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SPPI for Telecommunication Services in Austria

Statistics Austria

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1. Introduction

At the Voorburg Group meeting 2007 in Seoul it has been decided that for this year's meeting in Mexico the following service branches will be treated:

- Wired, Wireless, Satellite, and Telecommunications Services
- Wholesale Trade

Due to the fact that Statistics Austria is already calculating an SPPI for NACE 64.20 since 2007 we decided to volunteer for a SPPI Mini Presentation on this topic. This Paper provides deeper insight in the development and calculation framework of the respective service branch in Austria and serves as a completion of the PPT-Mini presentation in this years Voorburg Group meeting in Aguascalientes.

2. Definition of service being priced

According to the currently used NACE Rev. 1.1, the index relates to activity "Telecommunications Services" which is class 64.20 in the Austrian Statistical Classification of Economic Activities¹ (ÖNACE 2003). ÖNACE-code 64.20 "Telecommunications" is split into sub-class 64.20-01 "Telecommunications (without Cable- and TV-Associations)" and sub-class 64.20-02 "Cable- and TV-Associations". The following table shows a consolidation of the presently used NACE Rev. 1.1 and CPA 2002 classification system.

Table 1: Telecommunications according to NACE Rev. 1.1

NACE Rev .1.1	Description	CPA 2002	Description	Service products
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

Source: Eurostat Ramon

According to the Austrian structural business survey 2006 about 95% of the turnover of the 4 digit ÖNACE-code 64.20 was contributed by telecommunication and about 5 % comes from Transmission of Radio and TV by cable activities (see Table 3). Due to this minor share of NACE 64.20-02 in regard to turnover, Statistics Austria decided to develop an SPPI for NACE 64.20 which is exclusively based on ÖNACE 64.20-01 "Telecommunications (without Cable- and TV-Associations)" and neglecting sub-class 64.20-02 "Cable- and TV-Associations.

¹ ÖNACE 2003 which corresponds with NACE Rev.1.1 and ISIC Rev. 3.1 respectively

According to the available information provided by the RTR (Austrian Regulatory Authority for Telecommunications and Broadcasting; RTR GmbH; see chapter 4) the Austrian SPPI for telecommunication services is composed of the following service products:

- Fixed-link voice telephony
- Mobile communications
- Broadband internet access
- Leased lines

The implementation of the upcoming NACE Rev. 2 will cause various classificatory innovations in the telecommunications service branch. On the one hand services which have been summarized under one NACE code in former times will be split up and will become a self contained NACE 3-digit code within the branch. On the other hand services which have been a part of the telecommunication branch like radio broadcasting and television and broadcasting activities will be separated and will become an independent NACE 3-digit code (60.1; 60.2).

Compared to NACE Rev. 1.1 and its corresponding service products in which the services fixed link and mobile telecommunications have been integrated in the aggregate “data and message transmitting services” (CPA 2002 code 64.20.1) in NACE Rev. 2 a split of this services into two separated 3-digit aggregates “wired telecommunications activities” (NACE Rev. 2 code 61.1) and “wireless telecommunications activities” (NACE Rev. 2 code 61.2) will be made. Moreover, „Satellite telecommunications activities“ has become a separate entry at NACE 3-digit level (NACE Rev. 2 code 61.3).

Table 2: Telecommunications according to NACE Rev. 2

NACE Rev.2	Description	CPA 2008	Description	Service products
61.1	Wired telecommunications activities	61.1	Wired telecommunications activities	61.10.1 Data and message transmitting services 61.10.2 Carrier services for wired telecommunications 61.10.3 Data transmission services over wired telecommunications networks 61.10.4 Wired Internet telecommunications services 61.10.5 Home programme distribution services over wired infrastructure
61.2	Wireless telecommunications activities	61.2	Wireless telecommunications activities	61.20.1 Mobile telecommunications services and private network services for wireless telecommunications systems 61.20.2 Carrier services for wireless telecommunications 61.20.3 Data transmission services over wireless telecommunications networks 61.20.4 Wireless Internet telecommunications services 61.20.5 Home programme distribution services over wireless networks
61.3	Satellite telecommunications activities	61.3	Satellite telecommunications activities	61.30.1 Satellite telecommunications services, except home programme distribution services via satellite 61.30.2 Home programme distribution services via satellite
61.9	Other telecommunications activities	61.9	Other telecommunications activities	61.90.1 Other telecommunications services

Source: Eurostat Ramon

In the course of an Eurostat Task Force which has taken place in spring 2008 in order to exchange experiences in the development of SPPIs France, Switzerland, Norway and Austria presented their calculation and aggregation structure for NACE

Rev. 1.1 code 64.20. Compared to NACE Rev. 1.1 it could be said that the upcoming NACE and CPA Revision fits better as to the split of service products proposed by the responding enterprises. All countries reported that a split on the indices to be developed in wired and wireless telecommunications at a first stage of vertical diversification is feasible. At present Satellite Telecommunications services play a minor role in regard to turnover and are therefore excluded from the index compilation.

3. Pricing unit of measure

In the Telecommunications service branch the pricing unit of measure depends on the one hand on the chosen pricing method (e.g. rate method, bill method, unit value) as well as on the surveyed service product. Based e.g. on the pricing methodology used in Austria (unit value) and the diversification of service products (wired, wireless, broadband internet access etc. and their respective subgroups) the following “prices” in the form of unit values are collected depending on the availability of data:

- Fixed-link voice telephony (e.g. “price per minute” for calls within Austria, to mobiles etc.)
- Mobile communication (e.g. “price per minute” for calls, termination of SMS, etc.)
- Broadband internet access (e.g. “price per internet access)
- Leased lines

Using other pricing methods the pricing unit of measure will change. A description of the most common pricing methods used in the telecommunication service branch including their advantages and drawbacks will be presented in chapter 8.

4. Market conditions and constraints

a) Size of the industry

The Structural Business Survey (2006) which uses the Austrian Business Register (UR) as a sampling frame shows some key figures for telecommunication services and gives a rough picture of this service sector in Austria (see Table 3).

Table 3: Split of turnover according to the national diversification of ÖNACE 64.2

ÖNACE category (Rev. 1.1)	Number of enterprises	Share on turnover 2006
64.2 Telecommunications		
64.20-01 Telecommunications (without cable TV and radio activities)	144	94,64 %
64.20-02 Cable TV and radio activities	67	5,36 %

Source: Structural business survey 2006

As already pointed out in chapter 2, due to the marginal share of turnover of “Cable TV and radio activities” Statistics Austria decided to concentrate on ÖNACE 64.20-01 “Telecommunications (without cable TV and radio activities) by creating its SPPI for telecommunication services. With regard to NACE Rev. 2 these services are part of the 2-digit code 60 (Programming and broadcasting activities).

All-in-all 349 licenses have been granted by the Austrian Regulatory Authority for Telecommunications and Broadcasting (RTR GmbH) of which 106 for fixed-link voice telephony, 11 for mobile telephony, 77 for leased lines and 155 for voice over IP. The RTR, assisted by the Austrian legislature, has to guarantee a competitive national telecommunications service branch which provides its customers with the best services available in a cost effective way.

Table 4 provides further details about the number of enterprises and the share on turnover concerning ÖNACE 64.2, although they don't provide enough detailed data in order to distinguish between telecommunication and Cable-TV & Radio -Activities. For reasons of confidentiality some data have to be suppressed.

Table 4: Key figures for ÖNACE 64.2 according to NACE Rev. 1.1

Business Service ÖNACE	Employees	Number of enterprises	Share on turnover of ÖNACE 64.2 2006
64.2 Telecommunications			in 1000 EURO
Total	18.471	211	7..219.790
	1 – 9	166	2,19 %
	10 -19	20	3,37 %
	20 – 49	10	1,36 %
	50 – 249	7	c.
	≥ 250	8	c.

