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WORKING FOR YOU – WHEREVER YOU NEED ENERGY.



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Electricity prices after 10 years of liberalisation - competition quando tandem venires?

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Disclaimer



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Preliminary results – do not cite without the authors permission.

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Liberalisation @10 in Austria

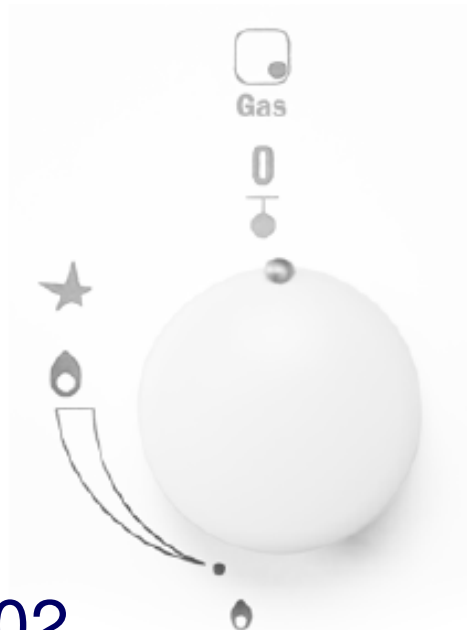


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- Switching for all consumers:



2001



2002

- Positive developments can be identified
 - Efficiency increases especially for networks
 - Counterfactual analysis shows impressive gains (Kratena 2011):

Liberalisation Effects 2001-2009 [Bn Euros]		
	Electricity	Natural Gas
Industry	8,9	1,2
Housholds	1,3	0,08
Sum	10,2	1,28

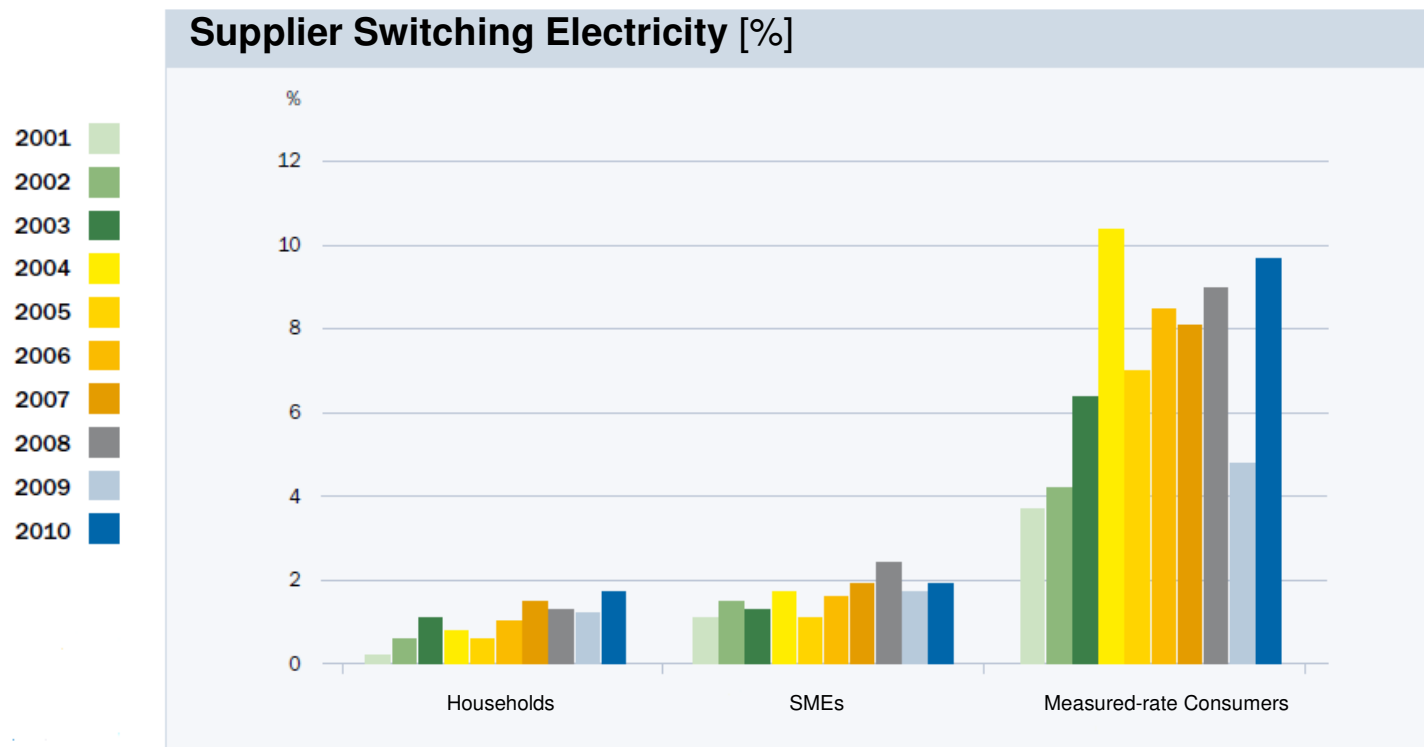
Calculations based on scenarios presented in Kratena K. (2011) 'Gesamtwirtschaftliche Effekte der Energiemarktliberalisierung in Österreich', Mimeo, Wien.

