

International wood pellet trade for heating in the EU

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Schipfer F., Kranzl L.

Introduction

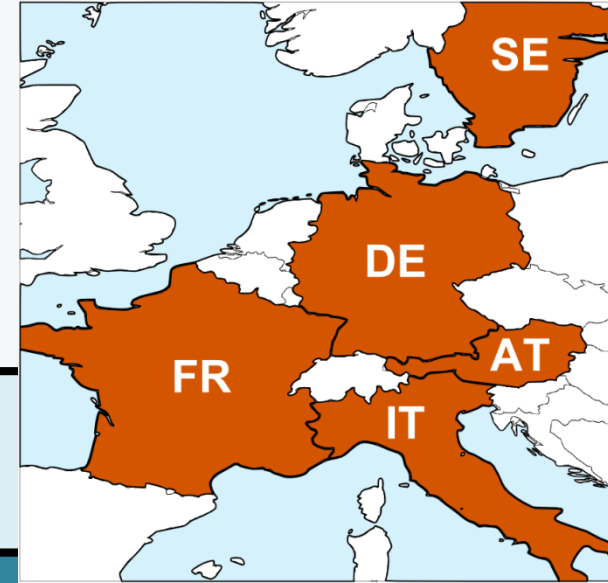
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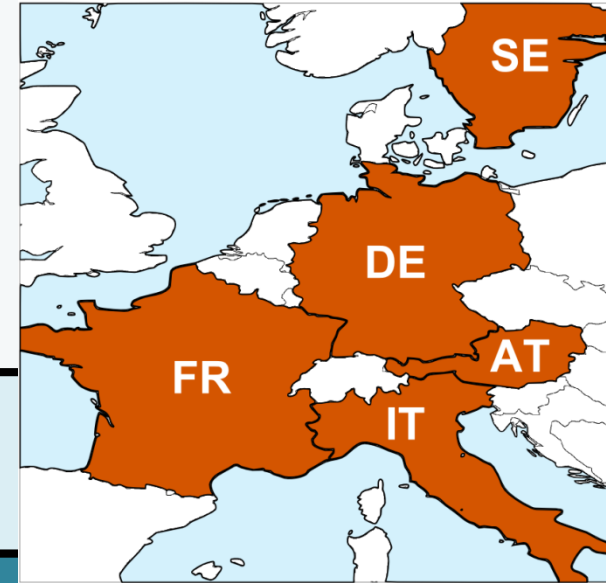
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Drivers and barriers for trade are often discussed,
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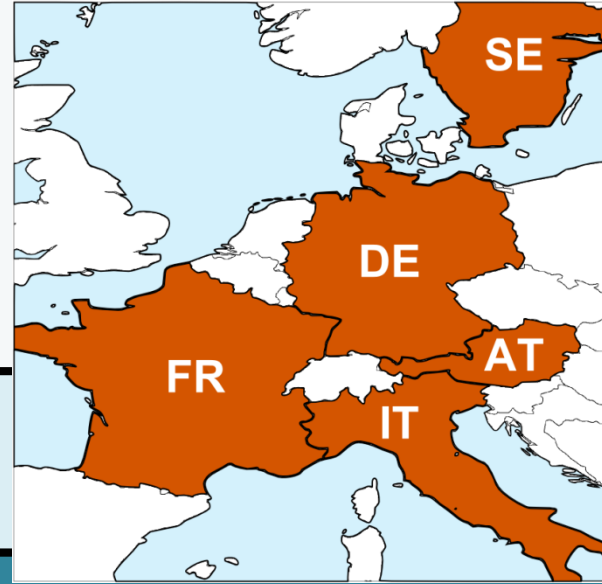
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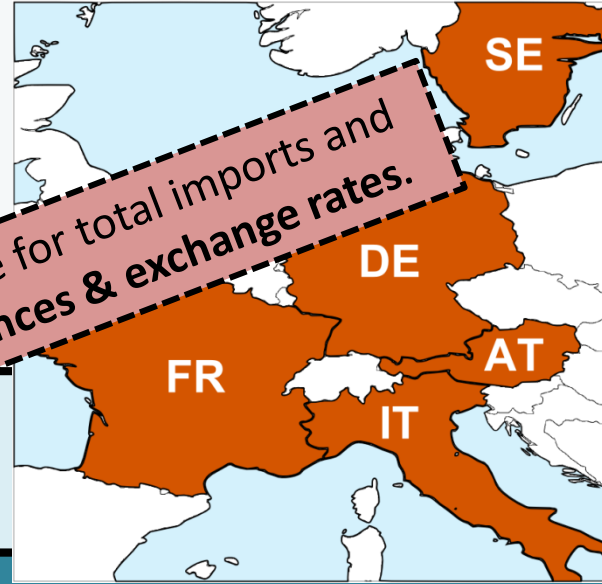
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Hypothesis