Source: Structural business survey 2006
 : confidential

The whole branch consists of 211 enterprises of which only 15 have more than 50 employees. These 15 enterprises dominate the branch producing more than 90% of the turnover. These figures also correspond with the description of the branch development which has been characterised by a lot of mergers in the last years (see paragraph *Market development*, page 9)

As already described in chapter 2 compared to NACE Rev. 1.1 the upcoming NACE Rev. 2 introduces a new classification system in regard to the split of service products in the telecommunications service branch. Enterprises have been informed about the changes and in the case where enterprises could not be reclassified automatically, classification notes have been sent to them in order to reclassify them by themselves.

The following table, which is based on the reclassified Austrian Business Register, provides a split of enterprises and turnover according to the new classification system.

Table 5: Key figures for ÖNACE 64.2 according to NACE Rev. 2

ÖNACE category	Employees	Number of enterprises	Share on turnover 2006
61. Telecommunications			in 1.000 €
TOTAL	18.308	319	7.917.396
61.1 Wired telecommunications activities	11.925	135	49%
61.2 Wireless telecommunications activities	5832	57	49%
61.3 Satellite telecommunications activities	c.	c.	c.
61.9 Other telecommunications activities	c.	c.	c.

Source: Austrian Business Register 2008

Compared to table 4 no tremendous changes happen as to the total turnover of the branch and the number of persons employed. Due to different coverage according to the NACE Rev. 2 the number of enterprises as well as the number of persons employed in the branch has risen compared to NACE Rev. 1.1. Like for table 4 some information had to be suppressed due to confidentiality reasons. On the overall the structure is not changing much, the dominating services are wired- and wireless telecommunications activities.

b) Special conditions or restrictions

Deregulation

The deregulation of telecommunication markets is an issue that will continue to occupy all of Europe in the coming years. Regulatory authorities have been established throughout the European Union, not least because of the general European legal environment in the course of liberalisation. The Green Paper² in the year 1987 was the point of origin for the liberalization process precisely because it initiated the elimination of the mainly governmental monopolies in the telecommunications branch. As a consequence of this liberalization process the European Union set up new directives in 2002 which have been implemented in Austria by the Austrian Telecommunications Act (TKG) in the year 2003.

To advance and to push this liberalization and to ensure free and fair competition in the national telecommunication markets, Austria set up the Telekom Control Commission in late 1997 which is an independent panel authority with the powers of a court, and the Austrian Regulatory Authority for Telecommunications and Broadcasting (RTR GmbH; replaced Telekom-Control GmbH as of March 31, 2001) serves as its operative arm.

² Green Paper on the development of the common market for telecommunications services and equipment COM(87)290, June 30, 1987

Market development

As can be seen in table 6 even after the finalisation of the liberalization process an economic growth of the Austrian telecommunication branch could be noticed till 2006. But in 2007, compared to the year 2006 and in addition to fixed-line telecommunications and leased lines for the first time the net retail revenues for mobile telecommunications decreased which leads to a total decline of the overall net retail revenues of 3.2 percent. Only in the broadband access segment the upward trend of increasing revenues continued in 2005 and 2006. But relating the turnover figures with the respective (mostly increasing) traffic volumes (e.g. minutes) in a next step it could be seen that except for the fixed link market in all sub segments of the telecommunications service branch this will result in decreasing prices per service product.

Table 6: Economic development of Telecommunications

		2004	2005	2006	2007
Fixed-link					
	Turnover	1.607	1.523	1.401	1.243
	Minutes	10.748.085.350	9.938.222.015	9.073.351.119	7.948.381.523
	Number of lines	3,084.702	3,009.962	2,918.324	2,786.975
Mobile					
	Turnover	2.562	2.680	2.708	2.668
	Minutes	10.147.563.581	11.681.671.603	13.728.427.108	16.977.195.161
	Subscribers	7,722.170	8,647.315	9,254.265	9,855.338
Broadband					
	Turnover	361	440	520	574
	Number of lines	760.816	1,054.985	1,334.228	1,559.113
Leased Lines					
	Turnover	102	102	90	85
	Number 64kbit/s lines	598.249	756.353	994.390	1,408.539

Source: RTR

For the **fixed-link telecommunications segment** in general it can be stated that after the atmosphere of change caused by the liberalization of the branch and characterized by a lot of new market entries this segment is now in a phase of mergers and acquisitions. However in spite of these mergers of sizeable competitors the former monopolist Telekom Austria is still the top selling enterprise of the segment and plays a significant role in the Austrian telecommunication service branch. It is the only telecommunication enterprise with nationwide infrastructure and can therefore theoretically prevent other competitors to gain access to customers. To guarantee free market competition the enterprise is therefore restricted in regard to its pricing policy and business conditions and has to grant other competitors access to parts of its network structure.

In the **mobile communications segment** the market entry for new competitors is generally limited by a natural technical barrier. To participate in the market new enterprises have to obtain frequency usage rights. However even this segment has been in a phase of mergers and acquisitions that have resulted in the dominance of 4 mobile communications service providers. The fact that mobile communications have become the main competitor of the fixed linked business segment is of particular importance in regard to the development of the overall telecommunications branch. The number of subscribers for mobile communication increases vis-a-vis that of the fixed linked segment. This is measured by the so called penetration rate which is

calculated by the division of the number of active subscribers by the Austrian population.

Limitations of available data

One restriction to be taken into account when developing an SPPI for the telecommunications branch is the ability to distinguish private from business customers. Contrary to other service branches like legal services, where e.g. a model pricing approach can be restricted to such legal cases which are representative for business customers, in this branch responding enterprises are not always able to make a distinction of users. Thus in the mobile telecommunications segment the resulting overall index for telecommunications in Austria is a b2all index.

c) Record keeping practice

In principle price information can be obtained relatively easy on the websites of the telecommunications operators. There the respective tariffs for various fields of telecommunications (e.g. fixed link; mobile, broadband flat rates etc.) are published. In most cases additional price relevant distinctions with regard to different types of service products (e.g. call minutes, SMS, etc.) and different zones (time of the day and distance) can be made. A big drawback with this kind of price information is that these are list prices and no information concerning discounts is available.

On the other hand revenue and volume data for telecommunication services on very detailed level are recorded in the enterprises' book-keeping systems. By establishing an ongoing cooperation these data can now be used to calculate the index according to the unit value method keeping the respondent burden at a minimum.

5. Standard classification structure and detail related to the area

Contrary to some other service branches (e.g. Architectural and engineering activities) with an insufficient classification structure not really reflecting the real market situation the national classification structure is a good starting point in order to identify price determining characteristics. The Austrian standard classification structure ÖNACE is identical to the NACE on 4 digit level. In addition the ÖNACE has another 6-digit level breakdown of activities.

This classification structure looks as follows:

ÖNACE 64.20 Telecommunications

- **64.20.-01 Telecommunications (without cable TV and radio activities)**
- **64.20-02 Cable TV and radio activities (not included in the SPPI calculation)**

(Ö)NACE 64.20 comprises the following services:

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 item excludes:

– production of radio and television programmes even if in connection with broadcast, see 92.20

The upcoming NACE Rev. 2 is in some respects more detailed and in step with actual practice in the way that the telecommunications branch classifies its services. Now at a first stage telecommunications is divided into 4 main aggregates.