Competitive Pressure?



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- One indicator for retail markets is switching
- Only large industrial users seem to be interested in supplier switching

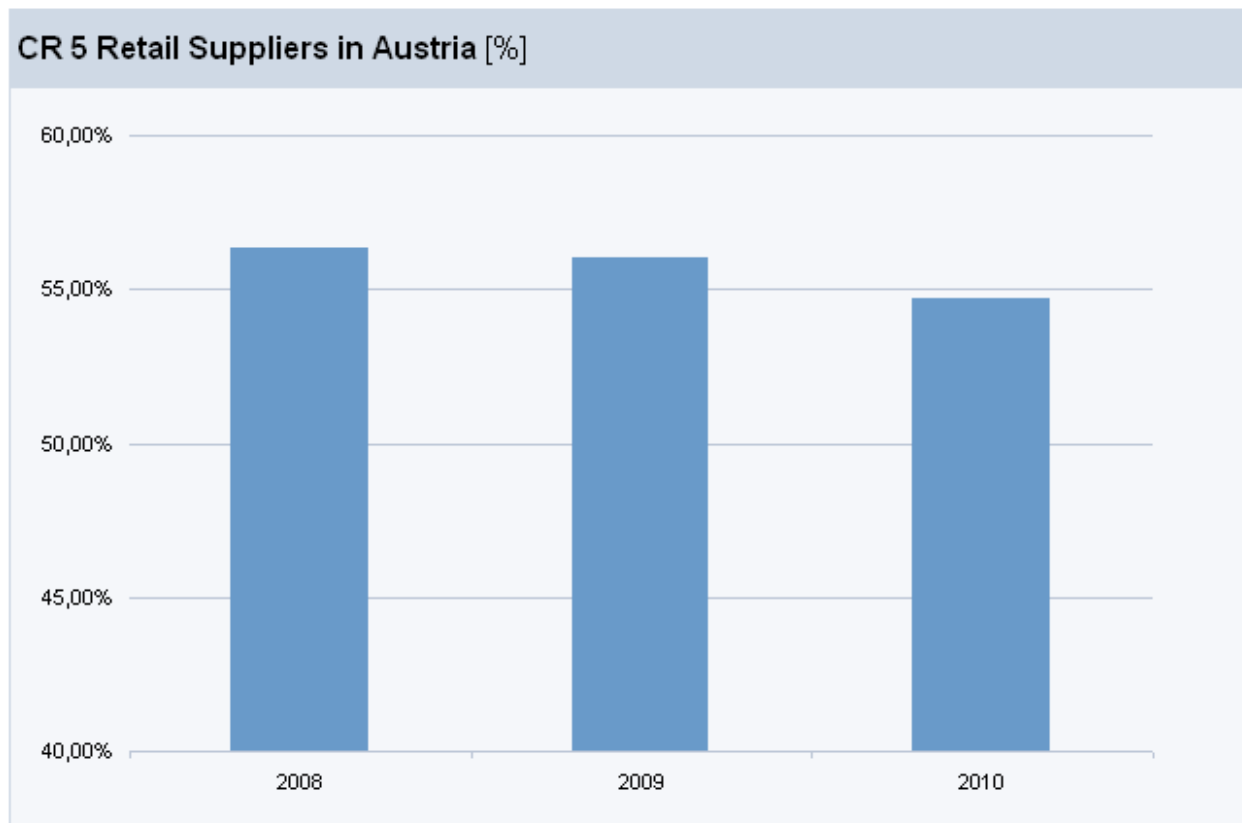


Structural Change



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- Structural change in the Austrian electricity retail sector also hasn't been forthcoming (plus state ownership)





