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TURNOVER AND OUTPUT MEASUREMENT

FOR THE TELECOM SECTOR

IN THE NETHERLANDS

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1. Definition of the telecom sector

The ISIC (International Standard Industrial Classification of all economic activities) is used in many countries. All countries within the European Union work with the NACE classification (NACE = Nomenclature statistique des activités économiques dans la Communauté Européenne). NACE and ISIC have the two first digits in common; the third and fourth digit may differ, but for the telecommunications sector no differences in the classification occur, as is shown in table 1.
The telecom sector (NACE 642) includes all kinds of telecommunication services: wired, wireless, satellite and other.

Table 1. Telecom services according to the current NACE and ISIC classification

NACE Rev. 1.1 and ISIC Rev. 3.1			Description
Section	Division	Group	
I			TRANSPORT, STORAGE AND COMMUNICATION
	60		Land transport; transport via pipelines
	61		Water transport
	62		Air transport
	63		Supporting and auxiliary transport activities; activities of travel agencies
	64		Post and telecommunications
		641	Post and courier activities
		642	Telecommunications

In the next few years, the NACE will be revised. Because of the growing significance of services industries for the national economies they will receive far more attention, and be shown in more detail in the statistics.
The current NACE puts the telecom sector as part of 'Post and telecommunication' (Section I, NACE division 64). In the future NACE, the telecom sector will be part of 'Information and communication' (Section J, NACE division 61).
The new classification distinguishes wired, wireless, satellite and other telecommunication services.

Table 2. Telecom services according to the future NACE and ISIC classification

NACE Rev. 2 and ISIC Rev. 4			Description
Section	Division	Group	
J			INFORMATION AND COMMUNICATION
	58		Publishing activities
	59		Motion picture, video and television programme production, sound recording and music publishing activities
	60		Broadcasting and programming activities
	61		Telecommunications
		611	Wired telecommunications activities
		612	Wireless telecommunications activities
		613	Satellite telecommunications activities
		619	Other telecommunications activities
	62		Information technology activities
	63		Information service activities

Of course, the new classification will suit the information needs much better than the current one. But the transition from the current to the future classification will be awkward for analysis over time, since categories will be split up into two or more new ones and then combined with parts of other former categories, as is shown in table 3.

Table 3. Future NACE categories built up from current NACE categories

NACE Rev. 2	Description	NACE Rev. 1.1	Description
61.1	Wired telecommunication	64.20	Telecommunication
61.2	Wireless telecommunication	64.20	Telecommunication
61.3	Satellite telecommunication	64.20	Telecommunication
61.9	Other telecommunication	64.20	Telecommunication
60.2	Television programming and broadcasting activities		
60.21	Television programming and broadcasting activities, except by subscription	64.20 92.20	Telecommunication Radio and television activities
60.22	Television programming and broadcasting activities by subscription	72.40 92.20	Database activities Radio and television activities

The statistical information on telecommunications in the Netherlands consists of:

a) **Structural business statistics**
These are annual statistics on business demography, employment, turnover, costs and a breakdown of turnover by kind of service. Currently, we have these statistics available for the total of NACE 642, the three digit category. However, we have a confidentiality problem in the category of post and courier activities (NACE 641), as a result of which we are not able to publish the three, but only the two digit category (NACE 64), the sum of both.
In the future, we will switch to the new NACE and provide these statistics for NACE 61.1, 61.2, 61.3 and 61.9. We expect no confidentiality problems there since telecommunications will move to a completely different section with more economic actors.

b) **Short-term statistics**
These are quarterly statistics on turnover, number of employees, vacancies and output prices. For turnover and number of employees we compile these statistics for the total of NACE 642, the three digit category. In the future we expect to publish NACE 61.1, 61.2, 61.3 and 61.9 separately. Since there are European regulations on both Structural business statistics and Short-term statistics, comparable statistics are available in all countries of the European Union, and coordinated statistical information on the website and in the publications of Eurostat.

c) **Survey of the working population**
In an annual survey, people are asked to give information on personal characteristics, job characteristics (and working ambitions if they are unemployed at the time) and educational level for the total of post and telecommunications, NACE 64.

d) **National Accounts**
The National Accounts provide information on production, intermediate consumption and value added for the total of post and telecommunications, NACE 64, on an annual basis.
Many countries all over the world use the SNA (System of National Accounts, developed by EC, Eurostat, IMF, OECD and UN, under the auspices of the inter-secretariat working group on National Accounts). In the European Union the ESA (European system of national and regional accounts) is used. It is generally consistent with SNA, but it incorporates some differences, particularly in its presentation.

