

International wood pellet trade for heating in the EU

IEA Task40 IV

Stockholm, 23/05/2016

Schipfer F., Kranzl L.

Introduction

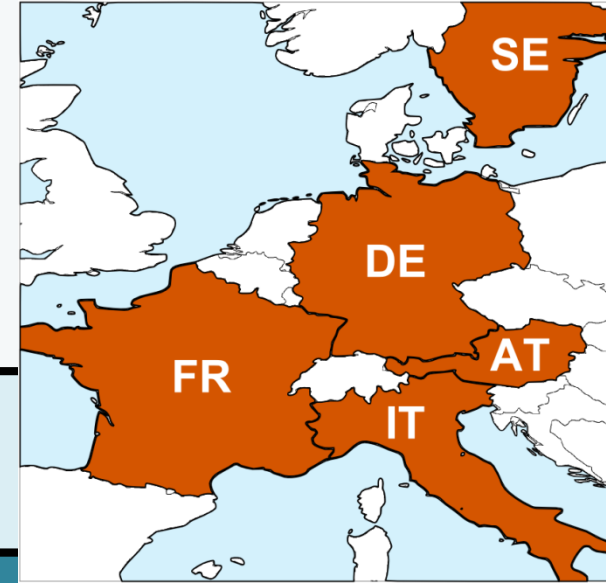
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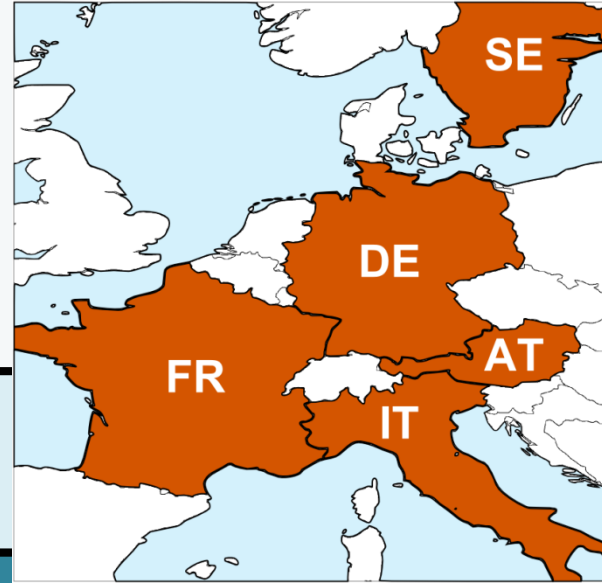
Source: own illustration based on rworldmap

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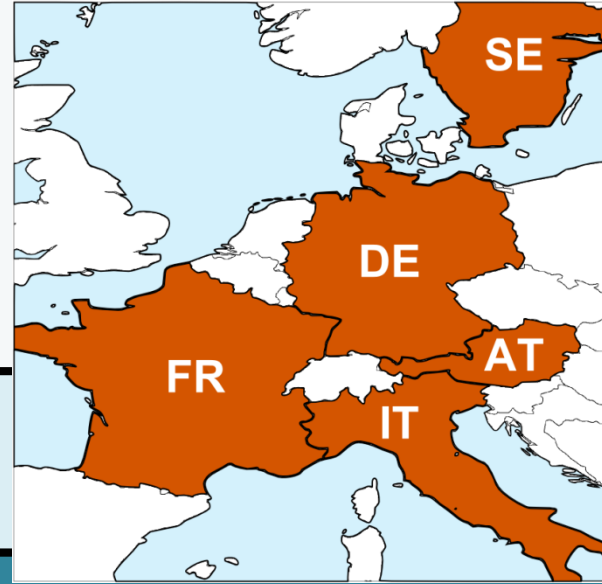
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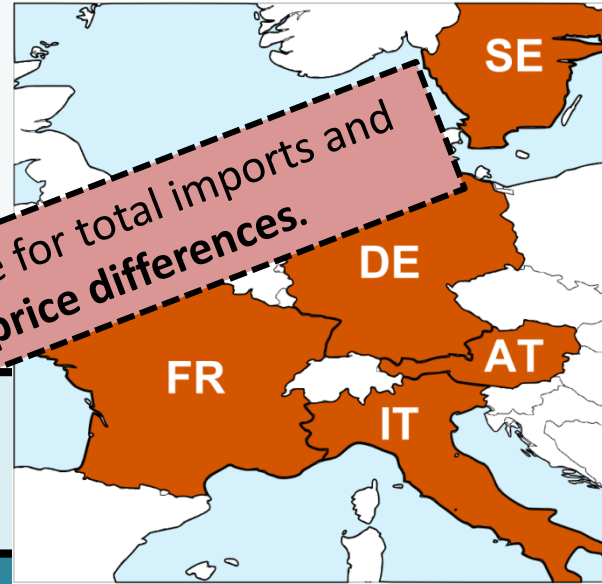
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Hypothesis

