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Special

The European Directive on Common Rules Promoting the Repair of Goods. A Critical Assessment of its Drafting Process

A Directiva europea sobre normas comúns de fomento da reparación de mercadorías. Avaliación crítica do seu proceso de elaboración

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Abstract

The European Commission has recently launched a proposal for a Directive to promote repair. In this paper we critically analyse the drafting process in order to understand the resulting policy options. We consider that although the ambition of the Directive was low from the beginning given the limited policy options, it became even worse during the consultation period. The selection of barriers to repair was limited, and manufacturers pushed for a narrow and closed form of Right-to-Repair (R2R) that transferred all control over the potentially emerging repair market to them. Some information measures were proposed so as to increase transparency, potentially increasing the administrative burden on independent repairers, along with measures to encourage repair when under legal guarantee. This Directive fails to promote repair or help independent repairers overcome access barriers, nor does it allow member states to go beyond the limits imposed in the Directive itself.

Keywords: Repair; Repairability; R2R; European Commission; Directive.

Resumo

A Comisión Europea lanzou recentemente unha proposta de Directiva para fomentar a reparación. Neste artigo analizamos cun enfoque crítico o proceso de redacción para comprender as opcións políticas resultantes. Consideramos que, aínda que a ambición da Directiva era escasa desde o principio -dadas as limitadas opcións políticas-, empeorou aínda máis durante o período de consulta. A selección de barreiras á reparación foi limitada, e os fabricantes premeron a favor dunha forma estreita e pechada de Dereito a Reparación (R2R) que lles transfería todo o control sobre o mercado de reparación potencialmente emerxente. Propuxéronse algunhas medidas de información para aumentar a transparencia, o que potencialmente aumentaría a carga administrativa dos reparadores independentes, xunto con medidas para fomentar a reparación con garantía legal. Esta Directiva non fomenta a reparación nin axuda aos talleres independentes a superar as barreiras de acceso, nin permite aos estados membros ir máis aló dos límites impostos na propia Directiva.

Palabras clave: Reparación; Reparabilidade; R2R; Comisión Europea; Directiva.

JEL Codes: 021; 043; 044; Q56; Q57.



1. INTRODUCTION

Repair is a restorative practice that allows the useful lives of objects to be lengthened and reduces the likelihood of prematurely disposing of them. This circular activity reduces resource consumption and emissions, as it is used instead of new production, but it also contributes to creating jobs and economic activity on a territorial basis, thus making it a core element of the Circular Economy paradigm (Stahel, 2013; Gharfalkar et al., 2016; Svensson-Hoglund, et al., 2021; López-Bermúdez & Vence, 2023; Llorente-González & Vence, 2020). Due to the increasing environmental pressure placed on natural resources and sinks, repair represents an opportunity to minimise it while meeting our material needs, thus making it a key activity in the strategy towards a circular economy. In the case of the European Union, the advantages that stem from a strong repair economy are also geopolitical. The EU is currently internationally dependent on many strategic resources that are essential for its economy (European Commission, 2018). Any circular activity that can reduce the dependency on resources while ensuring the satisfaction of material needs is highly desirable, as noted in the European Green Deal (European Commission, 2019) and the second Circular Economy Action Plan (European Commission, 2020). Hence, it should be in the EU's best interests to facilitate repair whenever possible. In addition to that, the EU is currently in a privileged position as a global commercial and industrial hub to push for legislative reforms that would ensure that manufacturers conform to repairability rules.

Regulation to promote repair is gaining in importance, with Europe being no exception. One of the most popular regulatory approaches is the Right to Repair legislation (R2R), which aims to remove access barriers to repair, so that it is not blocked by default. It would then be up to the consumers to decide whether or not to seek a repair based on the market conditions available to them. R2R does not necessarily mean making repair more attractive overall, but simply forbidding manufacturers from impeding repair outright, by way of design decisions, intellectual property, copyright and patent law (Grinvald & Tur-Sinai, 2019; Svensson et al., 2018). It is important to bear in mind that promoting repair goes beyond R2R, it involves a wide range of policy reforms aimed at making repair a more desirable practice overall. Thus, the European Union and many member states have proposed measures that have, to some degree, made repair legislation go further than merely removing the barriers, as we will see in the following section. It is in this context that the Directive of the European Parliament and of the Council on common rules promoting the repair of goods and amending Regulation (EU) 2017/2394, Directives (EU) 2019/771 and (EU) 2020/1828 was proposed by the European Commission (European Commission, 2023b). This is an agreement towards a full harmonisation directive, meaning that it would prevent member states from going beyond the limits established in the Directive itself, were they to seek more ambitious legislation. The reason given behind this directive has to do with differing European legislations potentially hindering the proper functioning of the Common Market. So far this Directive proposal has been adopted by the European Commission and European Parliament, after some amendments were introduced.

In this paper, we will focus on a revealing dimension of the debate surrounding the repair regulation, that is, the elaboration process and how the participation of agents and stakeholders shapes the resulting policies. In this paper, we will critically assess the drafting process of the Directive on common rules promoting the repair of goods. Our aim is to determine how the elaboration process influenced the final outcome of the Directive and whether or not this fulfils the expectations of the promotion of repair as an alternative to sustainable consumption.

Manufacturers may have a strong incentive to discourage repair, since it could act as a deterrent for consumption by ensuring that goods are used longer. Reduced or slower replacement rates for these items might have a detrimental effect on manufacturers' revenues. Thus, one of the main incentives of repair from an environmental perspective could become a threat from the perspective of industries. This is the same logic that made planned obsolescence common practive among designers and industrialists in the first place (Packard, 1960).

Nevertheless, repair as an aftersales service might be an important source of revenue for manufacturers, so it stands to reason that they might be interested in having an influence over the outcome of the repair regulation. Some estimates put the size of the repair sector at around 3% of American employment (Wiens, 2018). Other regional estimates suggest that this figure is closer to around 2.4% (López-Bermúdez & Vence, 2023, p. 189)

Given how large the repair business is for manufacturers, it is not surprising that many of them dislike the idea of restricting their control over the repair market. Some of the strongest manufacturers have actively hindered the passage of right to repair regulations. (Grinvald & Tur-Sinai, 2019)

This paper is structured as follows: in Section 2 we address the methodology and methods employed in our analysis; in Section 3 we review the regulations regarding repair at both the EU and national levels and what is the niche that this Directive fills; in Section 4 we present the drafting process and its stages, along with the policy options proposed; section 5 is dedicated to the critical analysis of the drafting process and its outcomes; in Section 6 we present our conclusions.

