



Why we need longer warranties



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We have all been there, a quite new gadget breaks down after the warranty has expired but it's just not worth to have it repaired. Even in the best scenario it would cost €100+ to just get an expert to open it to give an estimate and another €100–200 for a fix. Often you can get a new one cheaper and faster and risk free that will also last longer and come with a renewed warranty.

Also the high cost of repairs is not an illusion, an electrical engineer in the west has a lot higher salary than a factory worker in the east. And a highly optimized manufacturing line is a lot more efficient in assembling things than a manual process. There are no artificial cost factors that could be removed to make repairing significantly cheaper.

The problem is made worse by the fact that us as consumers have gotten used to things breaking is not a problem because getting a new one is so cheap. So we're not holding quality as a primary product

argument and companies are not competing on making long lasting things but rather making them look more expensive than they are. Another consequence is that things are becoming harder to fix as it's cheaper to use lock in plastic clips and glue rather than screws and other easily repairable constructions.

This is not sustainable from neither waste nor resource use perspective with electronic waste being the fastest growing form of waste [VICE]. We need to make our products last longer and make fixing things more competitive compared to replacing with new.

Case: Television capacitors

A widely publicized problem in televisions are bad capacitors that fail after a few years and cause the television to fail to start with clicking sounds. The problem is trying to cut costs and using lower cost parts and Samsung even lost a class action suit in America [CNET].

This is a relatively easy problem to repair, symptoms are easy to recognize and compatible capacitors are widely available and the risks are low. But it still requires an electronics expert to open the set, remove defunct capacitors and solder in new ones, still costing hundreds [ARS]. Alternatively, if you can solder, you can get a repair kit of 10 capacitors from Ebay for about \$10 and do it yourself for a lot cheaper.

When buying capacitors in bulk the prices seem to come down 10–30% with an order of magnitude (e.g. 10 -> 100) with 10k costing less than \$0.2/pc [MOUSER]. It's pretty safe to assume that for Samsung buying in millions could get them for less than \$0.1/pc or less than a \$1 increase in the manufacturing cost. In retail this might mean several dollars, but still an order of magnitude or two cheaper than the repair.

Case: Bosch power tools

Bosch offers two lines of power tools, green for consumers and blue for professionals. For the green line you get a 3y warranty for consumer use and 1y for professional use while the blue line has 3y for professionals also [BOSCH]. I.e. the blue line is built to last at least 3 times more use and in practice probably a lot more as professional tools can be used daily while most consumers typically only occasionally. At

the same time products with similar features in the blue line are only 50–100% more expensive, i.e. overall the green line will be more expensive in use in all but most infrequent use. Also generally we can see that the return of investment for improving quality is good, i.e. you can make a tool last twice as long without making it twice as expensive (even when sold in much smaller volumes).

Longer warranties

A simple solution is to increase the mandatory product warranties. On the other hand this forces manufacturers to in-source the cost of bad quality, making the return rate and cost of repair more important product metrics. When this gets pushed to resale prices, better quality and cheaper repairs get more competitive. Also raising the bar on quality means that it will be manufactured in greater numbers which will further drive down the cost. While it's true that things will become more expensive, it will pay itself back in the long term. Good quality is already a good investment today and will become an even better one when everyone does it.

Also instead of doing one-time-increases, warranties should be treated like a process. It's not a good idea to do massive regulative changes overnight but rather they need to be consistently getting longer over time. This is similar to the MPG standards of cars and energy efficiency requirements of home appliances, there needs to be long term roadmap that pushes the industry to improve, adapt and innovate.

Conclusions

A push for longer warranties can only work if done on a large enough scale. A single country doing it is probably not enough to force manufacturers to change. Because of this the European Union should extend the consumer goods directives to cover this and more clearly define categories of consumer goods, their minimal warranties and roadmaps.

Any thoughts, comments, complaints? Leave a reply or write an email to [matias at rational dot zone], I want to hear your opinion.

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