



Behavioural Study on Consumers' Engagement in the Circular Economy

Executive Summary

October 2018

Objectives

In 2017, LE Europe, VVA, Ipsos, ConPolicy and Trinomix were commissioned by the European Commission to conduct a behavioural study on consumers' engagement in the Circular Economy (CE). The objective was to provide policy-relevant insights to assist with the implementation of the EU Circular Economy Action Plan.

The study sought to:

1. Identify barriers and trade-offs faced by consumers when deciding whether to engage in the CE, in particular whether to purchase a more or a less durable good, whether to have a good repaired, or to discard it and buy a replacement;
2. Establish the relative importance of economic, social and psychological factors that govern the extent to which consumers engage in the CE, especially purchasing durable products and seeking to repair products instead of disposing of them; and
3. Propose policy tools to enable and encourage consumers to engage in CE practices related to durability and reparability.

Methodology

The study mainly focussed on the following five products: **vacuum cleaners, televisions, dishwashers, smartphones and clothes.**

A **systematic literature review** was carried out across all 28 EU Member States, Norway, Iceland, Switzerland, Japan, Canada, and the USA.¹ This review was complemented by insights collected through **50 interviews with stakeholders** from e.g. business and consumer associations, NGOs, public authorities and academia, and **consumer focus groups** with the general public and potentially vulnerable consumer groups in 4 countries.² These activities contributed towards the results of the study and informed the design of an **online consumer survey** and **behavioural experiment** conducted in respectively 12 and 6 countries with 12,064 and 6,042 respondents who were representative of the general population for each country in terms of age, gender and geographic region.³

¹ Literature was reviewed in English, German (AT, DE), Czech, French (FR, LU, BE), Hungarian, Dutch (NL, BE), Romanian and Spanish.

² Two groups were conducted in each of: CZ, DE, IE and SE. One group was held with participants from the general public, the other with potentially vulnerable consumers (people who struggle, or are in arrears, with bills, and are unemployed, retired, long-term sick or disabled, or single parents).

³ The online consumer survey was conducted in: AT, CZ, FR, DE, HU, IE, LV, NL, PT, RO, ES and SE. The behavioural experiment was embedded in the survey in CZ, DE, IE, RO, ES and SE.

The survey collected information on consumers' experiences with CE practices such as repairing, renting, leasing and purchasing second hand products, their reasons behind engaging in the CE (or not), as well as general socio-demographic characteristics and self-declared attitudes towards the CE.

The behavioural experiment contained two tasks: a purchasing and a repair experiment. Both experiment tasks were financially incentivised for enhanced realism and external validity.

The **purchasing experiment** tested different forms of durability and reparability information and their effects on consumers' product choices. The following treatments were tested: 'manufacturer warranties' and 'expected lifetime' claims; durability commitments and reparability ratings included in the EU Energy and Ecolabels using novel icons.⁴ Additionally, the effects of behaviourally motivated 'nudges' via claims such as '*Products that last longer may save you money over time*' and '*A majority of people choose products that last longer and are easier to repair*' were tested.

The **repair experiment** confronted respondents with a broken product for which they could decide whether to have it repaired, or to replace it with either a brand new or second hand product. The experimental conditions tested how the trade-offs between repairing and replacing were affected by a real effort task which increased the effort required to respectively repair, or replace, and framing effects of the repair option.

Behavioural experiments allow the isolation of the drivers of consumer choice and are widely used by policy makers internationally to test information provision on consumer decision-making. Experiments are necessarily simplifications of the real world, as such the findings of the experiment should be viewed in conjunction with the experimental set-up which consisted of a simplified process with streamlined and standardised product information.

Findings and conclusions

In brief, all strands of research found that consumers were **generally willing to engage** in CE practices. But **actual engagement was rather low**. While a majority of consumers repair products (64%), a substantial share have **not repaired products** in the past (36%), and/or have **no experience renting/leasing or buying second hand products** (~90%). A reason for this low engagement in CE practices could be that **consumers lack information** regarding product durability and reparability as well as the lack of sufficiently developed markets (e.g. for second hand products, renting, leasing or sharing services etc.). In the behavioural experiment the **provision of such information was found to be highly effective** at shifting purchasing decisions towards products with greater durability and reparability. The survey and experiment also found that **repair decisions are easily disrupted if arranging repair requires effort**. These findings indicate that there is a **large potential** to close the gap between consumers' willingness to engage and their actual engagement.