Seasonality in consumption and production is decisive for total imports and
bilateral trade streams are triggered by **price differences & exchange rates.**

Are 1) resin pellet prices 2) exchange rates and 3) seasonality determining
bilateral trade? Are wood pellets a commodity and focus country markets co-integrated?



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Looking for statistical significance in linear models:

International trade in goods statistics (ITGS) from Eurostat:

- Monthly bilateral trade since Jan.2012

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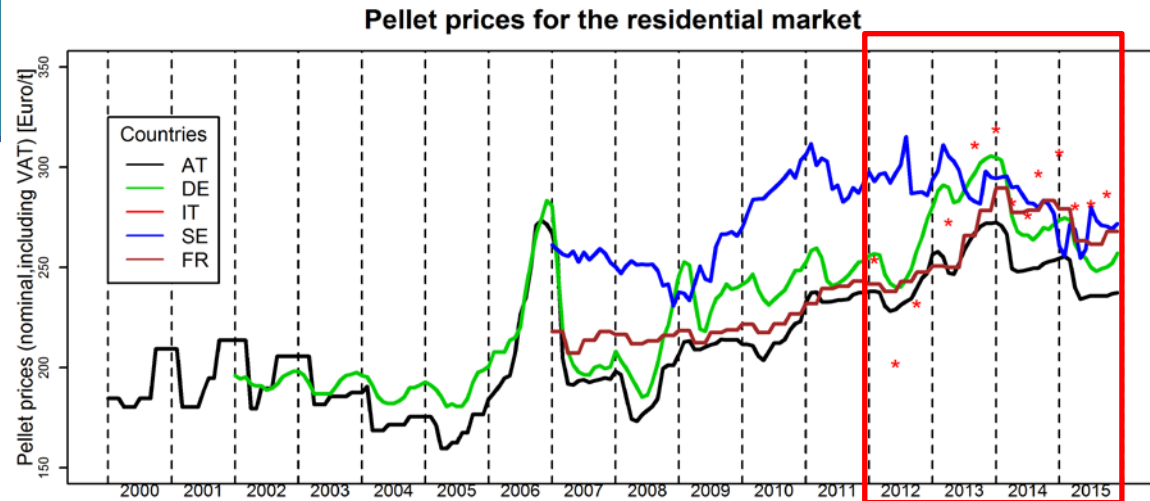
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Exchange rates •

Residential wood pellet prices •



Looking for statistical significance in linear models:

