ACCOMPANIED DRIVING
FROM AGE 17

Practical Feasibility of a New Scheme for Young Novice Drivers in Germany

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Problem:

- Highest crash risk as a car driver is initially after licensing (in Germany up till now right from age 18 away as „full privileged“ driver)
- Substantial decrease of crash risk with increased driving experience (minus 50% during the first 9 months, minus 90% during the first 2.6 years of driving)

(cf. SCHADE 2001)
Solution:
Extending the relatively short formal driver education in professional “driving schools” by a period in which the novice is only allowed to drive while being accompanied by an experienced driver.

(cf. WILLMES-LENZ 2008: 137)
Pre-conditions to participate in the model

• From the age of 16 ½: Start of the mandatory pre-licence training and education for licences Class B / BE with a professional driving instructor in a so-called “driving school”;
• Passing through the professional “driving school” curriculum;
• Successful passing of the theoretical and the practical licensing tests;
  ➔ i.e.: Participants in the model pass exactly the same formal training and tests as regular licence acquirers;
• From 17\textsuperscript{th} birthday: Handing over of a certificate, allowing to drive a car in Germany (licences Class B / BE);
  ➔ Only one constraint: Driving is only allowed when accompanied by an experienced adult;
• Age of 18: Replacement of the certificate by regular drivers licence (full driving privileges);
Qualifications of the attendants (supervising drivers)

The attendant (supervising driver):

- must be at least 30 years old,
- must have held a valid driver’s licence Class B for at least five years,
- must not have more than three demerit points in Germany’s Central Register of Traffic Offenders (“traffic-sinner file”) and
- must – at the start of the accompanied trip – have a BAC lower than 0.05 gm/100 ml, and must not be affected by intoxicants (illegal drugs);
Chronology of surveys in the panel

Panel Wave 1
Feb. 30, 2007

Panel Wave 2
March 01, 2008

Panel Wave 3
April 30, 2008

Panel Wave 4
July 04, 2008

Participant’s questionnaire

Attendant’s (Supervising driver’s) questionnaire

(n = 1,735; 45.9 %)

Participant’s questionnaire

Participant’s questionnaire

Closure questionnaire

(n = 3,088; 81.7 %)

Participant’s questionnaire

Closure questionnaire

(n = 1,652; 85.1 %)

Participant’s questionnaire

Closure questionnaire

(n = 1,118; 93.0 %)

Reference: FUNK, GRÜNINGER (2010, picture 2-2)
Novice drivers in the sample of the process evaluation (n = 3,780):

- **sex**: 48.5 % male, 51.5 % female;
- **education**: 66.8 % pupils, 31.6 % apprentices

Most frequent attendants (supervising drivers) (according to the youth):

- female,
- 40-49 years old,
- living in the **same household** with the novice driver;

= own mother

Reference: FUNK, GRÜNINGER (2010, sections 3.3 and 4.4)
Impulse for participating in the accompanied driving model (as stated by the novice driver)

- Myself: 85.7%
- My parents: 55.8%
- Peers: 35.1%
- Other relatives: 8.4%
- Other non-relatives: 6.5%
- Colleagues: 1.4%
- Other motivation: 10.9%

Multiple responses possible
(n = 3,047 respondents)

Reference: FUNK, GRÜNINGER (2010, table 4-7)
Difficulties in finding an attendant (supervising driver)? (as stated by the novice driver)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>84.8%</td>
</tr>
<tr>
<td>Younger than age 30</td>
<td>10.7%</td>
</tr>
<tr>
<td>Holding driver's licence less than three years</td>
<td>5.4%</td>
</tr>
<tr>
<td>Too many demerit points</td>
<td>5.2%</td>
</tr>
<tr>
<td>Other reason</td>
<td>0.9%</td>
</tr>
<tr>
<td>No parental assent</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

Multiple responses possible (n = 3,680 respondents)

Reference: FUNK, GRÜNINGER (2010, table 4-16);
Youth: Reasons for delayed driving licence acquisition

- **Time management problems**
  (didn’t manage it earlier, started driver training later because of lack of time or training lasted longer than planned)

- **Financial problems**
  (started driver training later or training lasted longer because of lack of money)

- **Change of mind concerning participation in the model**
  (own change of mind or convinced by parents)

- **Lack of support**
  (Convincing parents or finding another attendant)

- **„Rest category“**
  (other reasons, ignorance about accompanied driving, still got enough time to drive until my 18th birthday)

Multiple responses: 5,892 answers from 2,938 respondents;
Reference: FUNK, GRÜNINGER (2010, table 4-3)
Youth: Reasons for participating in the model