Possible Causes

- Switching barriers especially for small and medium sized consumers (see e.g. discussion in Ebnet (2010))
- Limited savings – especially for low levels of consumption (but still actually rather large in absolute terms)
 - Pricing structure based on discounts which furthers confusion and lowers comparability
- Lack of information and awareness (compare petrol and electricity)
- State and cross-ownership for suppliers, no new entrants at retail level (state ownership for certain electricity companies defined by law)



Resulting Questions

- These problems lead us to the formulation of two main research questions in the Austrian context:
 - How much have consumers “lost” because of the lack of competition?
 - Which changes would help to further competition?
- The former is an empirical exercise
 - Relies on counterfactual
- Followed by qualitative approach looking at specific policy options

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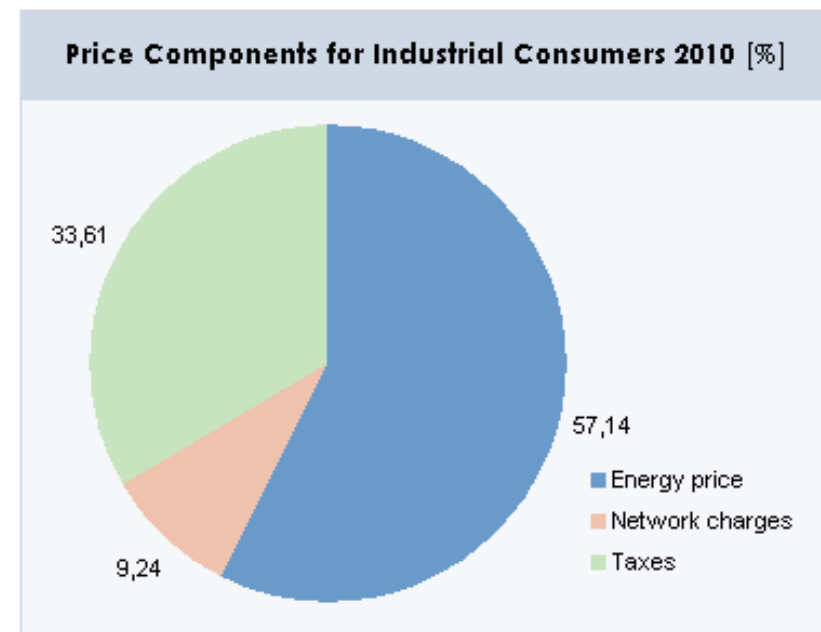
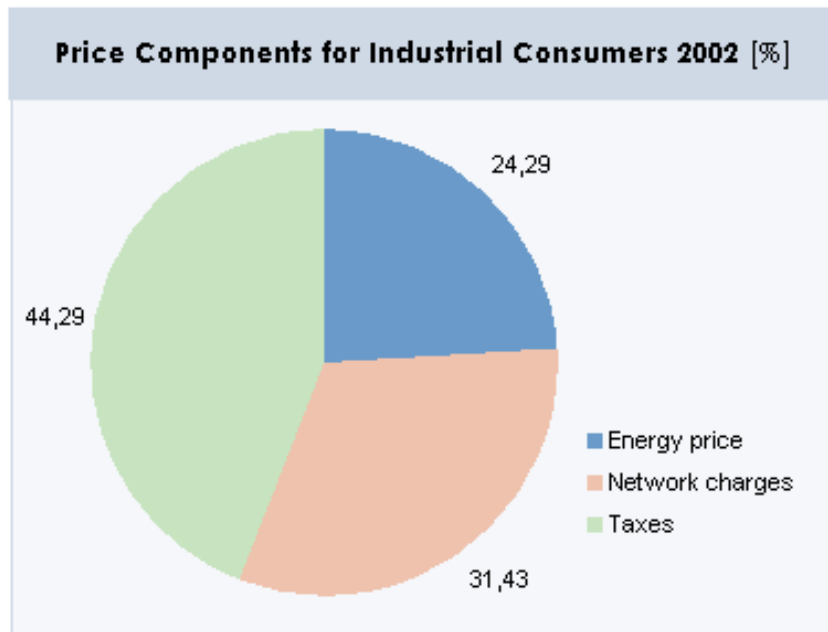
Why Prices?

