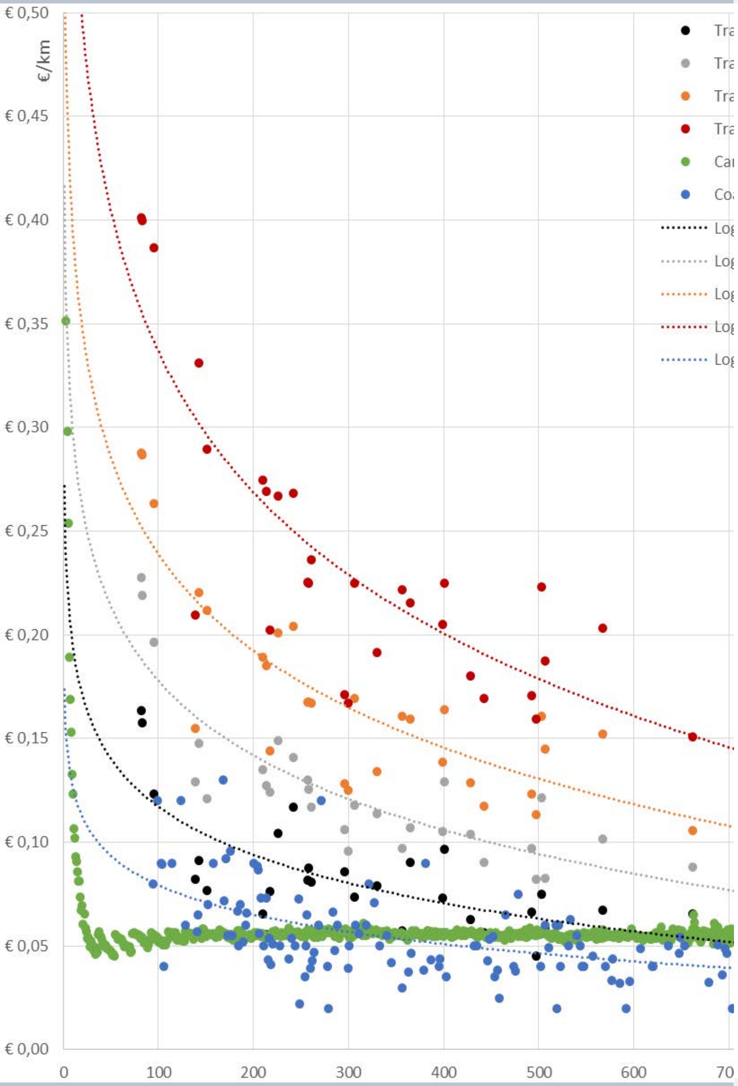

Long-distance rail prices in a competitive market

An introductory analysis

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Introduction

EU policy for intermodal competition

Long-distance transport has been central in the EU agenda since the beginning (EC, 1992), around three pillars

a. Infrastructure → **trans-European networks programme** → only limitedly met

b. Liberalisation → **creation of a level-playing field** → much more visible to the citizens

c. (Environment)

However, to obtain *a smooth functioning of and effective competition in the internal market*, there is further work to do to eliminate *all residual barriers between modes and national systems, easing the process of integration and facilitating the emergence of multinational and multimodal operators* (EC, 2011).

Introduction

Intermodal competition

→ Air transport market

Airlines compete in the market, without any prescription in terms of fares, network, timetables, ownership (some exceptions are allowed to guarantee a minimum level of accessibility for remote regions through PSO contracts). **Airport instead require regulation**, and in some case a significant entry barrier is that of slot allocation.

→ Railways

The **separation is the pre-requisite for competition**, being it *for the market* (in the regional transport) or *in the market* (as first option for the long-distance), but **not sufficient by itself**, as domestic services are liberalized in a few countries (Italy's among them).

→ Coach transport

Coach transport has **historically been marginal** in most of European countries, dominated by rail, usually constrained in limited niche markets without rail; however, **in recent years** it sought an extremely **quick expansion**. Early cases of domestic coach liberalization show that after a period of steep growth, **evolution slowed down when maturity was reached**.

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Framing of Italian case

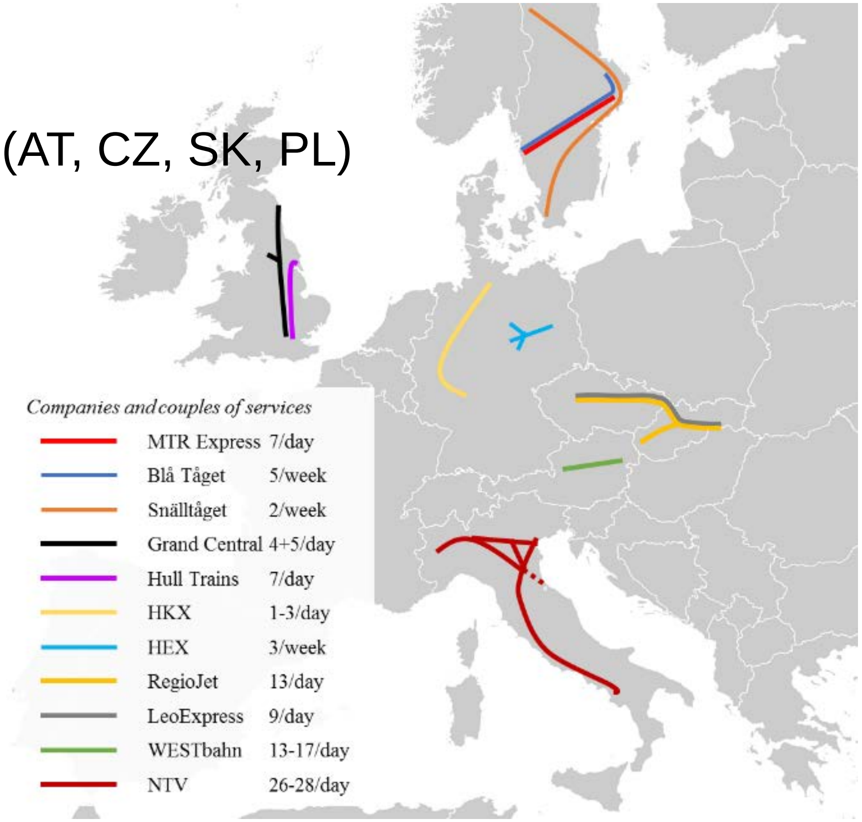
Few cases of (real) open access competition

Open access, excluding incumbent's secondary brands (e.g. OUIGO) and co-owned companies (e.g. Thalys…), is still a limited phenomenon.

