Definition of the country we are looking at
Countries developing or having developed SPPIs for telecommunications

According to an OECD inquiry:

33 Countries: AUS, AUT, BEL, BGR, CAN, CHE, CYP, CZE, DEU, DNK, ESP, EST, FIN, FRAN, GBR, GRC, HUN, ITA, JPN, KOR, LTU, MEX, NLD, NOR, NZL, POL, SVK, SVN, SWE, USA, CHN, HKG, VNM

Price Collection: Quarterly (18)
  Monthly (12)
  Semi-annually (1)

Pricing Method: Unit Value (16)
  Price of repeated service (16)
  Contract (3)
  Component Pricing (3)
  Model Pricing (2)
Definition of service being priced

Telecommunications

ISIC Rev. 3.1: Code 64.2
NACE Rev. 1.1: Code 64.2
ÖNACE 2003 (= NACE Rev. 1.1): Code 64.2

This class includes:

- transmission of sound, images, data or other information via cables, broadcasting, relay or satellite
- telephone, telegraph and telex communication
- maintenance of the network, transmission (transport) of radio and television programmes
- internet access provision

This class excludes:

- production of radio and television programmes even if in connection with broadcast (see 92.20)
### Telecommunications NACE Rev. 1.1 (Code 64.20)

<table>
<thead>
<tr>
<th>NACE Rev. 1.1</th>
<th>Description</th>
<th>CPA 2002</th>
<th>Description</th>
<th>Service products</th>
</tr>
</thead>
</table>
| 64.20         | Telecommunications | 64.20.1 | Data and message transmitting services | 64.20.11 Public local telephone services  
64.20.12 Public long distance telephone services  
64.20.13 Mobile telephone services  
64.20.14 Shared business network services  
64.20.15 Dedicated business network services  
64.20.16 Data network services  
64.20.18 Internet access provision services |
| 64.20.2       | Other telecommunications services | 64.20.21 Television transmission services  
64.20.22 Radio transmission services  
64.20.23 Interconnection services  
64.20.28 Other telecommunications services |
| 64.20.3       | Radio and television cable services | 64.20.30 Radio and television cable services |
ÖNACE Rev. 1.1 (Code 64.20) Telecommunications

- ÖNACE 64.20-01: Telecommunications (without cable TV and radio activities)
  - Data and message transmitting services (ÖCPA 64.20.1)
  - Other telecommunications services (ÖCPA 64.20.2)

- ÖNACE 64.20-02: Cable TV and radio activities
  - Radio and television cable services (ÖCPA 64.20.3)
## Telecommunications NACE Rev. 2 (Code 61)

<table>
<thead>
<tr>
<th>NACE Rev.2</th>
<th>Description</th>
<th>CPA 2008</th>
<th>Description</th>
<th>Service products</th>
</tr>
</thead>
<tbody>
<tr>
<td>61.1</td>
<td>Wired telecommunications activities</td>
<td>61.1</td>
<td>Wired telecommunications activities</td>
<td>61.10.1 Data and message transmitting services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.10.2 Carrier services for wired telecommunications</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.10.3 Data transmission services over wired telecommunications networks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.10.4 Wired Internet telecommunications services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.10.5 Home programme distribution services over wired infrastructure</td>
</tr>
<tr>
<td>61.2</td>
<td>Wireless telecommunications activities</td>
<td>61.2</td>
<td>Wireless telecommunications activities</td>
<td>61.20.1 Mobile telecommunications services and private network services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.20.2 Carrier services for wireless telecommunications</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.20.3 Data transmission services over wireless telecommunications networks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.20.4 Wireless Internet telecommunications services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.20.5 Home programme distribution services over wireless networks</td>
</tr>
<tr>
<td>61.3</td>
<td>Satellite telecommunications activities</td>
<td>61.3</td>
<td>Satellite telecommunications activities</td>
<td>61.30.1 Satellite telecommunications services, except home programme distribution services via satellite</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.30.2 Home programme distribution services via satellite</td>
</tr>
<tr>
<td>61.9</td>
<td>Other telecommunications activities</td>
<td>61.9</td>
<td>Other telecommunications activities</td>
<td>61.90.1 Other telecommunications services</td>
</tr>
</tbody>
</table>
ÖNACE Rev. 2 (Code 61) Telecommunications

- 61.1 Wired telecommunications activities
- 61.2 Wireless telecommunications activities
- 61.3 Satellite telecommunications activities
- 61.9 Other telecommunications activities
Pricing unit of measure