- **Wish to drive a car (instrumental motive)**
  *explaining 15.3 % of the variance*
  (probation time will end sooner; to sit behind the wheel as soon as possible; driving moped without accompaniment; licensure for certain at 18th birthday; more favourable car insurance tariff)

- **Safety motive** *explaining 13.9 % of the variance*
  (to drive more safely as solo driver later; to feel safer at the start as novice driver; to show parents that I will later drive safe as solo driver)

- **Role model / Temporal equalisation of potential stressors**
  *explaining 10.2 % of the variance*
  (older siblings / friends already participated; driving test otherwise parallel to much stress in school / vocational training)
Parents: Reasons for participating in the model

• Help and support for their children \(\textit{explaining 14.6 \% of the variance}\)
  (to help the youth; to let her/him participate in my experience as car driver)

• Practical reasons \(\textit{explaining 14.6 \% of the variance}\)
  (probation time will end sooner; more favourable car insurance tariff; equalisation of potential stressors in school / vocational training)

• Safety concerns \(\textit{explaining 14.1 \% of the variance}\)
  (less worries, when youth drives solo later on; to assure themselves, that youth will drive safe and cautious)

• Popularity motive and role model \(\Rightarrow 11.6 \% of the variance\)
  (good experiences of relatives and friends; family member already participated in the model)

Multiple responses: 6,536 answers from 1,720 respondents;
Reference: FUNK, GRÜNINGER (2010, table 4-14)
Mean daily mileage of all model participants

All model participants (including immobile ones);
Questioned at all four panel waves;

Reference: FUNK, GRÜNINGER (2010, picture 5-25)
Mean daily mileage of mobile model participants

Only *actual* mobile model participants;
Questioned at all four panel waves;

Reference: FUNK, GRÜNINGER (2010, picture 5-40)
Mean monthly mileage of all model participants

Significant difference

<table>
<thead>
<tr>
<th>Total</th>
<th>Sex</th>
<th>Educational status</th>
<th>School-leaving qualification of parents</th>
<th>Region of origin</th>
<th>Regional type</th>
<th>Previous length of model participation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Male (n = 1,496)</td>
<td>Female (n = 1,611)</td>
<td>Trainees (n = 394)</td>
<td>Old Fed. States (n = 2,542)</td>
<td>New Fed. States (n = 564)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>318,5</td>
<td>335,0</td>
<td>303,2</td>
<td>294,5</td>
<td>297,0</td>
</tr>
</tbody>
</table>

Mean monthly mileage in km

All model participants;
Questioned at all four panel waves;

Reference: FUNK, GRÜNINGER (2010, picture 5-64)
Extrapolation of the mean monthly mileage to the mean total mileage in the model scheme

Mean duration of attendance: 8 months;
Mean mileage during this time: 2,400 km;

Reference: FUNK, GRÜNINGER (2010, picture 5-68)
Categories of driving time of the mobile model participants – reference week of the 1st panel wave

Exposure time:
- Longer than 1 hour 30 minutes
- Up to 1 hour 30 minutes
- Up to 1 hour 15 minutes
- Up to 1 hour
- Up to 45 minutes
- Up to 30 minutes
- Up to 15 minutes

Weekday:
- Monday: 38.1% (n = 1,267)
- Tuesday: 40.3% (n = 1,264)
- Wednesday: 37.2% (n = 1,274)
- Thursday: 41.8% (n = 1,236)
- Friday: 35.8% (n = 1,491)
- Saturday: 31.9% (n = 1,400)
- Sunday: 28.5% (n = 1,142)

Reference: FUNK, GRÜNINGER (2010, picture 5-71)
Most frequent destinations of the model participants in the 1st panel wave (multiple responses possible)

- School, vocational training, work
- Household chores
- Private trips
- Leisure trips

<table>
<thead>
<tr>
<th>Day</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday - Sunday</td>
<td>40.9% (n=2,833)</td>
</tr>
<tr>
<td>Monday - Friday</td>
<td>42.8% (n=2,594)</td>
</tr>
<tr>
<td>Saturday - Sunday</td>
<td>9.4% (n=1,911)</td>
</tr>
</tbody>
</table>

Reference: FUNK, GRÜNINGER (2010, table 5-16)
Most frequent destinations of the model participants in the 1st panel wave (multiple responses possible)

- School, vocational training, work: Monday - Sunday: 59.7%, Monday - Friday: 52.6%, Saturday - Sunday: 35.1%
- Household chores: Monday - Sunday: 40.9%, Monday - Friday: 42.8%
- Private trips: Monday - Sunday: 9.4%
- Leisure trips