Discussion of results with experts

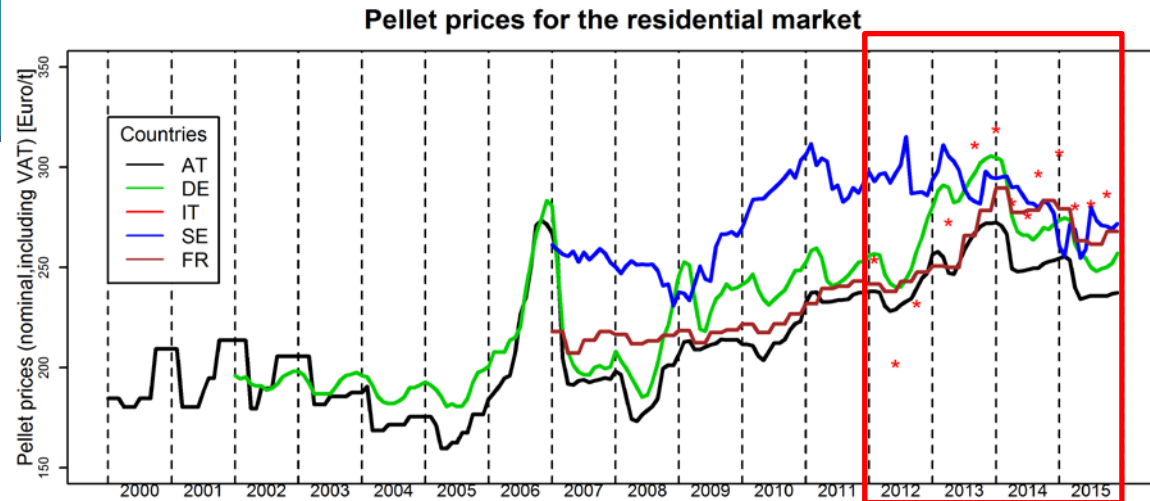
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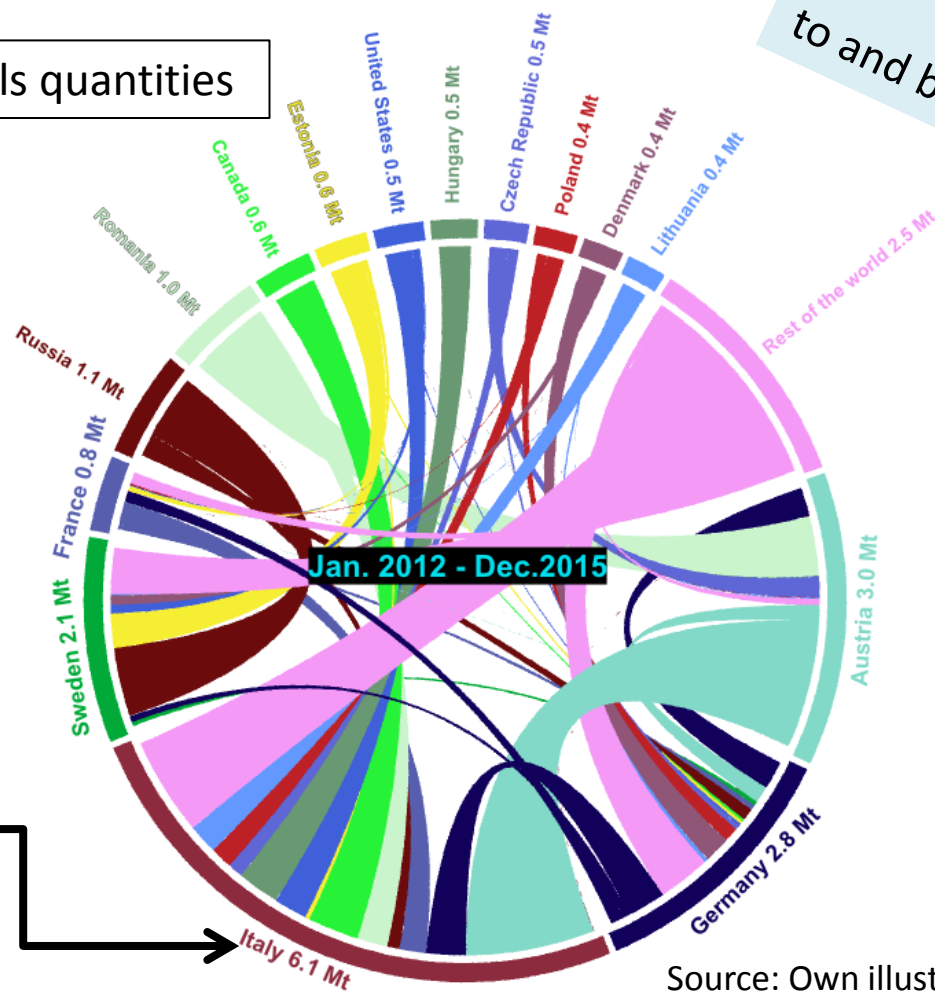
Exchange rates •

