The impact of cross-reference-pricing on pharmaceutical prices – manufacturers' pricing strategies and price regulation

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Setting public reimbursement prices in the EU-15

- Only national aspects are considered when regulating pharmaceutical prices
  - Germany, UK, Spain
- Prices are set or negotiated by governmental agencies using prices in foreign countries as part of their decision-making criteria
  - Belgium, Finland, France, Sweden, Denmark
- Prices are set using an index of foreign prices („cross-reference pricing)
  - Austria, Greece, Ireland, Italy, Luxembourg, the Netherlands, and Portugal

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Methods

- Cross-reference pricing schemes were classified
- Analytic model was built to simulate the effect of a marginal price reduction in Germany

- Information derived from:
  - official governmental sources
  - grey literature
  - European Observatory (HIT country profiles)
  - international organisations (World Bank, OECD)

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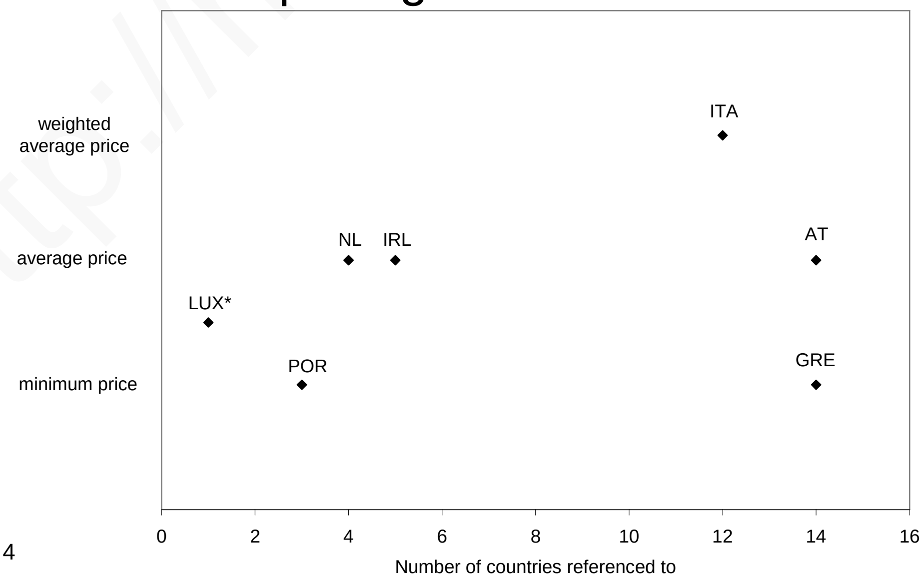
Classification of Cross-reference pricing schemes



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Cross-reference pricing

- As a result of cross-reference pricing there are interrelations between regulary schemes in different countries

$$NL = \frac{[BEL + FRA + GER + UK]}{4}$$

  - Some countries are included in cross-reference pricing schemes that use cross-reference pricing themselves

$$IRL = \min\left[UK; \frac{DEN + FRA + GER + NL + UK}{5}\right]$$

  - Cross-referencing across countries

$$AT = \frac{BEL + DEN + FIN + FRA + GER + GRE + IRL + ITA + LUX + POR + NL + SPA + SWE + UK}{14}$$

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Interrelations between regulatory schemes

Referenced countries

Cross-reference-pricing schemes

	AT	BEL	DEN	FIN	FRA	GER	GRE	ISL	IRL	ITA	LIE	LUX	POR	NL	NOR	SPA	SWE	UK
AT		x	x	x	x	x	x		x	x		x	x	x		x		x
GRE	x	x	x	x	x	x	x		x	x		x	x			x	x	x
IRL			x		x	x								x				x
ITA	x	x		x	x	x	x		x	x			x			x	x	x
LUX*		(x)			(x)	(x)												
NL		x			x	x												x
POR					x					x						x		

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Modelling the Impact of a marginal price reduction in Germany on Cross-reference Pricing Schemes (I)

Assumptions:

- the referenced drug is marketed in all EU-15 countries
  - launched in Italy before 1997, thus cross-reference pricing is applied in Italy
  - Greece does not reference to Germany or any country using cross-reference pricing
  - Portugal references to Italy
  - Luxemburg imports drug form France or Belgium (not cross-referencing to Germany)
  - Ireland references to the average price of the five countries
- the prices obtained through cross-reference pricing schemes are binding

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Modelling the Impact of a marginal price reduction in Germany on Cross-reference Pricing Schemes (II)

	direct impact	**indirect impact**	**total impact**
Austria	0.07	0.08	0.15
Italy	0.30 - 0.33	0.03	0.33 - 0.36
Ireland	0.21 - 0.23	0.05-0.06	0.27 - 0.29
Portugal	0.00	0.33-0.36	0.33 - 0.36
Netherlands	0.27 - 0.29	0.00	0.27 - 0.29

Variation is due to different wholesaler mark-ups in Germany

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Effects of cross-reference pricing

- Increased dependency on pricing decision in some European countries (e.g. France and Germany)
- Relocation of the reimbursement decision
- Burden of a reimbursement decision is shifted
    - Increased incentive for industry to prevent stronger market regulation / ignore market regulation
    - Higher pricing level (increased incentive to avoid price reductions)
    - Incentive to launch high priced dummies in small countries / not to launch a drug in a country with a low pricing level
- Enables Strategic product launches which might exploit differences in price setting

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Conclusions

If applying cross-reference pricing:

- As many countries as possible should be included into the scheme
- Countries that use cross-reference pricing themselves should not be included
- Market volumes of the referenced countries should be integrated into the index (e.g. Italy) to prevent the launch of high price dummies and launch delays in countries with small markets

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