- In principle from an IO perspective many factors would need to be analysed:
 - Market and firm structure
 - Products and quality
 - Technological changes
 - ...
- We look at electricity prices (= dependent variable)
 - From a consumer's point of view most important variable (if good is homogeneous and minimum quality is guaranteed)
 - Pragmatism: widely available data and of fairly reliable quality

Pricing for Industrial Consumers



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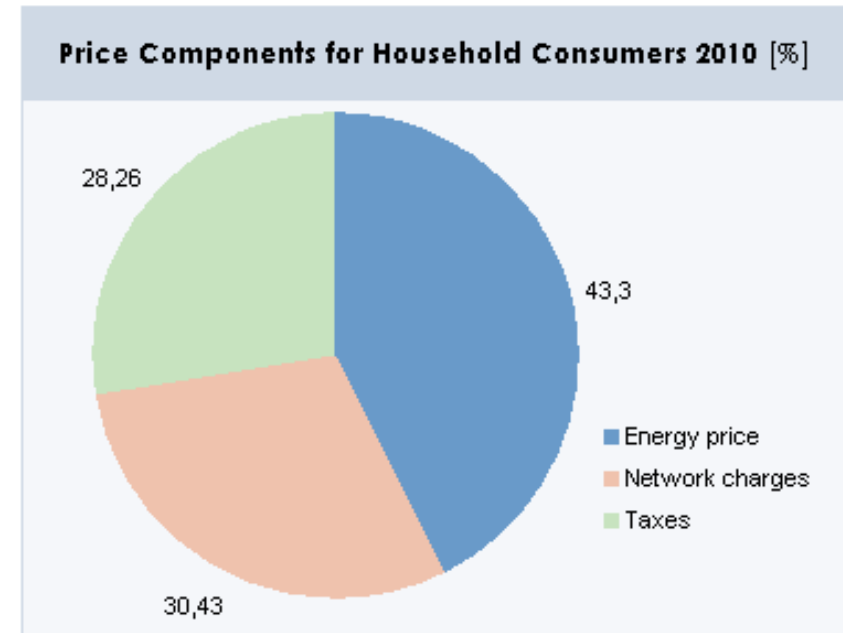
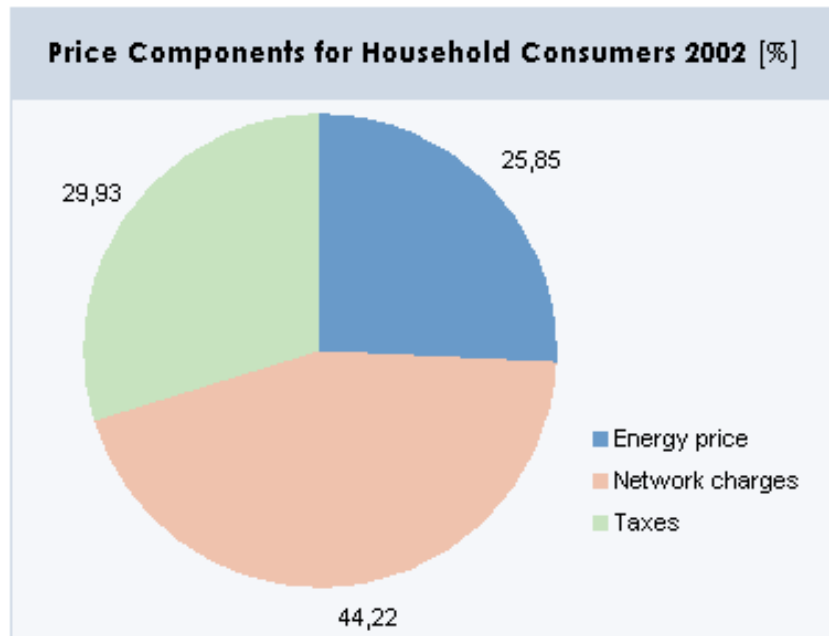


- Impressive structural change: regulated component (i.e. network charges) becomes less important

Pricing for Household Consumers



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- For household consumers this effect is less dramatic but still visible