However, there are two very significant cases:

a. Westbahn, LeoExpress and RegioJet
firmly competing in Central Europe's market (AT, CZ, SK, PL)

b. Italian NTV/ITALO



Framing of Italian case

Italo

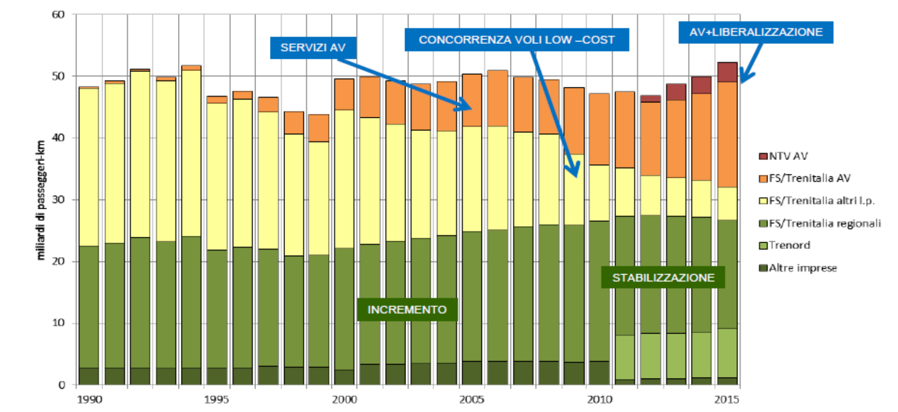
ITALO is the only non-incumbent operator in a fully HS-segment. It is also, by far, the largest private long-distance pax company in Europe.

Competition in Italy has undoubtedly:

1. Lowered prices
2. Increased quality
3. Increased supply
4. Increased passengers

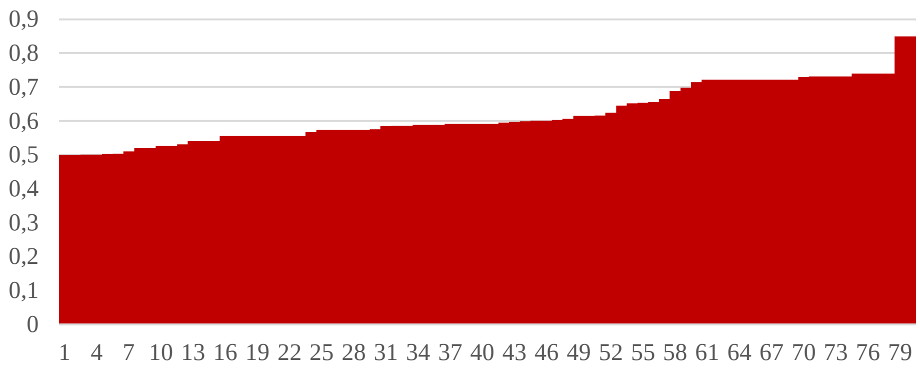
Italo has now a non-irrelevant market share in routes where present.

FIGURA V.2.6: ANDAMENTO DEL TRAFFICO FERROVIARIO PASSEGGERI (1990-2015)



Fonte: Elaborazioni su dati CNIT, ISTAT, NTV, Trenord.

HHI on OD routes where Italo is present



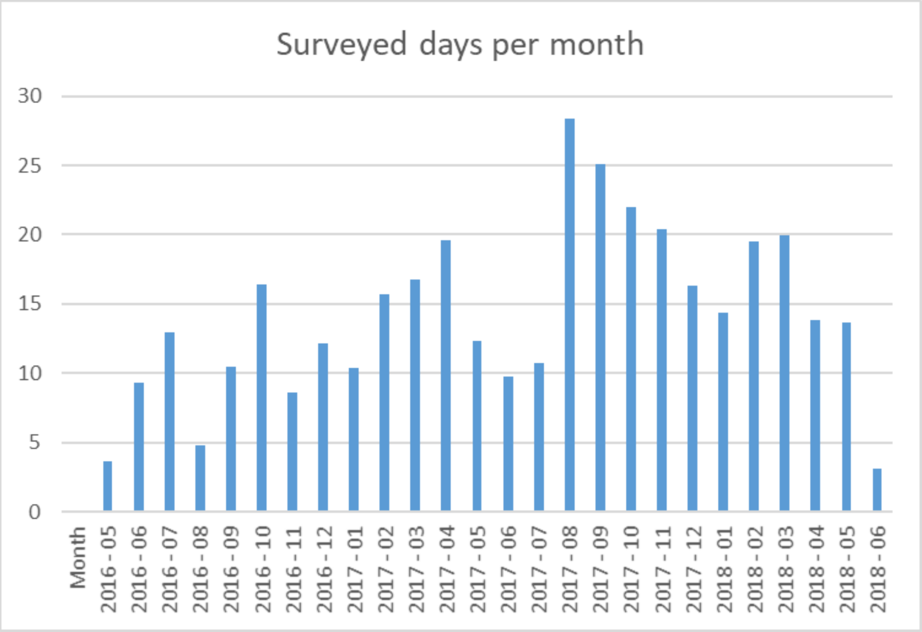
Source: our elaborations on 2016 rail timetable

Framing of Italian case

Rail, coach and carpooling fares observations

Rail database

- Data have been collected since May, 2016 on a number of days per month, both in weekdays and holidays (total: 317).
- 30 routes surveyed, 14 of them featuring service by both Trenitalia and Italo, covering the main OD pairs along the whole country.
- Fare collected with various anticipation respect to day of travel (1, 2, 5, 10, 20 days).
- Recording of every fare for each train running on the observed travel date.



Coach database

- 18 months (24) of observation between 2016 and 2017 for every bus company
- Average monthly price per company/route

