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Prospects for Increasing the Market Share of Longer Lasting Products in Consumer Durables Markets

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Keywords: Marketing Strategies; Product Life; Warranty; Washing Machines.

Abstract: Product longevity provides a route to sustainable consumption because the material flow in the environment is reduced when products last longer. Thus, there is a need to increase the proportion of such products in consumer goods markets. Warranties provide remedies when consumers buy goods which turn out to be defective. Warranties also play a significant role in promoting product sales and improving customer satisfaction with after-sales service quality. Therefore, this paper uses evidence from a review of warranties to explore the role of marketing strategies in decreasing the material flow in the economy. A warranty that, in essence, promotes use of a product for a longer duration is described in five parameters. Companies for investigation were identified using a systematic process and information about manufacturers' guarantees and warranties, together with other information that indicate product lifespans was collected using secondary research. The score of warranties on the parameters was considered as an indication of companies' commitment towards longer lasting products. Counter to expectations, the data indicated that the price points at which companies operate, brand perception, and warranty terms and conditions may not be linked, and offering a warranty may not always mean that the company stands by its products, supports repair to promote use for longer duration.

Introduction

In the past decade much research has focussed on identifying workable business models to help a transition to circular economy (Beltramello et al., 2013; Bocken et al., 2017; Boons et al., 2013; Schaltegger & Burritt, 2018). However, it remains unclear why sustainable business models are not more popular, especially considering that businesses have acknowledged climate change and their moral obligation to act upon it (WBCSD, 2010).

Product longevity provides a route to sustainable consumption (Salvia et al., 2016) because, by making products last longer, the material flow is reduced (Bakker et al., 2014). How long a product is used encompasses social and cultural factors (Cooper, 2010) in addition to its physical durability, which is more related to a product's functionality over time (Stahel, 2010). Warranties can support greater functionality (Bocken et al., 2014) and extended warranties can play a significant role in promoting product sales and improving customer satisfaction with after-sales service quality (He et al., 2018; Murthy & Djamaludin, 2002).

The purpose of this paper is to compare marketing strategies such as product warranties by companies producing large kitchen appliances, one of three product categories explored in a wider study, with different foci on product longevity. A manufacturer's guarantee is the initial guarantee that comes free with a product and (in the case of washing machines) is generally for 1 or 2 years. Warranties are product promises, although while a guarantee is a part of the sales contract, a warranty is not.

Other initiatives that support a product's longer use, such as availability of spare parts and warranties on repairs are also considered in the paper (Twigg-Flesner, 2010). Table 1 is a glossary of terminology of guarantees and warranties.

The paper uses evidence about warranties offered by companies (such as company websites, product manuals and publicly available warranty terms and conditions) to explore the role of marketing strategies in decreasing the material flow in the economy.

Methods

This section of the paper explains how companies were chosen. Data were collected using a systematic process, shown in Figure 1. In order to be able to compare warranties, a specific type of product, washing machines,

was chosen, as their sale and trade is significant in the UK and high number of units are discarded every year. On average, about 3 million washing machines reach the end of their lives each year (James, Maddox, & Gisher, 2011).

Glossary

Guarantee	An undertaking to the consumer given without an extra charge by a manufacturer that, if the goods do not meet the specifications set out in the guarantee statement or in any associated advertising: 1. the consumer will be reimbursed for the price paid for the goods 2. the goods will be repaired, replaced or handled in any way.
Warranty	Term used for promises other than those under guarantee, that is they are not a part of the contract of sales of the product. They are of different types.
Service contract	A contract in writing to perform, over a fixed period of time or for a specified duration, services relating to the maintenance or repair (or both) of a consumer product.
Implied warranty	Obligations on the manufacturer that are implied under law such as fitness for purpose and merchantable quality of the product at the time of sale until a specified duration.
Full warranty	Warranties that meet all of the following criteria: 1. In the case of a defect, malfunction, or failure to conform with written warranty, the company remedies the product within a reasonable time and without charge 2. The company does not impose any limitation on the duration of any implied warranty on the product 3. If the product or a component part contains a defect or malfunction after a reasonable number of attempts by the company to remedy defects or malfunctions in such product, it permits the consumer to elect either a refund for, or replacement without charge of, such product or part.
Limited warranty	A warranty that does not meet any of the criteria for full warranty is a limited warranty.
Manufacturers' guarantee	A warranty on new purchases provided by the manufacturer and promises that such material or workmanship is defect free or will meet a specified level of performance over a specified period of time; Also called standard warranty on new purchases.
Promotional warranty	Manufacturers' guarantee that has been extended for a longer duration, by the manufacturer.
Retailers warranty	This is an extended warranty provided by the retailers at a cost to the consumer.
Extended warranty	Warranty that is bought by the consumer after the manufacturers' guarantee or retailers' warranty has expired.