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

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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Exchange rates •

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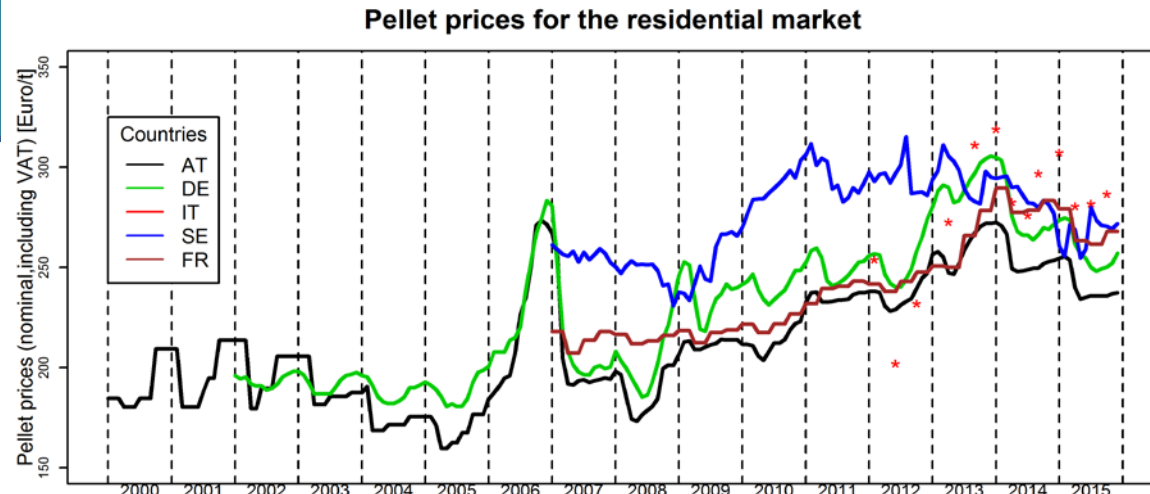
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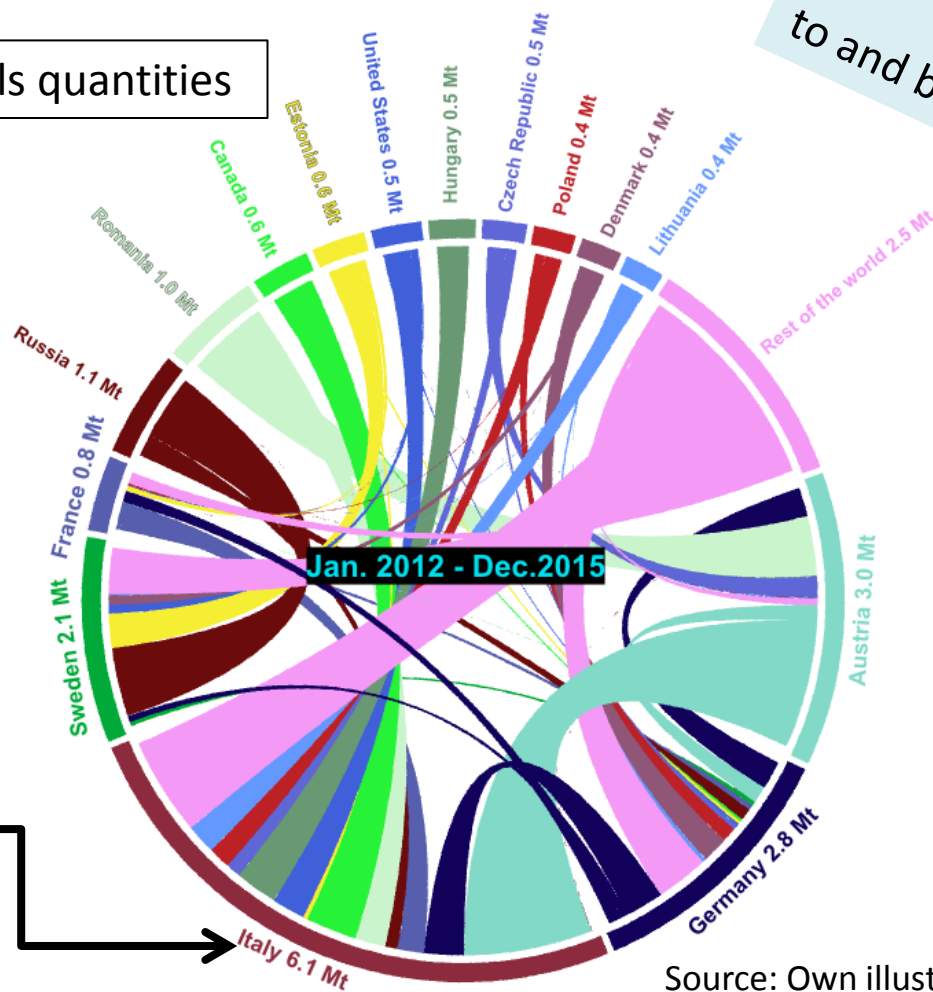
Exchange rates •