Understanding consumer engagement in the Circular Economy

Survey respondents reported that they keep things they own for a long time (93%), recycle unwanted possessions (78%), and repair possessions if they break (64%). A minority, yet still sizable share (10-25%), of survey respondents were interested in engaging with novel CE practices such as leasing products instead of purchasing them.

The study uncovered a **high level of consistency between self-reported pro-CE**

⁴ 'Manufacturer warranty' and 'Expected lifetime' were not explained or defined further in the experiment. Durability on EU labels was defined as: *The period in which the manufacturer promises to replace or repair the product free of charge.*

Reparability on EU labels was defined as: *Ease-of-repair rating based on availability of repair manuals, spare parts and repair services.*

attitudes in the survey and actual behaviour in the monetarily incentivised behavioural experiment: Consumers who self-claimed having pro-CE attitudes were also more likely to repair products in the experiment, or to buy second hand rather than brand new products.

The different research methods showed that **interest in product durability and reparability** was generally **higher for large and expensive products** (e.g. white goods), and slightly lower for fashion items (e.g. clothes, smartphones). For fashion products there was however a higher willingness to buy second hand (clothes, smartphones), or to rent or lease such products (smartphones).

Consumer expectations and experiences with durability and reparability

All research methods found that **consumers most associate durability with product quality** and **reparability was most associated with availability of spare parts**. Reparability was throughout the study found to be less important to consumers than durability. According to the survey this is because consumers trust manufacturer warranties and would not expect durable products to break.

The study did not find overwhelming evidence of a 'throwaway economy'. Across all products, a **majority of survey respondents (~60%) reported having repaired products** in the past. Repairs were mostly done by professionals (26% repair services, 17% manufacturers) but to some extent also by friends/family (8%). Self-repair was less frequent but still substantial, especially for clothes (12%). Overall people were happy with professional repair services. Over 70% had their **expectations in terms of convenience, speed, quality and friendliness of the repair met**, or even exceeded. These findings seem to dispel perceptions that consumers are marked by negative experiences with repair services which were reported by several stakeholders.

A joint analysis of the behavioural experiment and survey revealed that **consumers who have received durability information** via manufacturer warranties, or durability promises at the point of sale in a purchasing exercise **were significantly more likely to expect free replacement or free repairs of faulty products**. Instead, those who had not seen such information were significantly less likely to expect free repairs or replacements and instead expected to pay for these services.

Drivers, barriers and trade-offs faced by consumers

It emerged clearly from the different strands of research that the **price-quality ratio** is the **most important driver and simultaneously barrier** for consumer engagement in the CE, **followed by convenience**. Many consumers were willing to pay more for products with better durability and reparability but can be persuaded by low prices to disregard CE credentials. Similarly, when replacement is more convenient than repairing, consumers are easily led to purchase new products. This was especially pronounced for consumers with a preference for new trends and technology. However, only about one in ten consumers in the survey reported having strong preferences for new trends and technology.

The study found that repairing is popular but not ubiquitous. Most consumers who did not repair expected repairs to be too expensive (25-50% across products), preferred getting a new product (17-25%), or felt the old product was obsolete or out of fashion (20-30%). Some (5-10%) however felt they did not know how/where to repair products, or that it would be too much effort to repair (8-14%).

In the online behavioural experiment, 62-83% (depending on the product type) of respondents chose to repair rather than replace products. But, repairs became less frequent when additional effort was required to arrange the repair, while an identical level of effort left motivations to replace products unaffected. Beyond convenience, marketing practices which increase the salience of repair had only a limited effect on consumer decisions in the experiment. Moreover, consumers in the experiment were

indifferent to use repair services offered by manufacturers or independent repair shops.

Effects of product information on purchasing decisions

Many **consumers claimed they were aware of the durability and reparability of products** they had purchased, yet the study uncovered that **CE product information** (i.e. information on durability and reparability of products) **was in fact difficult to find and consumers wanted to receive better information.**

Evidence from the literature review, stakeholder interviews, focus groups, and experiment showed that improved information provision at the point of purchase (e.g. on EU labels, or provided by manufacturers) was effective at promoting CE behaviours amongst consumers. When, respectively, durability or reparability information was provided in the experiment **consumers were almost three times more likely to choose products with the highest durability** on offer, and **more than two times more likely to choose products with the highest reparability ratings.** General CE preferences were strongest when durability and reparability information was presented together. That is, when durability and reparability information was shown together on the product label, individuals were most likely to purchase products which rated highly in both dimensions – durability and reparability. Durability was again clearly the more influential factor. These shifts in product choice resulted from consumers turning away from low durability/reparability products in favour of those with better CE credentials.