Table 1. Glossary of terms for guarantee and warranty. Sources: Consumer Rights Act 2015, Magnuson-Moss Warranty Federal Trade Commission Improvement Act 1975 and Sale of Goods Act 1979.

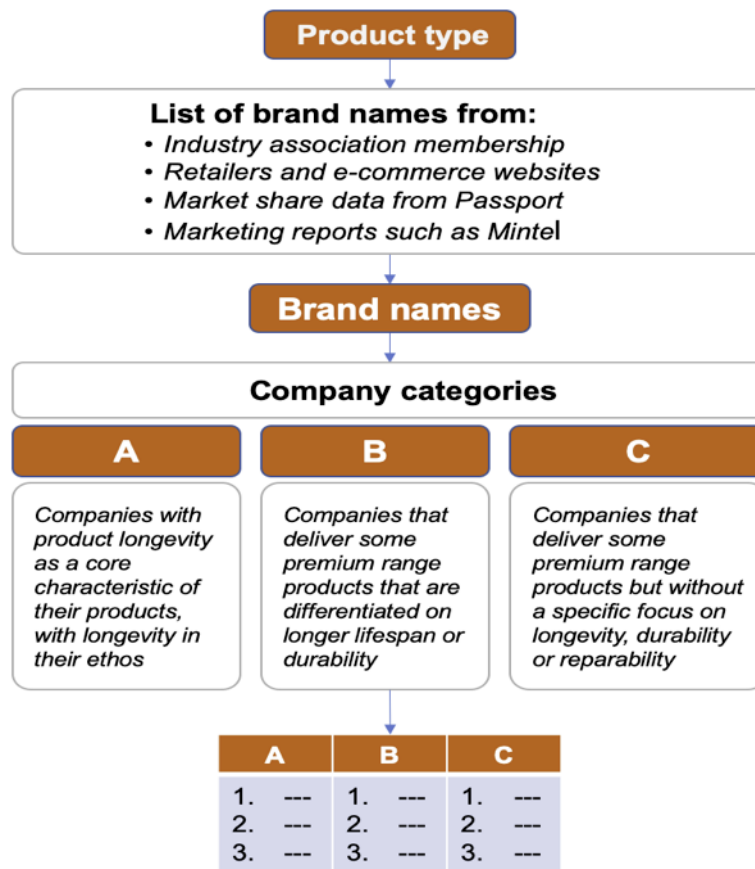


Figure 1. Process to identify companies.

Companies were listed from their industry associations and those that sell washing machines were identified. Information for minimum and maximum price points (retail prices) at which the specific products are sold were identified from retailer websites such as Argos.co.uk, Currys.co.uk and JohnLewis.com.

Each company was then studied and evaluated for its degree of focus on longevity. Three focus levels were identified and are referred to below as categories A, B and C.