Reference: FUNK, GRÜNINGER (2010, table 5-16)
Most frequent destinations of the model participants in the 1st panel wave (multiple responses possible)

<table>
<thead>
<tr>
<th>Destination</th>
<th>Monday - Sunday (n=2,833)</th>
<th>Monday - Friday (n=2,594)</th>
<th>Saturday - Sunday (n=1,911)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School, vocational training, work</td>
<td>40.9</td>
<td>42.8</td>
<td>35.1</td>
</tr>
<tr>
<td>Household chores</td>
<td>59.7</td>
<td>52.6</td>
<td>61.9</td>
</tr>
<tr>
<td>Private trips</td>
<td>64.3</td>
<td>46.2</td>
<td></td>
</tr>
<tr>
<td>Leisure trips</td>
<td>0</td>
<td>9.4</td>
<td></td>
</tr>
<tr>
<td>Family, visiting friends etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reference: FUNK, GRÜNINGER (2010, table 5-16)
Most frequent destinations of the model participants in the 1\textsuperscript{st} panel wave (multiple responses possible)

Reference: FUNK, GRÜNINGER (2010, table 5-16)
Subjective indicators of building driving experience: During the last four weeks felt unsure ...

...while rapidly responding to unforeseen situations

<table>
<thead>
<tr>
<th>Wave</th>
<th>Percentage of unsafe novice drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave 1</td>
<td>34.0</td>
</tr>
<tr>
<td>Wave 2</td>
<td>25.7</td>
</tr>
<tr>
<td>Wave 3</td>
<td>19.0</td>
</tr>
<tr>
<td>Wave 4</td>
<td>12.2</td>
</tr>
</tbody>
</table>

Reference: FUNK, GRÜNINGER (2010, picture 6-19a)
Subjective indicators of building driving experience: During the last four weeks felt unsure...

...while correctly recognising the intentions of other road users

Reference: FUNK, GRÜNINGER (2010, picture 6-19a)
Subjective indicators of building driving experience – as seen by the youth

All model participants, 2\textsuperscript{nd} panel wave

Reference: FUNK, GRÜNINGER (2010, picture 7-28)
• Impetus for participating in the accompanied driving model scheme:
  - largely from the youth themselves (85.7 %)
  - also by more than half of the parents (55.8 %)
• More than four out of five youth didn’t have difficulties in finding an attendant (supervising driver)
• Handing over of the driving test certificate:
  On average 5.1 months after the 17th birthday
  ➔ main reason for the delay: problems with time management
• Reasons of the youth to participate in the model scheme:
  - request to drive a car (instrumental motive);
  - safety concerns; and
  - practical aspects

• Reasons of the parents (attendants) to participate in the model scheme as supervising drivers:
  - offering help and support to their children;
  - safety considerations;
  - making use of the practical aspects of the accompanied (supervised) driving model
    [reasons all equally prevalent]
• Mileage in the model:
  - Per day:  \( \bar{D} = 9.3 \text{ km (all)}, \bar{D} = 24.0 \text{ km (mobile youth)} \)
  - Per week:  \( \bar{D} = 65.0 \text{ km (all)}, \bar{D} = 71.7 \text{ km (mobile youth)} \)
  - Per month:  \( \bar{D} = 318.5 \text{ km} \)

  ➤ **Sample**: approx. **2,400 km** during **8 months**;

  ➤ **Extrapolation** to 12 months duration of attendance (supervised driving): **Potential of approx. 3,800 km**

• **Driving time (exposure duration):**
  - Mostly rather short (up to approx. 30 minutes)
  - At weekend increase of longer trips

• **Destinations:**
  - Mon – Fri: School, vocational training / work, household chores
  - Sat – Sun: Private trips (Family, visiting friends)
Subjective perception of the youth:
Strong indicators for building driving experience

Furthermore (as surveyed on the level of the Federal States (the German „Länder“)):

- Crash data gathered by the police:
  Prevalence of crashes while participating in the model = very low
  ➔ extremely high safety during implementation of the model scheme

- Federal Motor Transport Authority:
  Only few violations of the requirement to be accompanied (supervised)
  ➔ no abuse of the accompanied driving model
The accompanied driving model can be characterized by:

- **easy access**
  - Recommendation:
    To encourage youth – interested in obtaining a full privileged driver’s licence at age 18 – to start accompanied driving closer to their 17th birthday;

- **good practicability**
  - Recommendation:
    To encourage the participants to drive more, together with an attendant (supervising driver);

- **safe implementation**
Thank you very much for your attention!

For more information and list of cited literature please contact:

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