ÖNACE 61 Telecommunications

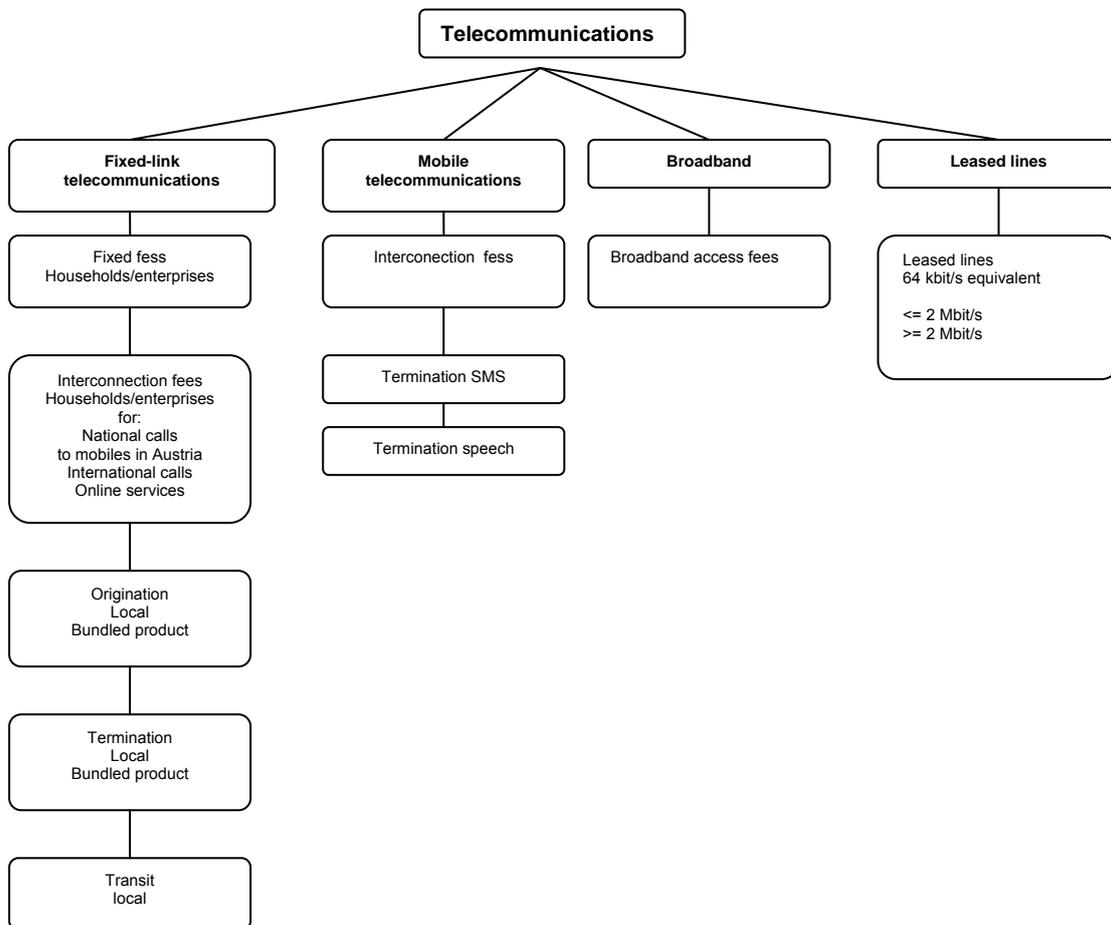
- **61.1 Wired telecommunications activities**
- **61.2 Wireless telecommunications activities**
- **61.3 Satellite telecommunications activities**
- **61.9 Other telecommunications activities**

Due to the fact that in some areas the mobile communications has got ahead of the fixed linked, the diversification in wired- and wireless telecommunications activities better reflects the real market situation and the continuously increasing importance of the wireless communications segment. According to a study carried out by the RTR in 2007 for the consumers, besides cost factors, the reasons to favour wireless telecommunications are benefits like mobility and flexibility. 8% of the Austrian population solely possess a fixed linked telephone, whereas 43% only use a mobile phone and 49% possess both kinds of telephones. Another finding of the study shows that within the youngest age group (till 29) approximately 66% own a mobile phone but no fixed link telephone extension.

6. Evaluation of standard vs. definition and market conditions

Using the description of the above shown NACE 4-digit code and its corresponding CPA “service product” classification (see table 1) as a rudimental origin we tried to develop an adequate SPPI calculation and aggregation structure in close co-operation with the RTR on the basis of the available data collected in the course of the Communications Survey Regulation. The resulting family tree of selected service products which represent the real market structure of provided services is mainly based on the input of the RTR experts and looks as follows:

Scheme 1: Index aggregation structure



Source: Statistics Austria

The family tree as shown in Scheme 1 has been proposed by the RTR experts. It corresponds with the structure of NACE Rev. 2 and will be used as our index aggregation structure. Satellite telecommunication services have not been taken into account due to their minor market relevance.

For the time being RTR and the responding enterprises are not able to provide data at a lower level of aggregation for some aggregates. Hopefully in the case of a future revision of the Communications Survey Regulation (see chapter 8; The situation in Austria) more detailed data (e.g. in the mobile segment) will be available.

7. National accounts concepts and measurement issues for the area

Compilation of output at current prices in the Austrian National Accounts (NA)

Telecommunication services are part of section I of the ÖNACE Rev.1.1 which is broken down into the NACE divisions 60, 61, 62, 63 and 64. An internal working classification is used in NA as follows:

Table 7: Working classification for ÖNACE I - Transport and Communication

	ÖNACE Group and NA-working level	Category
60	60.1	Transport via railways
	60.21-01	Other scheduled passenger land transport
	60.21-02	Other scheduled Other scheduled passenger land transport bus
	60.21-03	Passenger land transport by cableway, etc.
	60.22+60.23	Taxi operation and Other land passenger transport
	60.24	Freight transport by road
	60.3	Transport via pipelines
61	61	WATER TRANSPORT
62	62	AIR TRANSPORT
63	63.1	Cargo handling and storage
	63.21-01+63.21-03	Parking houses and Other supporting land transport activities
	63.21-02	Toll roads
	63.22	Other supporting water transport activities
	63.23	Other supporting air transport activities
	63.3	Activities of travel agencies and tour operators; tourist assistance activities n.e.c.
	63.4	Activities of other transport agencies
64	64.11+64.12+64.20-01	National post activities and Courier activities other than national post activities, Telecommunications
	64.20-02	Cable, Radio and TV distribution

The data source for the compilation of output of market producers is mainly the structural business survey which is conducted once every year. This survey is supported by the results of the Input/Output analysis as well as by data from the annual company reports and detailed auditing reports. This data source is used to compile the production account. The survey results and the raw data from company reports/auditing reports are going to be adapted for NA requirements. Adaptions take place in order to ensure the comprehensiveness of transactions (e.g. estimates for transactions without bill, estimates concerning own-account production of software, supplements to the activated own-account production, etc.).

Compilation of real output (volume)

Aspects to be taken into account with Telecommunication services

Telecommunication services are an area with a wide range of products that are developing quickly. Products include fixed lines, mobile phones, data network services, television and radio transmission services and internet service provision.

There are important aspects of measurement of prices for telecommunications having a great impact on the calculation of real volumes. The measurement of prices faces a number of complicated problems:

- charging mechanisms employed are often very complex (mixed package offers, etc.)
- technological developments bring about big changes in the quality of products
- discounts play an important role in this business segment and need to be reflected adequately
- bundling of products particularly for mobile phone services

What does the theory say?

According to the handbook on price and volume measures the deflation method using different price indicators is recommended. As a basic principle it says “When considering the suitability of methods it is important to ensure that indicators are fully representative of the products and the full range of charges made.”

As an A method the deflation of output by quality adjusted PPIs is proposed. “The use of CPIs, adjusted to basic prices, for the output consumed by households (for example television cable services) would also be an A method”.