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Imports and arrivals quantities

Cumulated int. trade
to and between the focus countries

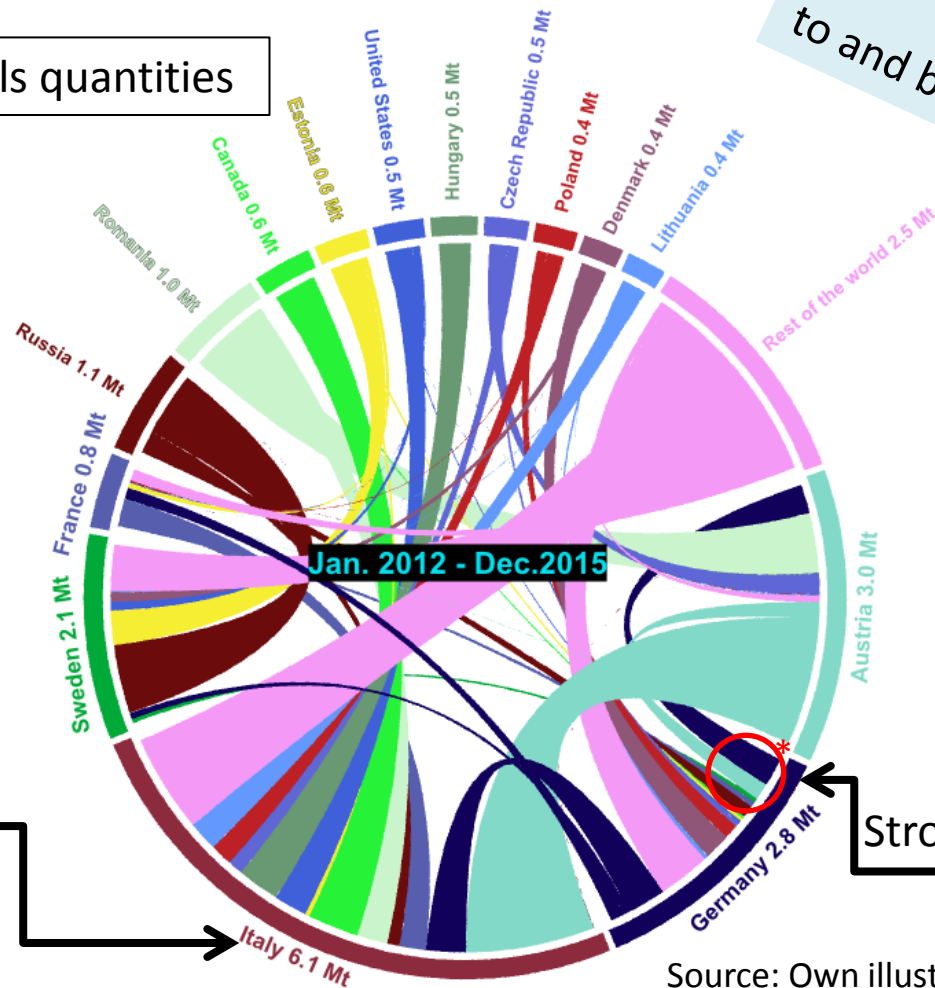


Main receiving MS

Source: Own illustration based on Eurostat (2016)