2. METHODOLOGY

Since the aim of this paper is to determine to what extent the position of relevant stakeholders during the elaboration process has influenced the results of the Directive, we have analysed the available documentation on the drafting process (European Commission, 2023a, 2023b, 2023c, 2023d) as well as the raw data regarding consultation with the stakeholders. "Document analysis involves the process of skimming, thorough reading, examining content and interpretation of documents" (Kayesa & Shung-King, 2021). Policy and regulatory document analysis constitutes a particular instance of document analysis:

This type of analysis is based on a prior understanding of the policy environment. Consequently, an expectation of policy document analysis is that the [...] researcher has familiarity with not only the policy document but also a literature base that provides knowledge about the policy arena under study. A review of the relevant literature is normally undertaken prior to document assembly and analysis. This provides a theoretical platform for devising the specific questions that will be formulated to guide the scrutiny of text in the document. (Cardno, 2018, p. 631)

There are two contexts for this research, firstly a review of the relevant policy measures currently in force in the European legal sphere (Section 3) and secondly how repair barriers are currently understood in the field of repair research (Section 5.1). This helps determine the conceptual framework of analysis, which in our case involves the context, the negotiation process and the policy content.

Our analysis is qualitative, focusing on the critical analysis of the content of the text (Cardno, 2018; Armstrong, 2021). The questions employed in our analysis in the selected documents include the explicit and implicit aims of the Directive, the opinions of member states, civil society stakeholders and European institutions, notably the Regulatory Scrutiny Board (RSB [summarised in tables containing the raw data from the inquiries]) and the identification

of barriers as a previous step in policy selection. The positions of manufacturers were assessed by a thematic analysis of the inquiries conducted by the European Commission. The codes employed were inductive and emerged from the positions of the manufacturers themselves. These included: 1. I do not understand the EU's concept of R2R; 2 With regard to the concept of R2R, 2.1. I do not understand R2R in general, 2.2. The legal guarantee is enough, 2.3. The notion of R2R should be rejected altogether, 2.4. The R2R should be accepted, but the responsibility should lie entirely on the consumer; 3. As regards products to be covered by the R2R; 3.1. No products should be covered, 3.2. The premise for the selection of products should be refused, 3.3. The selection of products should be left to the discretion of the manufacturer; 4. Concern for the independent repair sector should be given; 5. Information tools should be employed only; 6. Prices should not be regulated; 7. Supply in the EU market needs to be controlled; 8. The period of time spares are available should be controlled. The result of this analysis in turn allows us to critically assess the elaboration process of the Directive and the decisions adopted therein.

3. REGULATING REPAIR IN THE EUROPEAN LEGAL SPHERE

The EU and several member states have so far adopted various policy measures concerning repair and repairability. This diversity of national legislations is used as justification for the Directive on common rules promoting the repair of goods, since it is claimed that obstacles to the correct functioning of the internal market could emerge. In this section, we provide an overview of the most relevant policy measures and legislations adopted by the EU and the member states regarding repair, as well as their effects.

Table 1. European directives that affect repair and repairability

Measure	Details
The Waste Framework Directive (2008/98/EC)	It is considered a departing point regarding the Circular Economy due to the prioritisation of waste prevention (reuse) rather than solely focusing on waste treatment.
The Waste Electrical and Electronic Equipment Directive (2012/19/EC)	Extended Producer Responsibility (EPR) is consolidated for WEEE. This system is conceived for recovery rather than reuse and can pose a problem in terms of repairability.
Consumer Sales and Guarantees Directive (1999/44/EC)	This ensures a 2-year legal guarantee for all products acquired in the EU, even repaired ones. Guarantees do not necessarily promote repair since many consumers may feel entitled to a new product when the one they own is still under guarantee.
The Ecodesign Directive (2019/125/EC)	Although focused on energy efficiency, a series of related regulations for certain products have ensured that design and repairability criteria are met. This directive is the first important step towards promoting repair, despite the limited scope of products.
The Ecodesign for Sustainable Products Regulation	This new regulation, which is still being laid out, will provide a framework for setting performance and information requirements, including durability, reusability, upgradability and repairability, along with efficiency requirements.

Source: own elaboration from Dalhammar et al. (2020), Maitre-Ekern & Dalhammar (2016), Riisgard et al. (2016), European Commission (2022)

In the last few decades, the EU has adopted a series of policy measures that have had an impact on repair (see Table 1), although not necessarily positive. For instance, Extended Producer Responsibility (EPR) has been addressed as an obstacle to reuse. EPR could hinder

repair for several reasons: it is legally complicated to repair products because when one ends up in waste bins, it belongs to the EPR system; it can also be a barrier to promoting product ecodesign, since the incentives in EPR schemes are currently more for recycling than repair (Dalhammar et al., 2020, p. 20).

Additionally, once in the waste stream, Electrical and electronic equipment (EEE) is often treated with little care, which in turn makes it difficult to repair and/or refurbish, even when the damage is merely aesthetic, given the difficulty to restore it to its original appearance (Cole et al., 2018). Legal guarantees do not ensure increased repair either, since consumers may feel entitled to new products when trouble arises with it within its legal guarantee period; for instance, 65% of consumers choose replacement over repair before the warranty expires (European Commission, 2023a, p. 14), so additional measures should be taken to ensure that the latter is prioritised over substitution.

The regulations under the Ecodesign Directive (2019/125/EC) adopted some specific measures regarding repair and repairability. These included the availability of spare parts and information and designing for ease of disassembly. So far, these requirements have only covered a limited number of product categories (electronic displays, servers and data storage devices, vacuum cleaners, washing machines and washer-dryers, dishwashers, refrigerators, including those with a direct sales function, and welding equipment). These rules will eventually play a crucial role in the current Directive, as the R2R will only apply to products for which ecodesign requirements exist or will soon exist. In this regard, it is important to bear in mind the Ecodesign for Sustainable Products regulation, which will expand on the current Ecodesign Directive.

Besides the European directives, certain member states have adopted different policy measures that have affected repair to some degree. This divergence in national laws and the supposed effects on the internal market have been used as justifications for the "full harmonisation" character of the Directive on common rules promoting the repair of goods. This means that member states will not be able to maintain or introduce provisions that vary from those included in the Directive itself (European Commission, 2023b).

