



Ex-post Analysis of an Approved Merger

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Errare humanum est, sed in errare perseverare diabolicum.

Summary

- **The difference-in-differences methodology and its application in ex-post merger analysis**
- **Brief overview of our case**

The difference-in-differences (DID) methodology

Medical terminology: a treatment is tested on 2 groups

Control group = normal evolution of analyzed phenomenon

Treated group = normal evolution + treatment effect

→ difference before and after treatment, and between groups, isolates treatment effect

DID is used in medical studies, public policy, experiments.

Treated group = companies who merged

Control group = companies similar to those who merged

→ DID isolates merger impact on product prices, quality, range. Focus on prices.

The following econometric model is used:

$$P = \alpha + \beta_1 T + \beta_2 A + \beta_3 TA + \Gamma X + \Delta M + \varepsilon,$$

P = product price

T = 1 for merging parties, else 0

A = 1 for time periods after merger, else 0

TA = interaction term, 1 for merging parties after merger, else 0

X = other exogenous variables (attenuate control group imperfections)

M = time dummies (allow for different seasonality between groups)

Possible issues

- Finding a good control group
- Changes in product quality or range
- Validity of our assumptions
- Data availability: Do companies have the obligation to supply data after the merger is cleared?

Brief overview of our case

PLUS: Exits the Romanian retail market, sells all 103 stores

LIDL: Enters the Romanian market, acquires all PLUS stores

Nov. 2010: Merger approved, 1st phase, no conditions

Why is this a competition case?



SCHWARZ
GRUPPE



Discounter



Supermarket

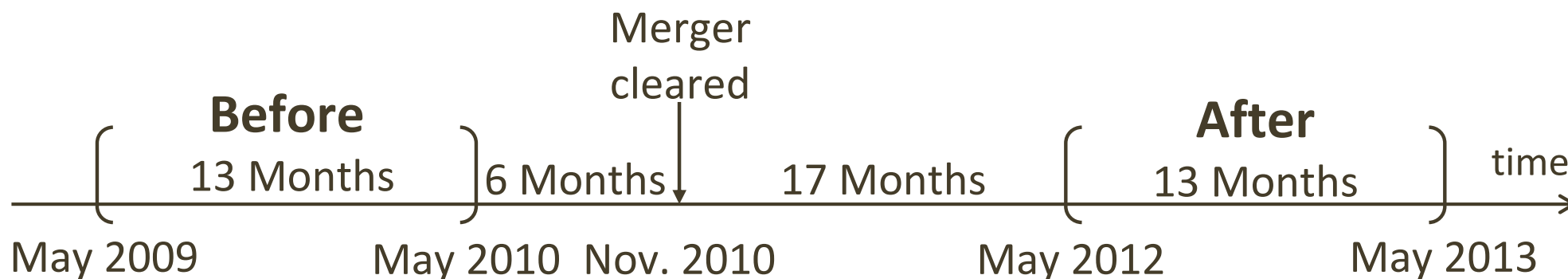
May 2013: RCC decided to conduct an ex-post analysis

In-house analysis included review of:

- **Market evolution in some areas**
 - **Entries and their development**
 - **Private labels**
 - **Procurement market**
 - **KAUFLAND prices in some areas**
- Consumer Goods Department**
- Research Department**

5 potentially problematic locations, SCHWARZ > 25%, DID

- **Treated: 5 potentially problematic KAUF LAND stores**
- **Control: 11 other KAUF LAND stores, cities of similar size**
- **Same products sold → no change in product quality or range between groups**
- **Data: KAUF LAND cooperated. Monthly average prices.**
- **11 product categories selected: milk, apples, poultry, pork, potatoes, eggs, tomatoes, sunflower oil, wine, bread, cold cuts.**





	K1	K2	K3	K4	K5
Milk	0	0	0	0	↓
Apples	0	0	0	0	0
Cold cuts	X	0	0	0	X
Fresh bread	0	X	0	0	↓
Poultry	↓	0	0	↓	↓
Pork	↓	↓	X	↓	↓
Potatoes	0	0	0	0	0
Eggs	0	↓	↑	↑	0
Tomatoes	0	0	0	↓	↓
Sunflower oil	0	0	0	X	0
Wine	↓	0	↑	X	0

Results

0 Merger impact on price not statistically significant different from zero (33)

↑ Price rises, statistically significant (3)

↓ Price decreases, statistically significant (13)

X Impact impossible to assess, different conditions in control and treated (6)

Fresh bread: shorter time series



Thank you!

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