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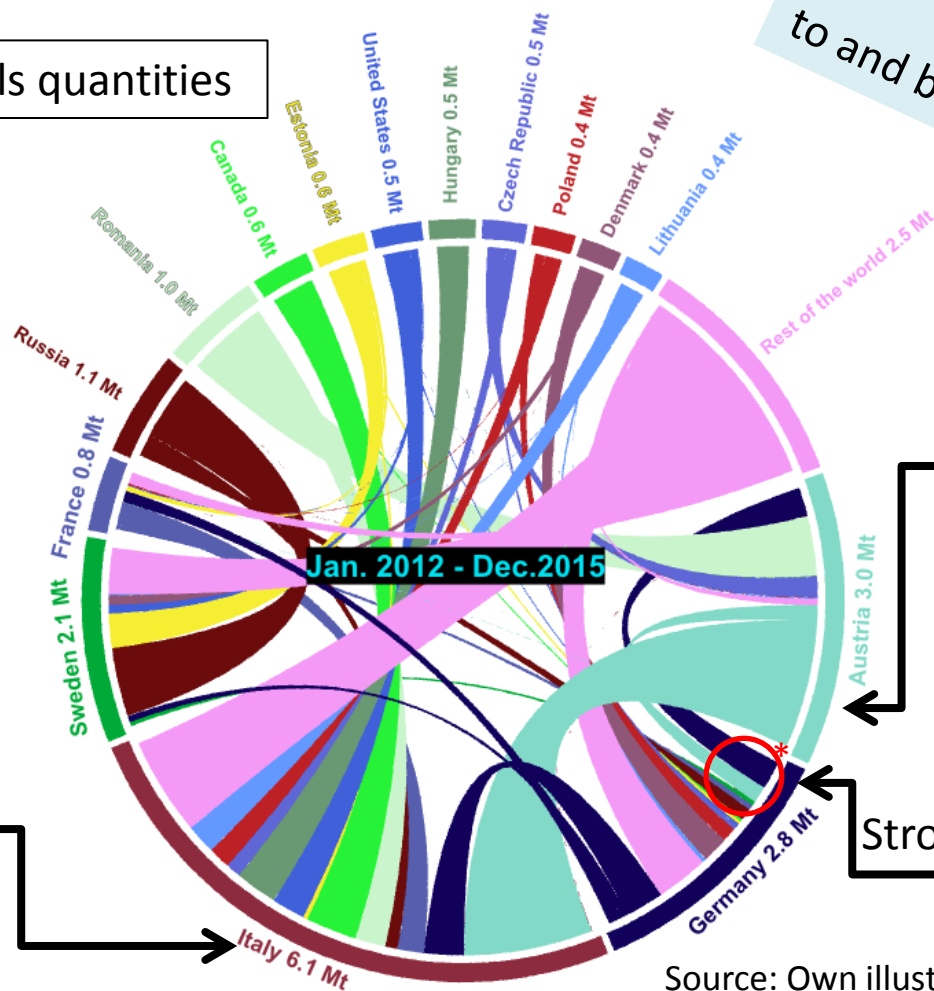
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Strongest bi-directoral trade

