The circular economy and household appliances in Hungary

CECED HUNGARY
2017
The age of appliances in Hungarian households
The age of appliances

Average age of appliances

- Cookers
- Freezers
- Fridges
- Dishwashers
- Washing machines

2017, 2015, 2013
<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2013</th>
<th>2015</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>fridge</td>
<td>40,4</td>
<td>43,7</td>
<td>57,9</td>
<td>57,1</td>
</tr>
<tr>
<td>freezer</td>
<td>60,9</td>
<td>65,2</td>
<td>70,7</td>
<td>68,7</td>
</tr>
<tr>
<td>washing machine</td>
<td>40,5</td>
<td>42,9</td>
<td>49,2</td>
<td>45,1</td>
</tr>
</tbody>
</table>
### Old appliances in 2017 (%)

<table>
<thead>
<tr>
<th></th>
<th>washing machine</th>
<th>fridge</th>
<th>freezer</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 years +</td>
<td>45,1</td>
<td>57,1</td>
<td>68,7</td>
</tr>
<tr>
<td>11 years +</td>
<td>32,9</td>
<td>43,2</td>
<td>60</td>
</tr>
<tr>
<td>15 years +</td>
<td>19,5</td>
<td>24,9</td>
<td>49,3</td>
</tr>
<tr>
<td>19 years +</td>
<td>9,6</td>
<td>10,9</td>
<td>32,2</td>
</tr>
<tr>
<td>24 years +</td>
<td>6,1</td>
<td>5,4</td>
<td>19,2</td>
</tr>
</tbody>
</table>
Conclusion

The age of appliances in Hungarian households are very high, appliances are very old
Buying a new appliance
Buying intention in 2013 (%)

**IN GENERAL**

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Plans to buy</th>
<th>Doesn't plan to buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washing machine</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Television</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Cooker</td>
<td>9</td>
<td>91</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>6</td>
<td>94</td>
</tr>
<tr>
<td>Deep freezer</td>
<td>6</td>
<td>94</td>
</tr>
<tr>
<td>Hood</td>
<td>5</td>
<td>95</td>
</tr>
<tr>
<td>Air conditioner</td>
<td>5</td>
<td>95</td>
</tr>
<tr>
<td>Microwave oven</td>
<td>5</td>
<td>95</td>
</tr>
<tr>
<td>Vacuum cleaner</td>
<td>5</td>
<td>95</td>
</tr>
<tr>
<td>Dryer</td>
<td>2</td>
<td>98</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>2</td>
<td>98</td>
</tr>
<tr>
<td>Built-in cooktop</td>
<td>2</td>
<td>98</td>
</tr>
<tr>
<td>Built-in oven</td>
<td>2</td>
<td>99</td>
</tr>
</tbody>
</table>

**IN CASE OF AN APPLIANCE OLDER THAN 10 YEARS**

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Plans to buy</th>
<th>Doesn't plan to buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washing machine</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>Cooker</td>
<td>15</td>
<td>85</td>
</tr>
<tr>
<td>Television</td>
<td>15</td>
<td>85</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>12</td>
<td>88</td>
</tr>
<tr>
<td>Deep freezer</td>
<td>9</td>
<td>91</td>
</tr>
<tr>
<td>Microwave oven</td>
<td>9</td>
<td>91</td>
</tr>
<tr>
<td>Vacuum cleaner</td>
<td>7</td>
<td>93</td>
</tr>
</tbody>
</table>

CECEDHU – GFK Hungary, 2013
Buying intention in 2015 and 2017 (%)

CECEDHU – GFK Hungary, 2017
Buying intention in case of having an appliance older than 10 years

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Plans to Buy</th>
<th>Doesn't Plan to Buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washing machine</td>
<td>23</td>
<td>77</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>21</td>
<td>79</td>
</tr>
<tr>
<td>Television</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>Cooker</td>
<td>18</td>
<td>82</td>
</tr>
<tr>
<td>Hood</td>
<td>11</td>
<td>89</td>
</tr>
<tr>
<td>Vacuum cleaner</td>
<td>12</td>
<td>88</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>15</td>
<td>85</td>
</tr>
<tr>
<td>Deep freezer</td>
<td>12</td>
<td>88</td>
</tr>
<tr>
<td>Microwave oven</td>
<td>10</td>
<td>90</td>
</tr>
</tbody>
</table>