As a B method the handbook qualifies the use of PPIs where their coverage does not exactly match the products or where there is no adjustment for quality. UVIs for products that are entirely homogeneous, would also be a B method. The use of volume indicators that reflect the full range of outputs is a B method.

The use of detailed CPIs to deflate output other than that consumed by households can be a B method if price developments can be shown to be similar for households and businesses. However, CPIs are unlikely to be suitable for the full range of telecommunication services, because of the availability of discounts and the different range of products consumed by businesses. Using detailed CPIs for business purchases where it is known that businesses receive discounts or purchase a different range of products than households would be a C method.

The present NA practice in Austria

For the compilation of the volume for ÖNACE 64 – Post and telecommunication services an internal classification is used:

- 64a Post and courier activities, Telecommunications
- 64b Cable TV and radio activities

The characteristic output for the aggregate 64a Post and Courier Services, Telecommunication Services is deflated by using a composite index which is compiled from three indices:

- index for mobile phone service providers
- index for the Austrian Telekom (fixed-link)
- index for postal services

The sub-indices for mobile phone service providers and for the Austrian Telekom fixed line come from the Harmonised Consumer Price Index (HCPI) at the six-digit level “telephone and fax services”, the index for postal services stems from the corresponding HCPI-aggregate “postal services”. The composite index for deflating 64a is calculated by weighting the three sub-indices according to their respective turnover (B method).

For the deflation of 64b “Cable TV and radio activities” the corresponding HCPI sub-index for television cable charges is used (B method).

Self assessment and preview

According to the handbook the applied deflation indicators would not really meet all demands of a B-method completely because the CPIs are used without differentiation, i.e. there is no evidence that price developments being similar for households and businesses.

Currently, NA is gradually implementing SPPIs as deflators which are now calculated quarterly for postal services, courier services and telecommunications services (base period = 2006). These SPPIs are available in a detail described above and would allow to deflate the nominal values on a lower level of dis-aggregation. This would go hand in hand with the replacement of the HCPIs and improve the compilation of volumes from an imperfect B-method to an A-method.

8. Pricing method(s) and criteria for choosing various pricing methods

Country experiences in the development of an SPPI for telecommunication services have been presented in the context of Voorburg Group meetings several times (Örebro 2001; Tokyo 2003; Ottawa 2004). During these presentations the most commonly used pricing methods have been discussed which will be briefly reviewed in the next paragraphs.

Bill method

The basic principle of the bill method is the selection of individual telephone bills which represent a calling structure. These bills are characterised by clearly

identifiable service components that would be held constant over time to guarantee that exactly the same service can be re-priced by the respondent in the following periods. Even if the selected type of bill of the base period does not occur in exactly the same composition (combination) of services in the following periods it would be possible for the respondent to estimate the prices of the original bill in the $t+1$.

These bills can consist of the various different services of telecommunications like long and short distance calls, calls to mobiles, etc. In order to come close to the pricing concept of a service producer price index it is also possible and advisable to incorporate given discounts in the calculation of the resulting SPPI using the bill method.

Drawbacks:

- Bundling or unbundling of services may cause problems in the case that enterprises cannot provide data for the before unbundled or bundled service products
- Too burdensome for enterprises, this can result in non-response
- Tendency to select simple bills
- Respondents often cannot estimate how changes in one part of the bill affect other parts
- Discount information has to be surveyed additionally

Rate method

An alternative pricing methodology used in the telecommunication service branch is the rate method. Especially in cases where companies complained about the tremendous respondent burden of the bill method, the rate method was an acceptable alternative for the enterprise. Using the rate method companies no longer have to re-calculate the requested original bill of the base period by filling in the tariffs. Instead of that respondents provide tariffs or rates for completely specified services whose specifications or characteristics were held constant over time. These rates represent the price quotation which will be the starting point for the index calculation.

In principle the rate method is step one of the above mentioned bill method where also rates or tariffs are used to compose the requested price of the original bill in the following re-pricing periods. On this account in order to calculate an adequate SPPI by using the rate method in principle the same methodological principles have to be applied as for the bill method. It is on the one hand of utmost importance that the characteristics of the service are completely specified and held constant over time and on the other that applicable discounts for the selected rates should be taken into account.

Drawbacks:

- Bundling or unbundling of services may cause problems in the case that enterprises cannot provide data for the before unbundled or bundled service products
- Respondents have to estimate how changes in one rate influence other rates

- Discount information for the selected rates have to be surveyed additionally

Unit value method

A third, often preferred, alternative in calculating a services producer price index for telecommunications is the unit value method, because it eliminates the most drawbacks of the two before mentioned methods.

In general, due to rarely met homogeneity of services in miscellaneous subgroups, unit values are not the favoured pricing methods, if other methods could be applied for a service sector as well. But reported respondent burden, technological developments, changes in invoicing systems etc. make other pricing methods so difficult and costly, that unit values are used for the index calculation for telecommunication in most countries. Besides the cost-effectiveness, unit values also take changes in productivity into account. By using this method it is of particular importance that the statistician takes care of the homogeneity of service products in the detailed subgroups of services which he has built because of the assumption that the price developments of these tariffs within the detailed subgroup are homogeneous.

Using this method the respondent has to report two kinds of information on the most detailed level. For the calculation of the unit value the revenue for a precisely defined single telephone service on the lowest aggregation level as possible (e.g. calls from fixed link to mobiles within the country for business customers) is divided by the respective quantity (here minutes). The resulting unit value/unit price is the starting point for the index calculation.

Besides the already described advantages in most cases these data can be provided relatively easily by the respondents because enterprises of this service branch are interested in their revenues on a quantity base on their own. Furthermore by calculating unit values using revenue data potentially given discounts by the responding enterprises are therefore already incorporated in their reported revenue data as well as in the index calculation.

The situation in Austria

Another potential data source for the calculation of unit values and a possible solution to reduce the respondent burden caused by the NSIs to zero are national regulatory authorities for Telecommunication. Fortunately on October 10th 2004 the Communications Survey Regulation (KEV, BGBl II No. 365/2004) went into force in Austria. Based on that national regulation the RTR GmbH (Austrian Regulatory Authority for Telecommunications and Broadcasting) is obliged to collect quarterly revenue and volume data in the different fields of telecommunications. In close cooperation with the RTR representative sub branches of the telecommunication market and respective services have been selected. In a next step a secure data transmission routine has been installed in order to guarantee the quarterly transfer of the sensitive revenue and volume data. The sample of enterprises, defined by the RTR, covers a minimum market share of 90% for each of our sub-indices to ensure representativeness.

STAT, with the help of the Austrian RTR is able to calculate a quarterly SPPI for telecommunication services. Due to the structure of the provided data the index computation is based on a unit value approach, starting at the most detailed level of aggregation. The obtained unit value, depending on the surveyed service product, is e.g. defined as the ratio of revenues in Euro to quantities in minutes. Quarterly data for the index calculation on the most detailed level as possible (see family tree in chapter 6) as well as the respective weighting information are provided by the RTR.

The resulting index (see table 8) is calculated by following the index aggregation structure shown in chapter 6 and covering 90% of each selected submarket by using the same sample scheme as the RTR. In the overall about 193 unit values are calculated with revenue and quantity data of 23 enterprises which are continuously represented in more than one of the below mentioned sub-branches.