2. Unit of measure

Turnover is measured as net turnover: proceeds from sales, exclusive of VAT (value-added tax), after deduction of discounts, premiums, deposits and freight charges. The enterprise is used as statistical unit; at least one person works there for 15 hours a week or more. An enterprise may encompass more than one legal unit.

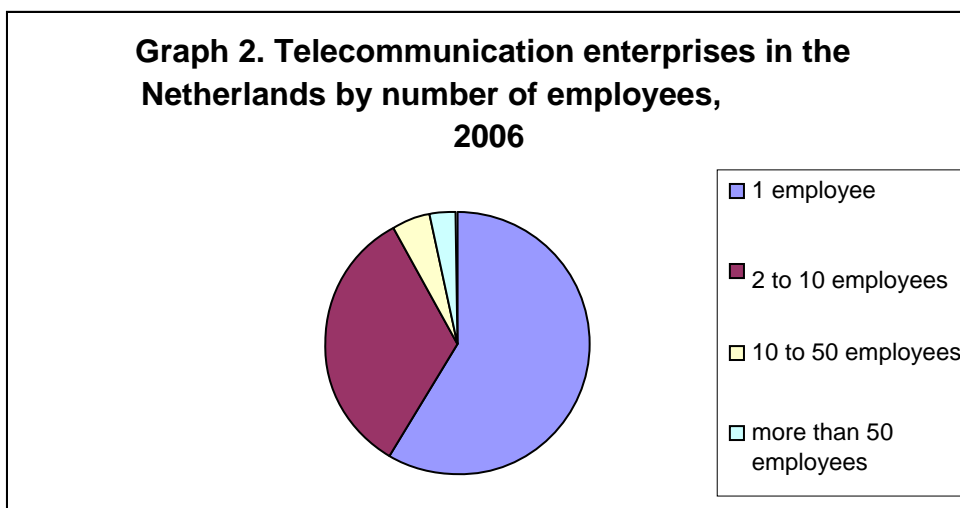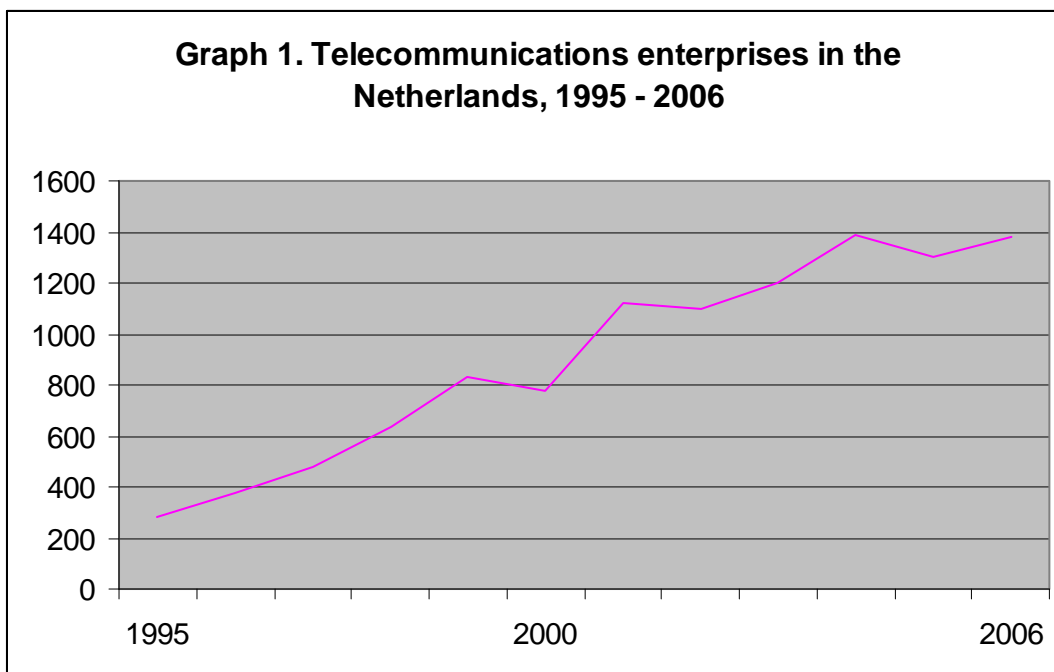## 3. Market conditions and constraints

In 2006, a total number of 1,380 enterprises were active in the telecommunications industry. In the Netherlands 0.2% of the total population of 746,365 enterprises were in the telecommunications industry in 2006. The number of enterprises has rapidly increased since 1995 (graph 1). In recent years, the number of persons employed declined, whereas the turnover per person employed has improved (table 4). Small and medium enterprises prevail: 58% of the enterprises employed only one person and 3% employed 50 persons or more (graph 2).
For confidentiality reasons we can not publish the results for the telecom sector; instead the total of post+telecom is presented below.