Depends on the chosen pricing methodology

- Rates
- Bills
- Turnover / quantities
## Price collection

### Rates

<table>
<thead>
<tr>
<th></th>
<th>Private</th>
<th></th>
<th>Business</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>daytime tariff</td>
<td>evening/weekend</td>
<td>daytime tariff</td>
<td>evening/weekend</td>
</tr>
<tr>
<td><strong>National</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Variable fees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td>4,08 Cent</td>
<td>1,13 Cent</td>
<td>Local</td>
<td>3,40 Cent 1,13 Cent</td>
</tr>
<tr>
<td>National</td>
<td>4,92 Cent</td>
<td>2,17 Cent</td>
<td>National</td>
<td>4,50 Cent 2,17 Cent</td>
</tr>
<tr>
<td>to 0664/0680</td>
<td>13,63 Cent</td>
<td>11,00 Cent</td>
<td>to 0664/0680</td>
<td>13,02 Cent 11,00 Cent</td>
</tr>
<tr>
<td>to 0676/0677</td>
<td>16,53 Cent</td>
<td>13,33 Cent</td>
<td>to 0676/0677</td>
<td>15,87 Cent 13,34 Cent</td>
</tr>
<tr>
<td>to 0699/0688-8/0681</td>
<td>16,80 Cent 13,55 Cent</td>
<td>to 0699/0688-8/0681</td>
<td>16,13 Cent 13,55 Cent</td>
<td></td>
</tr>
<tr>
<td>to 0650</td>
<td>17,91 Cent</td>
<td>14,49 Cent</td>
<td>to 0650</td>
<td>17,05 Cent 14,49 Cent</td>
</tr>
<tr>
<td>to 0660/0678</td>
<td>21,03 Cent</td>
<td>16,98 Cent</td>
<td>to 0660/0678</td>
<td>20,07 Cent 16,97 Cent</td>
</tr>
<tr>
<td><strong>Fixed fees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone extension</td>
<td>€ 13,32</td>
<td></td>
<td>Telephone extension</td>
<td>€ 18,90</td>
</tr>
<tr>
<td>ISDN</td>
<td>€ 22,16</td>
<td></td>
<td>ISDN</td>
<td>€ 24,90</td>
</tr>
<tr>
<td>ISDN Multi</td>
<td></td>
<td></td>
<td>ISDN Passiv Multi</td>
<td>€ 349,90</td>
</tr>
<tr>
<td>ISDN Passiv Multi</td>
<td></td>
<td></td>
<td></td>
<td>€ 249,90</td>
</tr>
</tbody>
</table>
## Price collection (cont.)

### Unit Values

<table>
<thead>
<tr>
<th>Minutes - National to mobiles</th>
<th>Q1-07</th>
<th>Q2-07</th>
<th>Q3-07</th>
<th>Q4-07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise 1 Private</td>
<td>186.924</td>
<td>212.503</td>
<td>210.830</td>
<td>246.918</td>
</tr>
<tr>
<td>Enterprise 2 Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise 3 Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise 4 Private</td>
<td>1.570.697</td>
<td>1.455.265</td>
<td>1.379.430</td>
<td>1.475.380</td>
</tr>
<tr>
<td>Enterprise 5 Private</td>
<td>128.898</td>
<td>126.378</td>
<td>132.510</td>
<td>145.320</td>
</tr>
<tr>
<td>Enterprise 6 Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise 7 Private</td>
<td>177.053</td>
<td>202.386</td>
<td>214.764</td>
<td>243.856</td>
</tr>
<tr>
<td>Enterprise 8 Private</td>
<td>958.279</td>
<td>986.079</td>
<td>900.597</td>
<td>955.250</td>
</tr>
<tr>
<td>Enterprise 9 Private</td>
<td>315.500</td>
<td>275.700</td>
<td>237.900</td>
<td>230.700</td>
</tr>
</tbody>
</table>

### Turnover - National to mobiles

<table>
<thead>
<tr>
<th>Turnover - National to mobiles</th>
<th>Q1-07</th>
<th>Q2-07</th>
<th>Q3-07</th>
<th>Q4-07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise 1 Private</td>
<td>28.602</td>
<td>32.598</td>
<td>32.158</td>
<td>37.804</td>
</tr>
<tr>
<td>Enterprise 2 Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise 3 Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise 4 Private</td>
<td>287.470</td>
<td>265.371</td>
<td>252.228</td>
<td>270.221</td>
</tr>
<tr>
<td>Enterprise 6 Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise 7 Private</td>
<td>30.343</td>
<td>34.732</td>
<td>36.745</td>
<td>34.807</td>
</tr>
<tr>
<td>Enterprise 8 Private</td>
<td>187.986</td>
<td>195.679</td>
<td>178.151</td>
<td>186.164</td>
</tr>
<tr>
<td>Enterprise 9 Private</td>
<td>62.200</td>
<td>54.600</td>
<td>46.900</td>
<td>45.900</td>
</tr>
</tbody>
</table>
Market conditions and constraints

