fail before necessary. The layman interprets this conception as evidence of "Planned Obsolescence"—the supposed purposeful designing of products with artificially decreased lifespans, or lessened durability, in order drive repeated purchases (Princen 2012). This commonly held view has led to many claiming producers are exploiting consumers, wasting resources, and purposely harming the environment.

As technology has rapidly advanced in recent decades, Planned Obsolescence has captured the public eye, with concerns over exploitation prompting regulatory responses. There has been pressure around the globe to regulate this supposed practice with multiple governments explicitly banning the practice. For example, in 2015 The European Union passed the Circular Economy Action Plan was passed in order to protect consumers and the environment, naming Planned Obsolescence as a roadblock to this goal (Commission 2015). This intervention is but one of many outlawing this practice, and while well intentioned, these regulations raise critical questions about just how effective they are at eliminating this supposed practice and its economic consequences.

This paper challenges the prevailing narrative surrounding Planned Obsolescence, utilizing sound economics, I posit that any government intervention designed to mitigate or

prevent Planned Obsolescence is fundamentally flawed. By neglecting the entrepreneurial discovery process behind which manufactures utilize to set product durability and consumer sovereignty, such policies fail to account for the mechanisms that naturally balance innovation, consumer preferences, and competition. I will challenge the ability of any centralized planner in preventing this practice due to their inability see the role of prices as information signals, the role innovation has on product durability, and the desires of consumers which shape product lifespans.

My analysis will begin by examining the historical context of Planned Obsolescence, from the strategies of the Phoebus Cartel to Bernard London's (1932) coining of the term, and beyond looking at the modern resurgence of the issue pertaining to nondurable goods and concerns over electronic waste. I will then analyze mainstream perspectives, highlighting their theoretical frameworks, aversion to producers, and criticisms lauded towards common entrepreneurial practices. Additionally, I will look at case studies pertaining to supposed Planned Obsolescence practices and policy interventions which explicitly regulate the practice and their outcomes. Drawing on insights from Friedrich Hayek, Israel Kirzner, Yoram Barzel, and others, I will critique the mainstream approach, showing the unintended consequences of intervention, and examine how entrepreneurs actually respond to consumer demand. Planned Obsolescence will be reframed as a market driven response to innovation and consumer preferences, clarifying the fundamental fault the mainstream has in their reasoning. Finally, I will examine potential policies that may provide some benefits to the environment and consumer protection in order to satiate regulatory bodies. Ultimately, this paper argues that entrepreneurial innovation and consumer choice, rather than legislative mandates, are the driving forces behind sustainable economic progress.

II. History of Planned Obsolescence

Planned Obsolescence, as a concept, has a storied history that reflects shifts in industrial innovation and consumer culture. Tracing the origins of this concept is necessary in order to clear up misconceptions surrounding the practice and reveal how it has changed throughout the years. The modern idea is far different than its original conception, without properly analyzing this change the clarity of the term becomes lost.

The roots of Planned Obsolescence can be traced to the early 20th century and the infamous case of the Phoebus Cartel. Formed in 1925, the Cartel comprised major lightbulb manufacturers such as Osram, Philips, Tungsram, General Electric, and others (Time 1945), who colluded to standardize and limit the lifespan of incandescent lightbulbs 1,000 hours down from 2,500 hours (Krajewski 2014). Commonly cited as an example of Planned Obsolescence (Valant 2016; MacKinnon 2016), the Cartel worked to lower operational costs and were supposedly motivated by increasing the number of sales of lightbulbs without fear of competition (Krajewski 2014). While the cartel broke up at the outset of the second World War, lightbulbs continued to be sold at the 1,000-hour standard set by the Cartel.

The Cartel, by deliberately reducing product durability to increase sales, set the precedent for associating Planned Obsolescence with corporate manipulation and the exploitation of consumers. Increasing profits at the expense of the consumers has long been seen as the sole reason for the reduction in the lifespan of bulbs. However, this analysis neglects the fact that there are benefits to shorter bulb lifespans such as these bulbs burn brighter for longer under the same wattage (Pöntinen 2011). The Monopolies and Restrictive Practices Commission (1951) challenged the narrative by stating that “there can be no absolutely right life [of light bulbs] for the many varying circumstances to be found among the consumers in any given

country, so that any standard life must always represent a compromise between conflicting factors." While the commission's findings were generally ignored by the mainstream, it sets the foundation for why regulation of Planned Obsolescence is problematic.

The term "Planned Obsolescence" itself was coined by real estate agent Bernard London in his pivotal 1932 pamphlet "Ending the Depression Through Planned Obsolescence." A far cry from the contemporary use of the term, London's bold conception advocated for the intentional design and production of goods with a predetermined, legal time of failure, or obsolescence. This policy mandates that governments "assign a lease of life to shoes and homes and machines, to all products of manufacture, mining and agriculture, when they are first created, and they would be sold and used with the term of their existence definitely known by the consumer" (London 1932). Afterwards these products would be required by law to be destroyed with coupons given to consumers that could be used to cover the sales tax on the purchase of new goods.