Table 4. Telecommunications in the Netherlands, results from the structural business statistics, 2003 - 2006

NACE 642 TELECOM	Enterprises	Turnover	Costs of labour	Employees	Costs of labour per employee	Turnover per employee
	(number)	(million euro)	(million euro)	(*1000)	(euro)	(euro)
2003	1200	Confidential	Confidential	Confidential	Confidential	Confidential
2004	1385	Confidential	Confidential	Confidential	Confidential	Confidential
2005	1300	Confidential	Confidential	Confidential	Confidential	Confidential
2006	1380	Confidential	Confidential	Confidential	Confidential	Confidential

NACE 64 POST+ TELECOM	Enterprises	Turnover	Costs of labour	Employees (fulltime equivalents)	Costs of labour per employee	Turnover per employee
	(number)	(million euro)	(million euro)	(*1000)	(euro)	(euro)
2000	3000	19023	4286	99.2	43206	191764
2001	3360	20912	4765	103.9	45861	201270
2002	2960	22981	4693	98.0	47888	234500
2003	3265	23000	4203	93.7	44856	245464
2004	3595	22703	4009	85.5	46889	265532
2005	3650	22919	3964	84.5	46911	271231

Graph 1. Telecommunications enterprises in the Netherlands, 1995 - 2006

Graph 2. Telecommunication enterprises in the Netherlands by number of employees, 2006

- 1 employee
- 2 to 10 employees
- 10 to 50 employees
- more than 50 employees

The short-term statistics reveal development figures of turnover on a quarterly basis (table 5). The goal of these figures is to give a quick insight in the direction in which a business sector is moving and to what extent. Short-term statistics deliver essential basic information for the compilation of the first flash figures on economic growth. The structural business statistics give information not only on turnover *developments,* but also on turnover *levels* and specifications and details of costs. Since these are annual statistics, this information becomes available for publication at a much later stage.

Table 5. Development of turnover in the telecom sector, results from the short-term statistics, 2003-2007

Year	Index of turnover 2003 = 100	Development of turnover %
2003 Q1	96	
2003 Q2	100	
2003 Q3	101	
2003 Q4	103	
2003	100	
2004 Q1	97	0.6
2004 Q2	98	-1.4
2004 Q3	101	-0.6
2004 Q4	101	-1.9
2004	99	-0.8
2005 Q1	97	0.6
2005 Q2	100	1.9
2005 Q3	100	-0.5
2005 Q4	101	-0.2
2005	100	0.5
2006 Q1	100	2.5
2006 Q2	101	0.4
2006 Q3	103	2.7
2006 Q4	107	6.1
2006	103	2.9
2007 Q1	103	2.9
2007 Q2	105	4.7
2007 Q3	104	1.3
2007 Q4	106	-1.0
2007	104	1.9

4. Standard classification structure and product details/levels

There is no further breakdown into product categories in the annual structural business statistics, nor in the short-term statistics.

5. Evaluation of standard definition and market conditions

The new NACE classification must reflect the current economic reality. It suits the information needs much better than the current NACE for all categories of data users: policy makers, scientists, the business world and private users.

6. National accounts concepts and measurement issues

The National Accounts provide statistical information on production, intermediate consumption, value added and labour costs for the post and telecom sector (table 6). Macro figures presented by the National Accounts are compiled from several source statistics. The concepts used in these source statistics sometimes differ from concepts used by National Accounts. To balance the National Accounts, some items not covered by source statistics are estimated (e.g. illegal activities) and the data are adjusted so that everything fits. Therefore, figures published based on source statistics are not always exactly the same as the National Accounts figures.

Table 6. Production, intermediate consumption, value added and labour costs for the post and telecom sector, results from the National Accounts, 1987 – 2006

	Production	Intermediate consumption	Gross value added (market prices)	Gross value added (basic prices 2000)	Labour costs
	million euro	*million euro*	*million euro*	*million euro*	*million euro*
1970	1181	441	740	.	545
1980	3919	1522	2397	.	1715
1990	7053	2765	4288	3606	2069
2000	19021	10623	8398	8398	4062
2001	21510	12269	9241	9703	4501
2002	23026	12120	10906	11071	4393
2003	24080	11979	12101	12031	4135
2004	24154	11910	12244	12333	4200
2005*	24344	11925	12419	12783	4136
2006*	24753	12407	12346	13075	4217
2007*	24998	12701	12297	13317	4274

* Provisional figure

7. Turnover/output data method

For the quarterly short-term statistics and the annual structural business statistics in NACE 64 we use direct data collection, by means of online and (a decreasing amount of) paper questionnaires for enterprises with 10 or more employees. A sample is drawn from the enterprises with 10-50 employees, whereas all enterprises employing 50 people or more receive a questionnaire. For enterprises with less than 10 employees we use information from the tax administration rather than questionnaires. National Accounts uses the short-term statistics as well as the structural business statistics as sources for their calculations.

