400 MILLION EURO: THE ECONOMIC VALUE OF CYCLING IN BRUSSELS IN 2020?

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Florent Verstraeten
Les études disent:

- Opbrengsten: 200 mln euro / jaar
- Huidige investeringen: 100 mln euro / jaar

TML, external costs/pkm, MIRA, 2016

Review of economic analysis of transport infrastructure and policies including health effects related to physical activity (reported in fietsverkeer juni 2008)

NL cycle highways (700km), Goudappel Coffeng

Bruno van Zeebroeck Florent Verstraeten, economic impact of cycling in Brussels, velocity, 16-06-2017
If Brussels were different?
What economic impact for Brussels?

* If 20% of mechanized journeys were made by bicycle

- Impacts?
- Societal gains?
- Comparison with a situation without bicycle
- Classic evaluation method
- Only *monétisable* items

II Jobs
What economic impact for Brussels?

Economic evaluation 2020 **IF** 20% cyclists

**Monetizable societal gains**

“Euros via monetization of physical units”
- Health 250 to 300 M
- Traffic safety +8 M
- Environment 4 M
- Congestion 10M

“Direct Euros”
- Household budgets 35-20=15 M
- Financing STIB = 35 M

Annual investments 27 M

1 euro invested = 17 à 19 euro return

300 to 400 million societal gains – 55 to 60 millions “euros directs”
Societal gains 2020 – monetized effects mortality:

**Health:**
- 125 to 150 lives saved
- 250 to 300 M
- WHO method
- Ready to pay to avoid dying

**Traffic safety:**
- 4 victims LESS
- +8 M
- Lots of pedestrians/2 wheelers
- « relatively low amount of cyclists die on road »
- Improved traffic safety
Societal gains 2020 – monetized effects emissions congestion:

- Cars get much cleaner (except NOx)
- “only” 20% ex-cardrivers
- Cycle journeys rather short

Emission 4 M EUR

Congestion 10 M EUR
Societal gains 2020 – direct euros financing STIB

• How STIB absorbs peak hour demand?

• Cyclists will reduce
  – Exploitation costs of STIB: 70 M €
  – Public contribution to STIB: 35 M €
  • Because 40% of cyclists would have used public transport
Brussels is not really different!

Economic evaluation 2020 *IF* 20% cyclists

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Sensitivity analysis

- Including more uncertain effects:
  - Morbidity (100M)
  - Accidents – injured (coût 50M)

- Scenario with + modal shift away from car

- Gains up to 600 M
- Benefit cost ratio between 7 and 8
Even more, creation of economic activity

Turnover and subsidies of the cycle economy

<table>
<thead>
<tr>
<th>Équivalents temps plein</th>
<th>2012</th>
<th>2020</th>
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</thead>
<tbody>
<tr>
<td>Achat et entretien de vélos et accessoires</td>
<td>76</td>
<td>216</td>
</tr>
<tr>
<td>Réalisation d'aménagements cyclables</td>
<td>35</td>
<td>50</td>
</tr>
<tr>
<td>Études aménagements cyclables</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Subsides aux associations</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Études (monitoring et conseil)</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Fonctionnement</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td>Location</td>
<td>30</td>
<td>110</td>
</tr>
<tr>
<td>Services aux cyclistes (formation, promotion,...)</td>
<td>25</td>
<td>98</td>
</tr>
<tr>
<td>Coursiers à vélo</td>
<td>16</td>
<td>120</td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
<td>664</td>
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</table>

**FTE of the cycle economy**

**large uncertainty for 2020 estimates**

Ratio private/public 2 in 2012, 3 in 2020
Et en plus,...

Cyclistes spent more locally?

More jobs per EUR spent

! Elements to confirm
Didn’t we forget something?
The non-monetisable

MOBILICITIES I

Percentage of commuters reporting these emotions in the Netherlands:

- **Joy**: 68%
- **Fear**: 6%
- **Rage**: 4%
- **Sadness**: 3%

What Bicycling Feels Like...

Every Single Time!
The non monétisable

Elements contributing to happiness:

<table>
<thead>
<tr>
<th>social relations</th>
<th>health</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Social Relations" /></td>
<td><img src="image2.png" alt="Health" /></td>
</tr>
</tbody>
</table>

also: equality – trust – auto-determination – jobs/recognized occupation

What if you need to choose between autonomous vehicle and a bicycle?
IT’S NOT ABOUT CYCLING.
IT’S IMPROVEMENT, MODERNISATION, HEALTH, QUALITY OF LIFE, ETC.
THE BICYCLE IS MERELY THE MOST EFFECTIVE TOOL IN OUR TOOLBOXES
Remember

• Return on investment up to 17
• -150 lifes saved each year
• 15 millions gains for households
• Gains for public transport company STIB
• More fun
• Less stress
Would investing in Brussels tunnels really have a higher return on investment?

“Cycling is the low hanging fruit in mobility policy, it hangs probably to low to be seen by car drivers”

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http://tmleuven.be/project/fietsenbrussel/index.htm