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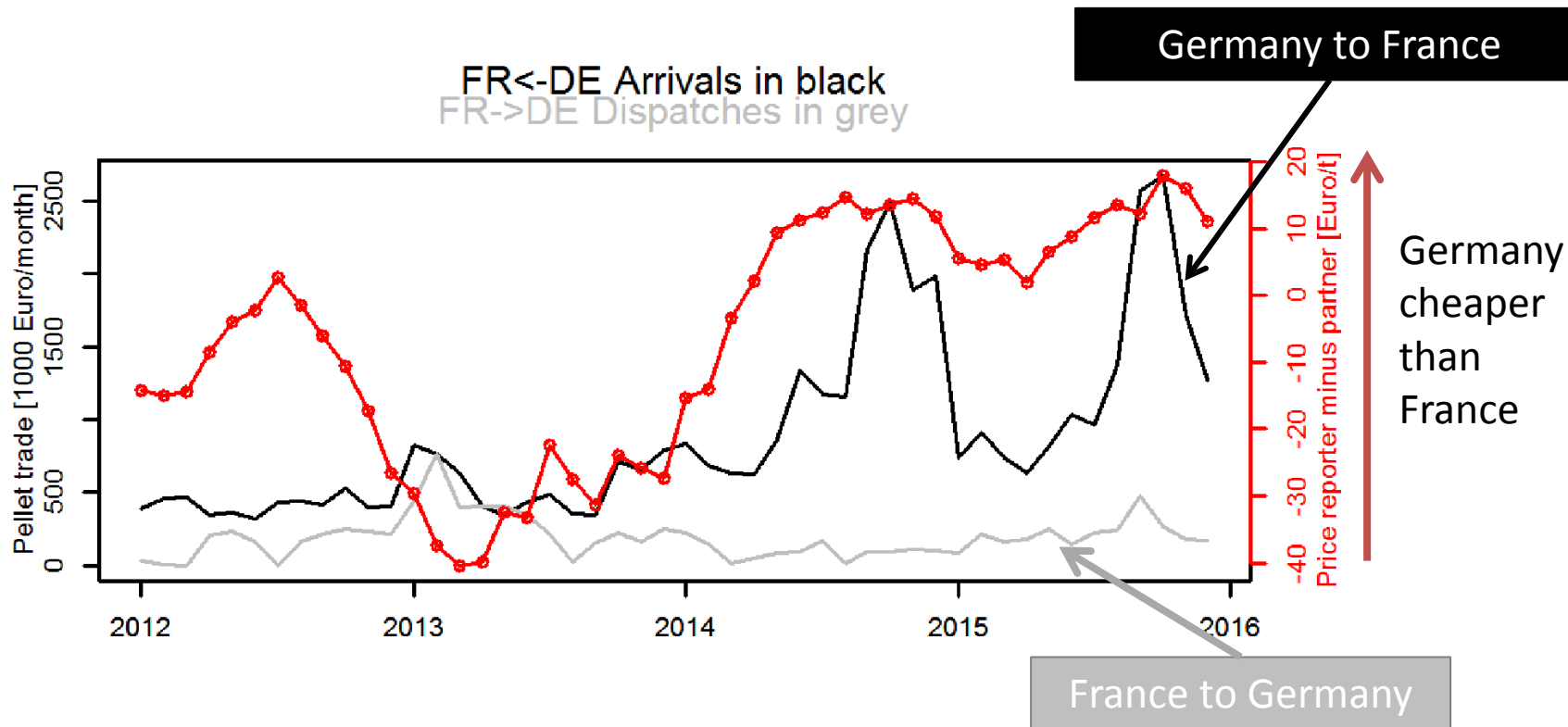
Largest uni-directoral
trade

Strongest bi-directoral trade

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Bilateral trade analysis



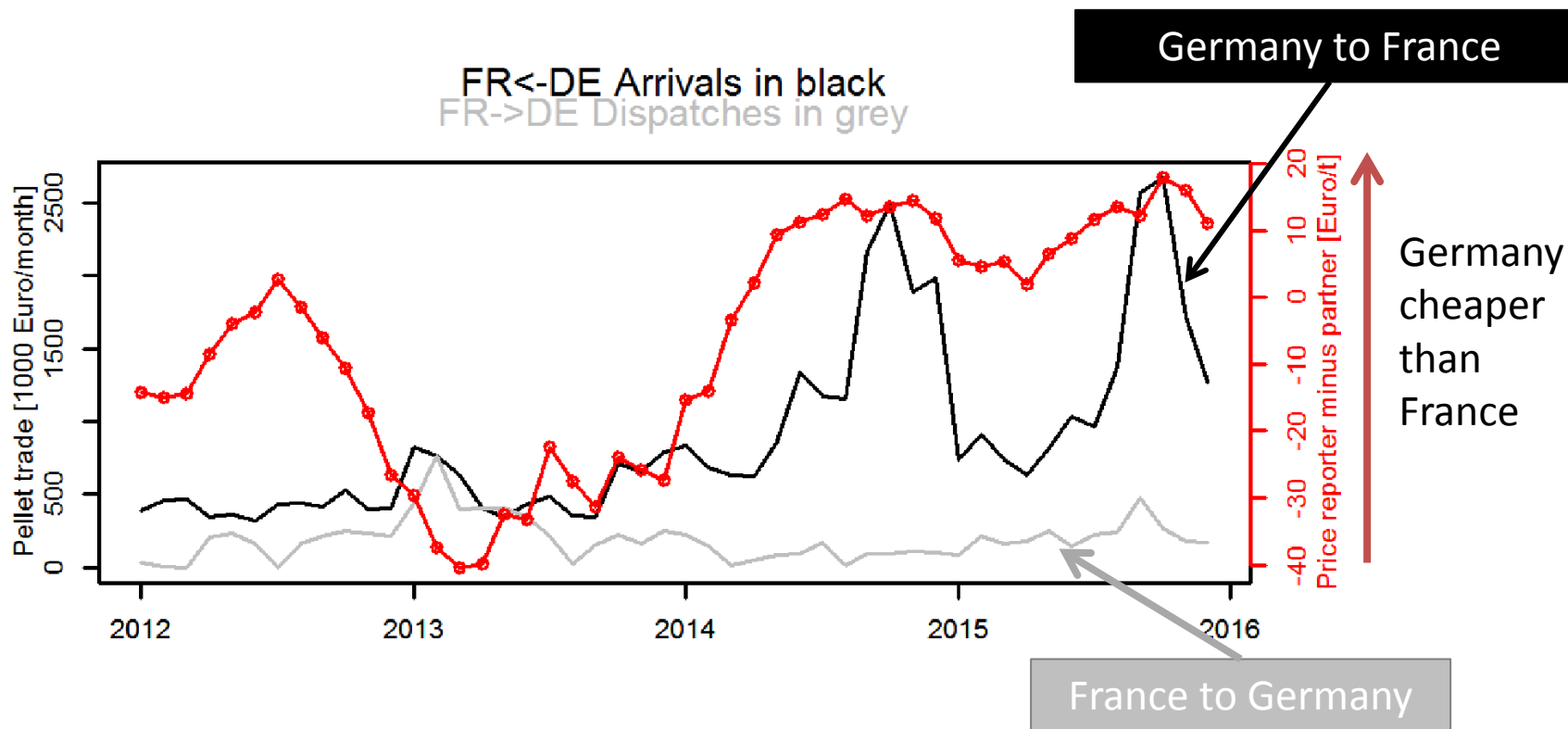
Source: own illustrations based on Eurostat (2016), DEPV, Beyond20/20 (2016)