Table 2. Policy measures adopted by member states concerning repair and repairability

Measure	Countries	Details
Vat reductions	Belgium, the Netherlands, Sweden, Finland and Austria	These countries apply a lower VAT tax rate on certain repair activities, mostly minor repair services: shoes, textiles and bicycles among other items.
Tax deductions	Sweden (2017 household equipment, 2007 IT services) and Austria (only some regions)	In Sweden, 50% of labour costs can be deducted for repairs made to household appliances at home. In the Austrian case, 50% of the cost of the repair up to $€100$ is reimbursed by some regional administrations.
Legal guarantees	Finland, the Netherlands and Norway	Both Finland and the Netherlands have a legal guarantee period for the expected lifespan of objects. The expected lifespan is determined by a specific board. Norway has a legal guarantee of 5 years for products expected to last more than 2 years (a category which mobile phones fall into).
Planned obsolescence	France (since 2014)	France amended their consumer code and criminal code so as to make planned obsolescence illegal in cases where lifespans are deliberately cut short due to defects or the impossibility to repair.

Measure	Countries	Details
Spare parts	France (since 2014)	France amended their consumer code to include the obligation of the seller to declare for how long spare parts would be available (if that information had been disclosed by the manufacturer). The producers are obliged to provide the spare parts for the stated period.
Repairability index	France	In 2021, France established a repairability index for 5 product categories (smartphones, laptops, televisions, washing machines and lawnmowers). This index needs to be calculated by the manufacturer according to a rule and included on the product labels.

Source: own elaboration from CHAFEA (2015), Dalhammar et al. (2020), Maitre-Ekern & Dalhammar (2016), Piringer & Schanda (2020), Wrbka & Dimatteo (2019), Right to Repair Europe (2021)

The measures adopted by different nations can be seen in Table 2, which include tax reforms, additional legal guarantees and the French regulatory approach.

Incentives include VAT reductions, income tax deductions and even the reimbursement of repair costs. To date, the former have been targeted minor repair subsectors, like shoe, textile and bicycle repairs. Meanwhile, in Sweden, tax deductions cover 50% of labour costs for repairs of household equipment and IT services. So far, the effects of these measures have been disappointing. In interviews with repairers in sectors benefitting from the abovementioned incentives, Dalhammar et al. (2020) discovered that only 9 in 22 noticed an increase in sales although they could not be sure whether it was due to the tax reform, whilst 5 out of 22 stated that they already had enough customers.

As we have already mentioned, the extension of legal guarantees does not ensure repair, since a consumer can ask for a new product instead. Additional measures are necessary in order to give repair priority over replacement during the warranty period. Nevertheless, the current directive does prioritise repair when under guarantee, as long as it works out cheaper than substitution. The effect of this measure might be limited though, given the fact that most trouble with items occurs after their guarantees have expired (European Commission, 2023).

The French measures, on the other hand, represent a completely different approach. France has banned and criminalised planned obsolescence and has compelled sellers to provide information on spare parts when available. This approach is not without flaws, though. It is very difficult to prove intentionality on the part of the manufacturer and some forms of obsolescence, like functional obsolescence, cannot really be tackled. They have also imposed an obligation on the part of the seller to specify the availability of spare parts if the manufacturer discloses this information. Nonetheless, there is no obligation for the manufacturer to disclose the information, nor an obligation for the manufacturer to even produce spare parts in the first place (Maitre-Ekern & Dalhammar, 2016), whereas the accompanying regulations for the product types mentioned earlier associated with the Ecodesign Directive, establish a minimum period of availability for spare parts.

As we have seen, several developments have taken place in the EU in regard to repair. Hence, the proposal for this directive aims to unify contrasting national legislations that might impact the Internal Market in the form of information gaps between countries. This directive will amend the provision of legal guarantees while also fusing together economic practices for repair, in that identical information and repair requirements among European Member States will be established.

4. THE PROPOSAL FOR A DIRECTIVE ON COMMON RULES PROMOTING REPAIR

Throughout the directive proposal's elaboration process, several steps were taken. First, the aim of the directive was determined, then various ideas were raised in a round of consultations with stakeholders and finally the potential impacts were assessed before deciding on a set of policy options.

4.1. The aim of the directive

It is claimed that the directive proposal, "[...] pursues the objective of improving the functioning of the internal market, while promoting more sustainable consumption" (European Commission, 2023b, p. 14). The main aim is to improve the internal market whereas more sustainable consumption is seen almost as a byproduct. In order to achieve these goals, the European Commission sets out to lay down some rules regulating repair under and beyond the legal guarantee to ensure homogeneity and competition in the repair market at the European level. Regarding the promotion of sustainable consumption by increasing repair, the European Commission identifies two main problems: first, even under the legal guarantee, replacement tends to be preferred over repair (European Commission, 2023a); second, when no longer under the legal guarantee, unfavourable conditions make repair unlikely. Promoting the repair of goods means increasing the likelihood of repair happening both under and beyond the legal guarantee (European Commission, 2023a).

4.2. Preparatory work and the drafting process

As with other regulations, this EU directive proposal drafted by the European Commission is the result of an extensive preparatory operation in which many stakeholders were involved. In this section, firstly, we examine the available documents that report on the consultations with the stakeholders, as well as the expected effects of the measures. Secondly, we assess the Impact Assessment report (European Commission, 2023a), where the procedural information is included.

4.2.1. Consulting the stakeholders

In this section, we address the consultation process with the stakeholders. This process took place in three stages: a series of enquiries, a call for evidence and a consultation with the Regulatory Scrutiny Board. The second stage was to collate the results on the perspectives of the member states.

Open Public Consultation (OPC) on sustainable consumption of goods

The OPC took place in the first months of 2022. The numbers and types of participants can be seen in Table 3. Citizens and businesses represented 81% of all respondents. Businesses were mainly large international manufacturers, like Amazon, Microsoft, Google and the European Automobile Manufacturers' Association.

Table 3. Numbers and types of participants in the Open Public Consultation

Type of participant	Number of participants	Percentage of total
Citizens	166	50%
Businesses	54	16%
Business organisations	51	15%
Consumer organisations	10	3%
Non-Governmental Organisations	13	4%
Environmental organisations	8	2%
Trade unions	2	1%
Public authorities	11	3%
Academic institutions	3	1%
Other	13	4%
Total	331	

Source: European Commission (2023a)

The questions in this consultation revolved around three main issues: shortening lifespan, policy interventions under the scope of the Sales of Goods Directive 2019/771 (abbreviated to SGD, which refers to the legal guarantee of an item) and policy interventions outside the SGD. Although some of the information is included in the European Commission (2023a), we calculated the complete results from the raw data, which is included in Appendix A.