<table>
<thead>
<tr>
<th>ÖNACE category (Rev. 1.1)</th>
<th>Employees</th>
<th>Number of enterprises</th>
<th>Share on turnover of ÖNACE 64 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 Post and Telecommunications</td>
<td>48.390</td>
<td>572</td>
<td>100 %</td>
</tr>
<tr>
<td>64.2 Telecommunications</td>
<td>18.471</td>
<td>211</td>
<td>74.80 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ÖNACE category (Rev. 1.1)</th>
<th>Employees</th>
<th>Number of enterprises</th>
<th>Share on turnover of ÖNACE 64.2 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>64.2 Telecommunications</td>
<td>18.471</td>
<td>211</td>
<td>in 1000 €</td>
</tr>
<tr>
<td>Total</td>
<td>18,471</td>
<td>211</td>
<td>7,219,790</td>
</tr>
<tr>
<td>1 – 9</td>
<td>166</td>
<td></td>
<td>2.19 %</td>
</tr>
<tr>
<td>10 – 19</td>
<td>20</td>
<td></td>
<td>3.37 %</td>
</tr>
<tr>
<td>20 – 49</td>
<td>10</td>
<td></td>
<td>1.36 %</td>
</tr>
<tr>
<td>50 – 249</td>
<td>7</td>
<td></td>
<td>c.</td>
</tr>
<tr>
<td>≥ 250</td>
<td>8</td>
<td></td>
<td>c.</td>
</tr>
</tbody>
</table>
Market conditions and constraints (cont.)

<table>
<thead>
<tr>
<th>ÖNACE category (Rev. 1.1)</th>
<th>Number of enterprises</th>
<th>Share on turnover 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>64.2 Telecommunications</td>
<td></td>
<td>in 1.000 €</td>
</tr>
<tr>
<td>TOTAL</td>
<td>211</td>
<td>7,219,790</td>
</tr>
<tr>
<td>64.20-01 Telecommunications (without cable TV and radio activities)</td>
<td>144</td>
<td>94,64 %</td>
</tr>
<tr>
<td>64.20-02 Cable TV and radio activities</td>
<td>67</td>
<td>5,36 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ÖNACE category (Rev. 2)</th>
<th>Number of enterprises</th>
<th>Share on turnover 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>61. Telecommunications</td>
<td></td>
<td>in 1.000 €</td>
</tr>
<tr>
<td>TOTAL</td>
<td>319</td>
<td>7,917,396</td>
</tr>
<tr>
<td>61. 1 Wired telecommunications activities</td>
<td>135</td>
<td>49 %</td>
</tr>
<tr>
<td>61.2 Wireless telecommunications activities</td>
<td>57</td>
<td>49 %</td>
</tr>
<tr>
<td>61.3 Satellite telecommunications activities</td>
<td>c.</td>
<td>c.</td>
</tr>
<tr>
<td>61.9 Other telecommunications activities</td>
<td>c.</td>
<td>c.</td>
</tr>
</tbody>
</table>
Special conditions or restrictions

- Liberalized service branch
- RTR has to ensure free and fair market competitions
- Mobile segment is rapidly growing
- For some areas unfortunately no b2b data available
- Record keeping practice: internet, turnover data
Telecommunications
(without cable TV and radio)

Method: Cut-off sample
(90% turnover coverage of each submarket)

Source: RTR

Telecommunications
(without cable TV and radio)

Method: selected „b2b“ services

Source: RTR
Evaluation of standard vs. definition and market conditions

Telecommunications

- Fixed-link voice telephony
  - Monthly base fees
  - Connection charges
  - Call Origination
  - Call Termination
  - Transit services

- Mobile communication
  - Connection charges (including monthly base fees)
  - Termination SMS

- Broadband
  - Bandwidths up to 2 Mbit/s
  - Termination of voice services

- Leased Lines
  - Bandwidths over 2 Mbit/s
Bill method

- **Advantages**
  - Recalculation of originally selected bills
  - Bills consist of various different services of the branch
  - Prices can be estimated
  - Discounts should be included

- **Drawbacks**
  - Burdensome
  - Selection of simple bills
  - Bundling
SPPI Pricing Methods

Rate method

- Advantages

  Provisions of rates
  Rates and tariffs could be entered in bills by the NSI
  Services (bills) held constant over time
  Also discounts should be incorporated

- Drawbacks

  Discount information not always available
  Bundling of services
  Changes in the price of one rate influence other rates
Unit Value method

Advantages

- Provision of turnover and quantity data
- Delivered by the accounting system of the enterprises
- Not so burdensome
- Probably collected by national regulatory authority
- Discounts are already incorporated

Drawbacks

- In general not the most favoured pricing method
- Only for homogenous groups of services advisable
- Start 2005
- Liberalized market
- Monitored by the RTR
  (Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR-GmbH))
- Communication Survey Regulation 2004
- "B to All" index
- Fixed-base index (base year 2006)
- Revision every 5 years
Index characteristics – Telecommunications (cont.)