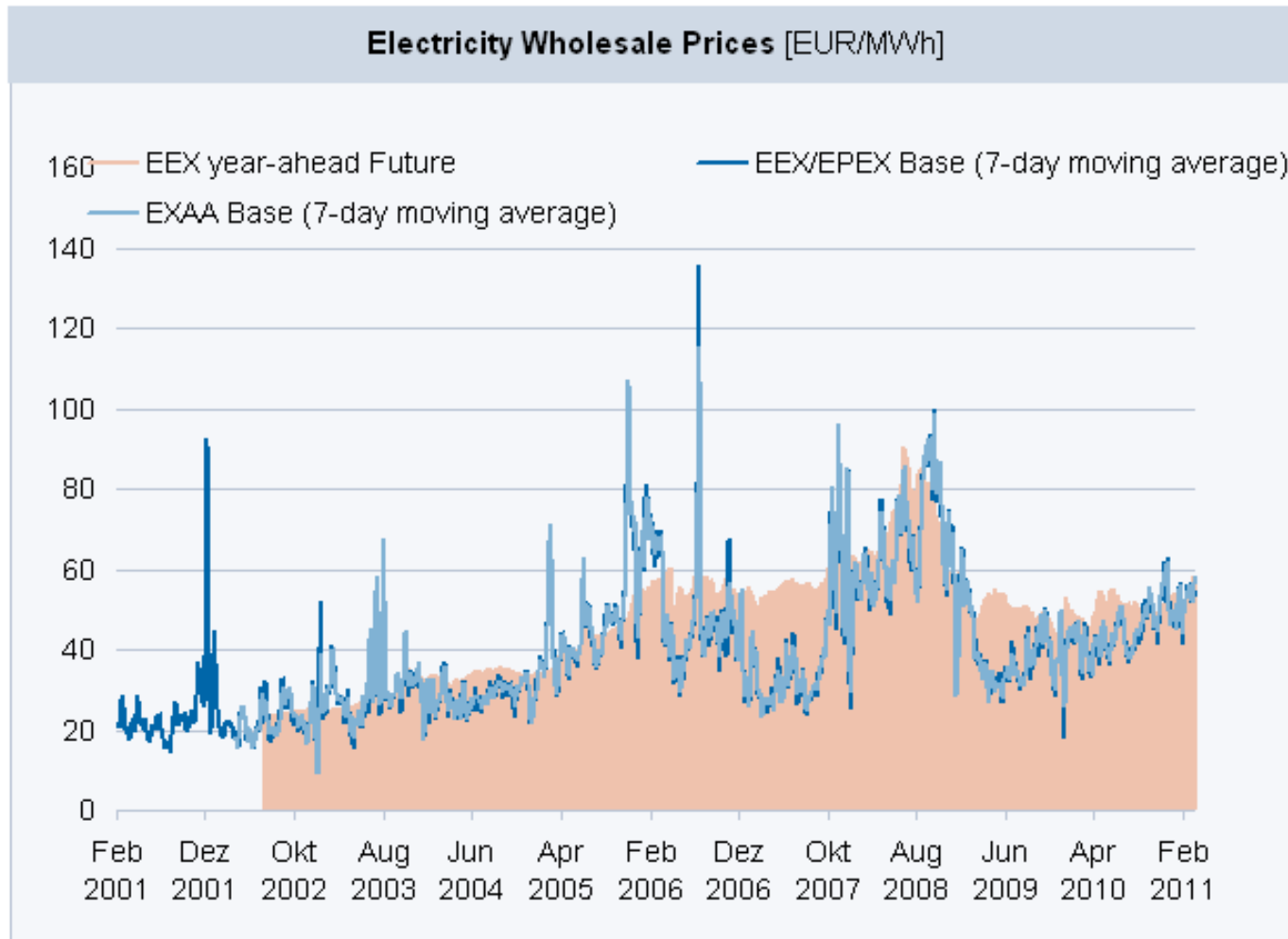
Electricity Retail Prices

- Regulation seems to have been effective in terms of significantly reducing network charges
 - has been shown econometrically in Kratena (2011)
- Energy prices have risen significantly and have grown in importance
 - Great dependence on wholesale prices needs to be taken into account
 - Especially since 2006-2008 has seen large increases in wholesale electricity prices and other energy prices (natural gas, Brent oil)

Wholesale Price Developments



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Fewer outliers 

Crash post-crisis 



Model Specification

- With this in mind and relying on Kratena we model household and industrial end user electricity prices as a function of
 - Natural gas wholesale price
 - Appropriate lag structure (AIC, BIC \rightarrow 1 lag)
 - Liberalisation dummy (one-off dividend)
 - Competition Indicator (switching rate, price differential)
- Time Series: Test for unit roots, cointegration
 - $I(1)$ but no cointegration \rightarrow proceed in first differences



Results on Switching Rates

- Switching rates seem to matter for industrial users but not statistically significant in household equation
- Although the one-off effect is much larger in magnitude