These findings are corroborated by consumers' **significant willingness-to-pay for better durability/reparability** for all product categories. Depending on how durability/reparability information was presented, willingness-to-pay for an additional year of durability ranged between €20-36 for vacuum cleaners and dishwashers, €92-148 for TVs, €148-217 for smartphones⁵, and €14-27 for coats. Willingness-to-pay for an improved reparability⁶ rating was around €29-54 for vacuum cleaners, €83-105 for dishwashers, €77-171 for TVs, €48-98 for smartphones and €10-30 for coats.

'**Nudges**' informing consumers of the benefits and social norms of buying durable/repairable products **increased the saliency** of CE characteristics and triggered shifts in preferences towards more durable/repairable products.

Suggestions for future policy action

The study makes recommendations as outlined below to further enhance consumer engagement in the CE.

- **Recommendation 1** – *Boosting CE engagement by strengthening pro-environmental attitudes and awareness*: Environmental awareness and positive attitudes towards environmentally favourable practices, like buying second hand products and repairing products, were found to be key determinants for sustainable consumer choices. From the study follow at least three specific areas of action which could be taken by policy makers and industry:
 - *Boosting pro-environmental attitudes*: One way this could be done is by focussing on educating young people by, for example, including environmental awareness education within school curricula.
 - *Increasing consumer awareness of second hand, renting/leasing and repair markets*: Recently, there has been an increase in the number of CE initiatives such as repair cafés. Similar initiatives could be promoted for second hand products, renting/ leasing of products.

⁵ Willingness-to-pay for additional durability of smartphones was measured in months and subsequently extrapolated to years. A linear relationship between time and willingness-to-pay was assumed (i.e. each extra month has the same value).

⁶ The willingness-to-pay was measured **per year** for durability and per **two-step** increase on the A-G scale for reparability(e.g. from G to E, C to A).

- *Promoting benefits of durability and reparability:* According to the study findings it would be beneficial to link durable and easily repairable products with 'high-quality' and 'cost-savings' in the long-term. Instilling such associations with durability and reparability could alter social norms towards the purchase of more durable and more easily repairable products.
- **Recommendation 2 – Making repair easier:** Consumers are generally willing to repair broken products, yet their intentions can easily be tainted if repair is viewed as too much effort compared to simply replacing the product. Repair could be made easier for example by:
 - *Making essential product components replaceable by consumers;*
 - *Including repair instructions for minor defects in user manuals;*
 - *Ensuring the availability of spare parts in the longer run.* For example by requiring manufacturers to provide spare parts for a defined time period (and also after a product has been discontinued);
 - *Encouraging manufacturers to offer a commitment to repair.* Commitments could function in a similar way to manufacturer guarantees. The study found consumers have high trust in these guarantees and they are more likely to seek repair of a product if it is covered by guarantee.
- **Recommendation 3 – Create financial incentives for reparability and durability:** Building on the importance of price in consumer decision-making, fiscal instruments providing economic incentives to producers and consumers to produce and purchase/rent/lease durable products or to repair could enhance CE engagement. However, further consumer research would be required to determine if there is sufficient price sensitivity in consumers for such stimuli to be effective.
- **Recommendation 4 - Making durability and reparability information available at the point of sale:** The study showed that consumers lack durability and reparability information and that the provision of such information is potentially very influential on purchasing decisions. Therefore, the following options should be explored:
 - Integrate durability and reparability information into existing (EU) labels;
 - Develop new EU rules for this purpose;
 - Examine the development of a scoring system for reparability of products⁷;
 - Provide information to consumers on the availability of spare parts and repair services.
- **Recommendation 5 – Strengthened enforcement of legislation requiring the provision of accurate information to consumers:** The provision of information not only needs to be presented in a way that consumers can understand and effectively use in their decision-making, but it also needs to be accurate. In order to ensure the accurate provision of information to consumers at the point of sale, continued and strengthened enforcement of national consumer laws (such as on unfair commercial practices) is of great importance to support consumers in their choices surrounding engagement in the Circular Economy.

⁷ For more information see: <http://susproc.irc.ec.europa.eu/ScoringSystemOnReparability/index.html>

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