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Bilateral trade analysis

Only this one out of the ten bilateral trade relations exhibit statistical significant correlation with price differences



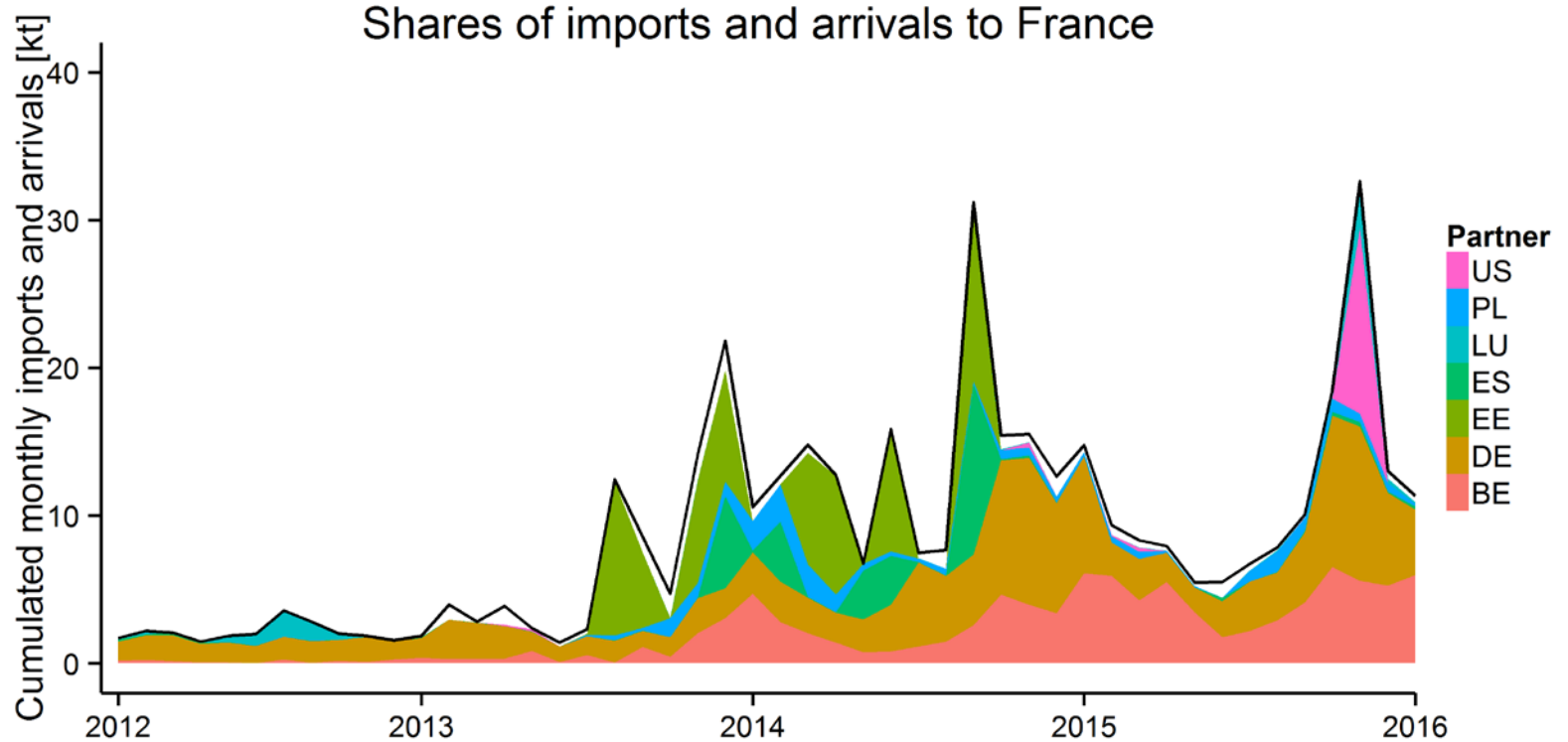
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Multilateral trade analysis

