



Has the incumbent an advantage in open access passenger rail competition? A case study on the Prague – Brno line

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Motivation

- Open access competition in CZ has developed substantially
- There is a substantial macro evidence, however much lower coverage of micro effects
- What are the impacts of OA on perception and behaviour of rail users?

What we know and what we do not know?

- The open access in CZ stimulated ridership, created high market shares for newcomers, brought innovations, created regulatory and efficiency challenges (see Tomeš et al. 2014, 2016 and Tomeš – Jandová (2018))
- However less clear is how OA changed perception and behaviour of rail users and why new operators has been so successful in gaining market shares (59% on Prague – Ostrava)

Literature

- Paha et al. (2013): **Status quo bias** with a preference for the service provider (beyond the impacts captured by loyalty enhancing tools)
- Froidh – Bystrom (2013): The **preference for established operators** – their brands are valued highly by consumers.
- Evidence based on (very limited) literature: the incumbent seems to have a significant advantage over the newcomers. However, this is not what are we observing in CZ. Why?

Methodology

- Data from consumer survey
- Analysis of descriptive statistics
- Two logit models
- Qualitative verification

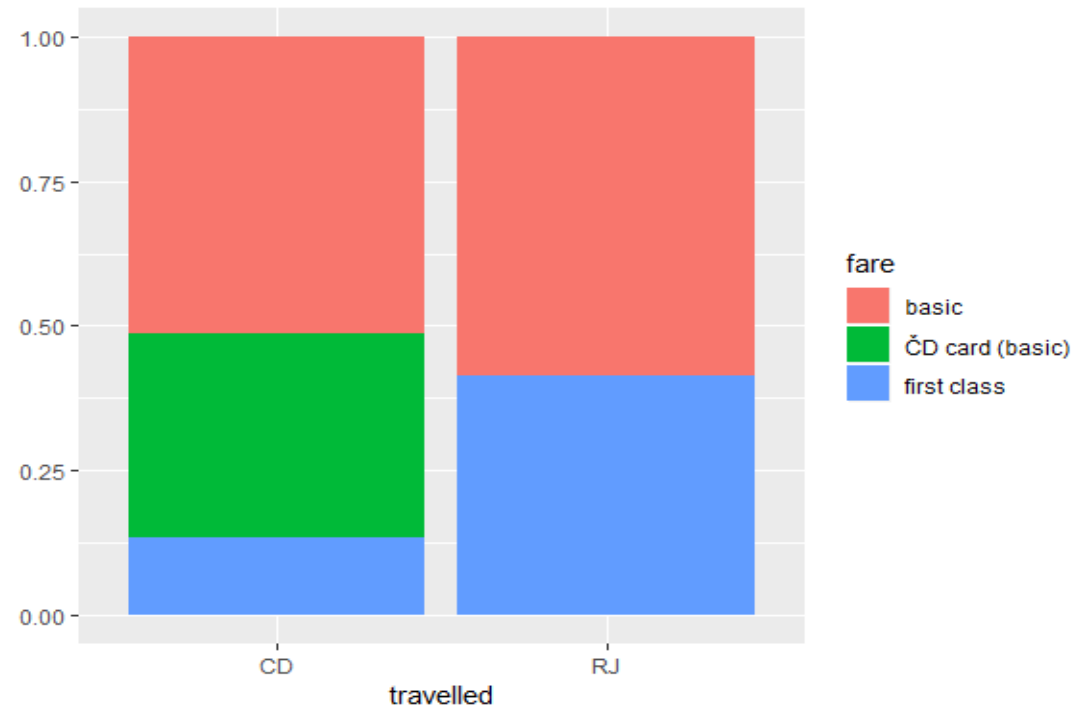
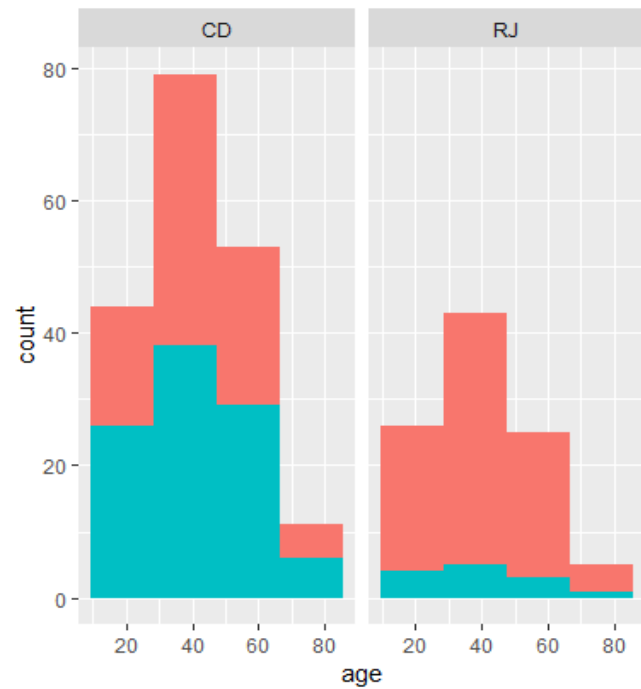
Prague – Brno line