This absurd plan was intended to stimulate demand through increasing the consumption of consumers, ensuring "steady" production level, full employment, and prevent hoarding and idle factories. He envisioned that this would end The Great Depression through stimulated production which would necessitate more labor, overall reducing unemployment. This policy is a prime, albeit extreme, example of the view Keynes put forward in *The General Theory of Employment, Interest, and Money* (1936), that stimulating aggregate demand would negate a depression. London's plan thankfully never came to fruition, however his ideas around limiting the lifespan of products to stimulate increased consumption have remained. When laymen hear "Planned Obsolescence" they see this pernicious view that London advocated for where firms are setting artificially low product

lifespans so that they can exploit their customers for profit. However, London saw this as a legal requirement, not as accidental nor an entrepreneurial decision, which is simply not what the modern use of the term refers to. The disconnect between the modern use and the original policy has muddied the proper definition, it is possible that either London's conceptual policy or the modern verbiage requires redefinition to clarify what is being referred to in economic and political discourse.

While London's proposal was theoretical and pernicious, it highlighted a growing awareness of how product design could influence broader economic and entrepreneurial thinking. The mid-20th century saw a resurgence of attention to Planned Obsolescence, fueled by post-war consumerism. A shift in producing disposable products such as razors, batteries, and plastic products led to criticism over the large creation of waste due to these products. In one of the most scathing criticisms of this new-found consumerism is Vance Packard's *The Waste Makers* (1960) which popularized the concept that creating these disposable products is a form of Planned Obsolescence. He accused manufacturers of deliberately designing products that fail prematurely or go out of style creating what he saw as a "Throwaway Society" (Hellmann and Luedicke 2018), in which consumerism and wastefulness were seen as cultural hallmarks of economic progress. Packard called Planned Obsolescence "the systematic attempt of business to make us wasteful, debt-ridden, permanently discontented individuals" (Packard 1960). This view stuck and resonated with a growing environmental movement that views the concept as a direct contribution to resource depletion and ecological harm.

The Throwaway Society can be characterized by the motto "instilling in the buyer the desire to own something a little newer, a little better, a little sooner than is necessary"

(Adamson and Gordon 2003). Packard worked to reframe “consumerism” from a positive term about economic progress and consumer practices to a negative term about the excess of goods and wastefulness (Glickman 2012). Blame was directed towards the manufacturers as pariahs rather than simply responding to consumer demands, especially attacking marketing and advertisers.

The proliferation of consumer electronics has been the driving force behind scrutiny and regulation of Planned Obsolescence. The rapid pace of technological innovation in smartphones, laptops, and other devices has led to shorter product lifespans due to the physical limitations of hardware and the output of new models utilizing cutting edge technology. Everyone wants the newest device, and firms race to release models with the latest technology as quickly as possible. Apple for example, noted for their yearly releases, find that schedule limiting and have turned to a system of releasing products as soon as they are ready (Gurman 2024). These trends have sparked concerns over electronic waste as discarded electronics contributed an estimated sixty-two million tonnes of waste in 2022 alone, with only 22.3% of it recycled (World Health Organization 2023). This massive amount of waste has led advocates of regulation to attempt to stifle manufacturers by labeling their innovations as Planned Obsolescence.

The historical trajectory of Planned Obsolescence mirrors the rise of more powerful state apparatuses with increased interventions in markets perceived to produce negative externalities such as waste. The growth in regulation has been influenced by a mainstream, public choice framework where policymakers respond to interest groups and negative views of the firm rather than sound economic reasoning.

III. Mainstream View of Planned Obsolescence

The mainstream view of Planned Obsolescence is that it undermines consumer welfare, wastes resources, and contributes to environmental degradation. This is followed by calls for regulatory intervention, emphasizing the need for policies to curb the perceived abuses from manufacturers.

The central critique is that Planned Obsolescence exploits consumers by forcing them to replace products more frequently than necessary. Jeremy Bulow's seminal paper, *An Economic Theory of Planned Obsolescence* (1986), argues that firms not faced with competition from new entrants deliberately design products with shorter lifespans that maximize profits, reducing consumer welfare. He claims that "Except under unusual cost conditions a monopolist not threatened by entry will produce goods with inefficiently short useful lives. This result is closely linked to the observation that a durable goods monopolist will prefer to rent, rather than sell its output." (Bulow 1986, 730) He further argues that oligopolists can collude to reduce durability of products to further maximize their profits. Bulow's paper is typically used as the smoking gun for policy makers that dominant firms or cartels reduce the lifespan of their products solely to maximize profits. Thus, he influenced the mainstream perspective that manufacturers create a system that locks consumers in a perpetual cycle of purchasing replacements.

