



# Impact of VAT-Exemptions in the Postal Sector on Competition and Welfare

European Commission, DG Internal Market and Services  
November 2010

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# Agenda

- **The impact of VAT exemptions on competition and welfare**
  - Introduction
  - Model description
  - Simulation results
- **Back to the basics: Competition in the postal sector**
- **Regulatory remedies to VAT market distortions**
  - Price regulation?
  - USO compensation?

# Introduction

**„... to ensure sound management of the universal service and to avoid distortions of competition...“**

97/67/EC (Postal Directive)

## Conflicting policy goals:

- Competition! → Level playing field for all operators
- Affordable prices for USO products (“in the public interest”)

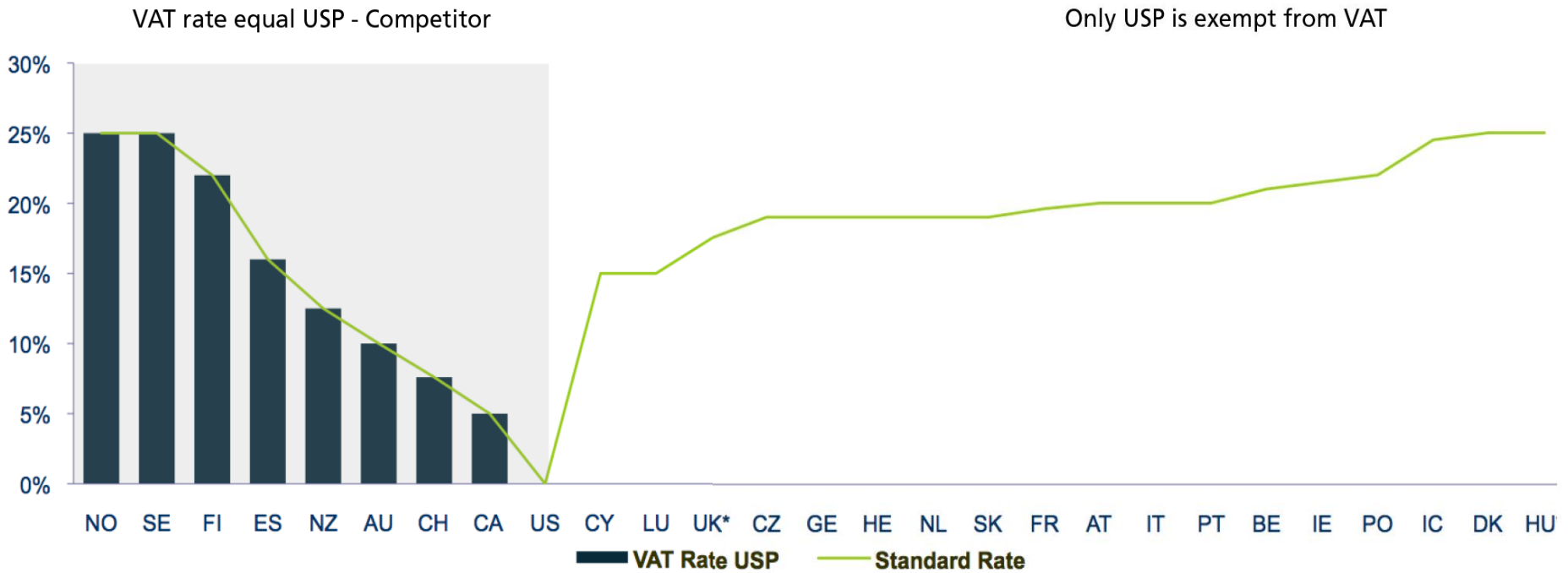
VAT exemptions for public postal operators in Europe recently confirmed by ECJ judgment; however, no exemption for individually negotiated prices on postal items.