... but vanishes when trade shares are analysed. DE->AT
Significant! best correlations however against hypothesis



Source: own illustrations based on Eurostat (2016)

Seasonality, exchange rates & co-integration

Import maxima: {
 Around december for SE
 Spring & early summer for AT, IT, DE

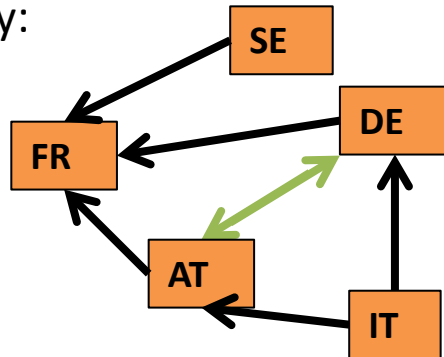
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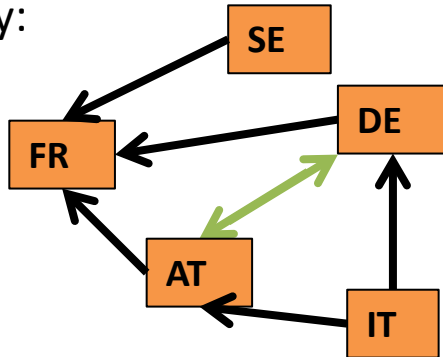


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Correlation with exchange rates:



SE imports from RU



IT imports from RU, CA & US

Discussion

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- Price data from pellet associations and statistics
- Risk minimisation
 - Standardisation (EN and ISO)
 - Vertical integration important for larger consumers
 - Long term contracts are expected to account for most trade
 - The 2nd futures instrument in place since end of 2015

Take home messages – pellets for heating

- Total imports are expected to be seasonal but trade patterns **can't** be explained by available price data – yet

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- Co-integration will take time – for now AT & DE pellets trade
- we consider wood pellets a young commodity → main obstacle: Transparency/ search costs → ALL participants would profit
- however markets at best semi-mature

Next steps

- Eurostat data → what`s the share of triangular trade and customs simplifications + analyse transport modi + share of total trade

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- Wood pellet trade model:
 - Include diversity of end users – e.g. using feed in tariffs instead of pellet prices for larger consumers
 - Higher spatial resolution - how to estimate national/ interregional trade?
 - Adjusting monthly trade to different pellet qualities – using specific eurostat prices
 - How to implement longer time frame (since 2006)?

**Thank you for listening –
what do YOU think ?**

Further information:

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IEA Bioenergy

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KOOPERATION