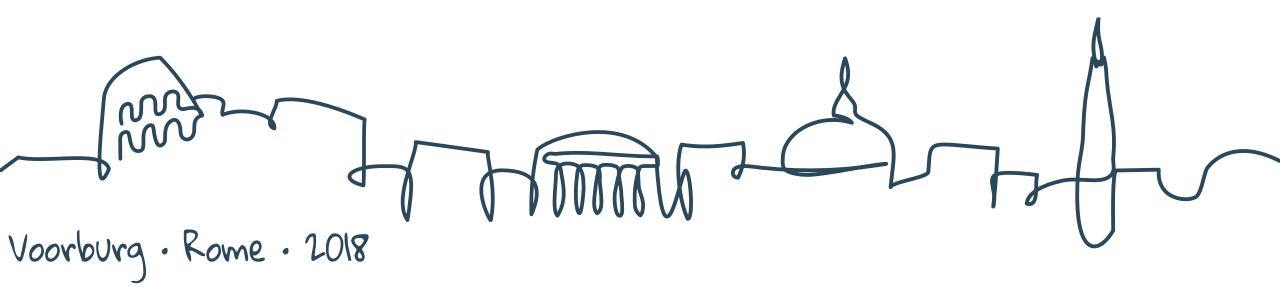


SPPI for Intermediaries

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1 Classification of Intermediaries

2 Calculation of SPPI





Classification (1) – Examples

| Company | Type of service | NACE | Classification | Business- model | Special characteristics |
|--------------|--------------------------------------|---------------|--|--|--|
| Booking.com | accommodation booking services | 7911 | travel agencies | commission based | booking intermediary huge market share> determines entire classification |
| Takeaway.com | food delivery services | 6312 | Data processing, hosting and related activities | commission based | intermediary for food delivery services, How to classify? |
| Funda B.V. | real estate services | 6201/ 6399 | Computer programming activities/Data processing, hosting and related activities | advertising revenue/ commission based | website includes 85% of private sector real estate for sale. arguably not an intermediary since it only provides information real estate agents however have to pay to place the properties on the site. |
| Bol.com B.V. | retail sale | 4791 | Retail sale via mail order houses or via Internet | commission based/ own inventory | web shop, but acts in part as an intermediary for third party sellers. |

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Classification (2) – Challenges

- O Intermediaries are often classified as IT companies or data processing/hosting companies (Funda B.V., Takeaway.com)
- O Intermediaries classified in the same industry as the underlying services may be problematic due to scale differences (Booking.com)
- O Intermediaries may have revenue from other activities (Funda B.V.) or intermediary services are not their main activity (Bol.com)
- O Who decides on the classification? In the Netherlands companies choose a classification when registering in the Chamber of Commerce.





Classification (3) – Conclusions and recommendations

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- O Status quo is ambiguous and there a no rules yet. Therefore economic change and structures are measured inconsistently.
- O Theoretically in the nearby future half the economy may be classified as other IT services leaving little room for economic analysis or policy making.
- O Intermediaries should be classified in a separate subcategory within the industry of the underlying service
- O Or: Intermediaries need their own classification

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Calculation (1) – Starting points

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- O SPPI's are used (among other things) as a deflator of revenues to calculate volume
- O Prices for intermediaries depend in part on the price of the underlying service sold
- O Prices for intermediaries are usually some combination of a fixed fee and a percentage fee





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Calculation (2) – Examples

| Variant 1 Fixed fee | Fee | # units sold | Revenue T-1 | Revenue T | Price T-1 | Price T | Price change T | Volume change T |
|------------------------|-------|--------------------|----------------|--------------|--------------|------------|-------------------|--------------------|
| Total | | 100 | 10,000 | 11,000 | 100 | 110 | 10% | 0% |
| Company C | | 100 | 9,000 | 9,900 | 90 | 99 | 10% | 0% |
| Intermediary I | Fixed | 100 | 1,000 | 1,100 | 10 | 11 | 10% | 0% |

O Fixed fee is straightfoward and can be measured directly





Calculation (3) – Examples

| Variant 2 perc. fee | Fee | # units sold | Revenue T-1 | Revenue T | Price T-1 | Price T | Price change T | Volume change T |
|------------------------|-----|--------------------|----------------|--------------|--------------|------------|-------------------|--------------------|
| Total | | 100 | 5250 | 5775 | 52.5 | 57.75 | 10% | 0% |
| Company C | | 100 | 5000 | 5500 | 50 | 55 | 10% | 0% |
| Intermediary I | 5% | 100 | 250 | 275 | 2.5 | 2.75 | 10% | 0% |

- O With a percentage fee calculation a price change by company leads to an actual price change for Intermediary I. Therefore, be careful not to measure the 5% percentage fee.
- O However, if company C's price change is due a quality change should you still consider this an actual price change?

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Calculation (4) – Examples (cont.)

| Variant 3 Combination fee | Fee | # units sold | Revenue T-1 | Revenue T | Price T-1 | Price T | Price change T | Volume change T |
|------------------------------|---------------|--------------------|----------------|--------------|--------------------|----------------------|-------------------|--------------------|
| Total | | 100 | 6,250 | 6,975 | 62.5 | 69.75 | 11.6% | 0% |
| Company C | | 100 | 5,000 | 5,500 | 50 | 55 | 10% | 0% |
| Intermediary I | 5% + fixed | 100 | 1,250 | 1,475 | 10 + 2.5 = 12.5 | 12 + 2.75 = 14.75 | 18% | 0% |

O With a combination fee, the actual price change for intermediary I depends on both the change in the fixed fee as on the price change for the underlying service.





Calculation (5) – Examples (cont.)

| Total Output Price | Fee | # units sold | Revenue T-1 | Revenue T | Price T-1 | Price T | Price change T | Volume change T |
|-----------------------|-----|--------------------|----------------|--------------|--------------|------------|-------------------|--------------------|
| Total | | 100 | 6,250 | 6,975 | 62.5 | 69.75 | 11.6% | 0% |

O Total output price accurately reflects the price change if and only if both the service company and the intermediary have the same classification.





Calculation (6) – Conclusions

- O If the intermediary uses a fixed fee, a straightforward measurement of the price change is sufficient
- O If the intermediary uses a percentage fee, any change in the price of the underlying service results in an actual price change, even if the fee percentage itself doesn't change
- O In case of a percentage fee, quality changes in the underlying service will lead to a higher intermediary price, but this may not be an actual price change.
- O If the total output price is measured this only measures the average price change. One cannot assume this price change accurately measures changes for the individual companies.

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