Residential wood pellet prices •



Imports and arrivals quantities

Cumulated int. trade
to and between the focus countries

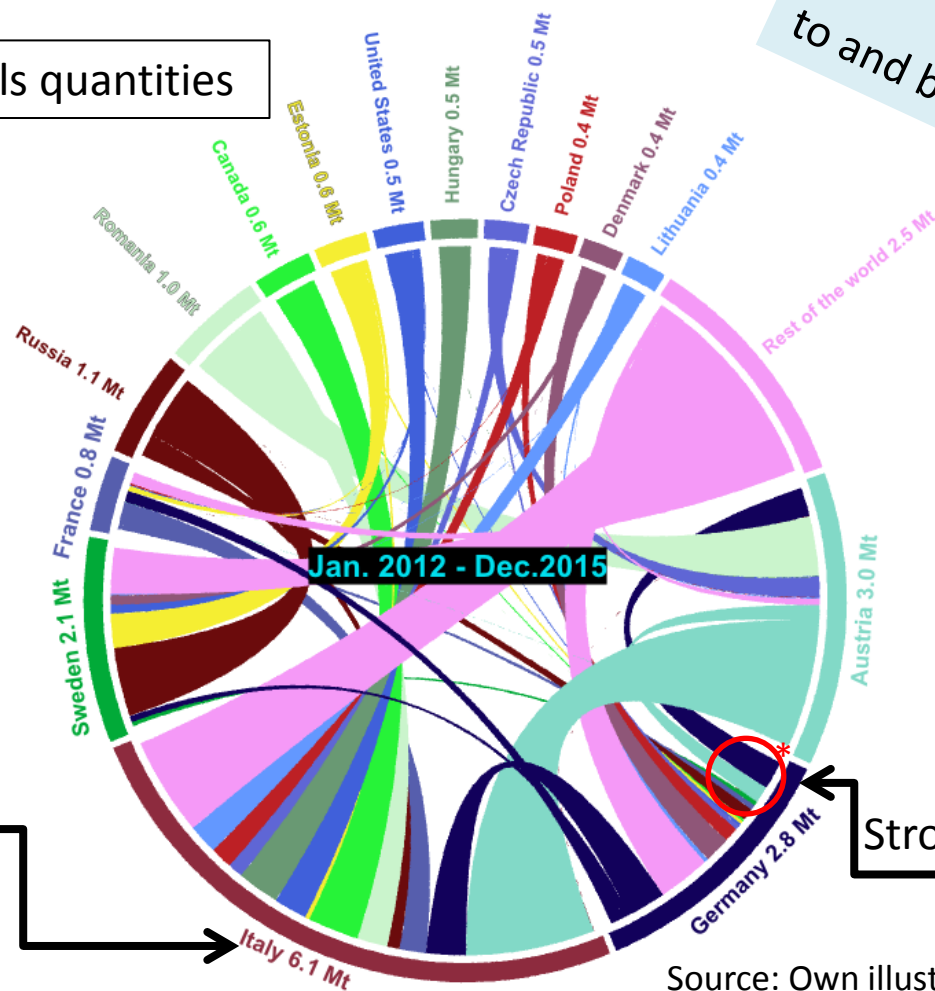


Main receiving MS

Source: Own illustration based on Eurostat (2016)