CECEDHU – GFK Hungary, 2017
Importance of Factors

<table>
<thead>
<tr>
<th></th>
<th>When buying household appliances</th>
<th>When buying consumer electronics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>2.33</td>
<td>2.34</td>
</tr>
<tr>
<td>Energy efficiency</td>
<td>2.63</td>
<td>2.75</td>
</tr>
<tr>
<td>Quality</td>
<td>2.77</td>
<td>3.14</td>
</tr>
<tr>
<td>Durability</td>
<td>3.34</td>
<td>3.84</td>
</tr>
<tr>
<td>Device services (programmes, nr. of functions, etc.)</td>
<td>4.58</td>
<td>4.25</td>
</tr>
<tr>
<td>Innovations</td>
<td>5.35</td>
<td>5.04</td>
</tr>
</tbody>
</table>

Most important

Least important

CECEDHU – GFK Hungary, 2015
According to the Centar Statistic Office

<table>
<thead>
<tr>
<th></th>
<th>1989</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average salary (HUF)</td>
<td>10,571</td>
<td>199,775</td>
</tr>
<tr>
<td>Coverage of households (%)</td>
<td>44 (in 1993)</td>
<td>83 (in 2008)</td>
</tr>
<tr>
<td>Average price of a WM (HUF)</td>
<td>19,550</td>
<td>75,160</td>
</tr>
</tbody>
</table>

http://www.ksh.hu/docs/hun/xstadat/xstadat_hosszu/h_qli001.html
Appliances at home (%)

- **Television**
  - CRT: 52%
  - LCD: 52%
  - Plasma: 10%

- **Refrigerator**
  - Double-door: 31%
  - Single-door: 34%

- **Washing machine**
  - Top-load: 11%
  - Front-load, normal: 37%
  - Front-load, narrow: 55%

- **Microwave oven**
  - Solo: 34%
  - Combination: 34%

- **(Detached) Cooker**
  - Gas cooker: 44%
  - Electric cooker: 50%
  - Combined cooker: 26%

- **Combination (Detached) Cooker**
  - Gas cooktop: 53%
  - Electric cooktop without induction: 83%
  - Electric cooktop with induction: 83%
  - Electric cooktop combined: 84%

- **Built-in cooker**
  - Gas cooktop: 9%
  - Electric cooktop with induction: 9%
  - Electric cooktop combined: 9%

- **Built-in oven**
  - Gas: 25%
  - Electric: 75%

- **Vacuum cleaner**
  - 2017: 88%
  - 2015: 93%

- **Washing machine and dryer**
  - 2017: 68%
  - 2015: 74%

- **Deep freezer**
  - 2017: 48%
  - 2015: 50%

- **Freezer cabinet**
  - 2017: 31%
  - 2015: 32%

- **Chest freezer**
  - 2017: 23%
  - 2015: 24%

- **Hood**
  - 2017: 42%
  - 2015: 40%

- **Dishwasher**
  - Normal: 19%
  - Narrow: 26%

- **Built-in cooktop**
  - Gas: 5%
  - Electric: 17%

- **Built-in oven**
  - Gas: 15%
  - Electric: 85%

- **Air conditioner**
  - 2017: 12%
  - 2015: 8%

- **Tumble dryer**
  - 2017: 3%
  - 2015: 8%

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Conclusions

➢ The percentage of households planning to buy new appliances is very low (even in case of having an appliance older than 10 year, lower than 25%).

➢ The main factor to be taken into consideration when buying a new appliance is price.

➢ Durability is far less important than price (even less important than energy efficiency or quality).

➢ The average price of a washing machine in 1989 was almost twice as much as the average salary, while in 2009 it was only 37% of the average salary.

➢ The number of households having household appliances has increased significantly since 1989.
Handling of unwanted appliances
Handling of unwanted appliances

If it is still functioning, I give it to a friend
- 2017: 29
- 2015: 31
- 2013: 35

I take it back to the shop where I buy the new machine
- 2017: 31
- 2015: 30
- 2013: 27

If it is still functioning, I sell it (i.e. on the internet)
- 2017: 17
- 2015: 18
- 2013: 15

I put it on the street at the time of rubbish removal
- 2017: 7
- 2015: 9
- 2013: 8

At the time of rubbish removal I dispose of it at the designated time and place
- 2017: 0
- 2015: 0
- 2013: 0

