

NHH



CARTELS

WHY LOOKING UNDER THE LAMPPOST MIGHT ACTUALLY WORK

Frode Steen, Ari Hyytinen, Nikolaus Fink





The structure of this session

- Frode
 - Introduction of our international cartel comparison project
- Ari
 - Anatomy of Finnish cartel contracts
- Nikolaus (Christine):
 - Registered Cartels in Austria – An overview
- Frode:
 - Very first descriptive findings of the international comparisons



Why should we care about *old legal cartels*?

- There is a need for a better understanding of how cartels work.
 - Especially in environments where cartels are free to openly communicate
 - What is the level of *mutual understanding* that cartels can achieve when they face no restrictions
- A better understanding should help to improve the effectiveness of competition policy with respect to cartels.
- **BUT:** So far, lack of data has inhibited progress.



AND: Data on legal cartels do exist?

- Cartels were legalized upon registration in several European countries in the (long) period between World War II and into the early 90s
- Substantive cross-country variation in institutional context.
- We developed access to cartel registration data.



Similarities Between Legal and Illegal Cartels

- Measures agreed upon by all cartel members that increase profitability relative to competitive outcome.
- But measures still invite profitable secretive deviation by individual cartel members.
- Deviation incentives require:
 - Provision of counterincentives,
 - Detection device for deviation,
 - Punishment device for deviators.

Dissimilarities Between Legal and Illegal Cartels



- Legal cartels

- Can establish formal organization running the cartel,
- Can publicize profit increasing measures,
- Can establish overt punishment schemes (take deviator to court – *in principle and it varies somewhat across countries*).

- Illegal cartels

- Need to hide measures that increase profitability, against detection,
 - by competitors
 - by authorities
- Need to provide incentives against whistle blowing,
- Need to hide punishment of deviators,
- Grim trigger strategies as a substitute for other forms of punishment?



The advantage with legal cartel contracts: Observing an Unobservable

- Legal cartels could and did write contracts that we can observe
- Illegal cartels might write contracts – but in any case we cannot observe them

We can observe an unobservable



Added benefits of legal cartels

- Much better availability of data on legal cartels.
 - Larger and probably less selected samples
 - Long time horizon (+40 years)
 - Exists in a number of different jurisdictions with varying institutional frameworks
 - Allows for both longitudinal and cross sectional variation (regulative structure, business cycle etc)



We therefore joined forces to collect data from five countries

- Austria, Finland, Norway, Sweden and the US
- Potentially more than *6500 cartel contracts*
- The international research team:
 - Philipp Schmidt-Dengler
 - Nikolaus Fink
 - David Genesove
 - Ari Hyytinen
 - Lars Persson
 - Konrad Stahl
 - Frode Steen
 - Hannah Thunström
 - Otto Toivanen
 - Christine Zulehner



Our Research agenda

- Key questions:

1. How do (legal) cartel contracts look like?

2. How much variation is there in terms of:

- A. Contract clauses and combinations thereof?

- B. Governance?

- AND: Do observable

- Cartel-,

- Industry- and

- Country specific institutional characteristics capture some of the variations?



Data sets

- Main sources: National Cartel Registries in Austria, Finland, Norway & Sweden which includes individual cartel contracts.
- In addition we are in the process of coding 557 US cartels from the National Industrial Recovery Act (NIRA) from the 1930s
- Semi-structured approach, quantification of contract clauses.

Cartel contracts	Total	Coded
Austria	149	149
Finland	898	109 (898)
Norway	ca 900	>750
Sweden	ca 4000	>125
The US	557	>450
Total	ca 6500	ca 1600 (2400)



THE INTERNATIONAL COMPARISON



Data used for international comparison

- To compare across countries we have concentrated on *parallel* nationwide manufacturing cartels (first in each 4-digit manuf industry).
- We have aggregated the contract codes to the 'Finnish level'

	# cartels	% of cartels in comparison sample
Austria	35	9.0 %
Finland	109	28.2 %
Norway	243	62.8 %
Total	387	

The Swedish dataset is not included here

How to raise profits – cross country differences?



	Finland	Norway	Austria
Price-based	0.58	0.70	0.72
Pricing	0.50	0.50	0.47
Payment Rule	0.38	<u>0.56</u>	<u>0.67</u>
Market allocation-based	0.53	0.48	0.77
Quota	0.17	0.15	<u>0.58</u>
Area-based	0.10	0.14	0.07
Non-area-based	0.39	0.29	0.33

- In terms of usage, the three countries are surprisingly equal.
- Two exceptions:
 - *Austria and Norway use somewhat more payment rules*
 - *Austria use much more quota clauses*

How to raise profits – cross country differences?



ALL (Austria, Finland & Norway)						Austria					
	Pricing	Payment Rule	Quota	Area-based	Non-area-based		Pricing	Payment Rule	Quota	Area-based	Non-area-based
Pricing	1					Pricing	1				
Payment Rule	0.36	1				Payment Rule	0.45	1			
Quota	0.14	0.04	1			Quota	0.32	0.01	1		
Area-based	-0.21	-0.24	-0.01	1		Area-based	-0.07	-0.20	0.05	1	
Non-area-based	-0.21	-0.21	-0.05	0.05	1	Non-area-based	-0.15	-0.26	-0.12	0.01	1
Finland						Norway					
	Pricing	Payment Rule	Quota	Area-based	Non-area-based		Pricing	Payment Rule	Quota	Area-based	Non-area-based
Pricing	1					Pricing	1				
Payment Rule	0.47	1				Payment Rule	0.30	1			
Quota	0.12	0.04	1			Quota	0.15	-0.02	1		
Area-based	-0.22	-0.20	-0.07	1		Area-based	-0.23	-0.28	0.03	1	
Non-area-based	-0.61	-0.46	-0.12	0.24	1	Non-area-based	-0.03	-0.06	-0.02	-0.02	1

—	Positive correlation
—	Negative correlation
	Significant



Some clear patterns across countries for the profit clauses:

- **Finding 1:**

Clauses on pricing and payment rules are significantly positively correlated across all countries

- **Finding 2:**

Clauses on Quotas is positively correlated with pricing and payment clauses across all countries

- **Finding 3:**

Norway and Finland surprisingly equal pattern

- **Finding 4:**

No common patterns in the remaining correlations, mostly zeros



Future tasks

- Look at instability issues
- Link cartels to industry and firm data
- Link data to market outcomes (performance)
- Relate key findings to comparable findings for illegal cartels (duration, size, practices etc)