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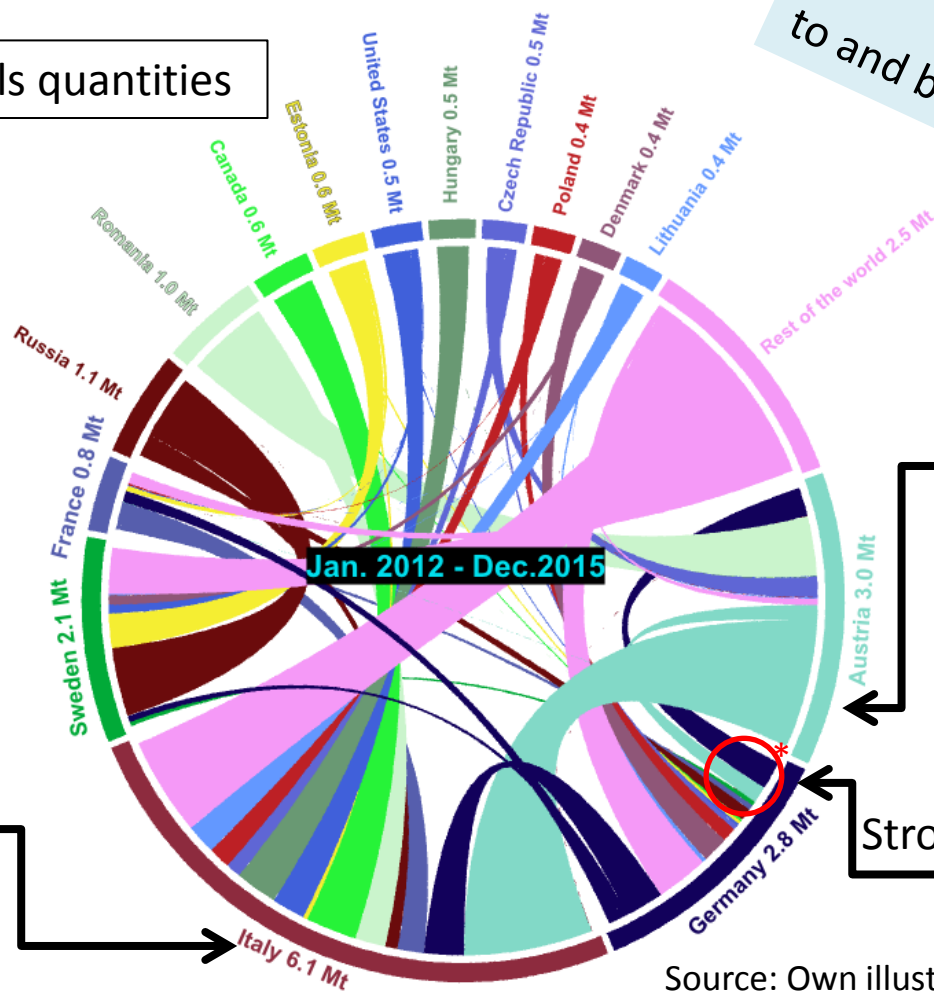
Main receiving MS

Strongest bi-directoral trade

Source: Own illustration based on Eurostat (2016)

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Largest uni-directoral
trade