Blablacar database

- March to Nov 2015 (81 days)
- Every OD relation, 356,000 trips

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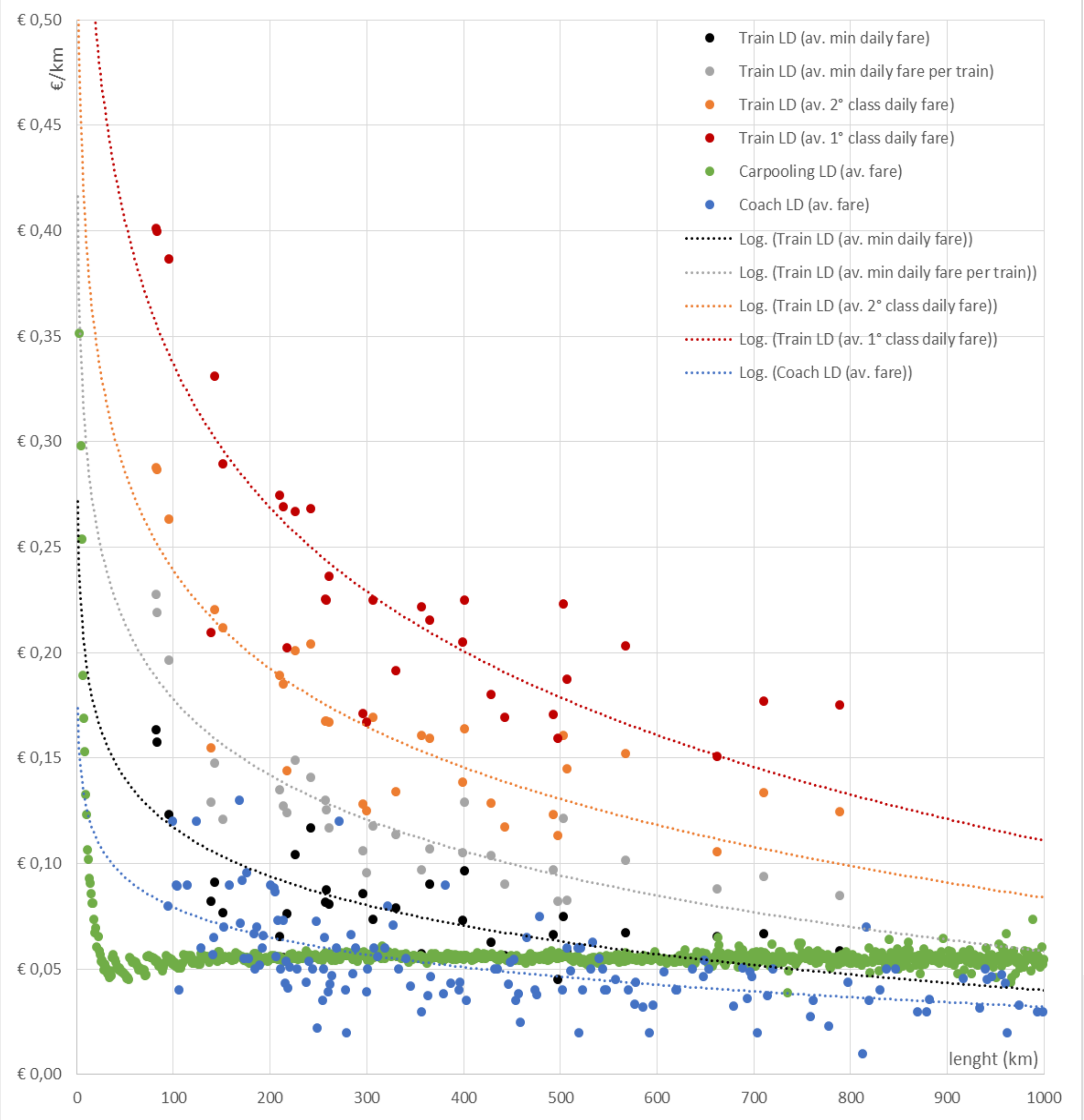
Intermodal competition

Price profiles per mode

Italian train fares are **distance-dependent with entry price**, but with a significant dispersion: according to OD couple, average prices vary up to +-25%.

This depends on:

- **Availability** (promotional fares may not be available or disappear soon)
- **Route and competition** (routes in competition cost less?: Milan-Rome -40% with respect to before competition; -15% Milan-Ancona. Beria et al, 2016)



Intermodal competition

Price profiles per mode

Coach fares are **distance-dependent with entry-prices**, but with a proportionally larger variability.

Dispersion is obvious, as companies are many and services extremely differentiated.

Significantly, **the lower boundary of rail prices is lower than higher coach prices**. This is probably rare elsewhere.

- Rail competition
- Coach could be faster on some routes

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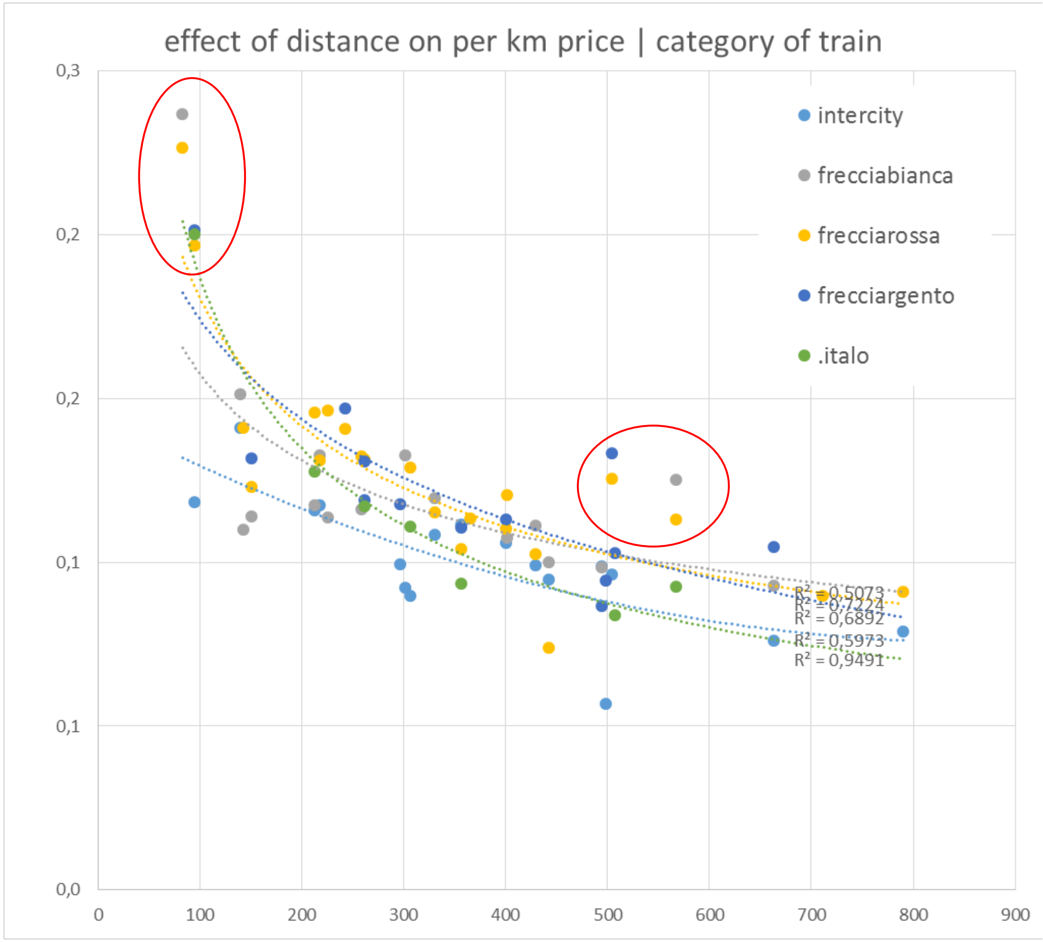
Intramodal competition