Similarly, Aaron Perzanowski and Jason Shultz, in *The End of Ownership: Personal Property in the Digital Economy* (2016), highlights how digital technology only exacerbates this issue. By embedding software that restricts repairability or creates dependency on proprietary systems, they claim that firms reduce consumer autonomy and ownership rights. They argue that in the modern age of digital technology, ownership itself is under attack as

you do not actually own physical goods such as electronic books, they are simply licensed. These licenses can be taken away from consumers at any time questioning whether consumers truly own their products or are simply renters. This trend, they claim, erodes consumer autonomy by forcing consumers to abide by certain rules or systems that can be altered or taken away at will. While on its own, Perzanowski and Shultz make compelling arguments advocating for private property rights, an argument can be made that the practice of selling digital goods is a form of Planned Obsolescence. Operating systems, for example, are seen as a form of obsolescence (Dheeraj Naraharisetti et al. 2023), as they require frequent updates that may be incompatible with previous generation hardware. This "technological obsolescence" is viewed as the same as reducing a good's durability in the eyes of regulators. In order to protect consumer welfare, software companies must make their products compatible with previous hardware and hardware made durable enough to handle advancements in software, so says the proponents of regulation.

From a socioeconomic perspective, critics like Robert Reich in *Supercapitalism* (2007) argue that planned obsolescence exacerbates inequality by disproportionately affecting low-income consumers. Frequent product replacements impose higher relative costs on "economically disadvantaged" groups, who may lack the resources to invest in durable alternatives. Moreover, Reich asserts that concentrated market power enables firms to perpetuate planned obsolescence without meaningful competition to check their practices. In this view, planned obsolescence is symptomatic of broader structural issues within capitalism, where profit maximization takes precedence over consumer welfare. Reich's critique aligns with calls for regulatory interventions to address these inequities and foster fairer market dynamics.

Mainstream critics also contend that Planned Obsolescence represents an incredibly wasteful use of resources, exacerbating environmental issues. Perhaps the most compelling argument made from those proposing regulations as many harmful substances, such as lead, are released in the environment with the production of mass-produced products (World Health Organization 2023). In order to curb mass production, some critics of the current system propose not only limiting firms' ability to freely produce goods, but to shape consumer demands themselves. Walter Stahel's work on the circular economy is an attempt to mesh both strands of regulatory thought. In *The Circular Economy: A User's Guide* (2019), he underscores the limitations of traditional, linear "take-make-waste" model and proposes a transition to a more sustainable, resource efficient circular approach. The circular model prioritizes resource preservation, waste reduction, and sustainable production. Stahel advocates for a system that designs products for durability, repairability, and are easily recyclable. He would like to see economic growth decoupled from resource extraction by reducing costs related to raw materials and waste disposal while creating jobs in repair and recycling industries. The model would significantly reduce waste production, energy consumption, and environmental degradation by keeping materials in circulation. By utilizing pay-per-use services or take-back schemes, Stahel sees potential for manufacturers to drive a shift from throwaway culture to one of sustainability. For followers of Stahel's model, Planned Obsolescence, by encouraging frequent product replacement, accelerates resource depletion and undermines efforts to create sustainable production cycles.

This perspective is further seen in *Planned Obsolescence in the Context of a Holistic Legal Sphere and the Circular Economy* (Malinauskaite and Erdem 2021), which directly advocates for further regulation of firms to comply with the circular economy. The authors

claim product design that results in reduced durability is caused by entrepreneurial choices which encourage consumers to buy replacements sooner than necessary. Directly citing the Throwaway Society, they claim that “this culture is no longer sustainable with a global population of 8 billion” (Malinauskaite and Erdem 2021). In an attempt to close the gap in a circular economy, they focus on two types of legal provisions to increase durability and protect consumer welfare. The first type of provision would require businesses to be transparent in communicating the extended lifespan of their products. However, they see that this alone could lead to increased search costs for information leading to a “cognitive overload” about pricing, resulting in a “Confusopoly” –The market failure where consumers buy products that they otherwise would not need due to confusing marketing around the good they are purchasing. The authors seem to not be fully convinced on the rational decision making of consumers and thus advocate for a second type of intervention, directly targeting product design. They thus support interventions that would result in fines or imprisonment for producers that purposely lower product durability, break up monopolies and oligopolies, and punishment for companies that do not design their products with a reuse, recycle, recovery mentality. Malinauskaite and Erdem call for interventions that would force producers to make transparent their product design practices, emphasize standardization and durability, and produce products that are able to be recovered under threat of fines or imprisonment.

The mainstream view of Planned Obsolescence is shaped by concerns over consumer exploitation, resource waste, environmental degradation, and economic inequality. These critiques form the foundation for policy proposals aimed at mitigating its effects, from strengthening consumer protections to promoting sustainable economic practices. These

regulations target producers as the mainstream have a negative view of firms as exploiters of consumer welfare. These arguments do highlight some genuine challenges; however, they overlook many of the reasons why firms design their products with specific durability in mind.