Strongest bi-directoral trade

Main receiving MS

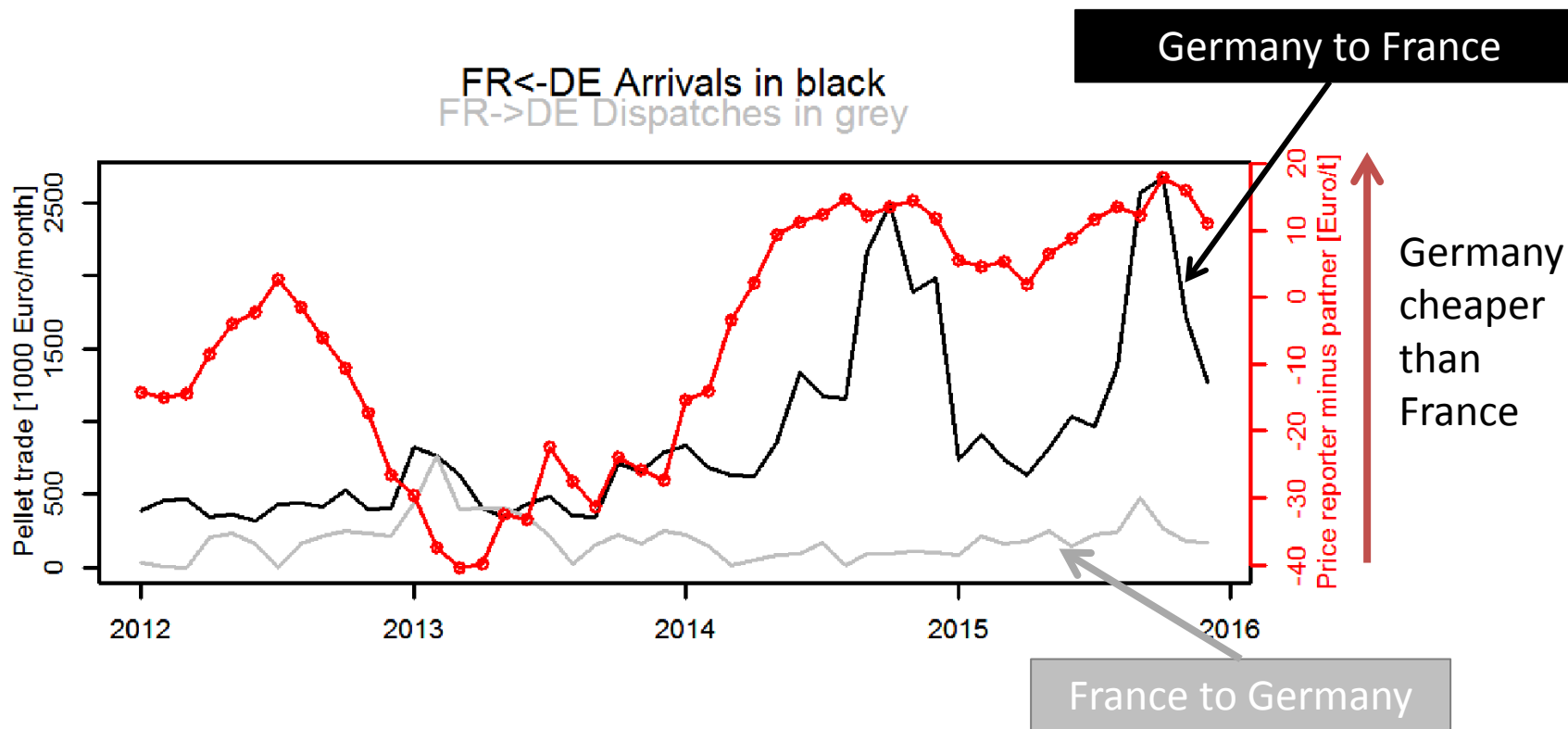
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Bilateral trade analysis