The majority of the participants agreed that lifespans had experienced a decreasing trend, while only business representatives disagreed. On the subject of this decline, the interviewees stated fashion and expensive or inaccessible repair services as the reasons, while business stakeholders mentioned technological change. In any case, it is worth noting that only 37% of business stakeholders answered the questions related to this specific topic.

On the policy measures under the scope of the SGD, three main issues were addressed: repair under the legal guarantee period, the liability extension and second-hand and refurbished goods. Out of all these measures, only one was eventually adopted in this directive proposal: the prioritisation of repair over replacement under the legal guarantee (see Section 3.3.). Extending liability periods was preferred by most, except by businesses, who argued that it would entail excessive costs.

The measures after the legal guarantee period, outside the scope of the SGD, is essentially what the directive refers to as R2R. Most participants argued that a new R2R should cover all product categories. On the respondents' preferred option to seek for repair, most of them seemed to prefer it when they were done by the manufacturers, followed closely by independent repairers and finally sellers and consumers themselves. Regarding whom should have the obligation to carry out these repairs, most considered it to be the manufacturer. On the subject of the price of a repair when there was no alternative, most business stakeholders argued that it should cover both the cost and a profit margin, while consumer organisations and NGOs argued that it should cover only the cost. In the OPC, the options that were presented were limited from the beginning.

Feedback on the published call for evidence for impact assessment was received, with 325 stakeholders participating. This went in the same direction as the public consultations, with businesses rejecting extending liability and accepting R2R outside the legal guarantee, provided

costs were covered. Most large manufacturers called for voluntary measures and trust in competitive markets.

As part of the elaboration process, the Regulatory Scrutiny Board (RSB) reviewed the impact assessment of the proposal. The RSB plays a key role in the regulatory process of the EU and is composed of members of the Directorates-General for the promotion of the market and industry experts. The board's participation in the elaboration process focused almost exclusively on ensuring that the cost-benefit and economic impacts of the policy options were assessed, not on whether the policy options would have the desired effect (Nogueira, 2024). The RSB turned down the proposal on one occasion. This highlights that its role cannot be understated, since it holds the power to veto any regulatory initiative.

Workshop with Member States

In this stage, member states were asked to contribute. Very little information is available on this process and none at all regarding the individual positions held by each of them. Most of them expressed preliminary positions while the others had not yet formed one, according to the Impact Assessment Report (European Commission, 2023a).

	Prioritise repair within guarantee		hand and	second hand and new goods	Impose obligation on producer to repair at a reasonable price
Favourable	11*	3	9	5	2**
Reluctant	1	6	3	9	10
No position	8	5***	8	5	4
Took the floor	20	19	20	19	16

Table 4. Available results on the positions held by member states

Source: own elaboration from the European Commission (2023a, pp. 97-99)

Some member states would be committed to the SGD for promoting repair to an extent but they would reject extending liability periods. As we have seen, several countries already have longer liability periods (see Section 2). Some member states would also be in favour of promoting second-hand and refurbished goods as replacements within the legal guarantee period, but would be reluctant to align liability periods of second-hand goods with new ones. Overwhelmingly, they would be reluctant to impose any obligation on the producer regarding repair, even if it were offered at a reasonable price. Member states hold a more conservative approach than businesses themselves on this matter. In sum, MS appear not to be keen to put the plans raised by the European Commission regarding repair into motion, even when the options proposed are not overly burdensome. In the end, the directive does include a policy option on the obligation to repair, although it is not very effective.

^{* 6} MS supported the PO1B and 7 MS supported the PO1A

^{**} Only one MS showed full support for the proposal

^{***} These were dependent on the specifics of the proposal

4.2.2. The barriers identified by the European Commission as part of the preparatory work

As part of the preparatory work of the directive, the European Commission identified a series of barriers and challenges to repair. It must be noted that the European Commission used the term drivers rather than barriers. Out of these, two are considered to be outside of the scope of the directive.

Barriers Descriptions 1. Repair when under guarantee Currently, the consumer can choose to have a product replaced instead of having it repaired when under guarantee. 2. Lack of transparency on availability and refers to finding the appropriate service conditions understanding its conditions beforehand. The effort that a consumer needs to make in order to have 3. Inconvenience something repaired along with the time that a repair takes, often affected by the delay in the supply of necessary parts. Repairs are poor value for money compared with the price of Not financially attractive outside guarantee buying a new product. Although included, this driver is not properly addressed in the directive. 5. Design that hinders repairability Design features that make repairs either more complicated or expensive than need be. The considerations that make a consumer want to have 6. Consumer choice

Table 5. Barriers to repair identified as part of the preparatory work

Source: own elaboration from European Commission (2023a)

something replaced rather than repaired.

Design and consumer choice are outside the scope of this directive, which is problematic for a regulation that should be focused on encouraging repair. It must be noted, though, that the upcoming Ecodesign for Sustainable Products Regulation, which is being developed separately, could cover the issue of design (see Section 2).

Out of the drivers that are claimed to be inside the scope of this directive, Driver 4 is not actually addressed. Repairs are affected by the relative price of the repair in relation to the price of a replacement. This means that a repair would be made more economically attractive by either reducing how much it would cost to do so or by increasing the price of the replacement. No measure proposed in this directive can tilt this balance in favour of repair. If anything, costs might even increase because of additional administrative burdens on repairers: "It is not in the realm of this initiative to influence factors that have an effect on prices; the resulting prices will largely be determined by the market." (European Commission, 2023a, p. 17). This directive will only deal with price in terms of making it more transparent, reportedly improving competition, thus depending solely on trust and transparency drivers.

The barriers considered in this directive do not accurately represent the barriers to repair that experts and academia had identified. These drivers are merely a redundant selection of repair issues, with the main focus on just two: repair under the legal guarantee and information and transparency (for a detailed analysis see Section 5.1.).

4.2.3. Expected environmental and socioeconomic impacts

The summary of the expected impacts can be found in Table 6. Impact assessment was carried out on the effectiveness of the policy options, which included the effect on sustainable consumption and the environment and the economic effect in costs and benefits for the agents.

Table 6. Summary of the impacts of the adopted policy options

	Benefits over 15 years	Costs over 15 years
Economic impact	Consumer savings 176.5 billion EUR Growth and investment 4.8 billion EUR Savings production costs 15.6 billion EUR	Business adjustment costs 8.1 billion EUR Business administrative costs 69.8 million EUR
Environmental impact	CO ₂ savings 18.5 million tons in CO ₂ -eq = 3.3 billion EUR Resource savings 1.8 million tons = 1.1 billion EUR Waste savings 3 million tons = 493.4 million EUR Total monetised 4.9 billion EUR	
Social impact	8872 jobs ~3.3 billion EUR in personnel costs	
Impact daministration	on	Implementation costs 105.5 million EUR

Source: European Commission (2023a)

The process of evaluating the impacts began with a study of a sample of 7 products affected by the directive. Based on an in-depth analysis, it estimated the expected impacts of the possible policy measures on the sampled markets, and then extrapolated them to the entire internal market. Based on the expected effect on reduced consumption and increased repair, social, economic and environmental effects were calculated and attributed to each agent (European Commission, 2023a).