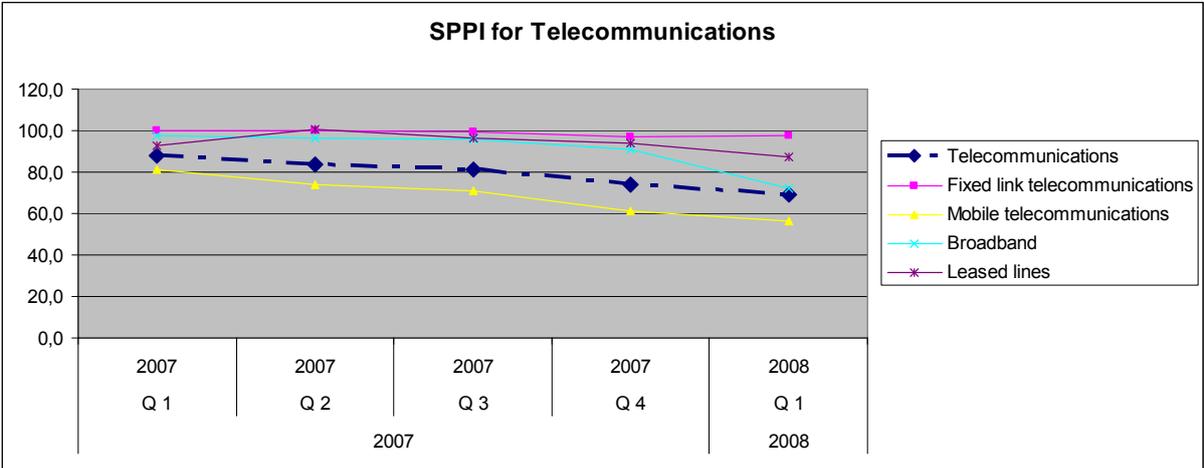
Table 8: SPPI for Telecommunications in Austria

	2007				2008			
	Q 1	Q 2	Q 3	Q 4	Q 1 ¹⁾	Q 2	Q 3	Q 4
Telecommunications total	87,9	83,6	81,5	74,2	69,4	-	-	-
Fixed-link telecommunications	99,8	100,0	99,7	97,0	97,5	-	-	-
Mobile Telecommunications	81,1	74,1	70,9	61,3	56,5	-	-	-
Broadband	97,6	96,7	96,0	91,1	72,3	-	-	-
Leased lines	92,5	100,4	96,6	94,2	87,2	-	-	-

Source: Statistics Austria (2006=100)
¹⁾: preliminary

As can be seen in table 8 and figure 1 except for the fixed-link telephony sub-branch where to some extent prices seem to be constant over time (-2,3%; Q1 2007 vs. Q1 2008) in the other main aggregates a continuously decrease of prices can be observed. Especially in the mobile telecommunications segment prices compared to the same period of the year before (Q1 2007 vs. Q1 2008) declined tremendously by -30,3%. The additional decreasing prices in the “broadband internet access” segment (-25,9%) and for “leased Lines” (-5,7%) lead to a total decrease of the overall SPPI for telecommunications of -21,1% compared to the same period of the last year.

Figure 1: SPPI for Telecommunications



9. Quality adjustment methodologies

In theory the quality adjustment methodologies described in the IMF PPI Manual could also be applied to services. But being a relatively new field of price statistical measures no secured facts about what is the best method for a certain service branch to avoid index biases are available. Examples for the use of quality adjustment methods for services can be found in the Methodological Guide for Developing Producer Price Indices For Services (OECD; Eurostat) in chapter 3.6.

Generally it could be said that calculating SPPIs using a fixed base year for five years according to the Laspeyres index formula concept the introduction of new service products creates problems in the non availability of weighting data for the respective new service in the base period. On the other hand keeping the weighting and service product structure of an index for a branch that is well known for its rapid technological development and the continuously introduction of new services constant over this long period, an outdated index that does not reflect the “real world” could be the consequence.

One necessity by using unit values for the calculation of an SPPI for telecommunications is the creation of homogeneous subgroups of services on a very detailed level. In regard to quality changes which could lead to index biases caused by the non-observance of new services or missing weighting data for the new services, the use of a unit value approach partly reduces the need of quality adjustment methodologies. Due to the fact that the built subgroups on lowest level of the index construction should consist of very homogeneous services, it could be assumed that a replacement of outdated or not longer offered services within one group would alleviate index biases because of the consistency of the grouped services in regard of their characteristics and thereof their price development.

Another factor that can cause an index bias even in the case of using a unit value approach is an outdated weighting structure caused by holding the structure constant over five years according to the Laspeyres index concept. In cases of service branches where continuously rapid technological developments could be observed a shift in the original weighting structure may be a possible outcome that might cause an index bias (e.g. wired telecommunication services loose market share compared to wireless telecommunications activities). A possible way out is to adapt the underlying index weighting structure in shorter periods to better reflect the real market conditions.

10. Evaluation and comparability with turnover/output measures

The compilation of turnover and output in the short-term business statistics

The Austrian short-term statistics on services is produced on the base of register administrative data source since 2003. The quarterly turnover indexes are calculated using monthly in-advance-reports of the companies on VAT to the tax authorities. This information which contains the total taxable turnover is available for the Statistical Office two months after the reference month. The quarterly total turnover is aggregated from the monthly data base.

For the moment only turnover indexes in nominal values are calculated. They measure for each category (groups 64.1 and 64.2 of NACE Rev. 1) the total turnover of the current month in percentage of the average monthly turnover in the base period (year 2000).

With the introduction of NACE Rev. 2 in short-term statistics (reference period 1st quarter 2009) the base period 2005=100 will be introduced. Additionally a working day adjustment will be carried out for turnover indicators in services. For compilation of turnover indexes based on volumes no legal requirements exist - therefore a calculation is not planned at the moment.

The compilation of turnover by product

Currently no detailed turnover data on service product level are collected by the respective directorate of Statistics Austria. Turnover data for telecommunications services are only collected on ÖNACE 6-digit level (see table 3) and published in the context of the Structural Business Survey. Due to the fact that telecommunications is none of the service branches for which turnover data on product level should be collected according to Annex 8 of the SBS Recast Regulation the situation will not change in the foreseeable future.

11. Summary

- Since June 2007 Statistics Austria is publishing an SPPI for telecommunications activities (NACE Rev. 1.1 code 64.20)
- Turnover and volume data are collected quarterly by the Austrian Regulatory Authority for Telecommunications and Broadcasting (RTR GmbH) on the basis of the Communications Survey Regulation
- The sample of enterprises, defined by the RTR, covers a minimum market share of 90% for each of our sub-indices to ensure representativeness
- Representative services for the index calculation have been selected in close co-operation with the RTR
- Based on this data STAT is calculating unit values for homogeneous subgroups of services on the most detailed available data level
- Main service aggregates of the resulting index are fixed-link telecommunications activities, mobile telecommunications activities, broadband access and leased lines

12. Quality Assessment tool

Points	Category and Questions	Score
	1. Shipment Price (Weight = .10)	
	<i>Select a. or b.</i>	
0	a. Price represents order pricing, actual price at shipment may well be different.	
100	b. Price represents the completion of service or a proxy measure for the completed transaction.	100
	2. Representative of current period production (Weight = .10)	
	<i>Select a. or b.</i>	
50	a. Emergence of new product lines or critical new product features has not occurred since the index reference period or since sample augmentation last done.	50
0	b. Emergence of new product lines or critical new product features has occurred since the index reference period or since sample augmentation last done.	
	<i>Select c. or d.</i>	
50	c. Product substitution usually occurs when an item becomes obsolete or, if model pricing applies, the models are regularly updated to reflect changes.	50
0	d. Product substitution usually does not occur when an item becomes obsolete or, if model pricing applies, the models are not regularly updated to reflect changes.	
	3. Transaction price (Weight = .25)	
	<i>Select the one most prevalent in the industry</i>	
100	a. The price is the real transaction price or a list price that can always be assumed to be equal to the transaction price.	
50	b. The price is a list price not equal to the transaction price.	
100	c. The price is a unit value for a homogeneous group of products.	100
50	d. The price is a unit value for a non-homogeneous group of products.	
75	e. The price is a model price.	
50	f. The price is constructed from input cost plus profit and overhead mark-up.	
	4. Output price (Weight = .25)	
	<i>Select the one most prevalent in the industry</i>	
100	a. Recorded price reflects an actual transaction or average of actual transactions.	100
75	b. Recorded price reflects a model transaction incorporating the pricing of all features found in an actual transaction.	
50	c. Recorded price reflects a model transaction incorporating the pricing of only some of the features found in an actual transaction.	
50	d. Recorded price reflects some components of a transaction.	
50	e. Recorded price reflects input costs plus overhead and profit margins incorporating the pricing of all features found in an actual transaction.	