Results for Model on Switching Rates		
	Electricity Price for: Industry	Households
$\Delta \ln(\text{Import Pr Natural Gas}(t))$	0.1416 *** (0.0572)	0.1935 *** (0.0335)
$\Delta \ln(\text{Pr Electricity}(t-1))$	0.7389 *** (0.1037)	0.1108 (0.0803)
Lib. dividend 1999	-0.5966 (0.0376) ***	
Lib. dividend 2003		-0.0477 *** (0.0051)
$\Delta \text{Switching indicator}(t-1)$	-0.0155 * (0.008)	0.0096 (0.0198)
R2, adjusted	0.8119	0.4612
S.E. of regression	0.0689	0.0318
DW-statistics	1.9230	2.1432

- Also industry equation is a much better fit

Results on Price Competition



- No surprisingly this indicator is statistically insignificant for industrial consumers
- But it is for households and larger in magnitude than the one-off liberalisation dividend

Results for Model on Price Competition		
	Electricity Price for: Industry	Households
$\Delta \ln(\text{Import Pr Natural Gas}(t))$	0.1388 (0.1517)	0.2061 *** (0.029)
$\Delta \ln(\text{Pr Electricity}(t-1))$	0.7474 *** (0.169)	0.0886 ** (0.0405)
Lib. dividend 1999	-0.5995 *** (0.0401)	
Lib. dividend 2003		-0.0489 *** (0.0033)
Δ Price Competition	0.0629 (0.3749)	-0.0527 *** (0.0133)
R2, adjusted	0.8094	0.4974
S.E. of regression	0.0694	0.0307
DW-statistics	2.0771	2.2058

- To do: Use this result in counterfactual

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Credible sanctions

- Sanctions and penalties need to be credible and incentive-compatible
- Currently the regulator can file a request for penalties of up to € 50.000 at the district authority
 - For most utilities this seems rather low and is unlikely to be a sufficient deterrence
 - Does not reflect economic importance of these industries
- In selected cases a sanction currently available is the loss of license
 - This is hardly credible
 - It would defeat the object of stimulating competition by further reducing the number of firms
- It would be preferable to tie penalties to turnover (similar to antitrust law)



Effective Unbundling

- Monitoring competences for unbundling in electricity have been given to the federal states who themselves own the largest distribution networks
 - This generates massive conflicts of interest and should be changed
- Further only minimum standards (as presented in the 3rd package) have been applied in Austria
- Under these conditions it seems difficult to ensure effective unbundling and independence of DSOs
- More precise regulations with regard to unbundling also seem necessary (similar to the Austrian natural gas sector)



Turning Antitrust Law Around

- Currently in Austrian antitrust law competition authorities have to prove that dominant firms abuse their market power
 - In practice this is extremely difficult (just think of “justified” prices)
- It would be preferable if the position of competition authorities would be strengthened by turning this around (i.e. follow the German example in §29 GWB)
 - But still methodological problems remain (especially for markets where market abuse is difficult to define: e.g. balancing energy)
- While this would make ex-post checks of market results easier this is cannot be a substitute for creating a market structure where effective competition is possible



Merger Control

- In the past merger control in this area has been somewhat lacking
- Two most prominent examples
 - EnergieAllianz (2001)
 - EconGas (2002)
- Both significantly increased market concentration but were approved hoping that foreign entrants would improve competition
 - EnergieAllianz: HHI increase from 1.300 to 3.300; no foreign entry materialised
 - EconGas market share 86% for natural gas import, 80% market share in retail market
- Of course one could rely on ex-post instruments (see previous slides) but this seems insufficient (especially since position of competition authority in this area is far weaker)



Monitoring and Data Availability

- Within 3rd package monitoring becomes more important
 - In Austria some of these competences have been given to the federal states who themselves are owners of utilities (EIWOG 2010)
- International comparisons still difficult for lack of data (especially for independent researchers)
 - E.g. Eurostat or IEA
 - Even for basic data like prices
 - Also methodologies vary so that where data exist comparability is difficult

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Conclusions

- Lack of competition means that consumers have gained less than they could have with more intense competition
- So far we have observed a political preference for “Austrian” solution rather than competition
- Some recommendations:
 - Increase transparency and ensure effective unbundling
 - Automation and standardisation for switching processes
 - Credible sanctions/penalty (currently either € 50.000 or loss of concession)
 - Better merger control (e.g. EnergieAllianz and EconGas)
 - Efficient monitoring (by appropriate authorities) and improved data availability



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