For instance, reduced consumption would imply consumer savings, but also reduced turnover for producers and sellers, which would translate into less employment in the affected sectors. In addition, reduced consumption would also mean savings in terms of resource usage and emissions. Increased repair, on the other hand, would have an effect on employment, partially or even fully, making up for the effects of reduced consumption. Increases in repair would also ensure that the material needs of customers were met without considerably increasing the environmental impacts. Administrative costs would apply to the policy options that would incorporate information requirements.

4.3. The selection of policy options

Based upon the preparatory work, a set of policy options was finally chosen. The possible policy options considered were divided into 2 main clusters, the first covering repair under the legal guarantee, the second covering repair after the legal guarantee. A total of 13 specific policy options were proposed, of which only 7 were accepted into the final proposal.

Table 7. Policy options proposed and accepted into the directive 2023/0083

	POLICY OPTIONS	Policy sub- options	Description	
Cluster I Within legal guarantee	Option 1 Repair within the SGD	PO1A	Consumers would only be able to ask for repair. Replacement would only apply when cheaper than repair.	
		PO1B	Repair would be the primary remedy. Replacement would only apply when the cost of repair greatly offset the cost of replacement	
	Option 2 Prolonging the liability period	PO2A	Longer liability period. Variant 1: +1 year where only repair could be chosen. Variant 2: the liability period would restart when repaired	
		PO2B	Longer liability period for repair	
	Option 3 Replacement with refurbished	PO3A	Replacement using refurbished goods only in the case of prolonged liability	
	goods	PO3B	Replacement using refurbished goods but only after the first year	
	Option 4 Liability period of refurbished and new goods		Offer equal liability periods to refurbished and new goods.	
Cluster II Outside legal guarantee	Option 5 Information on where to repair	PO5A	Producers would need to specify whether they would repair and under what conditions	
gaaranee		PO5B	Online matchmaking platform at national level	
		PO5C	Online matchmaking platform at EU level	
	Option 6 Transparency and conditions of repair	PO6A	Voluntary commitments by repairers and producers to a common 'easy to repair' EU standard	
		P06B	Obligation to issue binding repair quote on price and conditions on standard form	
		PO6C	Obligation to repair goods under the repairability requirements (with price capping)	
		PO6D	Obligation of producers to repair all products at a specified price.	
	Option 7 Promoting refurbished goods via platform (see PO5B PO5C)		Offer an option on the platform to contact consumers with faulty devices and firms interested in refurbishing them	

Note: the shaded cells represent the chosen policy options and sub-options

Source: own elaboration from the European Commission (2023a)

Table 7 presents all the options that were considered and those that were rejected. Only one policy option dealing with repair during the legal guarantee period was adopted, that being PO1A. Although PO1B was preferred overall by most of the parties involved in the consultations, it would have had the same effect as PO1A, since in the event that the cost of repair were greater, the producer would have the prerogative to opt for a replacement anyway. Measures outside the legal guarantee period essentially include the creation of a matchmaking platform, mandatory and voluntary commitments and the obligation imposed on producers to repair.

These measures can be presented in an alternative way, emphasising the synergies that can be found among them and the general aims to which they contribute. Table 8 shows two main groups of policy measures working in synergy: (1) convenience and transparency and (2) mandate to repair. The first one aims to improve trust among consumers while the goal of the second one is to increase the chance of repair both under and after the legal guarantee period.

Table 8. Classification of the policy measures adopted based on the synergies created between them

	Policy measure	Description	Policy options
Convenience and	Matchmaking platform	Platform for connecting repairers and customers and refurbishers and users offering discarded devices	P05B P07
nvenie	Mandatory standards	Repairers must issue a standard form with information on the repair when consulted	P06B
o)	Voluntary standards	Repairers can join a voluntary 'easy to repair' standard	PO6A
ıte	Obligation to repair	When the repairability criteria are met, repair is compulsory	PO6C
Mandate to repair	Guarantee	Repair is prioritised when under warranty	PO1A
Ma to	Information	Producers are obliged to specify whether they repair and under what conditions	PO5A

Source: Own elaboration based on the European Commission (2023a)

A platform that can connect repairers and customers which is yet to be implemented aims to introduce an innovative tool to allow customers to contact repairers. It might, however, create an exclusion effect of repairers that do not meet the standards set by member states or that cannot meet the level of demand of such a platform. It works in synergy with the obligation to use standard forms when an enquiry about a repair is made, as well as with the adherence to voluntary standards. The use of a standard form will allow for comparability and since the conditions stated in this form, particularly the price, will be binding in the case of a contract being agreed, it also gives reassurance to the consumer. The 'easy to repair' standard assures consumers that repairers will meet certain conditions. The whole idea behind these four policy options is to facilitate contact between potential customers and repairers, and to provide the former with certainty and information. These measures tackle the perception of repairs and repairers as untrustworthy (Packard, 1961; Krebs & Hoppenheit, 2020; Nazli, 2021).

The obligation to repair works alongside the information requirements and the guaranteed provisions. It constitutes one of the most innovative measures of this directive but has failed to properly serve its cause. The obligation is limited to products for which repairability requirements already exist (see Section 3). In short, some of the obstacles regarding access to repair and design were already covered by the ecodesign provisions. Prioritisation of repair when under guarantee works in synergy with the obligation to repair, since both require the same infrastructure by the producers, meaning that it is likely that in both cases, the goods would go through the authorised repair channels. Information requirements, in the context of this directive, just oblige the producer or seller to state whether they repair or not and under what conditions. Information in this context does not refer to manuals or schematics useful to perform repairs.

5. CRITICAL ANALYSIS AND DISCUSSION

After reviewing the preparatory process and drafting of the proposal, we will critically assess its consequences in terms of the resulting policy options, based on the existing literature.