## Dietl, Jaag, Lang, Lutzenberger, Trinkner (2010):

- Competitive effects of VAT exemptions, trade-offs
- Effects on profits, consumer surplus, tax revenue and welfare

# Current Situation

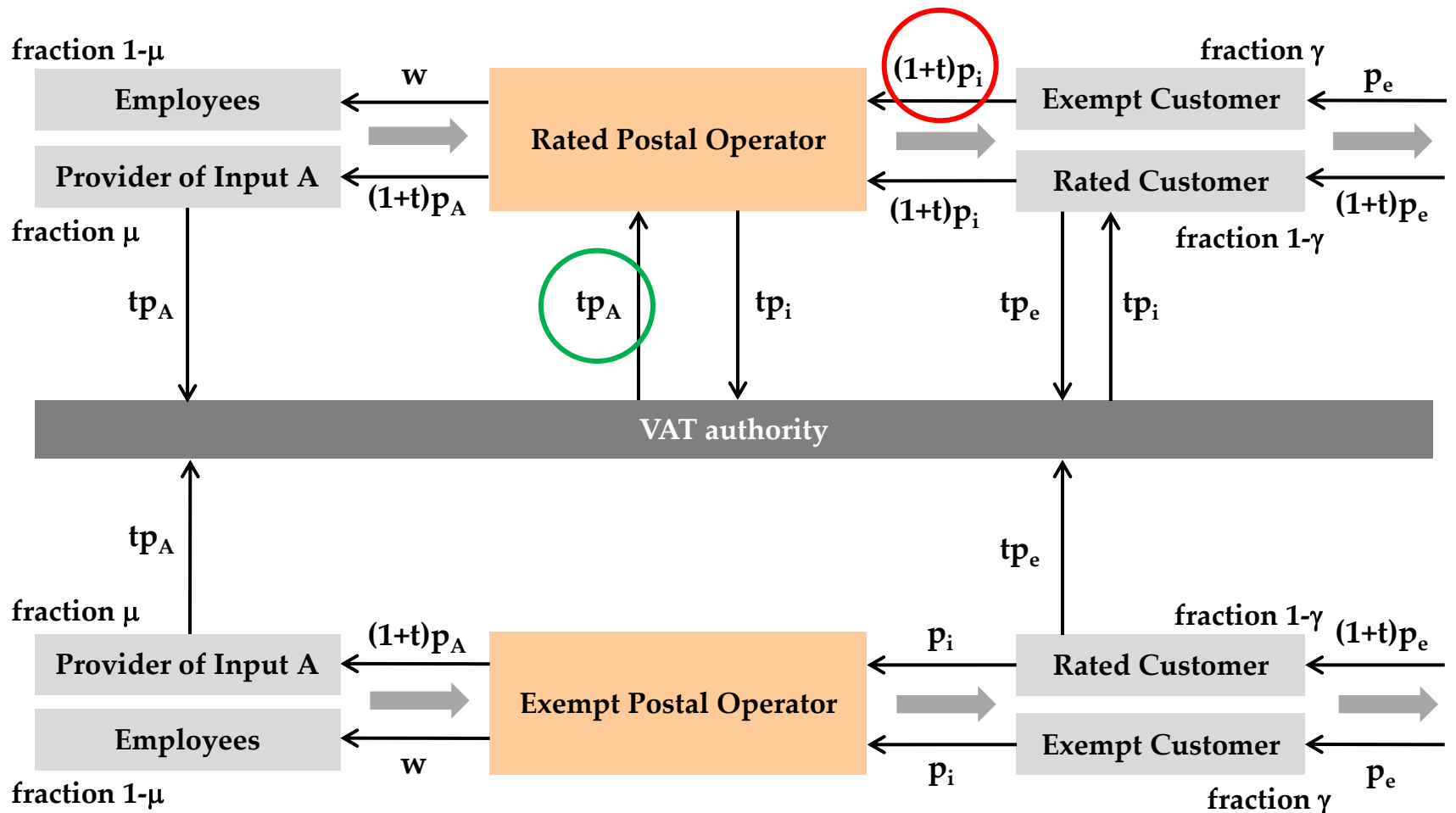
## VAT in IPC Member Countries



\*UK rate per January 2010, HU per July 2009

# How the VAT Works

## Rated and Exempt Operators



# Competitive Effects

Net competitive effect of VAT exemption is determined by the USP's

- ✘ **“Cost disadvantage”**: VAT on non-labor inputs cannot be reclaimed
- ✓ **“Pricing advantage”**: Lower net prices for exempt customers (e.g. banks, individuals)

**What is the net effect?**

→ **We need a theoretical model.**

- The first effect depends on the **fraction of non-labor inputs**
- The second effect depends on the **fraction of exempt customers**