IV. Policy and Case Studies

The mainstream critiques of Planned Obsolescence have spurred various policy measures aimed at curbing its alleged harms. These policies focus on targeting manufacturers in order to promote longevity, repairability, and resource efficiency in consumer goods. These policies, while good intentioned, are fundamentally flawed since they assume that the lifespans of products are, in fact, artificially lowered by dominant firms. This section will look at some of the policies governments have proposed directly relating to Planned Obsolescence and case studies which examine empirical phenomena related to the supposed practice.

Firstly, The European Union's Circular Economy Action Plan represents one of the most comprehensive attempts to address planned, or "premature," obsolescence at a systemic level (European Commission 2015). Utilizing Stahel's idea of The Circular Economy, this initiative prioritizes product durability, repairability, and recyclability to create a sustainable economic framework. By setting design standards and requiring extended producer responsibility, the EU aims to reduce waste and encourage manufacturers to adopt circular production practices. Some of their proposals for regulations include:
"enabling remanufacturing and high-quality recycling; reducing carbon and environmental footprints; restricting single-use and countering premature obsolescence; introducing a ban on the destruction of unsold durable goods; and rewarding products based on

their different sustainability performance, including by linking high performance levels to incentives" (European Commission 2015). These goals are backed under the threat of fines or legal sanctions for companies refuse to comply with the EU's standards. These policies attempt to impose rigid produce design standards, which may lead to stifled innovation. By imposing mandates on specific durability metrics, firms are discouraged from pursuing rapid technological advancement that would lead to shorter product lifespans. The EU's Circular Economy Action Plan is still in its initial stages of implementation and specific policies are still to be drafted, yet some countries have begun to impose regulations that follow along with the Plan's goals.

France, for example, has taken a direct approach by enacting legislation that explicitly combats Planned Obsolescence itself. Laws such as The Energy Transition for Green Growth Act (2015) state that "Planned obsolescence is defined as all the techniques by which a marketer aims to deliberately reduce the lifespan of a product in order to increase its replacement rate" and is punishable with a 2-year prison sentence, a fine of 300,000 Euros and that the amount may be increased "in proportion to the benefits derived from the breach, to 5% of the average annual turnover." These measures also mandate repairability indexes for certain products, empowering consumers to make more informed purchasing decisions. Scored on a scale of one to ten, products are rated on how easily they are repaired. This measure was implemented rather quickly and effectively with producers able to comply in 2-3 years. In that time 55% of consumers became aware of the index and three-fourths of those aware of the index said that it influenced their purchasing decisions (HOP 2021). This index targets consumer electronics and by itself was a rather effective piece of legislation. By easily increasing consumer awareness, the index, by itself, offers a low impact decrease in

information costs for consumers. However, when coupled with the risk of fines or imprisonment, France's laws are incredibly strict measures on manufacturers as shown by the recent lawsuit against Apple. The company was accused of Planned Obsolescence by phasing out of older models through "intentionally slowing down older model iPhones," resulting in a fine of $27 million for the company (Reuben Das 2023). Proving intent in cases of Planned Obsolescence is inherently difficult but Apple conceded, admitted they did, and ate the cost. Manufacturers may find ways to circumvent these laws, calling into question the effectiveness of these measures. Moreover, the added compliance costs could disproportionately impact smaller firms, reducing competition and potentially leading to higher prices for consumers.

Similar measures are in progress of being enacted in Canada with the passed Bill 29, *An Act to protect consumers from planned obsolescence and to promote the durability, repairability and maintenance of goods,* an amendment to the Consumer Protection Act (Jolin-Barrette 2023). This act reflects the growing demand for increased third-party and consumer direct repairability of products. Bill 29 aims to ensure that manufacturers provide consumers and third-party repairers with access to parts, tools, and information necessary to fix products. Supposedly, not providing consumers with the tools to fix their products is a form of Planned Obsolescence as consumers are forced to pay for costly repairs or buy new products. Proprietary restrictions of repair limits consumer welfare according to the act and industries must make available their tools and parts or standardize their designs in order to comply with this bill. Obvious concerns about this bill are that mandating open access to repair tools and information could inadvertently expose manufacturers to intellectual property risks, security vulnerabilities, and overall decreases in innovation.

One place where Planned Obsolescence is heavily scrutinized is the tech industry. Consumer electronics have seen a drastic decrease in lifespan in recent years. LCD monitors and TVs have seen a fall in lifespans by 17 percent, and other information technologies like PCs, laptops, and mobile phones by ten percent between 2000 and 2010, while lifespans of large appliances have fallen by seven percent in the same period. (Weiser 2016). Allegations of deliberate slowdowns in smartphones or limited battery lifespans have drawn widespread attention, prompting lawsuits and regulatory scrutiny. Apple saw significant backlash for its "battery throttling" controversy, which was perceived as an effort to push consumers toward newer models. However, a deeper examination reveals that these practices are not necessarily exploitative but may represent trade-offs inherent to technological innovation. Shorter product lifespans often reflect the rapid pace of innovation in the tech sector, where consumers demand devices with cutting-edge features and capabilities. This dynamic complicates the narratives surrounding Planned Obsolescence and highlights the need for deeper empirical studies.