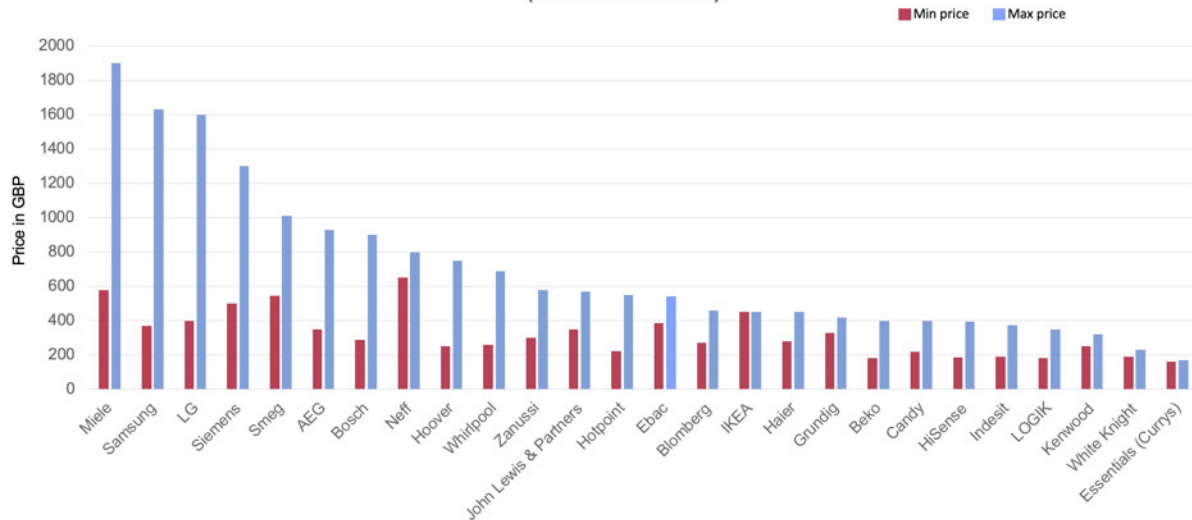
- Companies with product longevity as a core characteristic of their products, with longevity in their ethos
- Companies that deliver some premium range products that are differentiated by longer lifespan or durability
- Companies that deliver some premium range products but without a specific focus by longevity, durability or reparability.

The criteria to classify companies in categories A, B and C evolved during the process of studying the companies in detail, see Table 2.

Three companies were chosen for this study, one company in each category. Warranties offered by the three companies were read in detail using widely available information on company and retailer websites, to answer the following five questions:

1. Duration: Is the duration of the warranty equal to, or more than, the duration of implied warranties?
2. Transferability: Is the guarantee transferable with a change in ownership of the product?
3. Cost: Is the warranty inclusive of labour and parts, including the cost of returning and reinstalling the product?
4. Choice: Is the consumer given the option to choose either replacement or refund if repair is not possible or economical?

Minimum and maximum price points for washing machines in the UK, by brand (as on 27 Jun 2019)



Graph 1. Plot for minimum and maximum price points.

5. Duty: Is the consumer eligible for the warranty service even if they have not fulfilled duties such as registering the product?

Other criteria to classify companies on the basis of their focus on longevity were:

6. Spare parts availability: What is the duration for which spare parts will be available?
7. Warranty on repair work: What is the duration of the warranty on repair?

These answers were collected using desk research and are summarised using a colour scheme in Table 3. If the answer to the question is yes, it is represented in green colour, if no then red and if the answer is not clear or is at the discretion of the company, then amber. The colour scheme is used for visual convenience to represent the data. A warranty that, in essence, promotes product longevity will have five green scores. The score was considered a proxy for companies' intention to making longer lasting products. Companies offer different warranties, and these are coded in Table 2, for ease of reference.

Company categories	A	B	C
Manufacturers' guarantees: 1. <i>Duration</i> 2. <i>Transferability</i> 3. <i>Cost</i> 4. <i>Choice</i> 5. <i>Duty</i>	Answer to these five questions is Yes	Answer to three of the five questions is Yes	Answer to less than three questions is Yes
Warranties: 1. <i>Duration</i> 2. <i>Transferability</i> 3. <i>Cost</i> 4. <i>Choice</i> 5. <i>Duty</i>	Answer to these five questions is Yes	Answer to three of the five questions is Yes	Answer to less than three questions is Yes
Spare parts availability	Lifetime	Limited period	No mention
Warranty on repair work	Lifetime	Limited period	No mention

Table 2. Criteria to classify companies.

Results

This section is organised as follows: It discusses the rows in Table 3 row-wise. First, the graph of the minimum and maximum price points for washing machines in the UK is discussed and the choice of companies is explained. Then, observations about the three companies are discussed under six sub-headings: Brand perception, price points, manufacturers' guarantee, warranties, warranty on repair work and availability of spare parts.