→ **We need a simulation.**

# The Model

- Two postal operators: Incumbent, Entrant
- Distinction of VAT-rated inputs and exempt inputs  
 $1-\mu$  = fraction of exempt inputs  $\equiv$  fraction of labor costs
- Two types of customers: rated and exempt customers  
 $\gamma$  = fraction of exempt customers
- Equilibrium prices and quantities are endogenously determined. This allows to compute
  - Operators' profits
  - Consumer surplus
  - Tax revenues
 }  $\equiv$  overall welfare
- Price competition in differentiated products with two VAT regimes:
  - **Scenario A:** VAT exemption for the USP
  - **Scenario B:** No VAT exemption

# Assumptions

## Model Calibration

- Incumbent's advantage in quality and reputation:  
Has 80% market share if entrant offers same services
- Entrant's cost advantage:
  - 10% upstream (digital sorting)
  - 30% downstream (fewer deliveries per week)
- To isolate the competitive effects of different VAT regimes, we assume that
  - operators pay the same wages
  - employees and outsourced work force have the same wages→ Outsourcing is only relevant for VAT reasons



# Simulation Results I

## Base Case

Simulation Results Realistic Case ( $\mu I=0.3$ ;  $\mu E=0.8$ )

	Scenario A	Scenario B
Competitive Effects	tI=0;tE=0.2	tI=0.2;tE=0.2
Incumbent Market Share	60%	59%
Price Ratio (I/E) excl. VAT	137%	125%
Price Ratio (I/E) incl. VAT	114%	125%
Profit Ratio (I/E)	275%	178%
Profit I	33'210'986	23'547'197
Profit E	12'059'444	13'215'691
Welfare Effects		
Overall Price Level excl. VAT	0.34	0.32
Overall Price Level incl. VAT	0.36	0.38
Operator Profits	45'270'430	36'762'889
Consumer Surplus	352'656'946	349'511'937
Incremental Government Tax Revenue	-5'142'466	5'078'133
Overall Welfare	392'784'910	391'352'958

In the base case, compared to a symmetric VAT regime, the USP's VAT exemption

- distorts competition clearly in the incumbent's favor. Abolishing it would result in a decrease of its pre-tax prices and profits;
- increases consumer surplus and welfare.

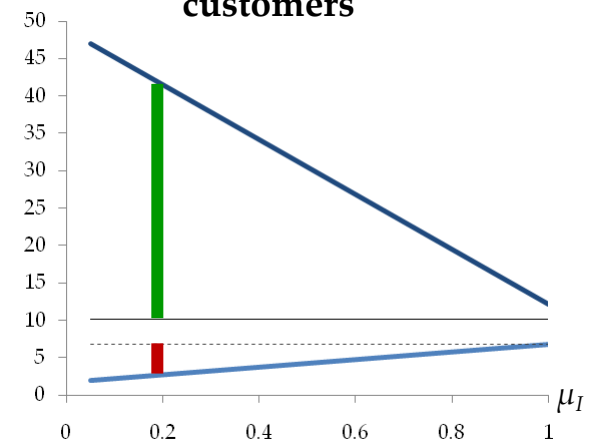
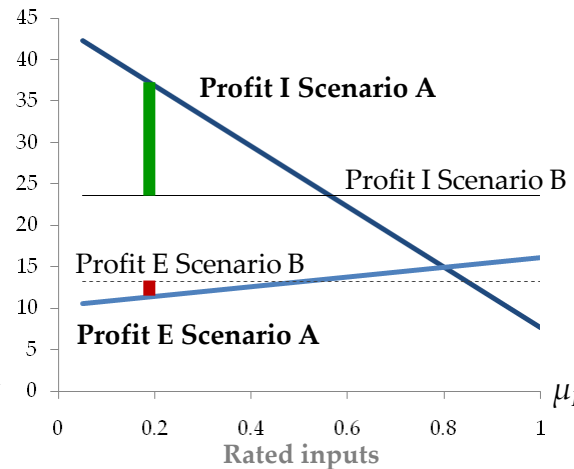
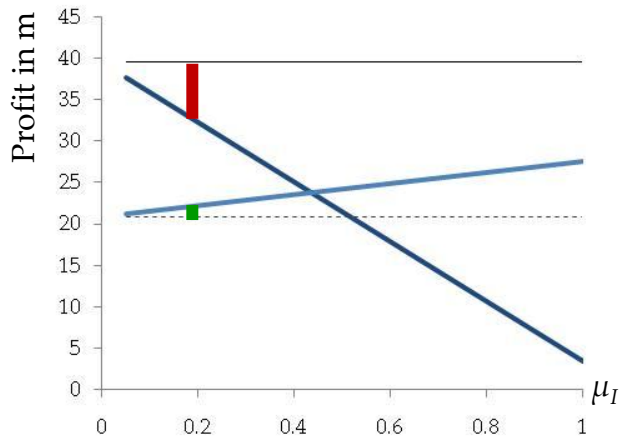
# Simulation Results II