I take it to a waste yard
- 2017: 5
- 2015: 5
- 2013: 8

I take it to a reuse center
- 2017: 1
- 2015: 1
- 2013: 1

Other
- 2017: 4
- 2015: 4
- 2013: 5

I do not know
- 2017: 1
- 2015: 1
- 2013: 1

CECEDHU – GFK Hungary, 2017
Conclusion

- Almost half of the appliances go for a second use before entering into the waste stream, but the percentage is decreasing (from 50% to 46% between 2013 and 2017)
- The number of appliances taken back to the shops is slightly increasing (from 27% to 31% between 2013 and 2017)
Maintenance, repair vs. replace
Warranty

Taking into account the expanded warranty possibilities when buying household appliances

- 32% yes, they absolutely influence my choice
- 50% yes, I take them into account but only if they are offered by the producer
- 19% no

Knowing about warranty obligation for the repairs beyond the warranty period

- 62% yes, I know about it
- 34% no, I don't know about it
- 4% no, I don't know about it, and I don't use to get any certificate

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Choosing the serviceman

- I always choose the repair service of the dealer (the authorized repairer) because the quality, the warranty and the skills represented by the brand are important to me: 30
- I don't choose the authorized repairer (the dealer) because its repair service is surely more expensive: 8
- I call more service agents and choose the one which expectedly will repair the appliance with lower price: 16
- I call more service agents and choose the one which will quicker repair the appliance: 11
- I choose that service agent which is recommended by my acquaintances: 27
- I never call serviceman, I use to repair the appliances by myself or with the help of an acquaintance: 9
- I never call serviceman, I rather buy a new appliance: 2
Measures when a large household appliance breaks down

- If the cost of repair is less than 20% of the price of a new product, I choose to repair it, otherwise I replace it
- If the cost of repair is less than 50% of the price of a new product, I choose to repair it, otherwise I replace it
- If the cost of repair is less than 75% of the price of a new product, I choose to repair it, otherwise I replace it
- I replace it anyway, don't repair it
- Don't know / No answer

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Following technological innovations

- It happened already that I replaced a well functioning large household appliance in order to have a more modern one.
- I haven’t replaced any well functioning large household appliance yet only to have a more modern one, but if I could I would do it.
- Following the technological innovations in case of large household appliances is not important to me, I use them as long as they are break down and cannot be repaired economically.
Time of replacing a functioning household appliance with a new one

- 57% would replace it already after 5 years or less even if it still works well
- 15% would replace it after 6-8 years even if it still works well
- 17% would replace it after 9-10 years even if it still works well
- 7% would replace it after 11-13 years even if it still works well
- I use it as long as I can, and replace it only if it breaks down and cannot be repaired economically

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Relation between regular maintenance and product life

- 60% Yes, maintenance is very important, I always take care of it
- 26% Yes, maintenance is very important, but unfortunately I often fail to do it
- 7% Maintenance doesn't influence the life of the appliance
- 7% Don't know

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Conclusions

- Although Hungarians keep appliances very long, in many cases they would replace them earlier if they could.
- 14% of the households have already changed, and another 38% would change a still well working appliance because of the technical innovation.
- Hungarians are quite good at maintenance, maybe that fact plays a role in the long use of the appliances...
The main contradiction/oddity is

- While there are several operational reuse centers existing in Western Europe, in Hungary this type of organisation/need has not developed.

- However, we could think that both in respect of jobs and appliances, there is a larger need for such an activity in the eastern part of Europe...
What is the situation in Hungary?

- No reuse center has been established before WEEE
- One company established under the WEEE for preparation for reuse
- Only few and inappropriate (usually very old) appliances to refurbish
- The price of the refurbished appliances are too high

This business activity is far from being profitable
We already know that Hungarians...

- Keep appliances as long as possible
- Mainly choose repair as opposed to replacement
- Even if buying a new one, give/sell the old for others

Appliances become waste very late, so it is not worth to prepare them for reuse
I wouldn’t buy anything in such a store, I am interested only in new products

<table>
<thead>
<tr>
<th>Probability to buy in a store chain offering used but professionally restored appliances with warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
</tr>
<tr>
<td>2015</td>
</tr>
</tbody>
</table>

- I wouldn’t buy anything in such a store, I am interested only in new products
- I would buy any type of products
- I would buy only some type of products

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Why to choose such products?

- The renewed product should be 15-20% cheaper than a new one
- The renewed product should be at least 40% cheaper than a new one
- Eco-consciousness
- Reliability (the old appliances are better than the new ones)
- Other
- No answer
Conclusions...