Effect of distance

- There is a relatively clear effect of distance to explain per-km price
- Some “outliers”: BO-FI, MI-BD, VE-RM, MI-RM
- However, trends are not straight → other factors influence



10 days-advanced purchase
Full 2017
Average of train's cheapest tickets

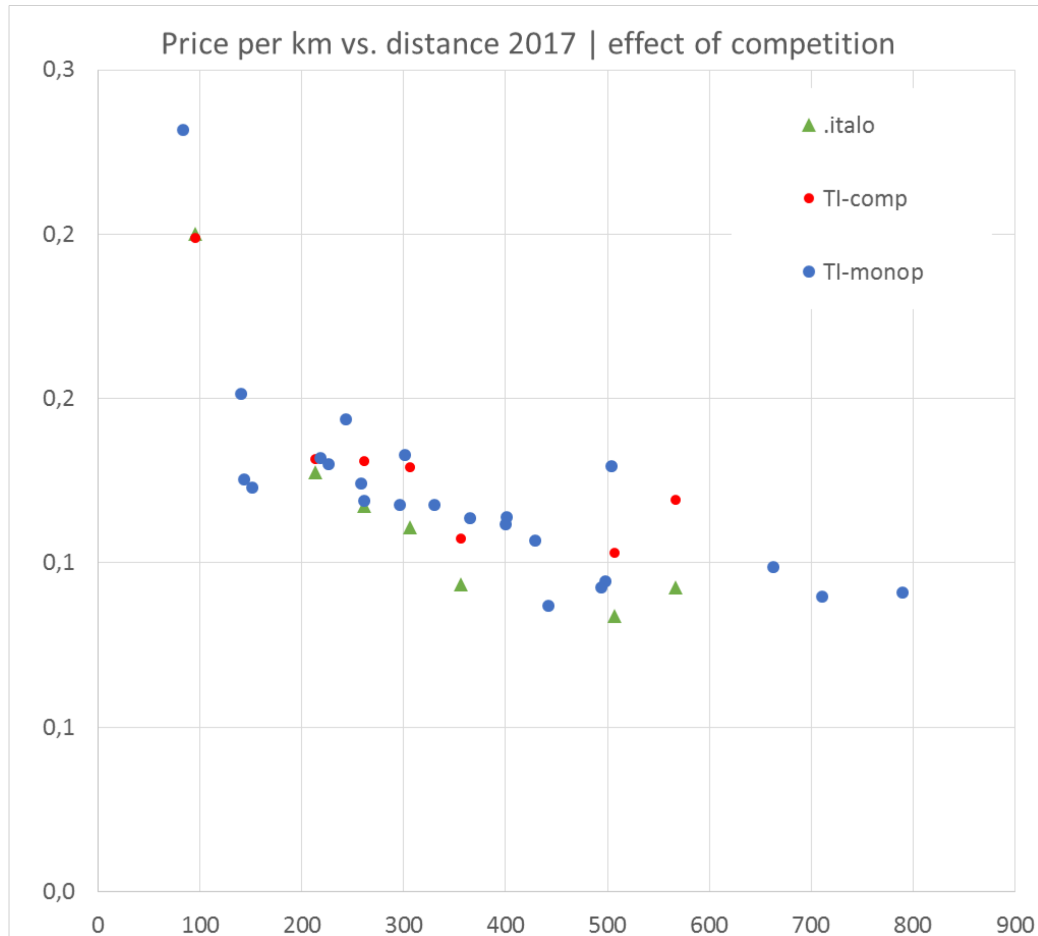
Intramodal competition

Effect of distance

- Routes in competition, TODAY, are not cheaper
- But **.Italo is cheaper** than Trenitalia and delta is increasing with distance

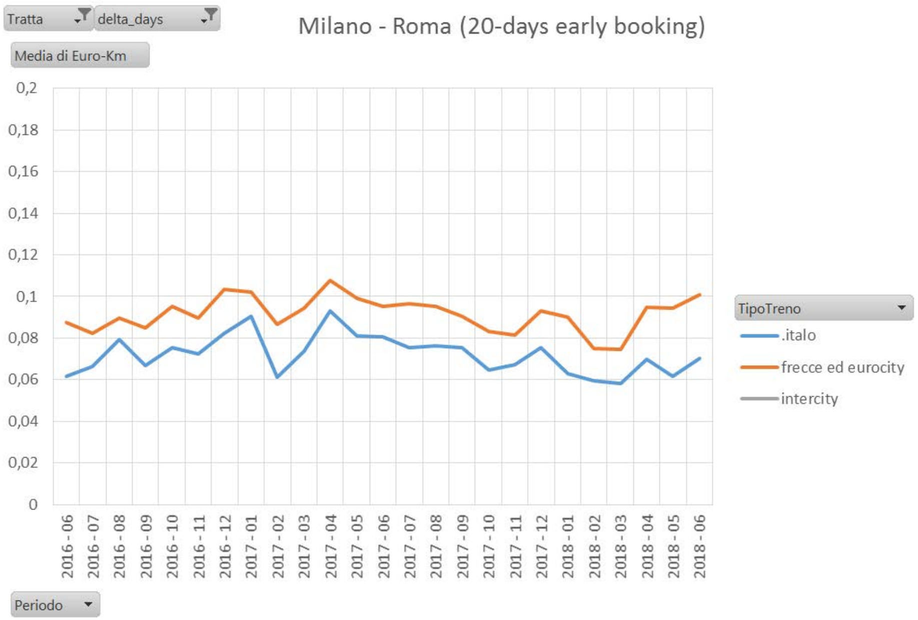
	.ITALO price vs. TRENITALIA
Bologna - Firenze	**0%**
Milano - Bologna	**-3%**
Roma - Firenze	**-11%**
Milano - Firenze	**-14%**
Roma - Bologna	**-13%**
Roma - Verona	**-18%**
Milano - Roma	**-22%**