5.1. Discussing the repair barriers identified by the European Commission

The classification of the barriers set by the European Commission is rather incomplete when contrasted with the evidence provided by the growing body of literature around the economy of repair. The European Commission's assessment ignores some of the most important barriers to repair while they downplay others. Out of the barriers which it does recognise, some are deliberately excluded from the scope of the directive. In Table 5, we find the barriers to repair identified by the European Commission in its Impact Assessment Report (European Commission, 2023a). In this section we critically assess these barriers based on the existing literature on the subject.

An in-depth analysis of the barriers identified in the literature allows us to see that the assessment by the EC is lacking in several aspects. For instance, access barriers to repair (those that impede repair altogether) are not present, with the exception of Driver 1. Under the legal guarantee period, products can be repaired or replaced. Until now, this depended upon a negotiation between the parties, which mostly resulted in replacements because consumers tended to feel entitled to new products when their ones were damaged (European Commission, 2023a). The policy measures adopted by the directive in regard to guarantee may have a positive, albeit limited, effect, since most defects occur outside of the legal guarantee period (European Commission, 2023a). No mention is made to barriers such as intellectual property, patent law or copyright, which play a fundamental role in impeding repair (Svensson, et al., 2018; Grinval & Tur Sinai, 2019; Dalhammar, et al., 2020). Nothing is stated either about the availability of spare parts and tools, or the prices they could charge, which could also inhibit repairs (Türkeli, et al., 2019; Riisgard, et al., 2016; Andersson, et al., 2018; Graziano & Trogal, 2017).

Since Driver 4 of the EC seems to refer to the cost of repair, this implies that the directive should try to make prices more transparent: "[I]t is not in the realm of this initiative to influence factors that have an effect on prices; the resulting prices will largely be determined by the market." (European Commission, 2023a, p. 17). In addition, the economic attractiveness of repair is actually dependent upon the relative prices of the repair. This means that both the prices of repair and replacement affect the likelihood of the final outcome. Making new products more expensive so that their actual cost to society and to the environment are represented could be a way of persuading consumers to repair (Stahel, 2013). It should be taken into account that the propensity to repair drops drastically when the repair cost exceeds 25% of the price of the replacement (McCollough, 2007, 2009). Measures taken to make repairs more economically attractive have only been adopted at the national level (see Section 3). This proposal does not attempt to improve the economic attractiveness of repair compared to replacement.

Some forms of obsolescence are covered by Drivers 5 and 6, which have been deliberately excluded from the scope of the directive. Nonetheless, obsolescence is a much broader notion than what these drivers suggest. It can be defined as the process by which products are phased out and it comes in many forms, most notably material obsolescence, functional obsolescence and psychological obsolescence (Packard, 1961). The former commonly refers to design

decisions and how they affect repairability (de Fusco, 2005; Packard, 1960; Öko-Institut e.V., 2020). The second type refers to technological change and innovation that can render objects obsolete (Packard, 1960; Öko-Institut e.V., 2020), which is absent from the European Commission's drivers, even though it had been discussed at the consultation phase (see Appendix A). The latter regards obsolescence perceived in the mind of the consumer (Packard, 1960; Öko-Institut e.V., 2020); this mostly used to be associated with fashion, but today it also implies a conscious decision by the consumer based on a multitude of factors (Svensson-Hoglund et al., 2023).

Convenience and trust is a recurring theme surrounding the feasibility of repair (Packard, 1960; Wieser & Tröger, 2017; Ackermann, et al., 2018; Nazli, 2021; Rogers, et al., 2021), a barrier which is one of the main points of this directive (see Table 8), reflected in Drivers 2 and 3. Indeed, most of the policy options proposed in this directive are information-related, because they are said to create a more transparent, and more competitive, repair market. Information, in this case, does not refer to technical information that would be useful for conducting repairs, like manuals or design schematics, but rather to market information about the repair conditions exclusively, like price, whether transportation is included or if substitution devices are provided as part of the contract.

An incorrect assessment of the barriers would affect the potential of any regulation because, as a result, the measures proposed would not properly tackle the fundamental issues. This directive is no exception in this regard. The drivers identified by the EC are narrow and limited, leaving most of the actual barriers to repair out of the equation. No real measures have been taken to address obsolescence in any of its forms nor to adjust the relative prices of repair to make it more attractive. Only those regarding trust and transparency have been taken on board, which makes sense, since the main objective of this directive is to incentivise competition in the common market, and sustainable consumption is just an addendum. Access barriers to repair have been addressed in this directive with the mandate for the manufacturer to repair, yet this measure falls short of its expectations, as it only covers products for which repairability criteria already exist, or might exist in the future (see Section 3). This interpretation of R2R as an obligation to repair is a form of closed access to repair (Svensson et al., 2018), meaning that the barriers in this case are removed but only if the consumer goes through the established channels set by the manufacturer.

5.2. The role of stakeholders in the drafting process

The consultation process with the stakeholders was biased from the beginning, since the policy options had already been decided upon prior to the meeting. The measures about which the participants were asked were limited to some aspects of repair under the legal guarantee period and the R2R. Examples of questions raised about the legal guarantees enquired about prioritising repair, extending the liability period, using second-hand and refurbished goods as replacements under the legal guarantee and liability periods for second-hand and refurbished goods. All these measures were rejected by manufacturers and member states (see Appendix A). Only prioritising repair under the legal guarantee period received some support and was included in the proposal, restricted to when the cost of replacing the defective item with a new one exceeded the cost of having it repaired.

The results of the consultation are also biased due to the overrepresentation of businesses and business organisations. Regarding the preferred option to perform a repair (European Commission, 2023a), the respondents answered in order of preference: manufacturers, independent repairers, sellers and consumers. This suggests that manufacturers are trusted the

most to perform repairs, which is convenient, given the position of the directive emphasising the importance of trust and the central role of manufacturers in the mandate to repair. If we were to exclude the manufacturers' answers from the total, most respondents would actually prefer independent repairers, followed by manufacturers, consumers themselves and finally sellers. Thus, it was businesses and their overrepresentation in the sample that gave the false impression of DIY repairs and independent repairers being less desirable, when they are generally preferred by citizens, consumer organisations and NGOs. The closed and narrow R2R proposed by the directive transfers the control of the repair process over to the manufacturers.