25	f. Recorded price reflects input costs plus overhead and profit margins incorporating the pricing of some of the features found in an actual transaction.	
0	g. Recorded price reflects charge out rates for fixed labor inputs not directly tied to a specific quantity of output.	
	5. Timely measure (Weight = .10)	
	<i>Select a. or b.</i>	
50	a. Pricing data reflect the service provision in the current period and are not lagged.	50
0	b. Pricing data are lagged.	
	<i>Select c., d., or e.</i>	
50	c. Pricing data reflect an average over the entire period.	50
40	d. Pricing data reflect an average of multiple measurements over a portion of the period.	
25	e. Pricing data reflect a single point in time.	
	6. Constant quality maintained (Weight = .20)	
	<i>Select a. or b.</i>	
100	a. Rapid changes to product specification are not expected or, if they are, a good method to explicitly quality adjust is in use.	
0	b. Rapid changes to product specification are expected and no explicit quality adjustment method is in use.	0
	Total =	80
	Type A point range = over 90	
	Type B point range = 70 to 90	
	Type C point range = less than 70	

ANNEXES

Detailed classification structures and explanatory notes

Source: Eurostat Ramon

NACE REV 1.1

Code: 64.20

Description: Telecommunications

This item includes: 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 item excludes: This class excludes:

- production of radio and television programmes even if in connection with broadcast, see 92.20

Reference to ISIC Rev. 3.1: 6420

CPA 2002

64.20.1 Data and message transmitting services

Code: 64.20.11

Description: Public local telephone services

This item includes: This subcategory includes:

- switching and transmission services necessary to establish and maintain communications between local calling areas

This service is primarily designed (used) to establish voice communications, but may serve other applications such as text communication (facsimile or teletex) and may be provided on a toll or flat-rate basis.

This service provides the customer with access to the supplier's and connecting carrier's entire telephone network or, in some instances, to a limited number of exchange areas (WATS services).

This item excludes: This subcategory does not include:

- private line services, classified in 64.20.14 and 64.20.15
- terminal equipment rental services, classified in 71.34.10

Code: 64.20.12

Description: Public long distance telephone services

This item includes: This subcategory includes:

- telephone services for transmission of messages from the local area to the international network

This item also includes: This subcategory also includes:

- taxi phone services

Code: 64.20.13

Description: Mobile telephone services

This item includes: This subcategory includes:

- radio telephone services which, by means of transportable equipment, give two-way access to the public telephone network or other mobile telephones. Some versions of this service, with proper terminal equipment, may be used to transmit facsimiles as well as voice communications
- paging services

Code: 64.20.14

Description: Shared business network services

This item includes: This subcategory includes:

- network services necessary to establish telephone communications between selected (point-to-point or multi-point) locations (terminals) via a public (shared) network. This type of service is primarily used to establish long-distance voice communications but some versions can also accommodate facsimile and data transmission

Code: 64.20.15

Description: Dedicated business network services

This item includes: This subcategory includes:

- network services necessary to establish telephone communications between selected (point-to-point or multi-point) locations (terminals) via private line(s). This type of service is primarily used to establish voice communications between distant PBX's (tie line), between a distant location and a PBX (off premises' extension), between a PBX and a distant exchange area (foreign exchange) or between designated telephone sets, but may also accommodate data transmission

Code: 64.20.16

Description: Data network services

This item includes: This subcategory includes:

- network services necessary to transmit data between equipment using the same or different protocols. This service can be provided via a public or dedicated data network (i.e. via a network dedicated to the customer's use)

Code: 64.20.18

Description: Internet access provision services

This item includes: This subcategory includes:

- services providing necessary features needed to access the internet

64.20.2 Other telecommunications services

Code: 64.20.21

Description: Television transmission services

This item includes: This subcategory includes:

- network services necessary for the transmission of television signals, independently of the type of technology (network) employed

This item excludes: This subcategory does not include:

- television cable services, classified in 64.20.30
- television programme production services, even in connection with broadcasting, classified in 92.20.12

Code: 64.20.22

Description: Radio transmission services

This item excludes: This subcategory does not include:

- mobile radio telephone services, classified in 64.20.13
- radio cable services, classified in 64.20.30
- production services of radio programmes, even in connection with broadcasting, classified in 92.20.11

Code: 64.20.23

Description: Interconnection services

This item includes: This subcategory includes:

- network services by one carrier to another when a communication originating in a carrier's territory must travel through another carrier's network to reach its destination

Code: 64.20.28

Description: Other telecommunications services

This item includes: This subcategory includes:

- integrated telecommunications services
- teleconferencing services
- telex, telegraph, telex and telefax services

This item excludes: This subcategory does not include:

- database services, i.e. provision of on-line information retrieval services, classified in 72.40.11

Code: 64.20.30

Description: Radio and television cable services

This item includes: This subcategory includes:

- radio and television programming package via cable
- basic TV services
- "pay-TV" services

This item excludes: This subcategory does not include:

- radio or television production services, classified in 92.20.1

NACE Rev. 2

Code: 61

Description: Telecommunications

This item includes: This division includes the activities of providing telecommunications and related service activities, that is transmitting voice, data, text, sound and video. The transmission facilities that carry out these activities may be based on a single technology or a combination of technologies. The commonality of activities classified in this division is the transmission of content, without being involved in its creation. The breakdown in this division is based on the type of infrastructure operated.

In the case of transmission of television signals this may include the bundling of complete programming channels (produced in division 60) in to programme packages for distribution.

Reference to ISIC Rev. 4: 61

61.10 Wired telecommunications activities

Code: 61.10

Description: Wired telecommunications activities

This item includes: This class includes:

- operating, maintaining or providing access to facilities for the transmission of voice, data, text, sound and video using a wired telecommunications infrastructure, including:
 - operating and maintaining switching and transmission facilities to provide point-to-point communications via landlines, microwave or a combination of landlines and satellite linkups
 - operating of cable distribution systems (e.g. for distribution of data and television signals)
 - furnishing telegraph and other non-vocal communications using own facilities

The transmission facilities that carry out these activities, may be based on a single technology or a combination of technologies.

This item also includes: This class also includes:

- purchasing access and network capacity from owners and operators of networks and providing telecommunications services using this capacity to businesses and households
- provision of Internet access by the operator of the wired infrastructure

This item excludes: This class excludes:

- telecommunications resellers, see 61.90

Rulings: Telephone cards (Sale of...)

Problem statement: Where is the sale of pre-paid telephone cards (for mobile phones or for other phones) classified?

Solution: Pre-paid telephone card should be seen as a form of payment for the service provided. Therefore sale of pre-paid telephone cards should be classified as a telecommunication activity according to the type of telecommunication service the card is intended for (wired or wireless).