One of the best case studies of Planned Obsolescence is Toshiaki Iizuka's empirical analysis of the textbook industry (2006). Iizuka investigates how textbook publishers revise editions to mitigate competition from used textbooks. Using a unique dataset from college bookstores (1996–2000), the study examines how publishers decide the timing of new editions and how these revisions correlate with the share of used textbook sales. The study found that publishers are more likely to introduce new editions as the share of used textbooks rises. For instance, a full increase in the share of used textbooks from 0 to 1 triples the likelihood of a new edition being introduced. Rather than competing with other publishers' releases, firms compete with their own used goods and can be seen as a way to try and "kill

off" used goods. He also notes that older textbooks are more likely to be revised, suggesting that content updates may also play a role in some cases. While some use this case study to support the claim manufacturers are exploitative, Iizuka's analysis suggests that allegations of planned obsolescence are often overstated, with limited empirical evidence supporting claims of intentional anti-competitive behavior. Instead, publishers compete with their own textbooks, seemingly to provide the latest revisions with profit being incidental to this goal. This study underscores the importance of understanding market mechanisms and their role in shaping industry behavior, even when these practices are criticized as exploitative.

Planned Obsolescence is an incredibly complex concept to assess empirically and with policymakers desiring to increasingly regulate the supposed practice, there are significant gaps in the literature pertaining to analyzing what constitutes Obsolescence. More studies like Iizuka's paper are necessary in exploring the actual incentives in reducing the durability of products or releasing new models before the usefulness of the previous product has ended. If regulators truly desire to ban this supposed practice, then it is necessary to clarify what actually constitutes Planned Obsolescence rather than simply attacking large dominant firms.

V. Sound Economics of why Regulation will Fail

Through looking at the mainstream argument against Planned Obsolescence and the regulatory response, it seems that there is a disdain towards the manufacturers of consumer goods, especially large dominant firms. This is symptomatic of wider mainstream views of the firms, which sees producers as inherently exploitative and wasteful rather than responding to consumer demands. The problem is that this view is fundamentally flawed, the antagonistic view of the firm has little basis in actual conditions and entrepreneurial reasoning. Utilizing the sound economic reasoning of prominent economists such as Mises,

Hayek, and Kirzner, one can see how these policies are inherently flawed and where the misinterpretation stems from.

Hayek in *The Use of Knowledge in Society* (1945), highlights the central problem with any policy centered around regulating product design. Central planners simply cannot possess the detailed, localized knowledge necessary to make decisions about optimal product design or lifespan. Policies that attempt to enforce durability standards or regulate product cycles often ignore the intricate trade-offs faced by entrepreneurs. For example, the Phoebus Cartel had actual engineering reasons to limit the lifespan of lightbulbs, reasons that stuck even after the breakup of the cartel. The lightbulbs stayed brighter for longer at the same wattage which reduces the number of lightbulbs needed for a room to be lit up. If it was solely a profit driven reason to limit new entrants to the market and increase sales, then why after the cartel dissolved did no firm capitalize on extending the lifespan of bulbs? The reasons known to engineers were not known to the central planners at the time and lawmakers today seemingly ignore the findings of the Monopolies and Restrictive Practices Commission (1951). The knowledge of determining the "correct" lifespan of a good requires knowledge of technological trends, consumer preferences, and production costs—knowledge dispersed among countless individuals. Hayek's insight highlights that government regulators lack the ability to aggregate and utilize this information effectively. He sees that a free market system, utilizing price signals, is the most effective way to utilize this "local knowledge" for optimal resource allocation, making centralized planning inherently inefficient due to its inability to access and process such dispersed information.

Another failure of regulators is to see that actually are the driving force behind the market, not producers. Mises introduces the concept of "consumer sovereignty" in his

seminal work *Human Action* (1949). According to Mises, consumer sovereignty means that consumers ultimately dictate the direction of production through their purchasing choices. Mises emphasizes that in a market economy, producers, entrepreneurs, and workers are directed by the preferences of consumers. Consumers "vote" with their dollars, influencing what goods and services are produced. Those who fail to align production with consumer preferences incur losses and are eventually driven out of the market. This ensures that resources are allocated to their most valued uses. Entrepreneurs may seem to wield power, but Mises argues they are subservient to the consumer. Entrepreneurs must anticipate and meet consumer demand, as their success depends entirely on satisfying these demands effectively. Mises acknowledges that consumer choices can sometimes be influenced by misinformation or coercion in non-ideal market conditions, but this does not negate the fundamental principle. The problem that policymakers face when trying to regulate Planned Obsolescence is that they fail to meet consumer needs effectively through their interventions, because they lack the profit-and-loss signals generated by voluntary consumer choices. Taking an antagonistic stance towards producers for simply producing the goods that people want does nothing to benefit consumers. Unless regulators want to regulate product design altogether, removing entrepreneurial innovation, no policy will truly be effective is preventing “Planned Obsolescence.” Consumers are enacting their rational decision making by deciding to purchase these goods, whether lawmakers like it or not, these goods are demanded. It would be better for the lawmakers to be intellectually honest and instead of regulating producers, regulating consumer decision making as it would better align with their goals.

