

Pass-On Analysis: A Practitioner's View



EE&MC - European Economic & Marketing Consultants GmbH
Düsseldorf * Brussels * Vienna
Karl-Arnold-Platz 1, D - 40474 Düsseldorf
Tel.: +49-211-45449770
www.ee-mc.com

Brno, November 14th 2018

Pass-on Analysis in Practice

EE&MC applies a broad range of analytical approaches



Complexity

Pass-on determinants

- Price elasticity of demand
- Price elasticity of supply
- Competitive intensity of direct customers
- Duration of the cartel
- Etc.

In-depth econometric analysis

- Extended regression models
- Quantitative estimation of possible pass-on effects

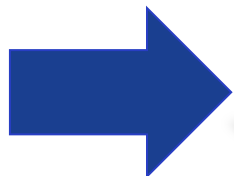
Simple econometric analysis

- Correlation analysis
- Simple regression models

Quick-look: Margin analysis

Graphical analysis

Data requirement



The burden of proof lies with the cartel members

Quick-Look: Analysis of Profit Margins

The weakness of this approach is that all other market circumstances are neglected

Data requirement:

- Upstream purchasing prices
- Downstream sales prices

Profit margin:

- Sales price minus purchasing price in %

*Hypothetical case: Cartel from 1998-2003
After-cartel period: 2003-2007*

	Average annual profit margin in %				
	Product A	Product B	Product C	Product D	Product E
1998		1%	1%	3%	1%
1999	3%	2%	3%	4%	2%
2000	4%	5%	4%	7%	3%
2001	5%	5%	6%	5%	4%
2002	6%	6%	7%	9%	5%
2003	11%	8%	7%	9%	5%
2004	10%	9%	8%	9%	6%
2005	13%	7%	12%	11%	7%
2006	12%	8%	11%	13%	8%
2007	11%	11%	10%	12%	9%
Average in cartel period (1998-2003)	5%	4%	4%	6%	3%
Average in non-infringement period (2003-2007)	11%	9%	10%	11%	7%
Change in %	-58%	-21%	-58%	-50%	-56%

In case that the profit margin during the cartel period was lower than in the after-cartel period, an indication is given that the claimant did not pass on (partially) the cartel overcharge to his own clients

Simple Econometric Analysis

The working assumption is that sales prices downstream could be influenced by purchasing prices upstream

Low R^2 of 45% indicates that the model would benefit from an increase in explanatory variables

Total period = cartel period + non-infringement period

Simple econometric model

Tool		OLS
Amount of observations		260
Dependent variable: Sales price	Explanatory variable: Purchasing price	0,975***
	Constant	0,074***
	R^2	0,450
	Durbin-Watson stat	0,320

- Example to the left indicates a pass-on in the total period; but statistical tests of the model are weak
- Example below confirms a pass-on during the non-infringement period but denies a pass-on during the cartel period
- Even simple econometric analyses require a good understanding of quantitative modelling

Low Durbin-Watson indicates a regression problem



Is this enough ?
Are there other meaningful explanatory variables ?

	No Pass-On	Pass-On
	Infringement period	Non-Infringement period
Tool	OLS	OLS
Amount of observations	130	130
Dependent variable: Sales price	Explanatory variable: Purchasing price	-0,003
	R^2	0,580
	Durbin-Watson stat	1,818
		0,356***
		0,614
		2,140

Extended Econometric Analysis

In the hypothetical case presented, the model is enlarged by the variable "ALDI"-price next to the variable purchasing price upstream

For some products the rule of thumb is:
in case ALDI increases prices on day x the majority of other retailers follows on day x+1