## Is VAT Exemption Really a Competitive Advantage?

**Case i:** 100 % customers rated,  
e.g. industrial companies

**Case ii:** 50% customers rated

**Case iii:** 0% customers rated  
e.g. banks and retail  
customers



- The more important non-labor inputs are, the greater is the cost disadvantage of the exempt postal operator.
- The fewer customers are rated, the greater is the pricing advantage of the exempt postal operator.
- In a realistic case, VAT exemption is a competitive advantage (cf. base case).

# Conclusion

## Main Findings

The USP's VAT exemption...

- has a positive effect on its profit
- has a negative effect on the competitor's profit
- **therefore strengthens the USP's competitive position**
- has a positive effect on consumer surplus
- has a negative effect on tax revenue
- **has little (but positive) effect on welfare**
- **incentivizes the USP to employ own workers instead of subcontractors**

# Are There Regulatory Remedies?

To remember:

- Cost disadvantage is not product- or customer-specific
- Pricing advantage is specific to exempt customer segment

VAT is only one part of the puzzle

Is there a regulatory antidote?

- Price regulation?
- USO regulation?



Beware of the side effects!

# Competition in the Postal Sector

## Barriers to Entry vs. Invitations to Compete

- **Legal aspects**
  - Reserved Area
- **Regulatory aspects**
  - VAT exemptions
  - USO and their financing
  - Minimum wages
  - Network access
  - Pricing flexibility
- **Economic aspects**
  - Cost structure (proportion of fixed costs, geography)
  - Market development (substitution!)



**Uncertainty**

# Competition in the Postal Sector

## It's All About the Cherries



Observed market entry strategies (Netherlands, Sweden) are highly selective with respect to

- area coverage,
- product range,
- customer focus

**Postal competition is likely to remain asymmetric for the near future**  
**Entrants will be the „Price-followers“**

# Competition in the Postal Sector

## A Level Playing Field or an Uphill Battle?

$$\begin{aligned}\text{Profit} &= \text{Revenue} - \text{Cost} \\ &= \text{Price} * \text{Quantity} - \text{Cost}\end{aligned}$$

→ Quantity (market share) comes at the cost of margin and vice versa.

Competition is in Prices

Cost is the Playing Field

Price ~ Cost

Determined by

- Form of Production (delivery frequency,...)
- Scale of Production
- Labor conditions (80% cost share!)
- Taxes

May vary for different customers

# Regulatory Remedies

## What About Price Regulation?

**VAT-advantage may already be compensated by other factors**

### **Retail-price regulation**

- **Reduces the USP's profit...**
  - **But: Also the competitors'!**
- May drive competitors out of the market (if binding)**