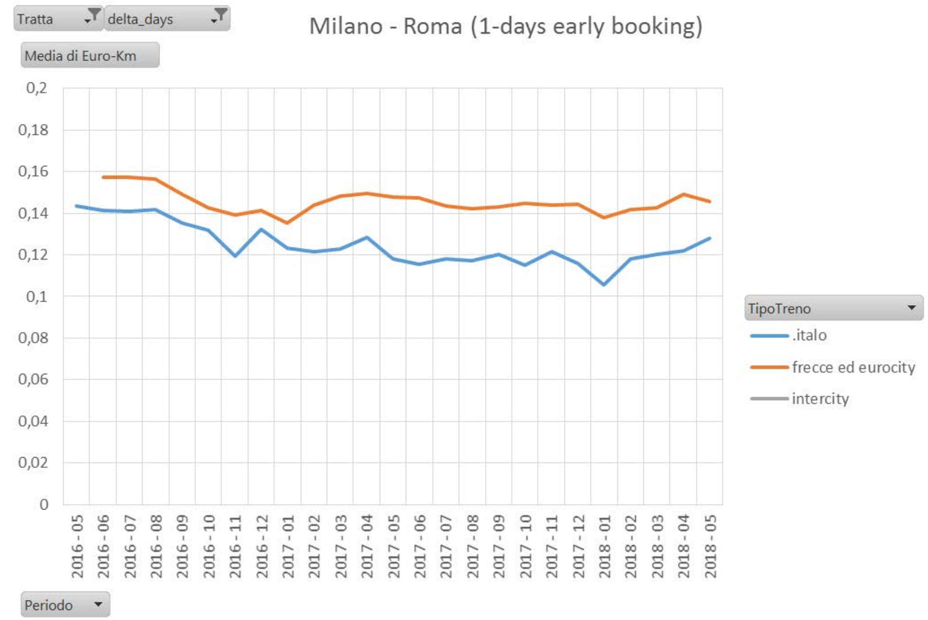
10 days-advanced purchase
Full 2017
Average of train's cheapest tickets



Intramodal competition

Milan - Rome

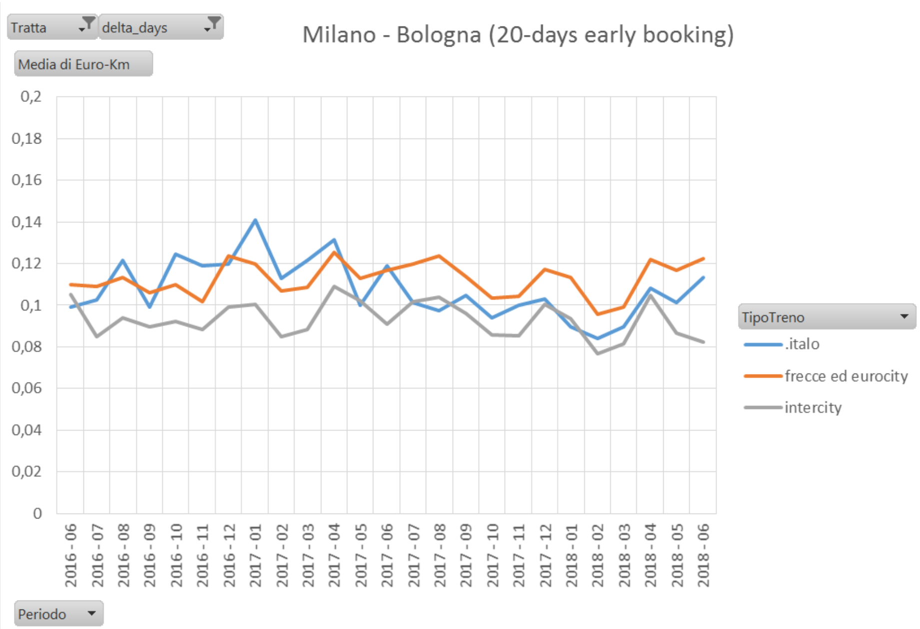


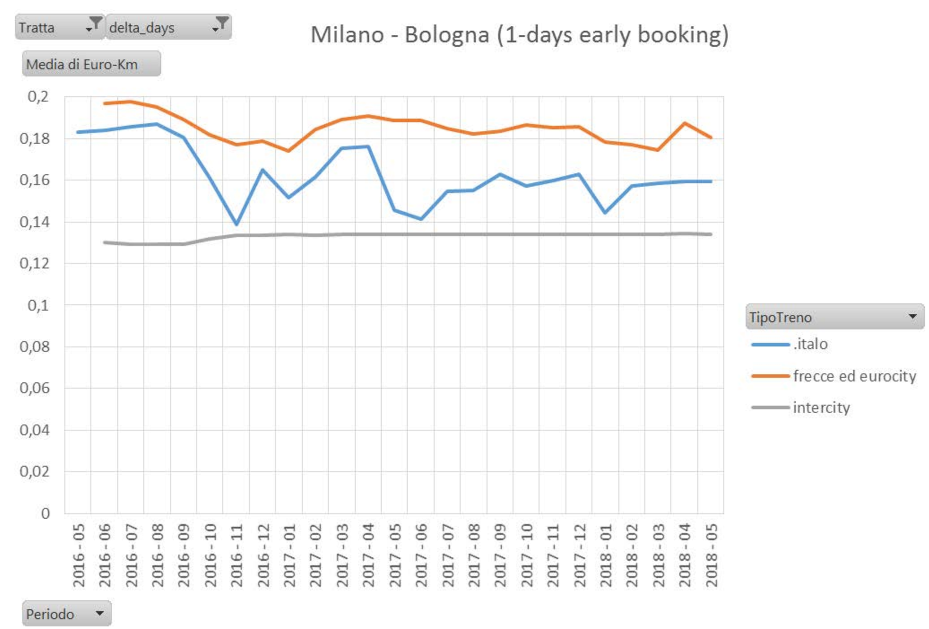


- → Prices are relatively stable over three years
- → Scarce seasonality
- → Advanced booking allows ~40% cheaper tickets
- → .Italo is on average 10% cheaper 20 days before, 14% 1 day before.