- Unit values
- Survey (turnover & quantities) is carried out by the RTR
- 23 reporting enterprises (represent 90% of each submarket)
- 193 Unit values
- 22 low level sub-indices calculated by using the weighted arithmetic mean
- 4 main sub-indices calculated by using the weighted arithmetic mean (fixed-link – mobile – broadband – leased lines)
- Weights for the aggregation of all sub-indices are based on turnover data
Index characteristics – Telecommunications (cont.)

- **Fixed-link**: Fixed-link telecommunication to mobile - calls to Austrian mobile networks (turnover & minutes)

- **Mobile**: Call termination fees ( = interconnection service) (turnover & minutes)

- **Broadband**: Broadband internet access (turnover & number of broadband circuit points)

- **Leased lines**: Leased lines with bandwidths over 2 Mbit/s (turnover & number of lines)
# SPPI Telecommunications

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q 1</td>
<td>Q 2</td>
</tr>
<tr>
<td>Telecommunications total</td>
<td>87,9</td>
<td>83,6</td>
</tr>
<tr>
<td>Fixed-link Telecommunications</td>
<td>99,8</td>
<td>100,0</td>
</tr>
<tr>
<td>Mobile Telecommunications</td>
<td>81,1</td>
<td>74,1</td>
</tr>
<tr>
<td>Broadband</td>
<td>97,6</td>
<td>96,7</td>
</tr>
<tr>
<td>Leased lines</td>
<td>92,5</td>
<td>100,4</td>
</tr>
</tbody>
</table>

\(^1\) preliminary

## SPPI for Telecommunications

![Graph showing SPPI for Telecommunications]

- **Telecommunications**: Black line with diamonds
- **Fixed link telecommunications**: Pink line with squares
- **Mobile telecommunications**: Yellow line with triangles
- **Broadband**: Green line with circles
- **Leased lines**: Purple line with stars

2006 = 100

17.09.2008

**STATISTIK AUSTRIA**
23rd Voorburg Group Meeting
Aguascalientes 22-26 September

Telecommunications
National Accounts / Turnover

Josef Auer
23.09.2008
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www.statistik.at
### NA CONCEPTS: Working classification

| ÖNACE 64          | 64.11 + 64.12 + 64.20-01 | National post activities  
|                   |                           | Courier activities other than national post activities  
|                   |                           | Telecommunications  
| 64.20-02          |                           | Cable, Radio and TV distribution  

17.09.2008

STATISTIK AUSTRIA

25
NA CONCEPTS: Compilation of output at current prices

Data source

- Structural business survey
- Results of Input/Output Analysis
- Annual company reports
- Annual auditing reports

+ Adaptions for NA requirements
Important branch-specific aspects:

- Quickly developing products
- Complex charging mechanisms
- Radical technical changes (quality)
- Discounts in the business segment
- Bundling of products (mobile phone services)
Recommendations
(HB on price and volume measures)

- General: “indicators to be fully representative of the products and the full range of charges made”

- A method: quality adjusted PPIs for b2b, CPIs (adj. to basic prices) for b2c

- B method: PPIs (non-QA, imperfect coverage), UVIs (for homogeneous products), volume indicators (reflecting full range of products), detailed CPIs (if price developments in business and household sector similar)

- C method: CPIs (if different price developments for business and household transactions are evident but no differentiation is made)
Present NA practice in Austria

- **64a Post and courier activities, Telecom**
  
  Weighted (by turnover) composite index consisting of:
  
  - Index for mobile phone services (HICP sub-index)
  - Index for the Austrian Telekom (HICP sub-index)
  - Index for postal services (HICP sub-index)

- **64b Cable TV and radio activities**
  
  HICP sub-index for television cable charges
Assessment of employed methods

Currently applied deflation indicators do not meet all demands of a B method: CPIs without differentiation business vs. household

Perspective: gradual implementation of SPPIs

= change from an imperfect B method → A method
Compilation of turnover index

For the moment only **turnover index in nominal values**

= total turnover of the current month in percentage of the average monthly turnover in the base period (year 2000)

administrative data source = monthly in-advance-reports of the companies on VAT to the tax authorities containing total taxable turnover. The quarterly total turnover is aggregated from the monthly data base.

For compilation of **turnover volume indexes** no legal requirements exist - therefore a calculation is not planned at the moment.
Turnover by products

Telecommunication services are not part of the service branches for which turnover data on product level should be collected according to Annex 8 of the SBS Recast Regulation therefore such compilation is not done at the moment.
Thank you for your attention

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Engelbert Holzer  
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