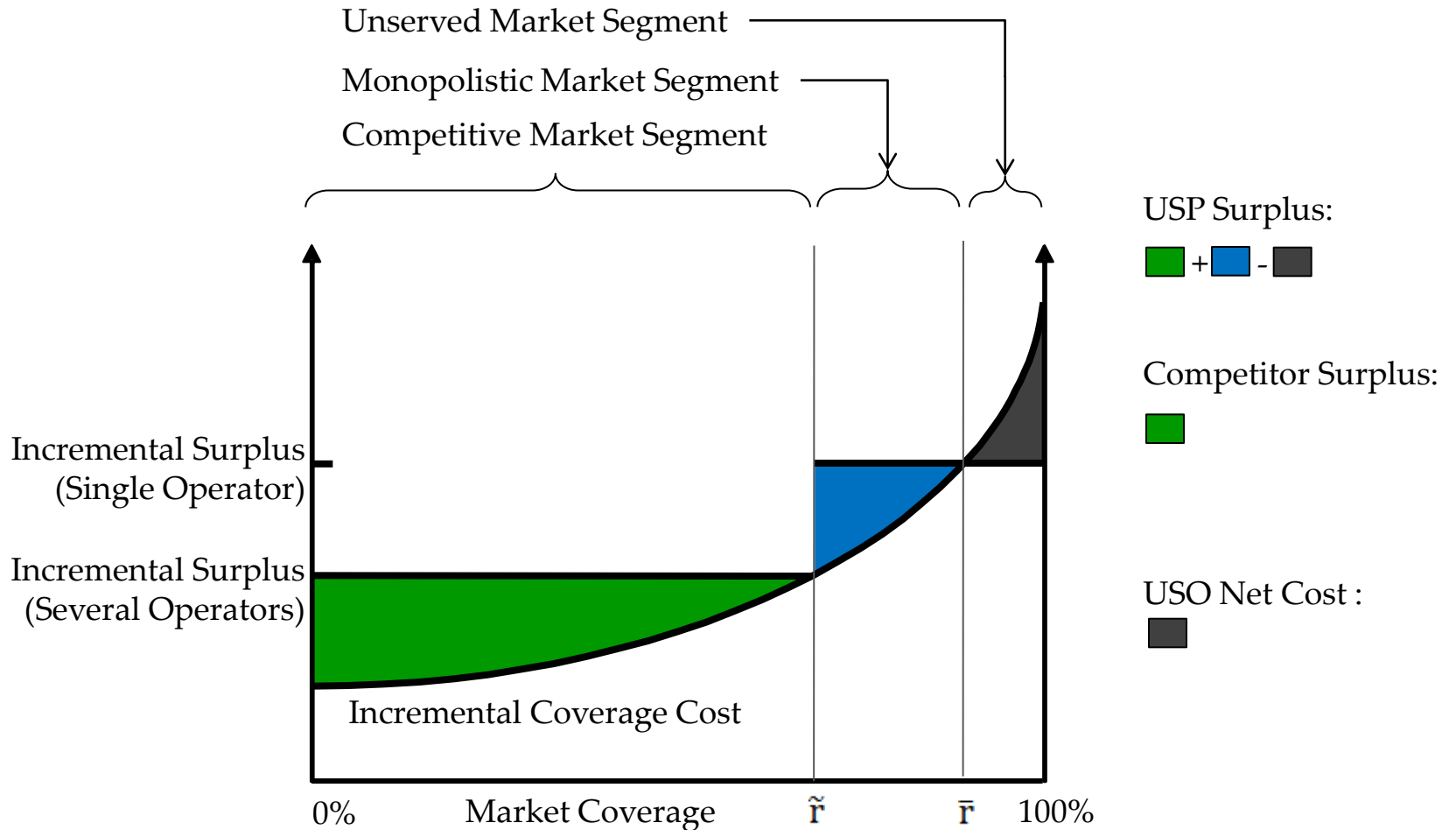
### **Wholesale-price regulation (access price)**

- **Lowers competitors' cost**
- **But: Price regulation to fine-tune competition?**