The minimum and maximum price points for washing machine brands in the UK are shown in Graph 1. The data is sorted by maximum price points, in descending order. Most brands operate in a narrow range of maximum price, with some brands having a comparatively higher maximum price. There appeared to be a relationship between the highest price charged and a perceived 'premium' status broadly in line with Mintel's descriptions of washing machine brands. According to Mintel (2017), Hotpoint, Zanussi and Indesit are 'middle market' brands, Beko is also a 'middle market' brand, bought for its 'cheap price', and Bosch is a 'premium' brand far from the 'mass market', which has a 'sophisticated image' and faces 'stiff competition from Samsung' which is regarded as the 'most trustworthy' brand.

Almost all companies offer a manufacturer's warranty of 2 years or less. Warranty details show that most companies do not provide the five essentials of warranties, described in the previous section, and hence their warranty provision may be described as limited, and consequently none of the companies were categorised as A.

Brand perception

The three companies scrutinised in this paper are Miele, Samsung and Hotpoint. Miele, categorised as B, was included because they claim that their washing machines are designed to work for 20 years, which is above the average lifespan of about 12.5 years (Alfieri, Cordella, Stamminger, & Bues, 2018). Miele has a reputation of 'high value' and is recognised for its 'high build quality' (Mintel, 2019). Samsung is in category B and perceived to have the 'strongest personality' of the major

brands (Mintel, 2017) and continues to be the 'most-trusted' brand in 2019 (Mintel). Hotpoint was chosen from category C as it is a popular washing machine brand in the UK in terms of volume of sales: over 15% of sales in the UK in 2017 (Euromonitor, 2019); Mintel (2017) reports that consumers identify the brand as 'reliable, accessible and affordable' and is the 'most-trusted of the value brands' (Mintel, 2019). Thus, all three are established brands that are preferred by consumers for different reasons.

Price points

The minimum and maximum prices (retail prices) were noted on the same day from three online retailer websites, as noted above. The price range for Miele and Samsung is very similar, with an overlap in the range £600 to £1600. However, the manufacturer's guarantee and warranty schemes are different for the brands. Miele and Samsung are perceived as 'premium' brands (Mintel, 2017), while Hotpoint is a 'mid-market' brand and its price range does not overlap with Miele.

Manufacturers' guarantees

Consumers are not charged for a manufacturer's guarantee, which is in line with the definition of a guarantee (Table 1).

Duration: The European Union Directive on certain aspects of sales of consumer goods and associated guarantees (1999/44/EC) requires companies to provide for 2 years of an implied warranty on products. Legislation in the UK provides a legal guarantee, also called the legal prescription period, of 6 years to the consumer (and 5 years in Scotland) (Europa.eu, 2019). The duration of warranty offered by the manufacturer must not limit the duration of implied warranties and, if it is so, the seller must mention it conspicuously. The implied warranty of 2 years provided in the EU Directive was taken as the benchmark for the first question in this study. Companies that operate in the premium range, such as Miele and Samsung, normally provide a manufacturer's guarantee for 2 years, while Hotpoint, which operates in the 'mid-market', offers a 1 year manufacturer's guarantee, which is less than the minimum requirements by the EU Directive.

Brand	Miele		Samsung		Hotpoint		
Brand perception (Mintel 2019)	<i>'expensive and prestigious'</i>		<i>'most-trusted'</i>		<i>'most trusted of value brands'</i>		
Price points							
Min. price	579		369		220		
Max. price	1899		1629		549		
Manufacturer's guarantee							
Guarantee period (months)	24		24		12		
Price (GBP)	0		0		0		
Duration	Green		Green		Red		
Transferability	Amber		Amber		Amber		
Cost	Green		Green		Red		
Choice	Red		Red		Red		
Duty	Green		Red		Red		
Warranty							
Warranty details*	M10	M5	S10	S5	H10	HCP	
						a	b
Warranty period (months)	96	36	96	36	96	6	12
Price (GBP)	0	0	0	0	0	Differs with product	
Duration	Green	Green	Green	Green	Green	Red	Green
Transferability	Amber	Amber	Red	Red	Red	Red	Red
Cost	Green	Green	Red	Green	Red	Red	Red
Choice	Red	Red	Red	Red	Red	Red	Red
Duty	Green	Green	Red	Green	Red	Red	Red
Warranty on repair work							
Within manufacturer's guarantee period	12 months		No mention		No mention		
During warranty period	12 months		Remainder of the warranty period		No mention		
After warranty period	12 months		3 months		No mention		
Availability of spare parts							
Information	No mention		No mention		No mention		
<i>Green=Yes Red=No Amber=Discretionary</i> <i>*M10: 10 Years promotional warranty</i> <i>M5: 5 Years promotional warranty</i> <i>S10: 10 Years parts only warranty on Digital inverter Motor</i> <i>S5: 5 Years promotional warranty</i> <i>H10: 10 Years parts guarantee</i> <i>HCP: Care plans a: One-off repair b: Repair and care</i>							