Intramodal competition

Milan - Bologna

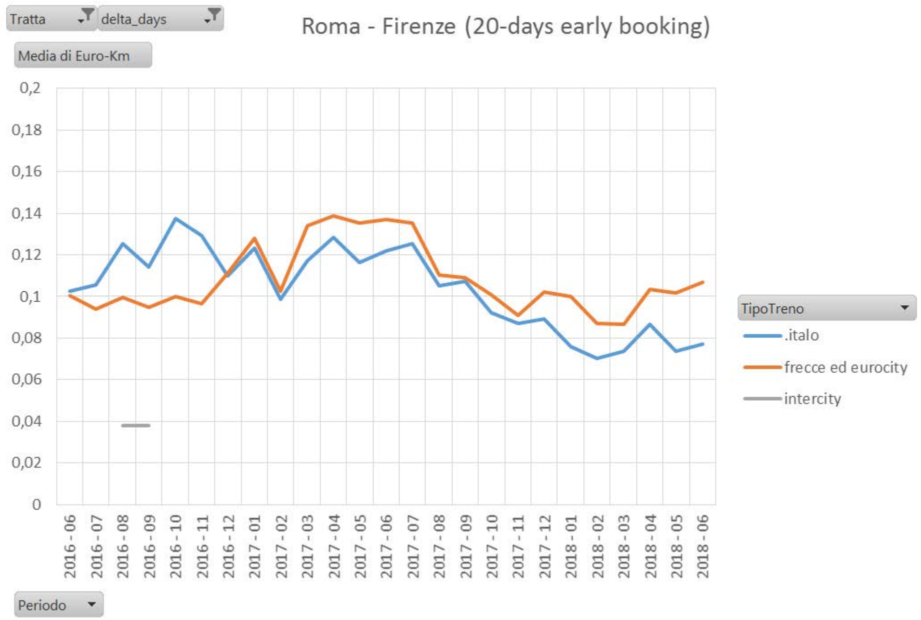


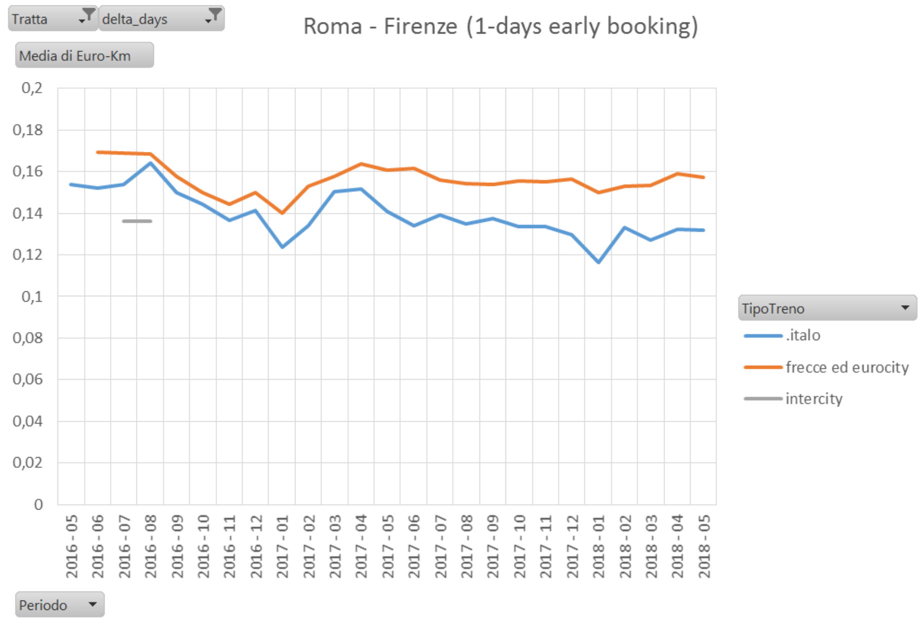


- → Italo is sometimes higher than Trenitalia in 2017, never in 2018 (-20 days)
- → Just before departure (-1 day) Trenitalia enjoys a +10% premium
- → No seasonality at all
- → Intercity prices 1-day before are capped

Intramodal competition

Florence - Roma

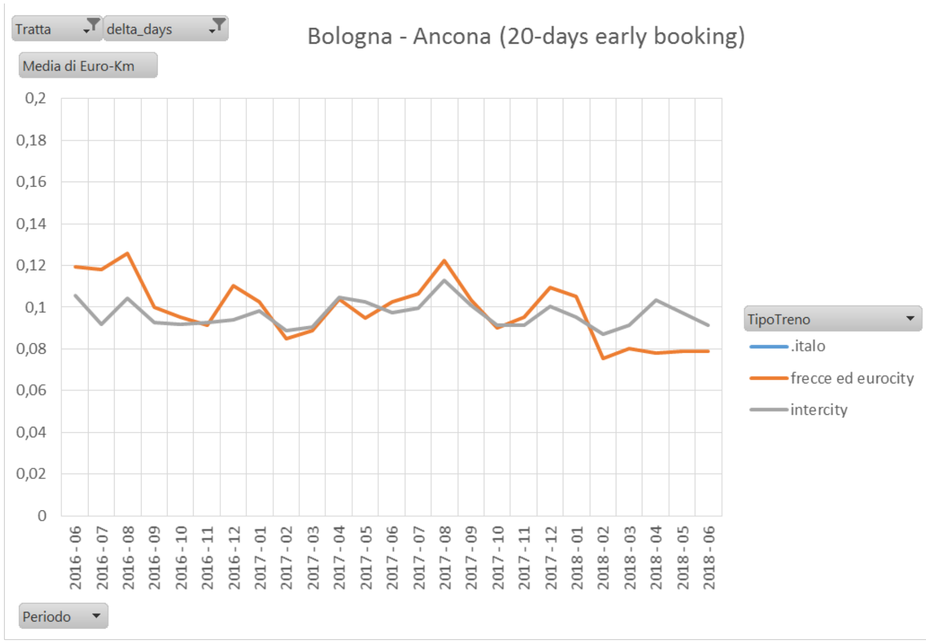


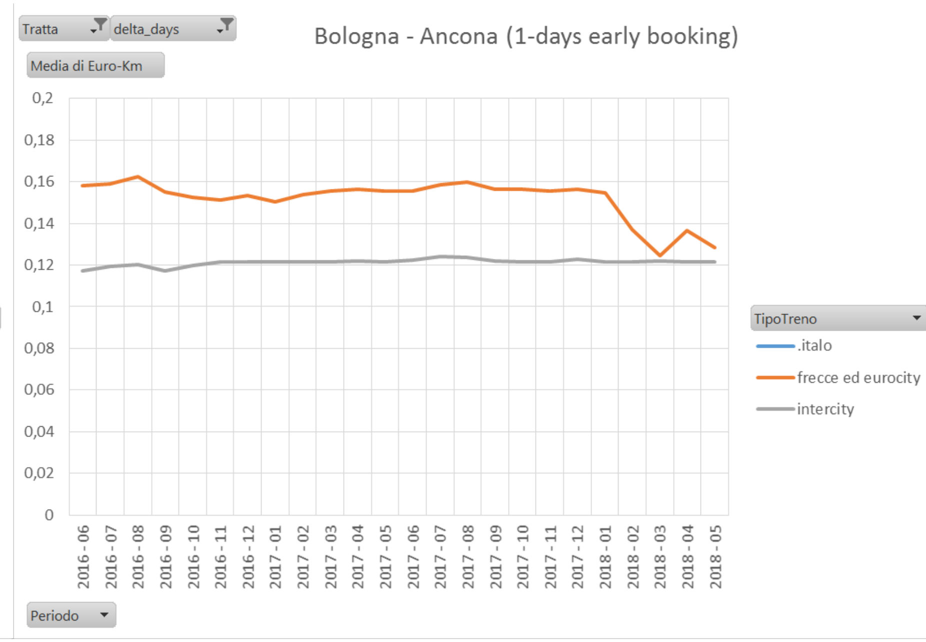


- → Very visible the price-repositioning of .Italo after 2017
- → Very visible the "reaction" of Trenitalia to Italo price decrease
- → 1-days before: price difference is widening
- → (Intercity trains do not serve Firenze S.M.N)