Furthermore, Kirzner's *Competition and Entrepreneurship* (1973), compounds with Mises's view that the entrepreneur's goal is to foster innovation and discovery. Entrepreneurs act as coordinators of economic activities. By discovering price discrepancies, unmet demands, or undervalued resources, they adjust supply and demand, moving the market toward equilibrium. Profits are the reward for this "alertness" or the ability to exploit opportunities, they are not guaranteed but the result of superior foresight. The contemporary lawmaker sees profits as negative, not understanding the role the entrepreneur has in the firm. They are not simply exploiters of consumers; they attempt to make the market more efficient by properly responding to consumer demand. Kirzner's view implies that excessive regulation stifles the entrepreneurial discovery process, reducing the market's ability to self-correct and innovate. Claims of planned obsolescence often assume that firms collude to exploit consumers, ignoring the competitive pressures that incentivize innovation. For instance, while some tech companies may produce devices with shorter lifespans, competitors offering longer-lasting alternatives can capture market share, ensuring consumer interests are served. In general though, consumers demand the latest, tech heavy products that simply may not be as durable which entrepreneurs just take advantage of this desire.

Another aspect of the market that regulators fail to see is that there are mechanisms naturally developed that address consumer concerns about product quality. Yoram Barzel in his *Measurement Cost and the Organization of Markets* (1982) argues that measurement costs, which include the costs associated with assessing the quality or quantity of goods, significantly influence market behavior. Firms have strong incentives to reduce measurement costs, such as uncertainty about product durability, through mechanisms like warranties, brand reputation, and consumer reviews. These mechanisms signal the trustworthiness of

companies and their commitment to responding to consumer desires of reducing information and transaction costs. Firms develop, advertise, and maintain these mechanisms outside of government intervention as they are the most effective means of reducing measurement costs. Regulatory bodies imposing fines on companies for not developing further mechanisms ignore that these agreements and contracts arise from the market reaching an equilibrium between producers and consumers. The market solutions are much more efficient and effective than any government-imposed sanction as the market has information about the desires of each party that lawmakers simply lack.

The largest problem with regulations targeting Planned Obsolescence is that it may not even exist in the first place. A bold claim to be sure, but the mainstream and laymen's understanding of the practice hinges on the belief that firms are reducing the lifespan of their goods, treating durability as the independent variable. However, the durability of a good may be completely secondary to other attributes that firms and consumers have a greater desire for. The work of Fishman, Gandal, and Shy in *Planned Obsolescence as an Engine of Technological Progress* (1993) reframes durability not as a driving force, but rather incidental to how innovative a market is. They argue that in highly competitive markets with high amounts of innovation, such as the tech industry, that lower product durability is the result of faster innovation cycles. Consumers may face higher replacement costs, yet they benefit by having their desire to have access to the latest technology sooner, fulfilled. Producing goods that are more durable is the result of higher costs of innovation which results in less technological turnover. If true, if Planned Obsolescence is the result of increasing innovation, then any regulation targeting this practice will result in decreased technological advancement, far more detrimental to consumer and overall economic welfare

than any perceived benefits. Regulating Planned Obsolescence may cause the exact harm regulators were attempting to fix.

The mainstream view of Planned Obsolescence completely neglects sound economic reasoning behind product design, innovation, and market operations. By treating the firm as hostile, they target minor symptoms of problems and scape goat entrepreneurs who simply attempt to respond to consumer demands. It truly would be better for regulators to simply say they either want to control product design, or prevent consumers from freely demanding products, as they then would be at least intellectually honest. The average consumer desires the products they are deciding to buy and by listening to a small, loud minority of interest groups, policymakers will only harm the wider consumer body. If the market desired more durable products over advanced technology, then firms would be producing more durable goods. By misinterpreting the fundamental nature of the principles they are targeting, policymakers are simply risking undermining the very innovation and increases in consumer welfare they attempt to promote.

While the policies attempting to ban Planned Obsolescence through regulating product design are incredibly misguided, some initiatives aimed at recycling and refurbishing wasted products may have merits. Policymakers have a seemingly never-ending drive to regulate, in order to satiate this desire, certain policies may be enacted that could provide benefits to the environment while not imposing large costs on consumers and manufacturers.

Initiatives that promote education about the environment and the harm waste such as electronics cause, or recycling policies that provide for the responsible disposal of outdated or broken goods without dictating product design, may provide genuine environmental benefits. France’s product durability labeling mandate is a minimally invasive initiative that

saw positive results on consumer awareness. A general awareness about the effects of pollution may lead to consumers desiring cleaner production processes and better recyclable products that firms are free to respond to. Rather than implementing harsh penalties on companies that do not abide by stringent and uneconomic standards, tax breaks could be used to better incentivize firms to allocate resources to clean up their processes.