Table 3. Criteria to classify companies.

Transferability: We argue that warranties must be on the product and their status must be independent of the ownership of the product, provided the product has been registered and is used in accordance with its purpose. Manufacturers' guarantees are generally non-transferable for washing machines; however, they can be transferred at the discretion of the

company. Guarantee provisions, therefore, do not automatically apply for a second buyer unless the company has agreed such an arrangement.

Cost: Cost here refers to labour, parts, and returning and reinstalling charges if the product needs either repair or replacement. The

consumer must not be liable to pay for repair that is caused due to manufacturing or workmanship defects and bringing faulty products to conformity must be 'free of charge', including postage, labour and materials. As large appliances such as washing machines are hard to move the repairs are generally provided in situ, thus postage is not a concern. Within the manufacturer's guarantee period any repair related expenses are borne by the manufacturer.

Choice: Different remedies- either repair, replacement or refund- are possible if the product turns out to be faulty. Of these remedies, repair is normally considered to be the most environmentally sustainable (Cooper & Salvia, 2018). A Parliamentary Committee report (House of Lords, 1997) advocated repair over other remedies as it increases the demand for maintenance and quality control. The report also indicates companies' preference for repair over replacement or refund as it is comparatively less expensive for them. Companies may encourage repair because they believe that if left to choose from the three remedies, most consumers will opt for refund or replacement over repair and therefore their costs will be greater. The Consumer Rights Act 2015 has taken this into account. While it gives consumers the right to repair or replacement, it also provides sellers reasonable opportunity to negotiate. Companies retain discretion to choose between replacement or refund if repair is not possible.

Duty: Companies generally encourage consumers to register their products, but claims can otherwise be made under manufacturer's guarantee.

Warranties

Miele's warranties scored the highest of the three companies, with three green and one amber (Table 3). Samsung's 5 Years warranty is comparable to Miele's, while its 10 Years warranty scores similar to Hotpoint's, which is very low with one green.

Miele, Samsung and Hotpoint do not charge consumers for promotional warranties or parts only warranties but Hotpoint's care plans are paid and price differs with product type and age.

Duration: The maximum warranty period offered by manufacturers is 8 years. Samsung and Hotpoint provide a 'parts only' warranty on

selected products, while Miele provides promotional warranties. The total warranty period, including manufacturers' guarantee, is a maximum of 10 years, which is less than the average lifespan of washing machines, 12.5 years (Alfieri et al., 2018). Hotpoint's manufacturer's guarantee is not as long as the minimum requirement in the EU Directive. Even with its additional one-off repair care plan, the product is covered for less than 2 years.

Transferability: As a product is likely to undergo a change in ownership in its later years, transferability under warranty is beneficial to customers and the environment. Samsung's promotional 5 Years extended warranty mentions that the manufacturer's guarantee is transferable whereas the extended warranty is not. Miele's warranties are transferable and renewable at the discretion of the company.

Cost: Hotpoint care-plans, charged to consumers, offer one repair 'followed by ongoing maintenance' and provide reward points on buying. These plans do not offer significant protection against breakdown (red boxes in Table 3). Hotpoint also offers a 1 year parts and labour guarantee but mentions that replacement of any removable or consumable parts is not covered. Its protection plan covers appliances that are out of guarantee but are under 5 years old. In this plan there are no charges for labour, parts or call out, but reinstallation charges have to be borne by the consumer.

