Demand for Long-Distance International Passenger Trains in Europe: Case Study Vindobona
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Background: A brief history of long-distance international passenger train services

- 1874: founding of the Compagnie Internationale des Wagons Lits et des grands Express Européens
  - own express services + cars attached to other trains
  - income from 20% fares supplement

- Post-war developments led by UIC
  - 1957: Trans-European Express Network
    - separate company proposed but rejected
  - 1986: EuroCity daytime express services
    - quality standards
    - network peaked in 1993

- Conventional long-distance services in decline since 1994
  - liberalisation of aviation in EU
  - hidden subsidies to other modes
  - high speed rail + bespoke rolling stock
  - commercial pressures + 4.5 hour limit
Background to study

- Frustration with withdrawal of long-distance services, worsening of connections, declining comfort, booking problems
  - situation deterring captives
  - despite Schengen and favourable policy environment

- Withdrawal of the EuroCity *Vindobona* in December 2014
  - only direct daytime train pair Berlin / Dresden – Vienna
  - anecdotal evidence that well used
  - sacrificed to make way for enhanced Prague – Graz timetable
    - scepticism that Prague – Graz market larger than Berlin/Dresden – Vienna
  - suspicion that passengers would be lost
  - good candidate for analysis
Case study Vindobona: the offer

- Express latterly EuroCity service on core route Vienna – Prague – Dresden – Berlin
- Ran continuously 1957 to 13.12.2014
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- Express latterly EuroCity service **Vienna – Prague – Dresden – Berlin**
- Ran continuously 1957 to 13.12.2014
- Route adjusted and journey time reduced incrementally
- Only direct daytime connection between the German and Austrian capitals

- Ran as EC 172/173 in 2013–14 timetable:
  - Vienna – Dresden: 7h15;
  - Vienna – Berlin: 9h40;
  - traditional multi-operator cooperation;

- Service withdrawn in December 2014 as part of Prague – Vienna – Graz timetable recast agreed bilaterally between ÖBB and ČD
Case study Vindobona: alternatives

- Alternative options Berlin – Vienna and v.v.:
  - ICE every two hours via Nuremberg with 1-2 changes (9h38) → more expensive, bicycles not permitted
  - EC every two hours with change in Prague (10h06; waiting time 77 mins)
  - Night train (10h30 – 11h46)
Case study Vindobona: alternatives

- Alternative options Berlin – Vienna and v.v.:
  - once per day with change in Breclav (waiting time 3 minutes, cross-platform; 9h40 before 12.2015; 9h06 in 2014–15)

- Flights:
  - 3 carriers; 99 EUR – 155 EUR
  - 10 flights/day; ca. 1h20 in the air
  - 4 EasyJet flights/week from 10.2015

- Coaches:
  - 3 carriers; 19 EUR – 80 EUR
  - 11 direct coaches/day; ca. 8h45
H1. The demand for direct rail services between Berlin, Dresden and Austria is non-trivial despite the journey time.

H2. A significant proportion of Vindobona passengers use it because it is direct.

H3. The loss of the direct service would lead to a significant proportion of users seeking an alternative mode.
Case study Vindobona: research methods

➢ Research tasks:
   ➢ estimation of absolute through demand in Vindobona in summer 2014
   ➢ determination of reasons for use and prediction of behaviour change if no direct train

➢ Constrained by limited resources and commercial sensitivity of ridership data

➢ Solution: seat reservation counts between August and November 2014 as proxy for demand
   ➢ scaling-up required to obtain best estimate

➢ Passenger surveys on board Vindobona in August 2014
   ➢ all cross-Prague passengers between Wien Meidling and Břeclav asked to complete 1-page questionnaire
   ➢ n= 240 (155 useable completed survey forms)
Case study Vindobona: key findings

- Up to 90 through passengers between Germany and Austria per train

<table>
<thead>
<tr>
<th>AT – DE reservation counts in EC 172</th>
<th>Maximum w/o scaling</th>
<th>Maximum with scaling</th>
<th>Average w/o scaling</th>
<th>Average with scaling</th>
<th>Scaling factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2014</td>
<td>82</td>
<td>90</td>
<td>49</td>
<td>54</td>
<td>10%</td>
</tr>
<tr>
<td>September 2014</td>
<td>34</td>
<td>41</td>
<td>22</td>
<td>26</td>
<td>20%</td>
</tr>
<tr>
<td>October –November 2014 (affected by strikes)</td>
<td>55</td>
<td>69</td>
<td>27</td>
<td>34</td>
<td>25%</td>
</tr>
</tbody>
</table>

- On-train surveys in August 2014 dominated by leisure travellers

- Holiday: 78%
- Short break: 12%
- Personal business: 5%
- Business: 4%
- Education: 1%
Case study Vindobona: key findings

- Why did you use this train?

- >50% of respondents cited “no changes”/“direct”
- Convenient arrival/departure times and price also important
Case study Vindobona: key findings

- What would you do if no direct train?

- Two thirds of respondents would change or consider changing behaviour
- 23% of respondents would fly or use a car
- 22% said it depends on alternatives
Case study Vindobona: conclusions

- H1. The demand for direct rail services between Berlin, Dresden and Austria is non-trivial despite the journey time up to 90 passengers per train ✓

- H2. A significant proportion of Vindobona passengers used it because the trunk leg was direct
  - 54% of respondents named this reason ✓
  - but price and departure/arrival times influence choice

- H3. The loss of the direct service has led to a significant proportion of users seeking an alternative mode
  - 49% would have used another mode or considered it ✓
    → environmental and commercial implications
  - but heavily dependent on attractiveness of alternative rail connections
    → price, number & reliability of connections
1. Significant demand likely to exist for rail routes > 4,5 hours
   - ‘interchange penalty’ is a major barrier to rail use, especially among leisure travellers and the elderly
   - international rail journeys should be as easy to book as flights
   - more research required to document:
     - long-distance international rail services → why is there such inconsistency in the provision and marketing of direct services?
     - volume and characterisation of demand → target market segments
     - low journey time elasticity?
   - operators should sell advantages of rail!
   - targeted marketing → use of travel time / pleasure of travel

2. Are additional operating costs associated with through trains covered by revenues? Case for financial support?

3. Retrenchment of international network must be reversed if EU transport and climate change targets are to be met
   - pan-European strategy? pan-European delivery?
4. Investment in infrastructure must be linked to service provision
   - Swiss-style thinking transport planning required: identification of potential → service concept and timetable design → improvement of infrastructure
   - parts of Vindobona route being upgraded → have long-distance services been considered?
   - EU institutions should insist on retention and improvement of services, including long-distance international services

5. Direct day trains Berlin – Vienna should be restored!
   - demand exists → competitor modes expanding
   - ! fares advantage partially lost from October 2015 !
   - consider routing via České Budějovice after completion of upgrading of Tábor route → operational advantages and development of new markets

http://worldcarfree.net/projects/back-on-track/index.php

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