Intramodal competition

Bologna - Ancona



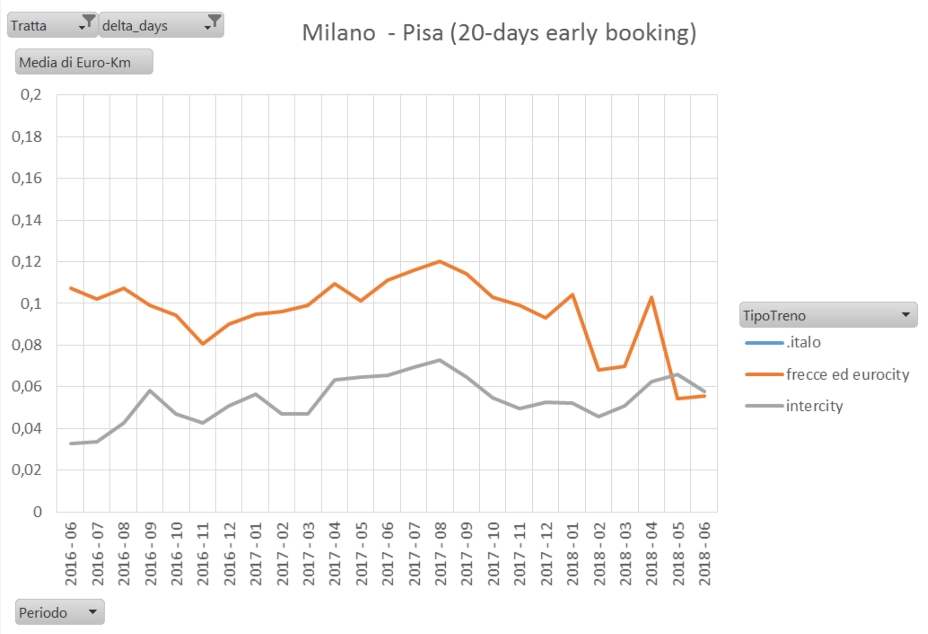


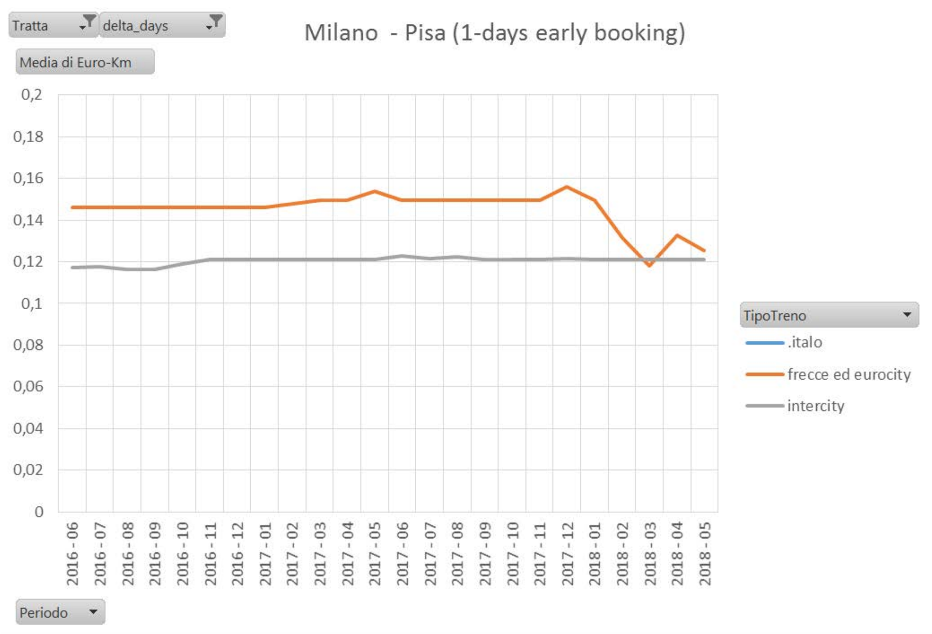
→ No high-speed, only conventional services

→ No price difference btw. Frecce and Intercity 20-days before. 1-day before Intercity is capped