- Connection of two biggest cities in the Czech Republic
- Direct highway in-between, however often congested
- Until 2016 only ČD (incumbent) trains on the line
- In 2016 RJ entered with 4 trains per day (against ČD's 28)
- In 2017 consumer survey on this line

Descriptive statistics of the survey (N=286)

Variable	%	Variable	%
Gender		Operator	
- Male	49	- RJ	35
- Female	51	- ČD	65
Education		Purpose	
- Primary	2	- Work	69
- Secondary	27	- Study	12
- Tertiary	71	- Private	19
Age		Frequency	
- 0–24	14	- Weekly	25
- 25–39	41	- Monthly	35
- 40–59	33	- Other	40
- 60–76	12		

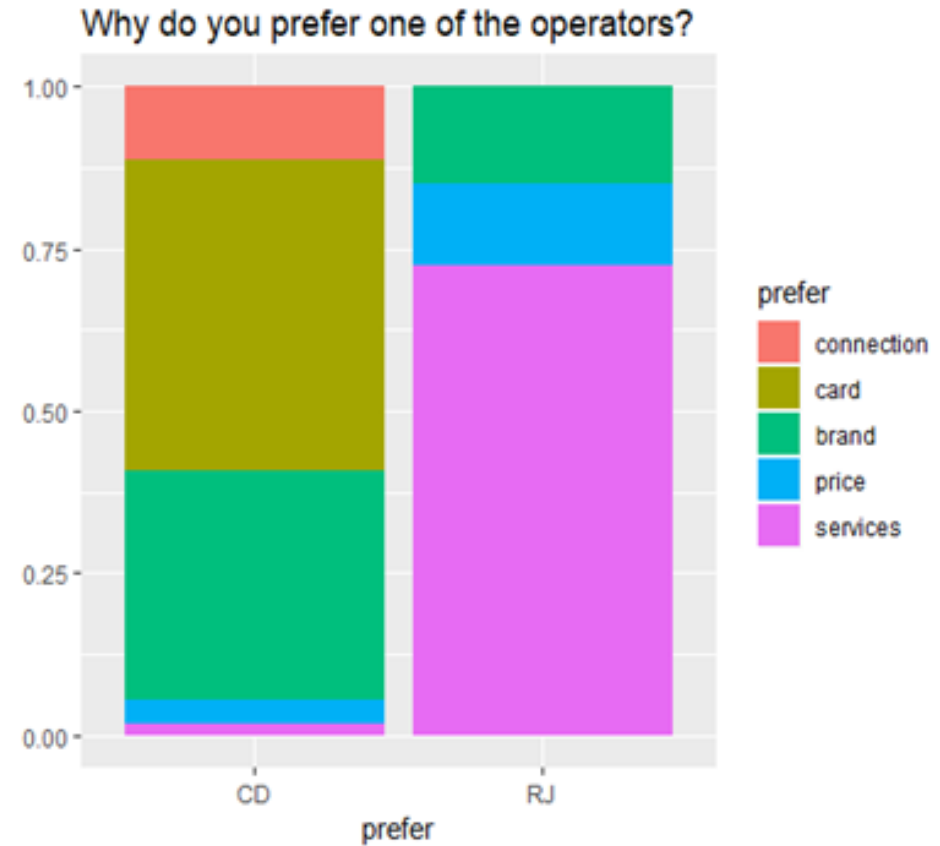
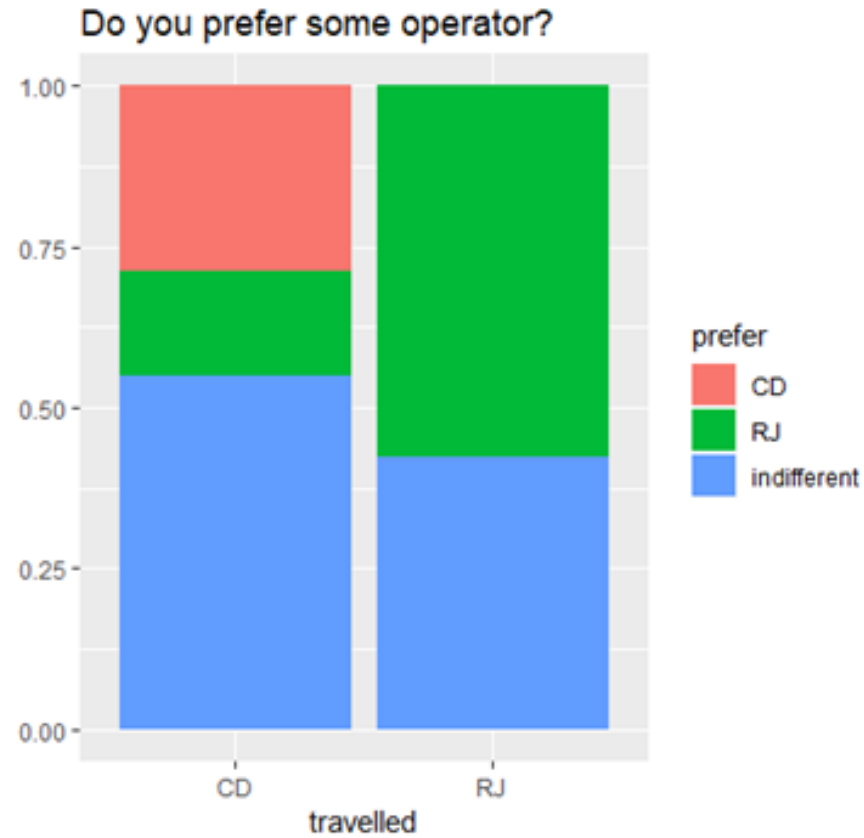
Where customers bought their tickets?