The simple graphic analysis is confirmed by the econometric model

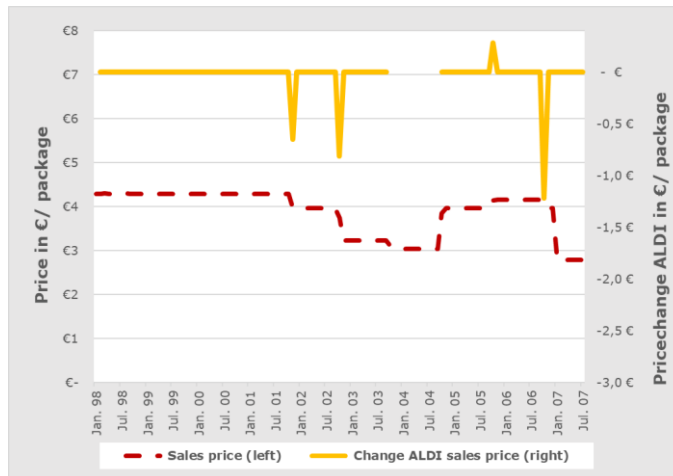


No Pass-On



Pass-On

Comparison ALDI-price changes and sales prices of another retailer



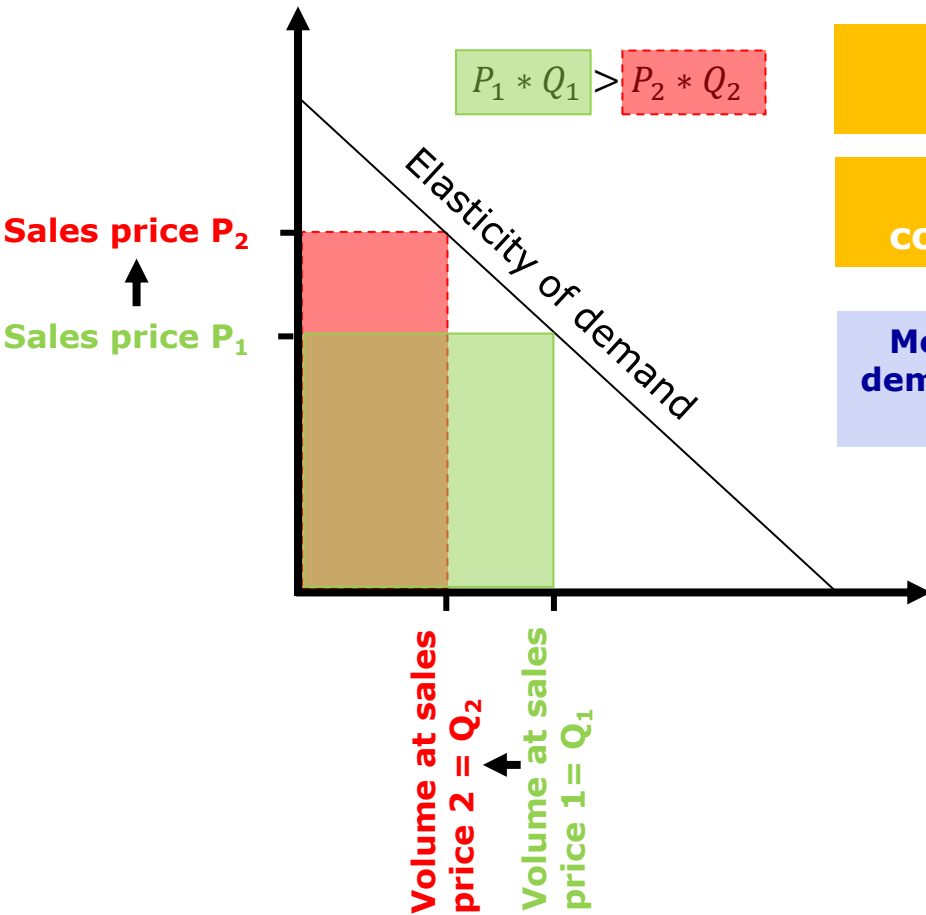
		Cartel period	Non-infringement period
Tool		OLS	OLS
Amount of observations		130	130
Sales price	Purchasing price		0,579***
	Purchasing price delayed by one month	0,006	
	ALDI sales price	0,782***	
	ALDI sales price delayed by one month		0,891***
R ²		0,923	0,893
Durbin-Watson stat		1,968	2,261



- In the competition period, the purchasing price upstream and the ALDI-price have a statistical significant effect on the sales price downstream
- The art is to construct a solid and reasonable econometric model

Challenge: Volume Effects

A volume decrease caused by a cartel is a cartel damage too



Economic theory:

Economic consequence:

Measurement of demand elasticities is crucial

Price increases lead to a decrease in demand

Thus, a pass-on of cartel prices might cause a loss of volumes / revenues too

The potential loss depends on the elasticity of demand

Example:
Analysis of "selective" demand changes requires extensive analyses



More information available on our homepage !

Düsseldorf

Karl-Arnold-Platz 1
40474 Düsseldorf
Germany



Brussels

Rond Point Schuman 6
1040 Brussels
Belgium



Vienna

Rasumofskygasse 2
1030 Vienna
Austria