Intramodal competition

Milan - Pisa



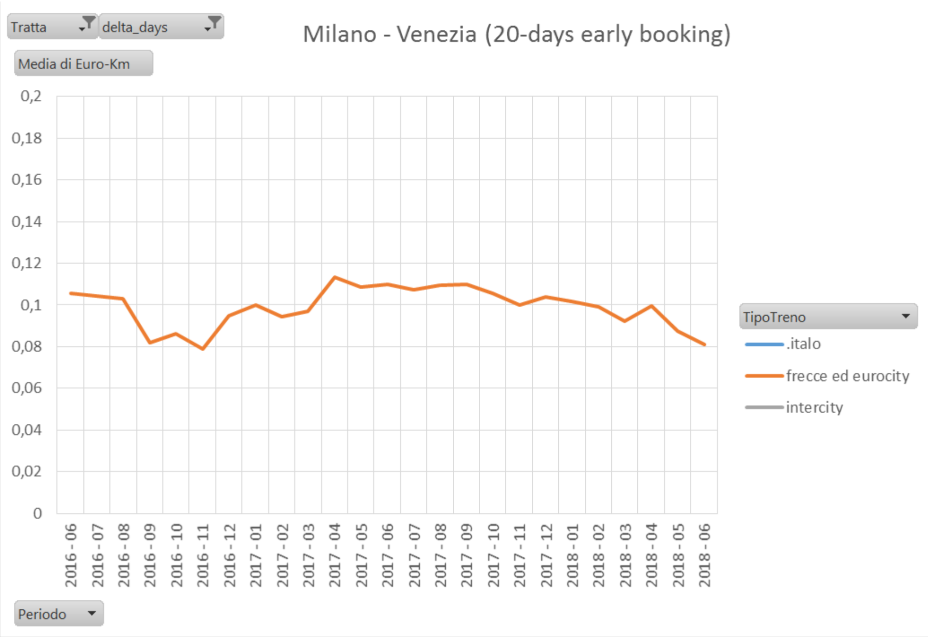


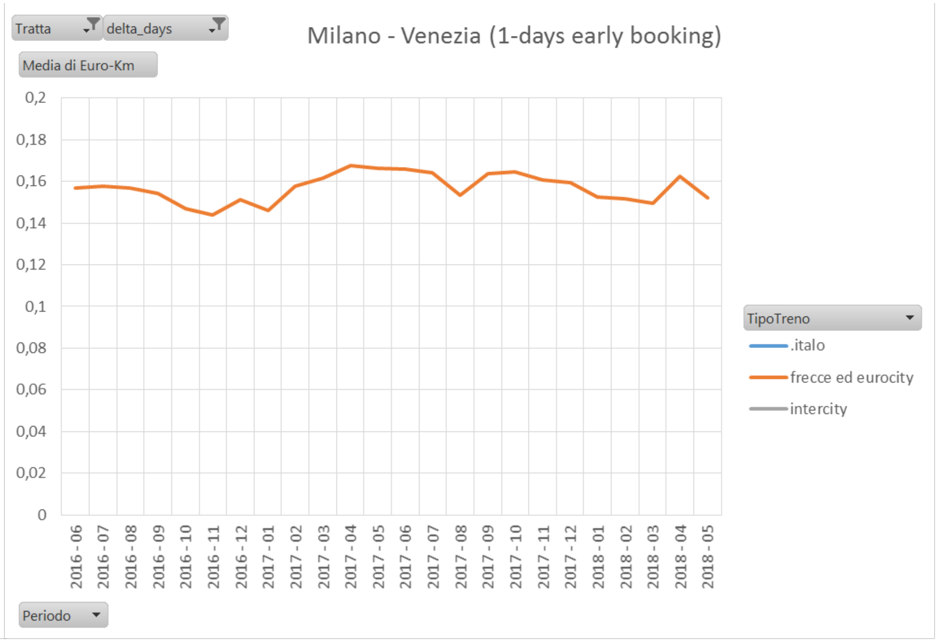
→ Higher seasonality effect. Off-season IC prices extremely low

→ 1-days advanced purchase very similar to Bologna-Ancona

Intramodal competition

Milan - Venice

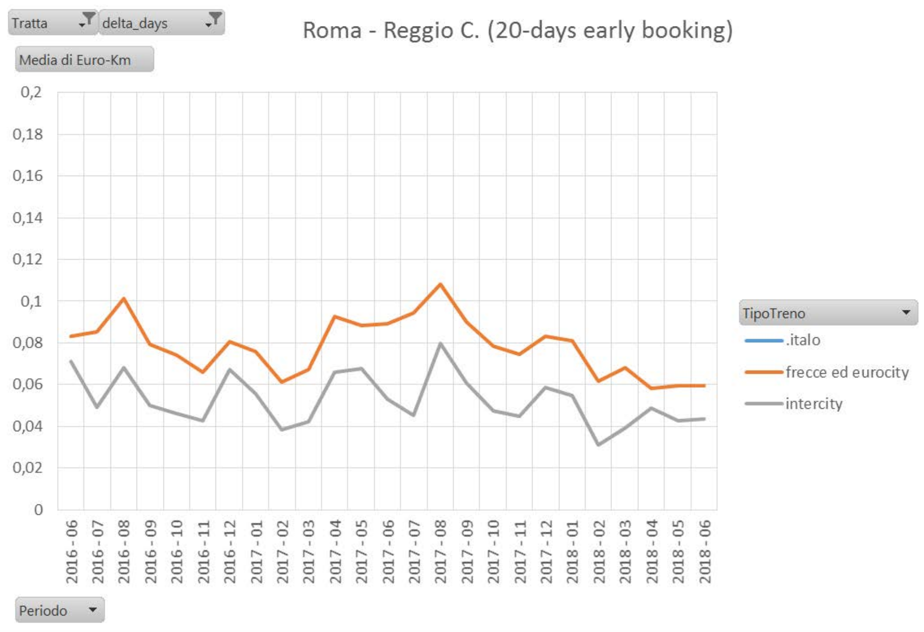


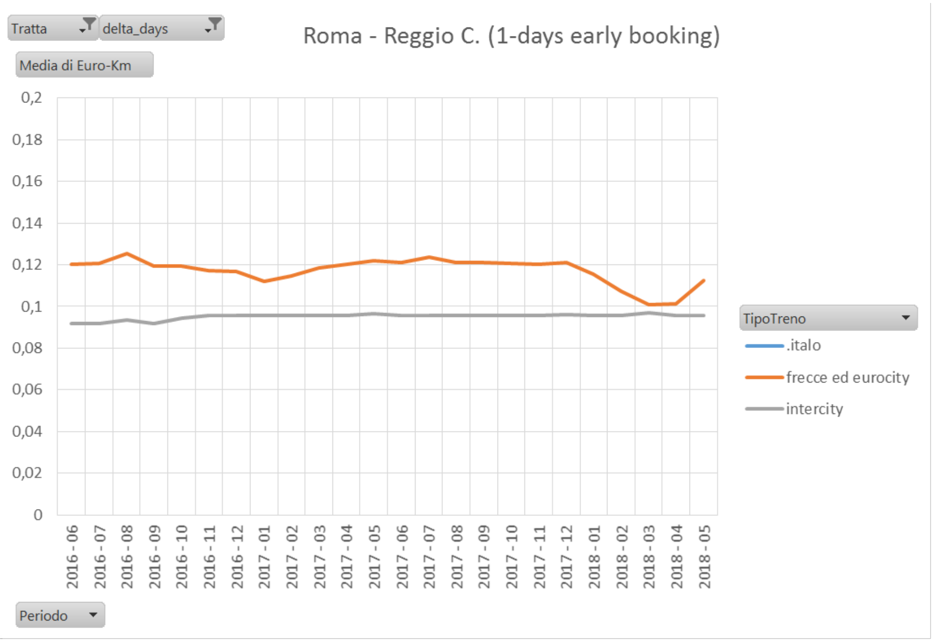


- No competition, no PSO.
- Apparently, April 2018 shows a price decrease: .Italo is ready to enter the route!
- However, price 20-days before is not significantly higher than other routes: probably the time band counts!

Intramodal competition

Rome – Reggio Calabria





→ Scarce difference between 20 and 1 day-advance purchase.

→ Seasonality visible 20-days before. 1-day before fully booked

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Conclusions and further research

Conclusions

1. Literature has already shown that competition has lowered prices in Italy. However, curiously, there is not yet a clear evidence that TI **today** prices systematically more where Italo is not present.
Most likely monopolistic pricing exists, but depends on route characteristics (seasonality, internal competition, train advantage, origin and destination, etc.). Time band may also influence.

2. We can «see» from database all determinants of price (season, day, competition, etc.), except the only parameter really governing price in yield management systems: **load factor**!

3. **Intermodal competition** shows interesting facts, for example that the cheapest train tickets are not more expensive than coach tickets.

Conclusions and further research

Further research

1. …a lot of **econometrics**!
2. Observe **load factor**, at least indirectly (we know when trains gets full)
3. Test the effect of Italo entry on the **Milan – Venice**
4. Include **intermodal competition**, both in terms of **prices** (but more interesting for coach prices, probably) and **supply/HHI**
5. … including **generalised cost** per OD per mode (transport model)
6. …

Anyone wants to collaborate?

Thank you for your attention!!!

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