The R2R comments made by manufacturers were mostly negative. The positions held by industry representatives emphasised the need for voluntary commitments and information requirements, i.e. matchmaking platforms. Overall, they argued that repair should be left for the market to resolve, which in turn would mean allowing producers to set the conditions for repair with control over the supply and price of spare parts and information. The French Association of Large Companies stated, "When [the legal guarantee] ends, repairability offered by companies are rising through healthy competition. A right to repair isn't needed" (sic). Microsoft rejects obsolescence altogether, saying, "the factors ranked above assume design obsolescence, which is an inaccurate assumption". Many businesses claimed that there would be security and safety concerns in regard to open access to repair, reiterated by the European Garden Machinery Industry Federation, "[W]e also warn about the safety and responsibility risk associated with independent repairers that are not qualified for EEE and might not execute repairs in the correct way as a professional would". For Amazon, "Repair by manufacturers will incentivise the best design for the longer use of goods". Most businesses showed doubts about what the intentions of the EC were with R2R, probably given the fact that the mandate to repair is a fairly new approach to the R2R (European Commission, 2023d) and they struggled to have a clear idea of how it would work. For instance, during the public consultation, only four times did concerns for the independent repair sector emerge and the consequences of an R2R scheme that would not improve the conditions for independent repairers. In total, the R2R regulation was rejected thirty times, with the general consensus being that legal guarantees should stay as they were.

In contrast, during the call for evidence, most repair initiatives considered the challenges that repair would have to face, highlighting the need to access information, ensure the availability of spare parts, even if they were IP-protected, and the need for ease of disassembly. Most notably, they observed that there was a need for financial incentives for the repair sector. They also stated that R2R should support independent repairers. One repairer felt that it was necessary to "[e]nsure that individual products [would be] easy to repair and spare parts [would be] available". iFixit encouraged policy makers to grant access to information and spare parts, even non-OEM ones, whilst it stressed the importance of "ensur[ing that] these measures appl[ied] to all product categories, and not only for those that the Commission [was] already partly regulating with ecodesign regulations". A car repairer encouraged the "liberalisation of designs on vehicle parts" and financial measures to bring production back to Europe and tax the import of parts that did not meet environmental criteria. This was in unison with the positions held by independent repairers' associations (AIRC, CLEPA, ECAR, FIGIEFA, Insurance Europe & SMEunited, 2023).

The majority of the member states were mostly unsure of the policy options proposed, with many showing no clear position and most of them refusing to go beyond promoting repair under the legal guarantee period. The crucial role played by the RSB must not be overlooked, bearing in mind that, at the time of writing, they had turned down the proposal once, on the grounds that there was a lack of quantitative economic estimates (Nogueira, 2024; European Commission, 2023c). The insistence on expected economic impacts rather than on

environmental or distributive ones exemplifies the RSB's clear priorities towards the economic and growth-oriented dimension of the regulatory measures rather than their potential for sustainability. This in turn is reflected in the aim of the directive, which puts the functioning of the internal market at the forefront, overshadowing sustainability.

Overwhelmingly, it was the criteria of businesses and business organisations that were adopted, both in terms of the barriers to repair and the policy measures. The focus on information and the market's supposed freedom to set the conditions for prices coincide with the opinions of the manufacturers. The narrow selection of products covered in this proposal is the result of their refusing to select product categories, claiming that R2R should be determined on a sector-specific approach or by manufacturers themselves. R2R, as proposed in the directive, benefits manufacturers almost exclusively, since it ensures control over the emerging repair market. This goes in line with evidence provided in the literature on the subject. Manufacturers are lobbying to delay and control the implementation of R2R (Grinvald & Tur-Sinai, 2019), while exerting control over independent repairers through IP and trademark legislation (Svensson-Hoglund et al., 2021).

5.3. Environmental and socioeconomic considerations

The shift from production to repair that could come from this directive would have positive effects, since repair is less resource-intensive and thus less damaging to the environment. Nonetheless, there is no certainty that this shift will result in an income transfer from manufacturers to repairers.

It was argued during the preparatory work that consumer savings resulting from these measures could be redirected towards investment that could lead to more growth in the long run. Production and growth, which are intrinsically linked, are the main drivers of environmental impacts. The environmental benefits of increased repair may not be reaped if the ultimate objective of the directive is to achieve growth. So far, growth has been the result of an increase in material and energy use, even if the growth rate of the environmental impacts is lower than the growth rate of the economy, referred to as relative decoupling. Growth that derives from a reduction in resource usage, known as absolute decoupling, is, for the time being, a fantasy.

There is no empirical evidence supporting the existence of a decoupling of the type described as necessary [...] that is an absolute, global, permanent and sufficiently fast and large decoupling of environmental pressures (both resources and impacts) from economic growth. In the end, our search for robust evidence was unsuccessful, coming up only with a handful of methodologically peculiar exceptions, most often of relative decoupling, and if absolute, mainly temporary and restricted in space. (Parrique et al., 2019)

Another aspect that may cast doubt over this directive is connected with transportation. Currently, when a product becomes defective under the legal guarantee period, it is not unusual for manufacturers to have to ship it to a specific location to have it repaired. If the same logic were to apply to any repair under the obligation to repair, the emissions required to ship the product back and forth would partially compensate for the savings. If the directive were able to expand the current network of internal and authorised repairers, the effect of transportation rebound effect might be less intense. In this case, it would be up to the manufacturers to determine how to deal with this requirement.

Repair can be a form of partial decoupling, meaning that growth can be achieved in the form of services while no new products are being manufactured. In terms of the socioeconomic impacts, it has been observed that there would likely be a shift from production to repair. The

way this shift would take place is not clear. The R2R proposed in the directive proposal is conceived for producers and their authorised repair services. At the same time, it would create administrive burdens on independent repairers in the form of bureaucratic requirements, without providing them with additional tools to overcome the barriers to repair. Thus, the shift from production to repair provided for in this directive proposal would not necessarily alter the current distribution of wealth between manufacturers and independent repairers, since a percentage from the economic transfers to the repair sector would go back to the manufacturers through their official repair services.

6. CONCLUSIONS

The potential of a regulatory measure should be defined first and foremost by the correct identification of the issue at hand. For this, the preparatory and drafting process should play a crucial role. The proposal of the directive on the promotion of common rules of repair (as described in European Commission, 2023a; 2023b), approved by the European Commission and the European Parliament and pending approval by the Council, fails to tackle the fundamental issues hindering repair. The full harmonisation character of the directive proposal would prevent member states from pursuing more ambitious legislation, since they would not be able to go beyond the limits established in the directive itself, which would affect the cohesion of the internal market. This is the result of a drafting process in which the most powerful agents and European institutions have been able to influence the assessment of the problem and the policy outcomes.