- Preparation for reuse can only be an efficient means under the aegis of the circular economy if appliances become waste before their actual lifecycle.

- More and more often appliances become waste according to the decision of the consumers, and not because they are obsolete.

- Preparation for reuse activity in Western Europe in many cases corresponds to the maintenance/repair of appliances during the first use in Hungary.
The replacement programmes
Early replacement programmes in Hungary

- Introduced in order to accelerate the replacement of old appliances
- Run by the Ministry for National Development
- Financed from the Green Investment Scheme

2014: refrigerators and freezers
2015: washing machines
2016: refrigerators and freezers
2017: refrigerators, freezers and washing machines
CECEDHU’s role in replacement programmes 1.

CECEDHU – GFK HUNGARY SURVEYS

- CO$_2$-studies (2009, 2013 and 2015), 2017 study is currently under preparation
- Calculations on savings

COORDINATION

- Official partner of the Ministry
- Coordination of producers taking part in the programme (not only CECEDHU members)
CECEDHU’s role in replacement programmes 2.
## Fridge replacement programme (2016)

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 year(s)</td>
<td>0.36</td>
</tr>
<tr>
<td>6-8 years</td>
<td>0.91</td>
</tr>
<tr>
<td>9-10 years</td>
<td>1.75</td>
</tr>
<tr>
<td>11-22 years</td>
<td>79.16</td>
</tr>
<tr>
<td>23 years +</td>
<td>17.83</td>
</tr>
</tbody>
</table>

Total number of applicants: 45699

97% of the fridges were at least 11 years old

Source of data: Ministry for National Development
Washing machine replacement programme (2015)

<table>
<thead>
<tr>
<th>The age of replaced appliances (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 year(s)</td>
<td>2,30</td>
</tr>
<tr>
<td>6-8 years</td>
<td>3,79</td>
</tr>
<tr>
<td>9-10 years</td>
<td>8,47</td>
</tr>
<tr>
<td>11 years +</td>
<td>85,44</td>
</tr>
</tbody>
</table>

Total number of applicants: 40522

85% of the WMs were at least 11 years old

Source of data: Ministry for National Development
Willingness of replacement in case of staid aid (%)

**at 10% discount**
- yes: 2
- no: 31
- perhaps: 11
- I can't afford: 39
- don't know: 17

**at 20% discount**
- yes: 6
- no: 17
- perhaps: 26
- I can't afford: 32
- don't know: 19

**at 30% discount**
- yes: 38
- no: 3
- perhaps: 28
- I can't afford: 26
- don't know: 6
Donation programme of CECED Hungary

Fridge donation to St. Margit Hospital (2016)

Washing machine donation to people in need (2015)

Fridge donation to people in need (2014)
This year’s plan is...
Advantages

- Experience and data for the future regulation on reuse
- Additional savings
- Donation
- Cycle Michael and Recycle Michael
Conclusions

- The replacement programmes were introduced to accelerate the change of the outdated appliances in Hungarian households.
- Although there have already been 3 programmes, the appliances in 2017 are still very old, so there is still a great potential in further programmes.
- Many people cannot afford to take part in the programmes, because they cannot pay their own contribution.
- Therefore CECED Hungary introduced a donation programme.
- In 2017 reuse will be built in the replacement programme as a pilot project.
Some interesting results...
Circular economy and global warming

Circular economy - what does it refer to?
- Efficient recycling of waste: 31%
- Cash flow through economic operators: 28%
- I have heard about it but don't know what it means: 14%
- I haven't heard about it yet: 27%

Who has a role in the battle against global warming?
- Industrial, agricultural, etc. companies, manufacturers: 70%
- Consumers: 67%
- Companies dealing with waste management: 34%
- I don't believe in global warming, nobody has to do anything against it: 1%
- Don't know: 12%

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Awareness raising activity of CECED Hungary
The Cycle Michael (Forgó Morgó) campaign

Launch: 2006
Kids programmes from 2013
Cycle Michael by the sea – the storybook
This school year’s topic was the circular economy

Stories of Cycle Michael and Recycle Michael are now available in English: http://cecedhu.hu/en/awareness-raising
The circular economy puzzles
The best drawings about the circular economy were placed on the giant puzzle.

Please use the slideshow form to view the gif.
Europe Day 2017
Contact

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www.cecedhu.hu (official website, currently under renewal)
www.forgomorgo.hu (Recycle Michael website, currently under renewal)
www.csereprogram.hu (replacement programmes’ website)

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