For Miele products under warranty all costs are borne by the company including labour, parts, removal and reinstallation. Miele also provides repair for products that are not covered under service certificates (5 and 10 Years promotional warranty); however, unlike Hotpoint, Miele mentions the costs on its website. Both Hotpoint and Samsung offer 10 Years 'parts only' warranties, at no additional cost, for which consumers do not pay for parts but must bear the cost of labour, which is generally very high (Domestic & General Group, 2019).

Choice: As with a manufacturer's guarantee, no company provides the choice of refund or replacement to the consumer if repair is not feasible when the product is under an extended warranty, and keep the decision to their discretion.

Duty: Companies require that for consumers to claim services under warranty, the product

must be registered, and the purchase receipt verified within a few days of purchase. This helps product tracking especially if recall is needed.

Warranty on repair work

Companies that focus on product longevity will design their repair services such that a consumer is inclined to repair the product. We argue that companies that provide warranties on repair work probably are more confident in their products and repair services than those that do not.

Miele provides 1 year guarantee on their repair services, which is not provided by Samsung. If a Samsung product is repaired within warranty, the warranty on the replaced part is as long as the warranty remaining on the product. If the product is out of warranty, Samsung provides a 3 months warranty on repair. Hotpoint does not provide a guarantee on repair services but as part of care plans, they provide 'an initial repair followed by ongoing maintenance'.

Miele lists repair charges on its website. These are to be paid for items that are not covered under a standard guarantee or warranty, or if repair is performed due to failure because of conditions mentioned under the list of exclusions of a warranty deed. Samsung and Hotpoint charge for labour, if the consumer chooses to repair using spare parts provided under warranty, but do not provide similar warranties as those by Miele on repair work.

Availability of spare parts

Availability of spare parts helps to make products last longer, as the maximum period of use of a product is determined by the shortest-lived component (Alfieri et al., 2018). Members of the Association of Manufacturers of Domestic Appliance (AMDEA) had a voluntary agreement to provide spare parts for up to 6 years from when a model was discontinued (UKwhitegoods, 2012). The latest guidelines state that manufacturers will try to retain functional spares for as long as 'there is a market' (AMDEA, 2014).

Miele, Samsung and Hotpoint do not mention their spare parts policies on their websites. However, Miele cover the cost of parts and labour in their warranties, which may indicate that Miele keeps spare parts for 10 years (maximum promotional warranty period), or on

the positive side, for 20 years because they claim their products last for 20 years.

Summarising the results, guarantees and warranties do not seem to have much influence on product lifespans. Miele's warranty promotes longer use of the product as can be distinctly seen in Table 3 from the number of green scores. Samsung's 5 Years warranty has somewhat similar green scores to Miele. Samsung sells some of its washing machines at comparable price points but has a warranty scheme with different durations for its components. This variation in warranties for products sold at similar price points suggests that companies differ in confidence in their products. Hotpoint experiments with various warranty options, but these appear to be selling ploys as evidenced by the number of red scores in Table 3.

Conclusions

This paper provides a comparison of manufacturer's guarantee and warranty initiatives from three established washing machine brands. Warranties can promote the use of products for a longer duration and stimulate sales and customers satisfaction and may be considered when consumers purchase goods such as large kitchen appliances. Other initiatives by a business, such as providing warranties on repair work, help consumers to consider repair over replacement, as does affordable spare parts.

Warranty, brand perception and price points

Companies selling products at higher price points, such as Samsung and Miele, provide similar manufacturer's guarantee but 'mid-market' companies may not provide similar terms and conditions. Samsung is 'most trustworthy', 'expresses my personality' and is a 'fun' brand (Mintel 2019). It sells at higher price points, similar to Miele, however its longer warranties are similar to those of Hotpoint in terms of the five essentials considered in this paper.

Hotpoint operates at the value end of the market. It is perceived as 'affordable', 'user-friendly' and 'reliable' by consumers (Mintel 2019). Although it offers 1 year manufacturer's guarantee, from the data collected in this paper, it does not seem to provide adequate cover even if the consumer is paying for the

warranty. The company seems to be popular for its cheap price. Considering it accounts for 15% of the total sales of washing machines in the UK, it seems to be performing reasonably in accordance with the expectations of consumers. Consumers are, probably, not considering warranties when buying products such as washing machines, even if they want them to last a long time. If consumers are not seeking robust warranties, what could motivate companies to extend the life of their products?