The aim of the directive is flawed because it denotes a poor understanding of the issue. Repair is performed fundamentally in proximity, so it makes little sense to talk about the cohesion of the internal market. The identification of the barriers to repair is also flawed. Only two major obstacles have been addressed: repair under the legal guarantee period and trust issues among consumers. With regard to the former, admittedly, the policy options proposed may improve the situation by prioritising repair, although the scope of the measure would be limited overall given the fact that most defects take place outside of the guarantee period (European Commission, 2023a). In terms of trust among consumers, the policy measures insist on the usage of information tools, like the creation of a matchmaking platform between repairers and potential customers and of voluntary and mandatory standards that repairers might and would have to adhere to, respectively. This would create a situation in which repairers, particularly independent ones, might be tasked with additional administrative burdens, thus risking an increase in repair costs without receiving from this directive any additional tools to overcome barriers to repair. Among the drivers identified by the EC, no mention was made to information requirements from the manufacturer, i.e. repair manuals and design schematics or anything that might be useful to perform a repair. The availability of spare parts was also overlooked. No economic incentives were proposed to either make repair cheaper or replacement more expensive. Finally, obsolescence issues were not taken into account, particularly in regard to functional and psychological obsolescence.

The obligation to repair, meanwhile, constitutes a form of closed and narrow R2R, closed because access barriers are removed but only when using the authorised channels, and narrow since the selection of products is limited to those for which ecodesign requirements already exist or might soon exist. Consequently, the expansion of the scope of this form of R2R is bound to the development of successive ecodesign requirements for additional product categories in the future, like the Ecodesign for Sustainable Products regulation, which will delay the implementation of the R2R.

In terms of the identification of the main barriers and the policy selection, the consultation with the stakeholders was key. The adoption of policy options was strongly influenced by big producers, who opted mostly in favour of information and voluntary commitments, rejecting the notion of R2R or choosing to follow a "business-as-usual" approach. As a result, the R2R proposed is very limited, while it ensures that the manufacturers are the main recipients of the revenue created by a closed R2R. The potential shift from manufacturing to repair would not necessarily result in an income transfer between manufacturers, or sellers, and independent repairers, since part of the repair revenue will be paid back to the manufacturers, or sellers, from their approved repair channels. Measures focused on information and transparency, a core element of this directive, may create administrative burdens that are reflected in the price of the repair. This is directly related to the aim of the proposal of "facilitat[ing] cross-border provision of services and competition among repairers of goods" (European Commission, 2023b, p. 14). In sum, the independent repair sector is not a beneficiary of this directive proposal, as manifested by the positions of some small and medium business associations and independent repairers' associations (AIRC, CLEPA, ECAR, FIGIEFA, Insurance Europe & SMEunited, 2023).

This directive proposal is ineffective in its aims and its potential impacts, since it puts growth and competition in the internal market ahead of sustainable consumption, which is treated like it were some kind of byproduct. The selection of barriers and policy options was poor considering the observations made in the literature review and the concerns raised from the repairers themselves were not fully taken into account. It must be noted that in order for repair to be promoted, it would require a comprehensive set of regulatory measures on multiple dimensions (Svensson-Hoglund et al., 2023; Milios, 2021), which this directive fails to address. This is the result of an elaboration process in which the most powerful institutions and agents, manufacturers and sellers, tilted the balance in their favour. The Regulatory Scrutiny Board also played their part by underlining the importance of financial cost/benefit provisions of the policy measures, rather than taking into account the effectiveness in regard to sustainability and increased repairability. This directive proposal falls short on expectations as a promoter of repair, but it also acts as an anchor, impeding member states from progressing beyond the limits which the directive itself imposes.

Author contributions

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Appendix

APPENDIX A

Table A1. Results of the Open Consultation on repair under the scope of the Sale of Goods directive

	Decrease in lifetimes		Repair under the Sale of Goods directive (2019/771)						
			Repair when under guarantee		Extend liability periods		Second hand and refurbished goods		
	Decrease time of usage (agree)	Causes behind decreased lifespan	Prioritise repair with the SGD	Repair as primary remedy	Restart liability period after repair (% that finds it effective)	Extend liability period within SGD (% that finds it effective)	Second-hand and refurbished goods in SGD	Align liability periods for new and refurbished goods	Replacing defective with refurbished goods
Consumer organisations	93.50%	-Expensive repair services -Non- availability of repair services - Fashion	30%	80%	80%	80%	70%	60%	10%
Environmental organisations and NGOs	93.50%		25%	100%	100%	50%	37%	25%	76%
Businesses	37%	-Fashion -Latest technological development (1)	50%	65%	25%	29%	38%	26%	48.40%
Citizens	87%	-Difficulty for consumers of performing repair themselves -Inconvenience - Non-availability of repair services -Expensive repair services	60%	80%	85%	84%	79%	62%	53.40%
Public authorities	82%	-Expensive repair services	54%	54%	25%	29%	72%	38%	45%
Overall	70%		54%	75%	66%	64%	62%	64%	51%

Note: (1) Only 37% of the business stakeholders answered this question.

Source: Own elaboration from the European Commission (2023a)

Table A2. Results of the Open Consultation on R2R

	Repair outside the scope of the Sale of Goods directive (2019/771)								
			Right to Repair	'R2R'					
	Encourage voluntary commitment to repair (effective)	What product categories should be covered	Under which situations R2R should apply	Preferred repair option (In decreasing order)	Obligation to repair should be imposed on whom?	Cost of repair			
Consumer organisations	50%	Majority believes all categories	 100% after legal guarantee expires 90% the result of wear and tear 80% caused by the consumer within legal guarantee 	Manufacturers Independent repairers Sellers Consumers	77.4% manufacturer and seller	22.6% cost and profit margin			
Environmental organisations and NGOs	25%	Majority believes all categories			77.4% manufacturer and seller	22.6% cost and profit margin			
Businesses	52.5%	28.5% agreed to electronics and 24% agreed to all categories	40% the result of wear and tear52% other situations	Manufacturers Independent repairers Sellers Consumers	50.5% manufacturer and seller	62% cost and profit margin			
Citizens	60%	Majority believes all categories		Independent repairers Manufacturers Consumers Sellers	51% manufacturer and seller 42% manufacturer	46% only cost of repair 22% cost and profit margin			
Public authorities	19%	Most believe it should apply to all categories		Independent repairers Manufacturers Sellers Consumers	85% manufacturer and seller	71% only cost of repair			
Overall	52.5%	68.6% all categories	 58.3% the result of wear and tear 52% where defects occur after guarantee expires 32% by defects caused by the consumer within the legal guarantee 	Manufacturers Independent repairers Sellers Consumers	55% manufacturer and seller 37% manufacturer	32% cost and profit margin 30% only cost of repair			

Source: Own elaboration from the European Commission (2023a)