Policymakers need to collaborate with producers and consumers rather than treat market processes as hostile. By aligning potential initiatives with market dynamics, policymakers can achieve the goal of protecting the environment without undermining innovation or consumer demand.

VI. Decreased Durability as a Signal for Increased Innovation

Planned Obsolescence, often criticized for being exploitative, may in fact be the result of increased innovation. Long hinted by many authors analyzing the concept, there are engineering reasons why firms design their products with certain durability. Durability is simply a result of how innovative a market is as explicitly stated by Fishman et al. (1993). In this section I will attempt to provide sound economic reasoning for why products are designed with certain durability.

Firstly, a discussion of what exactly durability is, is necessary before further reasoning. A durable good is commonly cited as being a good that remains useful for more than 3 years (Smith 2012). A highly durable good, for example, is a brick as it theoretically never loses its usefulness. Less durable goods and disposable goods, such as single-use razors or non-rechargeable batteries, do not remain useful for long periods of time. Durable goods can be thought of as goods that remain useful for prolonged periods of time.

Planned Obsolescence can be thought of as a durability issue; rather, why do some products seem to be more durable than others? Or, why do some apparently closely serviceable goods seem to fail faster than the competition? A closer look into the issue reveals that product durability is not necessarily a failure of design; rather, is shaped by the closely woven interlock between innovation, consumer preferences, and production costs. Deliberate decisions are made in balancing these factors, in order to create products that meet consumer demands at an affordable price while keeping pace with technological advancements. By exploring these principles, one can understand why highly demanded products such as smartphones may lack the durability we might expect.

The greater the durability of a product, the longer that good will be able to provide utility to a consumer. Durability, however, competes with other product attributes in the design process. When pertaining to a product like smartphones, producers attempt to pack as much cutting-edge technology in the smallest possible device. Smartphones are epitomic of industries driven by rapid innovation. Manufacturers are constantly (usually on a yearly basis) releasing new models featuring faster processors, sharper cameras, and lightest weight materials, all packed in the thinnest design possible. These advances, however, are not costless, and the cost that comes with these advances in technology is the durability of the good. Thinner devices run the risk of snapping while higher resolution screens and cameras are more susceptible to wear-and-tear and are fragile. Attempting to make a more durable phone might require heavier materials, less cutting-edge technology, or additional manufacturing redundancies, leading to increased production costs. Producers weigh these costs against the benefits of offering increased durability, striking a balance between the new

features and a longer product lifespan. They also must consider whether consumers truly value durability over new innovations or a potentially high price.

Consumer preferences provide another insight into understanding product durability. People may say they want their goods to last forever, but practically would prefer to upgrade their belongings in line with the latest technological advancements. The average consumer would much prefer the latest model iPhone 16 over the first generation released only a relatively short 20 years prior, or any phone contemporary to the first generation. Rapidly advancing technology has driven consumers to desire the latest upgrades, even when their current devices are still functional. This preference is so strong that manufacturers respond by competing over who can put the most cutting-edge technology in their products at the cost of durability. While some buyers may complain about the decreased durability, most are willing to replace their goods before the end of serviceability, when offered newer innovations. Designing products to last longer when faced with a preference for innovative technology will only lead to increasingly diminishing returns. Producers instead will allocate resources to features that offer higher returns, such developing better cameras or faster processors.

The opportunity cost of allocating resources towards furthering product durability is the resources not spent on innovating new technologies. Rather than pushing new boundaries of technology, manufacturers focused on durability stagnate innovation by neglecting to fund research and development. Devoting resources for longer-lasting phones may mean fewer resources invested in developing fundamental technological improvements. A more durable screen could be developed but it would come at the cost of delaying the launch of the phone with a new camera feature which consumers desire more. Firms are competing to satisfy

customers who desire new technology, and manufacturers who focus on durability alone do not provide the proper incentive in order to differentiate their products from competitors. In industries where innovations are happening at a blistering pace, such as the consumer electronics industry, the opportunity cost of durability is incredibly high. Manufactures are constantly faced with the desire for newer features and low prices; thus, shift focus away from durability. Firms will allocate their means to the most desired ends which is maximizing profits. Since most consumers are more concerned with features than durability, companies focus first on capitalizing on innovations, durability is secondary to this goal.

