Women’s everyday mobility supported by E-Bikes

Christine Chaloupka-Risser
Women and E-Bikes
The Study

- Financially supported by the Austrian Ministry of Transport Innovation and Technology
- Research Institutes: FACTUM, Research Data Competence, FGM-AMOR
Aim of the Study

Explore chances and limitations of E-Bikes concerning a shift of modal-split from individual motorised traffic to sustainable transport

Target group: women

Why women?
- characterised by emphasis on safety
- more often environmentally conscious
- emotionally less attached to their car than men
- don't drive car for prestige reasons
- could function as kind of role model
The approach

• State of the Art
  • technical standard of e-bikes, accessories, infrastructure (energy service stations, safety devices etc.)
  • mobility patterns of women

• Focus group discussions

• 2 Austrian-wide surveys:
  • life style in general with parts concerning e-bike, men & women (n=4600)
  • women in cities and from the country (n=1000)

• **Field-study:** 10 women were accompanied during some months while using e-bikes in their everyday life

• **Workshop** with retailers

• Result: a motivational catalogue to support e-bike use
Methodenmix:

State of the Art: technical standard of e-bikes, accessories, infrastructure (energy service stations, safety devices etc.), mobility patterns of women

Focus group discussions
2 Austrian-wide surveys: life style, men & women (n=4600)
   women in cities and from the country (n=1000)

Field-study: 10 women were accompanied during some months while using e-bikes in their everyday life

Workshop with retailers

Motivationskataloge
Für Frauen, Gemeinden und Händler

FACTUM OHG, FGM-AMOR, RDC
Results
Female mobility needs

• Multimodality
• Combine different purposes within one trip
• Responsible for supply and escort (children)
• Cover more short distances (0.5 - 5 km)
• everyday mobility of women follows a more complex pattern than men's mobility

• possible support by electro bikes?
Results surveys

• In general men seem slightly more interested in electric bikes than women (especially from an age of 49+), but: Interest in e-bikes by women and men is similar between an age of 15 and 49 (interest rapidly decreases above 70)
• 50% of all women can imagine using an e-bike
• Main field of application: shopping and errand trips followed by leisure time

What kind of trips would you use an e-bike for?

- everyday trips (shopping, errands…): 43 very relevant, 34 relevant, 12 rather not relevant, 8 not relevant, at all, 3 no response
- leisure time trips: 32 very relevant, 40 relevant, 16 rather not relevant, 8 not relevant, at all, 4 no response
- trips to/from work: 30 very relevant, 29 relevant, 16 rather not relevant, 19 not relevant, at all, 6 no response
- bike&ride: 24 very relevant, 33 relevant, 21 rather not relevant, 16 not relevant, at all, 6 no response
- others: 12 very relevant, 24 relevant, 21 rather not relevant, 28 not relevant, at all, 15 no response
Barrières for using E-bikes

- Price and fear of theft main barriers
- Young females (< 30) are more put off by the fear of theft and the feeling to be considered as unathletic
- Regarding the price: men more sensible

What keeps you from buying an e-bike?

- Price: 59%
- Fear of theft: 30%
- Weight: 18%
- Appearing unathletic: 17%
- Technically embryonic bikes: 15%
- Do not know: 20%
Expectations

- 90% it is easier to ride up a hill
- 79% e-bike can replace cars on short trips
- 70% save fuel costs
- 64% it is easier to transport children or goods
- 57% an alternative for the second or third car

What can make you use an e-bike?

<table>
<thead>
<tr>
<th>What can make you use an e-bike?</th>
<th>fully agree</th>
<th>rather agree</th>
<th>rather not agree</th>
<th>do not agree, at all</th>
<th>do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is easier to negotiate gradients</td>
<td>60</td>
<td>33</td>
<td>14</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>The e-bike can replace the car on short trips</td>
<td>44</td>
<td>35</td>
<td>14</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>I’m happy to ride an e-bike for environmental reasons</td>
<td>34</td>
<td>41</td>
<td>13</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>I can save fuel costs</td>
<td>34</td>
<td>36</td>
<td>18</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>It is easier to transport goods and children</td>
<td>24</td>
<td>40</td>
<td>25</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>An e-bike is a good alternative to a second car in a household</td>
<td>22</td>
<td>35</td>
<td>25</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>E-biking increases the sportiness and fitness</td>
<td>14</td>
<td>30</td>
<td>30</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Nothing can make me to use an e-bike</td>
<td>9</td>
<td>10</td>
<td>24</td>
<td>40</td>
<td>17</td>
</tr>
</tbody>
</table>
Needs / Safety aspects

• suitable for daily use
  - simple technical handling
  - low weight of the battery and the bike
  - Reliable screen that indicates battery charge condition

• sufficient lighting
• rear mirror
• possibility to test the bike
Needs / Safety aspects

Infrastructure

- sufficient public charging stations
- safe parking spaces
- a well connected cycle network
- e-bikes for hire
- broader cycle lanes
Mögliche Barrieren: Entkräftung

- Hoher Anschaffungspreis
- Angst vor Diebstahl
- Hohes Gewicht
- Hoher Wartungsaufwand
- Gefühl unsportlich zu sein
- Zweitauto oder Motorrad teurer
- gutes Schloss, geschützter Ort
- werden leichter; beim Fahren nicht spürbar, durch Abnehmen des Akkus reduzierbar
- Vorurteil
- selbst Zusatzschubkraft wählen und im flachen Gelände ganz ausschalten
Apropos Kosten

1 Akku:
Pro Ladung ca. 50 km
500 mal laden
25.000 km fahren
2500 Tage unterwegs sein
= 7 Jahre

1 Akku = € 400,–
(derzeit – wird billiger!)
1 mal aufladen = € 0,08
Vorteile des E-Rades gegenüber Rad

• Knie schonend durch Anfahrhilfe (vor allem mit schweren Packtaschen oder Anhänger)
• Nach mehrjähriger „Radenthaltsamkeit“ vergnüglicher Wiedereinstieg
• Längere Radtouren auch für Ungeübte
• Mithalten auch mit Geübten z.B. PartnerInnen oder Jugendlichen

Faktoren entsprechend WHO Gesundheits-definition: soziale Aspekte!
Conclusions
Preconditions to promote E-bikes for women for everyday mobility

• Term is well known in public; however, knowledge is elementary.

• Men are slightly more interested in e-bikes than women but main expected trip purposes for e-biking errands and shopping purposes where women have a high share of trips.

• Relevance of e-bikes highest in middle sized towns and on the countryside – especially in hilly areas.

• E-bikes nowadays look modern and stylish no longer image of a „granny-bike“ and a „lack of sportsmanship“
Conclusions

Preconditions to promote E-Bikes for women for everyday mobility

• E-bike for women has to be suitable for daily use → low weight of bikes, simple technical handling, convenient accessories (e.g. rear mirror)

• Special infrastructure e.g. charging units considered not so important when riding becomes an everyday habit but: it could function as promotion and eye-catcher for non-riders.

• Providing of possibilities to try e-bikes (e.g. integrate e-bikes in free city bikes)

• Improvement of existing Cycling infrastructure in general (well-connected cycle network, good signing, sufficient parking spaces)
Thank you!
Let’s try an E-Bike

www.factum.at
www.femelbike.at