Decision date: 01.07.2007

Reference to ISIC Rev. 4: 6110

61.20 Wireless telecommunications activities

Code: 61.20

Description: Wireless telecommunications activities

This item includes: This class includes:

- operating, maintaining or providing access to facilities for the transmission of voice, data, text, sound, and video using a wireless telecommunications infrastructure
- maintaining and operating paging as well as cellular and other wireless telecommunications networks

The transmission facilities provide omni-directional transmission via airwaves and may be based on a single technology or a combination of technologies.

This item also includes: This class also includes:

- purchasing access and network capacity from owners and operators of networks and providing wireless

telecommunications services (except satellite) using this capacity to businesses and households
- provision of Internet access by the operator of the wireless infrastructure

This item excludes: This class excludes:

- telecommunications resellers, see 61.90

Rulings: Telephone cards (Sale of...)

Problem statement: Where is the sale of pre-paid telephone cards (for mobile phones or for other phones) classified?

Solution: Pre-paid telephone card should be seen as a form of payment for the service provided. Therefore sale of pre-paid telephone cards should be classified as a telecommunication activity according to the type of telecommunication service the card is intended for (wired or wireless).

Decision date: 01.07.2007

Reference to ISIC Rev. 4: 6120

61.30 Satellite telecommunications activities

Code: 61.30

Description: Satellite telecommunications activities

This item includes: This class includes:

- operating, maintaining or providing access to facilities for the transmission of voice, data, text, sound and video using a satellite telecommunications infrastructure
- delivery of visual, aural or textual programming received from cable networks, local television stations or radio networks to consumers via direct-to-home satellite systems. (The units classified here do not generally originate programming material.)

This item also includes: This class also includes:

- provision of Internet access by the operator of the satellite infrastructure

This item excludes: This class excludes:

- telecommunications resellers, see 61.90

Reference to ISIC Rev. 4: 6130

61.90 Other telecommunications activities

Code: 61.90

Description: Other telecommunications activities

This item includes: This class includes:

- provision of specialised telecommunications applications, such as satellite tracking, communications telemetry, and radar station operations
- operation of satellite terminal stations and associated facilities operationally connected with one or more terrestrial communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems
- provision of Internet access over networks between the client and the ISP not owned or controlled by the ISP, such as dial-up Internet access etc.
- provision of telephone and Internet access in facilities open to the public
- provision of telecommunications services over existing telecom connections:
 - VOIP (Voice Over Internet Protocol) provision
- telecommunications resellers (i.e. purchasing and reselling network capacity without providing additional services)

This item excludes: This class excludes:

- provision of Internet access by operators of telecommunications infrastructure, see 61.10, 61.20, 61.30

Reference to ISIC Rev. 4: 6190

CPA 2008

61.10 Wired telecommunications services

61.10.1 Data and message transmitting services

Code: 61.10.11

Description: Fixed telephony services — access and use

This item includes: This subcategory includes:

- provision of access to and use of the public switched telephone network for the transmission and switching of voice, data, and video from a fixed customer location or from public and semi-public coin and card operated phones
- inbound and outbound telephony to and from national and international destinations
- calling features bundled with the access service

This item excludes: This subcategory excludes:

- provision of fixed telephony calling features for a separate fee, see 61.10.12
- provision of fixed telephony private line services, see 61.10.13
- provision of a local loop to other wired telecommunications service providers, see 61.10.20
- rental of terminal equipment, see 77.39.14

Rulings: Telephone cards (Sale of...)

Problem statement: Where is the sale of pre-paid telephone cards (for mobile phones or for other phones) classified?

Solution: Pre-paid telephone card should be seen as a form of payment for the service provided. Therefore sale of pre-paid telephone cards should be classified as a telecommunication activity according to the type of telecommunication service the card is intended for (wired or wireless).

Decision date: 01.07.2007

Reference to CPC Version 2: 46940

Code: 61.10.12

Description: Fixed telephony services — calling features

This item includes: This subcategory includes:

- provision of call management services for use from a fixed customer location for a fee, separate from the access fee

This service is made possible by specialised software and database applications linked to telecommunications networks. It includes features such as:

- call waiting, call forwarding, caller identification, three-way calling, call display, call return, call screen, call blocking, automatic call-back, call answer, voice mail and voice menus

Reference to CPC Version 2: 46950

Code: 61.10.13

Description: Private network services for wired telecommunications systems

This item includes: This subcategory includes:

- provision of wired telecommunication link(s) between specified points for the exclusive use of the client

This item excludes: This subcategory excludes:

- provision of private links by a telecommunication carrier to a wired telecommunication service provider, see 61.10.20

Reference to CPC Version 2: 46960

61.10.2 Carrier services for wired telecommunications

Code: 61.10.20

Description: Carrier services for wired telecommunications

This item includes: This subcategory includes:

- provision by a telecommunication carrier of wired facilities to originate, terminate, or transit calls for another telecommunications service provider
- charging for interconnection, settlement or termination of domestic or international calls
- charging long-distance carriers for calls originating at a pay phone or within another carriers local

network

- charging for jointly used facilities such as pole attachment
- charging for the exclusive use of circuits

This item excludes: This subcategory excludes:

- carriage of wired Internet traffic by one ISP for another ISP, see 61.10.41

Reference to CPC Version 2: 46980

61.10.3 Data transmission services over wired telecommunications networks

Code: 61.10.30

Description: Data transmission services over wired telecommunications networks

This item includes: This subcategory includes:

- provision of access to wired facilities and services specifically designed for the efficient transmission of data on a pay-as-you-use basis

This item excludes: This subcategory excludes:

- provision of wired telecommunication link(s) between specified points for the exclusive use of the client, see 61.10.13

Reference to CPC Version 2: 47000

61.10.4 Wired Internet telecommunications services

Code: 61.10.41

Description: Internet backbone services

This item includes: This subcategory includes:

- carrier services of Internet traffic by one ISP for another ISP (generally known in the industry as peering and transit charges)

Reference to CPC Version 2: 47020

Code: 61.10.42

Description: Narrow-band Internet access services over wired networks

This item includes: This subcategory includes:

- provision of a direct wired connection to the Internet at speeds below 256 Kbps. The Internet Service Provider (ISP) may also provide free services along with Internet access such as E-mail, space for the customer's web page, tools for simple web page design, chat, and technical support

This service may also include remote access or other types of Internet access and package upgrades such as international roaming and extra E-mail boxes, usually for additional costs to customers.

Reference to CPC Version 2: 47030

Code: 61.10.43

Description: Broad-band Internet access services over wired networks

This item includes: This subcategory includes:

- provision of a direct wired connection to the Internet at speeds 256 Kbps and higher. The Internet Service Provider (ISP) may also provide free services along with Internet access such as E-mail, space for the customer's web page, tools for simple web page design, chat, and technical support.

This service may also include remote access or other types of Internet access and package upgrades such as international roaming and extra E-mail boxes, usually for additional costs to customers.

Reference to CPC Version 2: 47040

Code: 61.10.49

Description: Other wired Internet telecommunications services

This item includes: This subcategory includes:

- provision of wired telecommunications services over the Internet other than Internet access

This includes services such as fax, telephony, audio conferencing and video conferencing over the Internet.

Reference to CPC Version 2: 47050

61.10.5 Home programme distribution services over wired infrastructure

Code: 61.10.51

Description: Home programme distribution services over wired infrastructure, basic programming package

This item includes: This subcategory includes:

- providing subscriber access to a basic range of programming services via wired infrastructure generally for a monthly fee

This package contains the minimum number of channels available to subscribers, as defined by each cable operator, and must be purchased to obtain any higher-level programming package. Charges for initial connection to the network, or for reconnection to the network, are included here.