Marketing communications

Hotpoint promotes its protection plan by highlighting 'unlimited' repairs. To get messages through, marketers may encode their messages in a way that takes into account how the target audience usually decodes messages (Kotler et. al., 2013). Logically, consumers would not want machines to break down, therefore use of the word 'unlimited' seems inappropriate unless consumers believe that repairs are expensive. Samsung's and Hotpoint's 'parts only' warranties turn out to be much more expensive for minor repairs, as free parts can be claimed under warranty only if their service is used and the labour charges are generally very high (Domestic & General Group, 2019). The use of the word 'unlimited' is explained further: 'It doesn't matter how many times you need a repair, we'll be there to help'. Therefore, while Hotpoint is making minor repairs expensive, it is simultaneously advertising care plans with 'unlimited repairs' for a charge. This may be interpreted as an attempt to create an impression in the minds of the consumer that the plan will be helpful in case of malfunctioning and will cost less for repairs. Also, Hotpoint mentions that the protection plans are covered by Domestic & General, that provides warranty services to household appliances, and can be transferred to a new owner. This communication may be aimed at luring consumers into buying the plan.

Samsung and Hotpoint provide warranty terms and conditions in product manuals and do not provide a comprehensive document. Miele has a comprehensive document informing consumers about all its warranties on all products. The cost of delivery, disposal and recycling of old appliances are included in the cost of the product. Miele also allows for appliance registration up to 12 years from purchase, conforming with AMDEA's consumer safety initiative to improve the traceability of products (AMDEA, 2019).

Repair and product longevity

The findings of this study suggest that established brands such as Miele, Samsung and Hotpoint provide warranties but do not always make repair a simple experience for the consumer. Therefore, it can be interpreted that some of the warranties may not promote longer use of the product. Samsung's warranty information on its website (Samsung.com, 2019) states that: 'To make a claim under this warranty, end users must produce the original proof of purchase...', thus making it difficult for a second buyer to make claims. Miele and Hotpoint also have a clause of a written consent for transferring warranties if products are sold by the first buyer within the warranty period. This requirement may thus be interpreted as an impediment to second-hand markets.

Miele specifies that they will not bear the repair charges of any appliances operated beyond 10,000 hours. Considering their claim that washing machines are designed to last for 20 years, their calculations seem to be based on the expectation that a machine is used for 500 hours per year on average. By contrast, Hotpoint only offers warranties for products that are less than 5 years old, which is one quarter of the life expected from a Miele washing machine.

Companies that focus on product longevity appear more likely to design their repair services such that the consumer is inclined to repair the product. Miele and Samsung offer repair for products that are not covered under warranty for which they charge. Hotpoint does not provide repair for products not covered under warranty but advertises Domestic & General's plans for repair on its website which are also charged. In general, consumers may prefer to repair if they can find value in paying for it (Kotler et. al., 2013). Providing a warranty on repair may help to instil consumers' confidence in repair over replacement. In the case of products being repaired but not under warranty Miele provides a 1 year warranty on repair work and Samsung provides a 3 months warranty; Hotpoint does not mention duration of a warranty. As manufacturers provide warranties for a maximum of 8 years, products are typically covered for a maximum of 10 years. Thus if a product were to fail just after a warranty expired, even with Miele's 1 year warranty total lifespan of the product, the period covered would be 11 years, less that the average lifespan of 12.5 years. Therefore,

despite manufacturers' offering various warranties, none of them cover the average lifespan of products.

The observations from this study indicate that there may not be a connection between the price points at which companies sell products, brand perception and intention for producing longer lasting products. The next stage in this research is to test these observations through interviews with key informants in companies' marketing and after-sales departments. Retailer guarantees have not been studied in this paper and these must also be included in further investigating the role of marketing strategies such as warranties in decreasing the material flow in the economy.

In this paper, warranty details are taken to indicate the intentions of companies regarding the lifespan of their products. Evidence from warranties suggests a higher price may not indicate that the product is fully supported by the company to last for as long as possible. This study needs to be extended to more companies to form more robust conclusions.

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