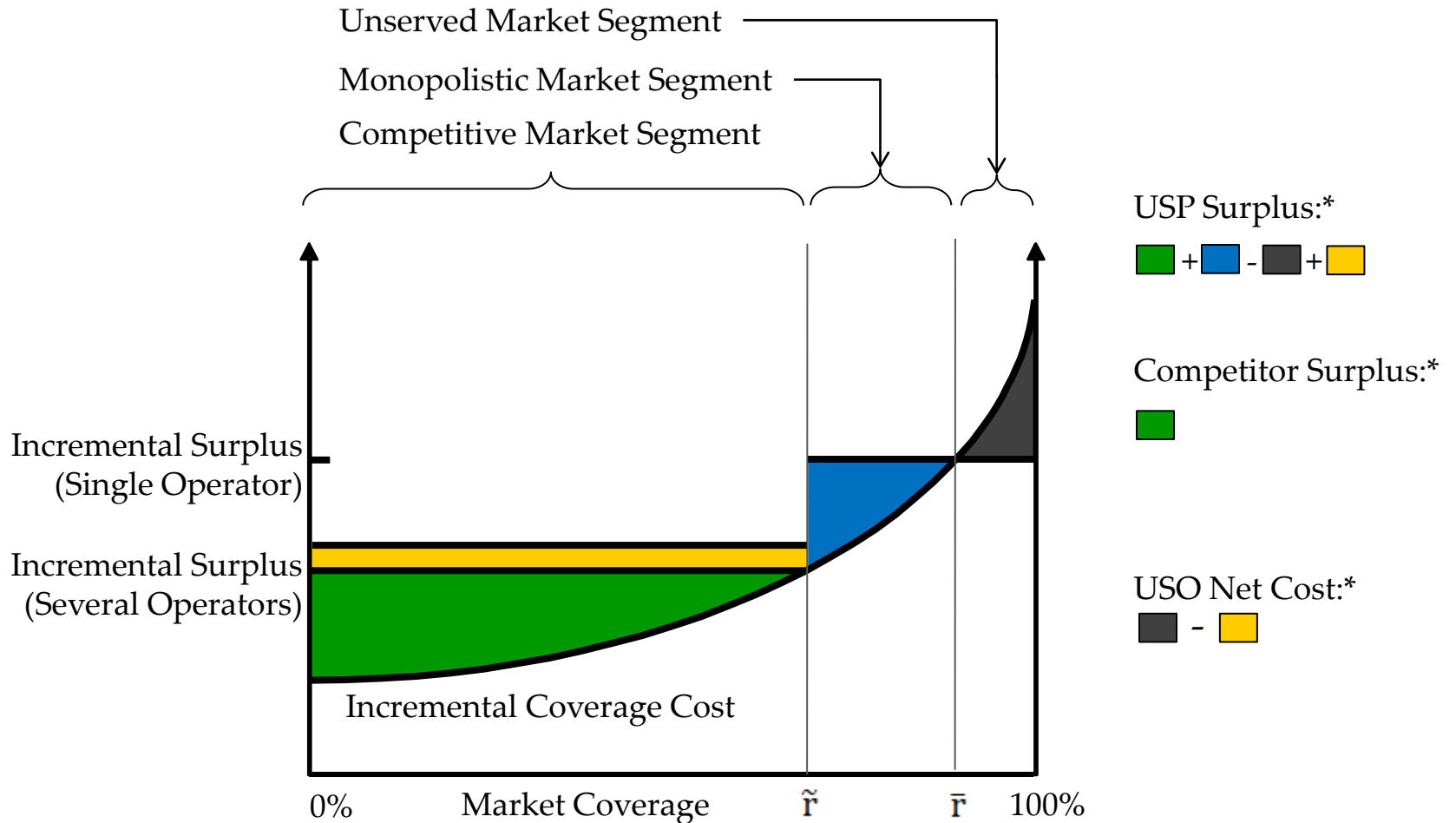
# What About the Net Cost of The USO?

## Competition with Equal VAT treatment



# What About the Net Cost of The USO?

## Competition with VAT Exemption



\*Additional effect: Reduced competitor's market coverage due to lower surplus in the competitive market segment; see Jaag and Trinkner (JRE, 2011)

# Calculating the Net Cost of Universal Service Obligations Again: Beware of the Side Effects

VAT exemption is a benefit of the USO

→ Take it into account in the costing of the USO!

## Article 7 of the Directive

“Where a Member State determines that the universal service obligations [...] entail a net cost [...] and represent an unfair financial burden on the universal service provider(s), it may introduce:

- a mechanism to compensate the undertaking(s) concerned from public funds; or
- a mechanism for the sharing of the net cost of the universal service obligations between providers of services and/or users.”

→ **Two-step procedure!**

**Interaction of costing and financing?**

## Annex I of the Directive

“The calculation of the net cost of specific aspects of universal service obligations is to be made separately and so as to avoid the double counting of any direct or indirect benefits and costs.”

→ **Separate calculation!**

**Interaction of interdependent USO-dimensions?**

**Thank you for your attention!**

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