To further see how innovation is a driving force behind a good's durability, consider the contrast between highly innovative goods such as smartphones and highly durable goods such as appliances. Products such as refrigerators, washing machines, and dishwashers are expected to last for decades as their core functionality does not see much change over time. The slower pace of innovation reduces the opportunity cost of durability in these goods. Furthermore, the higher price per unit associated with these goods allows for more leeway to invest in longer-lasting materials. Larger size is usually a consumer desire when pertaining to more durable goods such as appliances, and bulky construction is acceptable for consumers as little spatial movement is required to utilize these products. Innovative products such as smartphones, on the other hand, innovate by the year, or even monthly. A smartphone designed to last a decade will quickly become obsolete as more processor intensive software is developed, limiting the utility of the durable phone. Even if the hardware remains intact, consumers will find themselves desiring new models anyways to run new software. As long as innovation continues at breakneck speeds, firms do not have enough incentive to invest in

durability, since consumers are unlikely to retain their goods long enough to benefit from a longer product lifespan.

When innovation is at the forefront of an industry, firms race to be the first mover to capitalize on these innovations. Failing to meet consumer preferences results in losses for companies, and although durability matters, performance, and features matter much more for these innovative goods. Manufactures are simply prioritizing the attributes that maximize their sales, taking into consideration the preferences of all parties involved. The consumer-driven market optimizes for the combination of features that the majority of consumer's desire.

Products fail so easily not because they are poorly designed, but rather, they are designed according to consumer preferences, with economic trade-offs in mind. Durability, while generally desirable, is but one factor that influences product design. In industries driven by rapid innovation, it takes a backseat to other attributes such as camera quality, processor speed, lightweight and thin design. By examining economic principles such as the opportunity costs and role of consumer preferences in determining durability, the conclusion is reached that the market optimizes to provide maximum value for consumers. Durability is a byproduct of whether an industry is innovating or not, more innovation leads to less durable products, while less innovation leads to longer product lifespans. Rather than bemoaning the fact that a smartphone may not last forever, the technological advancements allowing for a truly powerful device to be held in hand should be celebrated.

With this reasoning I am attempting to show that Planned Obsolescence is far from being a market failure that should be banned, product durability reflects how dynamic innovation leads to an increasing consumer desire to possess newer technology. By embracing shorter

production cycles, firms are simply responding to the rapidly changing landscape of technology and consumer preferences. Attempts to regulate product lifespans risk distorting these processes, undermining the incentives that drive progress. Recognizing planned obsolescence as a sign of economic vitality allows for a more nuanced understanding of its role in promoting innovation and growth.

VII. Conclusion

Planned Obsolescence, often maligned as a market failure, emerges instead as a natural byproduct of innovation, consumer preferences, and market dynamics. This paper has demonstrated that criticisms of Planned Obsolescence frequently misunderstand the role of entrepreneurs, who respond to consumer demands and competitive pressures, rather than exploit markets for profit alone. Through sound economic reasoning, the inherent limitations of centralized planning and regulatory interventions have been exposed, highlighting the failure of such measures to account for the decentralized and adaptive nature of markets.

Historically, planned obsolescence has been framed as a pernicious strategy, but this narrative often overlooks its complexities. However, by examining supposed examples, such as the Phoebus Cartel and the textbook industry, it is revealed that alleged Obsolescence is frequently tied to the interplay between innovation and resource allocation rather than malicious intent. Regulatory policies, including the European Union's Circular Economy Action Plan and France's Anti-Obsolescence Laws, while well-meaning, often fail to account for the use of knowledge in broader society as seen by Hayek or the entrepreneurial discovery process put forth by Kirzner. These policies risk distorting market incentives and stifling the very innovation they seek to preserve.

Moreover, the rapid pace of technological advancement demonstrates that shorter product lifespans often reflect consumer desires for cutting-edge features rather than deliberate exploitation. The trade-offs between durability and innovation illustrate how firms balance competing priorities to meet evolving consumer expectations. As Fishman et al. highlight, technological progress frequently accelerates product turnover, suggesting that obsolescence is less a problem to be solved and more a feature of dynamic markets.

Nevertheless, I acknowledge that not all regulatory efforts are without merit. Policies focused on recycling and refurbishing wasted products, when aligned with market incentives, can complement the entrepreneurial process, and reduce environmental impact. These initiatives exemplify how collaboration between policymakers and market participants can yield meaningful results without undermining economic efficiency or innovation.

Further research may be necessary in empirical studies surrounding industries supposedly participating in Planned Obsolescence. In order to truly understand the economic reasons why firms are designing the durability of their products, a better look into the practices of product design and if firms are in stronger competition with their used products or rival firms is incredibly important. Additionally, further research into the political motives behind the sudden regulatory response surrounding product durability may be fruitful in understanding the phenomenon of Planned Obsolescence.

Ultimately, through this paper, I am attempting to reframe Planned Obsolescence as a sign of economic vitality and innovation, arguing that government interventions fail to address the underlying dynamics of consumer-driven markets. To truly address concerns surrounding resource waste and environmental impact, future research must focus on empirical studies that capture the complexity of market mechanisms and the unintended

consequences of regulatory measures. By embracing the insights of sound economics, we can better understand the role innovation has in fostering progress and consumer welfare while identifying solutions to wastefulness that preserve the freedom of markets.

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