Reference to CPC Version 2: 47070

Code: 61.10.52

Description: Home programme distribution services over wired infrastructure, discretionary programming package

This item includes: This subcategory includes:

- providing subscriber programming services via wired infrastructure in addition to those included in the basic package for a fee separate from, and in addition to, the basic monthly fee

This programming service can be provided in bundles determined by the cable operator or by the subscriber.

Reference to CPC Version 2: 47071

Code: 61.10.53

Description: Home programme distribution services over wired infrastructure, pay-per-view

This item includes: This subcategory includes:

- providing subscribers the ability to view a specific program (movie or event) via wired infrastructure from his home for a fee separate from, and in addition to, the monthly fee for basic or discretionary programming packages

Reference to CPC Version 2: 47072

61.20 Wireless telecommunications services

61.20.1 Mobile telecommunications services and private network services for wireless telecommunications systems

Code: 61.20.11

Description: Mobile telecommunications services — access and use

This item includes: This subcategory includes:

- provision of access to, and use of, switched or non-switched networks for the transmission of voice, data, and video where the call originates from or terminates into a portable handset or device, such as cellular, PCS (Personal Communications Services), ESMR (Enhanced Specialised Mobile Radio), and satellite phones; pagers; and mobile radios
- calling features bundled with the access service
- provision of Short Message Service (SMS) and Multimedia Messaging Service (MMS)

This item excludes: This subcategory excludes:

- provision of mobile calling features for a separate fee, see 61.20.12
- provision of wireless facilities for the exclusive use of the customer, see 61.20.13
- provision of wireless facilities to originate, terminate or transit calls for another telecommunications service provider, see 61.20.20
- provision of wireless facilities on a pay-as-you-use basis for the transmission of data to and from fixed locations, see 61.20.30
- provision of a connection to the Internet compatible with mobile devices, see 61.20.4

Rulings: Telephone cards (Sale of...)

Problem statement: Where is the sale of pre-paid telephone cards (for mobile phones or for other phones) classified?

Solution: Pre-paid telephone card should be seen as a form of payment for the service provided. Therefore sale of pre-paid telephone cards should be classified as a telecommunication activity according to the type of telecommunication service the card is intended for (wired or wireless).

Decision date: 01.07.2007

Reference to CPC Version 2: 47110

Code: 61.20.12

Description: Mobile telecommunications services — calling features

This item includes: This subcategory includes:

- provision of call management services for use with a portable handset or device for a fee separate from the access fee. This service is made possible by specialised software and database applications linked to telecommunications networks

It includes features such as: • call waiting, call forwarding, caller identification, three-way calling, call display, call return, call screen, call blocking, automatic call-back, call answer, voice mail and voice menus

Reference to CPC Version 2: 47120

Code: 61.20.13

Description: Private network services for wireless telecommunications systems

This item includes: This subcategory includes:

- provision of wireless telecommunication link(s) between specified points for the exclusive use of the client

This item excludes: This subcategory excludes:

- provision of private links by a wireless telecommunication carrier to a telecommunication service provider, see 61.20.20

Reference to CPC Version 2: 47130

61.20.2 Carrier services for wireless telecommunications

Code: 61.20.20

Description: Carrier services for wireless telecommunications

This item includes: This subcategory includes:

- provision by a telecommunication carrier of wireless facilities to originate, terminate, or transit calls for another telecommunications service provider
- charging for interconnection, settlement or termination of domestic or international calls
- charging long-distance carriers for calls originating at a pay phone or within another carriers local network
- charging for jointly used facilities such as pole attachments
- charging for the exclusive use of circuits

This item excludes: This subcategory excludes:

- carriage of wireless Internet traffic by one ISP for another ISP, see 61.20.4

Reference to CPC Version 2: 47150

61.20.3 Data transmission services over wireless telecommunications networks

Code: 61.20.30

This item includes: This subcategory includes:

- provision of access to wireless facilities and services specifically designed for the efficient transmission of data on a pay-as-you-use basis

This item excludes: This subcategory excludes:

- provision of wireless telecommunication link(s) between specified points for the exclusive use of the client, see 61.20.13

Reference to CPC Version 2: 47170

61.20.4 Wireless Internet telecommunications services

Code: 61.20.41

Description: Narrow-band Internet access services over wireless networks

This item includes: This subcategory includes:

- provision of a direct wireless connection to the Internet at speeds below 256 Kbps. The Internet Service Provider (ISP) may also provide free services along with Internet access such as E-mail, space for the customer's web page, tools for simple web page design, chat, and technical support.

This service may also include remote access or other types of Internet access and package upgrades such as international roaming and extra E-mail boxes, usually for additional costs to customers.

Reference to CPC Version 2: 47190

Code: 61.20.42

Description: Broad-band Internet access services over wireless networks

This item includes: This subcategory includes:

- provision of a direct wireless connection to the Internet at speeds 256 Kbps and higher. The Internet Service Provider (ISP) may also provide free services along with Internet access such as E-mail, space for the customer's web page, tools for simple web page design, chat, and technical support.

This service may also include remote access or other types of Internet access and package upgrades such as international roaming and extra E-mail boxes, usually for additional costs to customers.

Reference to CPC Version 2: 47200

Code: 61.20.49

Description: Other wireless Internet telecommunications services

This item includes: This subcategory includes:

- provision of wireless telecommunications services over the Internet other than Internet access

This includes services such as fax, telephony, audio conferencing and video conferencing over the Internet.

Reference to CPC Version 2: 47210

61.20.5 Home programme distribution services over wireless networks

Code: 61.20.50

Description: Home programme distribution services over wireless networks

Reference to CPC Version 2: 47216

61.30 Satellite telecommunications services

61.30.1 Satellite telecommunications services, except home programme distribution services via satellite

Code: 61.30.10

Description: Satellite telecommunications services, except home programme distribution services via satellite

This item includes: This subcategory includes:

- operating, maintaining or providing access to facilities for the transmission of voice, data, text, sound and video using satellite telecommunications infrastructure

This item also includes: This subcategory also includes:

- provision of Internet access by the operator of the satellite infrastructure

Reference to CPC Version 2: 47250

61.30.2 Home programme distribution services via satellite

Code: 61.30.20

Description: Home programme distribution services via satellite

This item includes: This subcategory includes:

- providing subscriber access to a basic range of programming services via satellite generally for a monthly fee. This package contains the minimum number of channels available to subscribers, as defined by each satellite operator, and must be purchased to obtain any higher-level programming package. Charges for initial connection or for reconnection are included here.

- providing subscriber programming services via satellite in addition to those included in the basic package for a fee separate from, and in addition to, the basic monthly fee. This programming service can be provided in bundles determined by the cable, satellite or MDS operator, in bundles determined by the subscriber, or a la carte.

- providing subscribers the ability to view a specific program (movie or event) via satellite from his home for a fee separate from, and in addition to, the monthly fee for basic or discretionary programming packages

Reference to CPC Version 2: 47270

61.90 Other telecommunications services

61.90.1 Other telecommunications services

Code: 61.90.10

Description: Other telecommunications services

This item includes: This subcategory includes:

- provision of specialised telecommunications applications, such as satellite tracking, communications telemetry, and radar station operations
- operation of satellite terminal stations and associated facilities operationally connected with one or more terrestrial communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems
- provision of Internet access over networks between the client and the ISP not owned or controlled by the ISP, such as dial-up Internet access etc.
- provision of telephone and Internet access in facilities open to the public
- provision of telecommunications services over existing telecom connections:
 - VOIP (Voice Over Internet Protocol) provision
- provision of network capacity without providing additional services
- provision of telecommunications services n.e.c., such as telegraph, telex and audio conferencing bridging services

Reference to CPC Version 2: 47310