What was the most important choice factor?

Reasons	Total %	ČD %	RJ %
Departure time	65	75	45
Quality of services	18	6	42
Loyalty card	9	13	0
Price	8	6	13

What were the users preferences?



What was changed by competition?

Change	%
Quality	41
Price	18
ČD improvement	27
More connections	26

Who is travelling with the incumbent?

Variable	Coefficient	Std. error	P-value	Significance	Slope at mean
Tried both operators	-1.05	0.37	0.005	***	-0.14
Business trip	0.80	0.38	0.035	**	0.10
Price	-1.91	0.64	0.003	***	-0.25
Services	-3.91	1.76	0.003	**	-0.50
Quality	-1.93	0.49	0.000	***	-0.25
Card	4.18	1.14	0.000	***	0.54
First class	-1.59	0.40	0.000	***	-0.21
Spend time working	-0.87	0.38	0.020	**	-0.11
Age	0.02	0.01	0.088	*	0.003
Number of observations	285				
McFadden R²	0.40				
ML pseudo R²	0.40				
Cragg and Uhler's pseudo R²	0.55				

Who is travelling more often?

Variable	Coefficient	Std. error	P-value	Significance	Slope at mean
Tried both operators	1.45	0.49	0.003	***	0.19
Travelled ČD	-0.93	0.42	0.028	**	-0.12
Better prices	1.38	0.49	0.005	***	0.18
More connections	-1.05	0.71	0.141		-0.14
Price	-0.98	0.82	0.233		-0.13
Services	1.35	0.62	0.030	**	0.17
Card	-2.34	1.09	0.033	**	-0.30
First class	1.05	0.41	0.011	**	0.14
Number of observations	285				
McFadden R²	0.27				
ML pseudo R²	0.22				
Cragg and Uhler's pseudo R²	0.37				

Discussion

- According to Fröidh – Byström (2013) and Paha et al. (2013), there is an advantage for established operators which forms a substantial barrier to entry.
- However, this holds only when the incumbent provides good service quality. When the incumbent delivers poor or unstable quality, customers may become fed up with such an operator and then have a strong preference for a newcomer.

Qualitative verification

- We utilized moderated discussion with 12 train users in October 2018. The respondents consisted of 5 women and 7 men travelling by rail between Brno and Prague.
- Despite its lower frequency and substantial lower connectivity, the respondents strongly preferred RJ, which was valued especially for its lower prices and additional on-board services. The services of the incumbent were for many respondents plagued by unreliability, overcrowding, and lateness.

Conclusion



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- Former studies concluded that the incumbent has the advantage due to under such conditions entry into a rail passenger market may be harder than is usually thought.
- However, the Czech passengers highly valued the services of the new operator and seemed to have a bias against the incumbent due to the lower quality of its services in history and on other lines.