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

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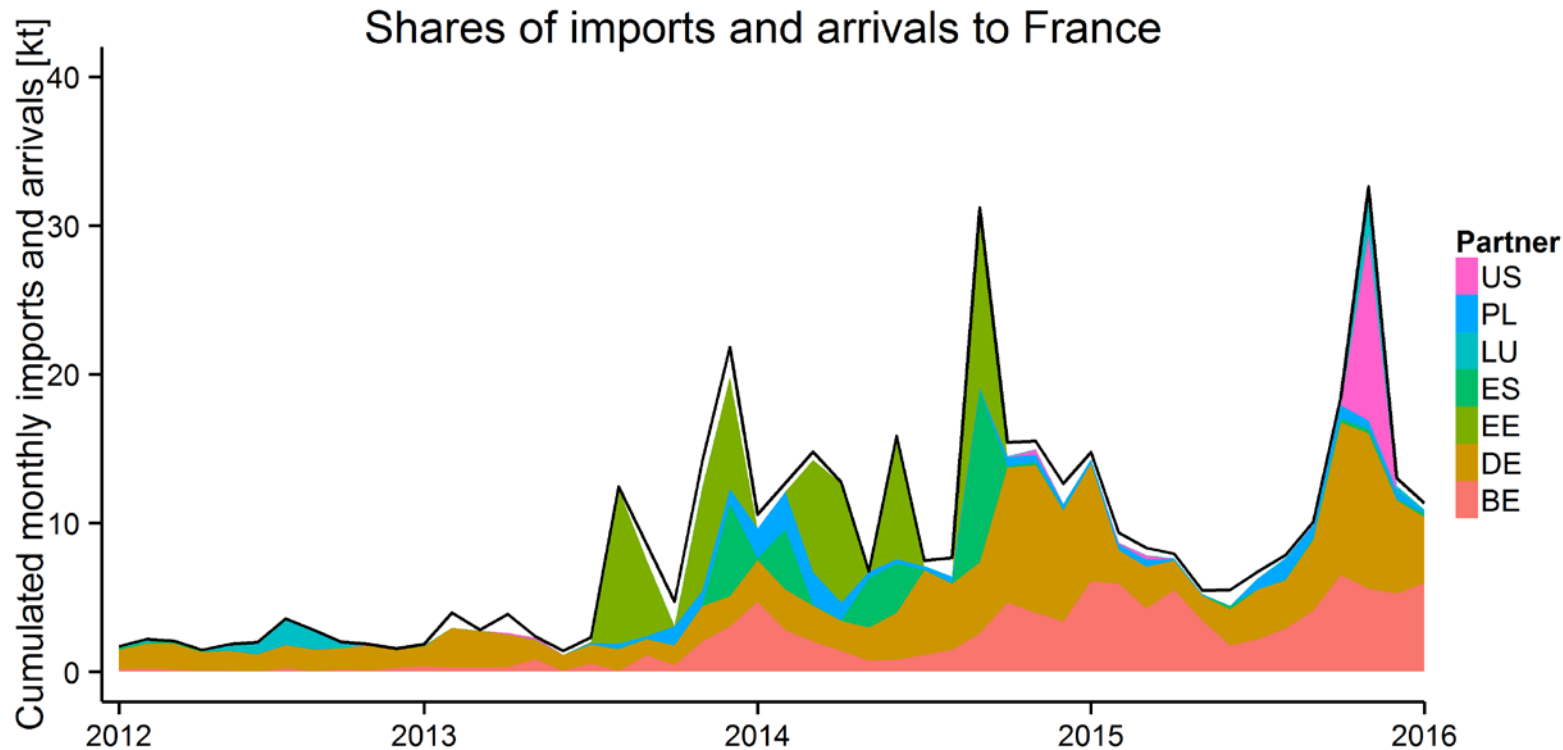
Source: own illustrations based on Eurostat (2016), DEPV, Beyond20/20 (2016)

24/05/2016

Energy Economics Group, TU Wien

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 & FR

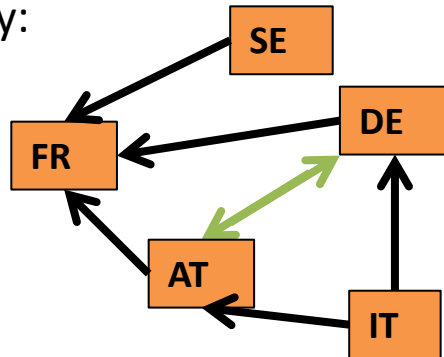
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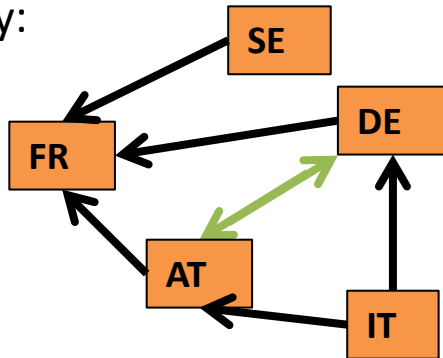


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Correlation with exchange rates:



SE imports from RU



IT imports from RU, CA & US

Take home messages – pellets for heating

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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
- however markets at best semi-mature

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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