Table 7. Sample size and response rates

	Sample size	Response	
	number of enterprises	*number of enterprises*	*in %*
Structural business statistics			
2003	694	397	57
2004	681	408	60
2005	648	373	58
2006	536	327	61
2007	406	***	***
Short-term statistics			
2003	115	89	77
2004	126	107	85
2005	100	89	89
2006	99	86	87
2007	123	103	84
2008	127	103	81

*** survey is not finished yet

In the European Annual Telecommunications Inquiry 2007 information on several output indicators was collected for the telecom sector. Some results are presented in table 8.

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Table 8. Some results of the Annual Telecommunications Inquiry

	The Netherlands		European Union (27)	
	1997	2006	1997	2006
Number of main (=fixed) telephone lines (in millions)	8.9	6.0	218.6	232.3
Number of mobile telephone subscriptions (in millions)	1.7	18.4	55.5	520.1

	The Netherlands		European Union (27)	
	2005	2007	2005	2007
Level of internet access:				
households with internet access at home (%)		83		54
households with broadband internet access at home (%)		44		42
broadband penetration rate (%)	20.7	32.4		17.2

	The Netherlands		European Union (25)	
	2001	2006	2001	2006
Prices in euros				
For local calls	0.32	0.33	0.39	0.36
For national long distance calls	0.48	0.49	1.17	0.74
For calls to the USA	0.78	0.85		1.79

Source: Eurostat: Telecommunications in Europe, 2006, Data in focus 12/2008

To conclude, turnover is measured:

a) Very fast in the quarterly short-term statistics; this results in a preliminary *trend* figure of turnover; an improved figure is published together with the preliminary *trend* figure of the next quarter;

b) More accurate (but later) in the annual structural business statistics; this results in a turnover *level* figure and an improved *trend* figure, completed with details on costs;

c) The National Accounts presents the contribution of the telecom sector to the national economy in comparison with other (service) industries, in terms of production and value added.

8. Comparability of turnover data with price indices

Price indices are compiled only for the new NACE 6110 and 6120: wired and wireless telecommunication (table 9). For confidentiality reasons the price indices are not published.
For turnover we compile these statistics for the total of NACE 642, the three digit category. In the future we expect to publish the new NACE 61.1, 61.2, 61.3 and 61.9 separately.
Turnover data are available for the total of the NACE 64, which also encompasses post and courier services. Separate data for the NACE 642 are available but not published for confidentiality reasons. However, they can be used to determine weights for price indices.
Volume developments for the total of NACE 642 have to be calculated by using the price index for wired and wireless as a proxy, thus not taking satellite and other telecommunications into consideration.

Table 9. Price indices for wired and wireless telephone, 2002 - 2007

	Wired telephone	**Wireless telephone**
2002 Q2	Confidential	Confidential
2002 Q3	Confidential	Confidential
2002 Q4	Confidential	Confidential
2003 Q1	Confidential	Confidential
2003 Q2	Confidential	Confidential
2003 Q3	Confidential	Confidential
2003 Q4	Confidential	Confidential
2004 Q1	Confidential	Confidential
2004 Q2	Confidential	Confidential
2004 Q3	Confidential	Confidential
2004 Q4	Confidential	Confidential
2005 Q1	Confidential	Confidential
2005 Q2	Confidential	Confidential
2005 Q3	Confidential	Confidential
2005 Q4	Confidential	Confidential
2006 Q1	Confidential	Confidential
2006 Q2	Confidential	Confidential
2006 Q3	Confidential	Confidential
2006 Q4	Confidential	Confidential
2007 Q1	Confidential	Confidential
2007 Q2	Confidential	Confidential
2007 Q3	Confidential	Confidential
2007 Q4	Confidential	Confidential

9. Summary

Turnover of the telecom sector is measured in several ways in the Netherlands: developments on a quarterly basis as well as levels and details of costs on an annual basis. Because of confidentiality issues in the post and courier activities (NACE 641), the publication of data on the telecom sector (NACE 642) is restricted. As a result only the two digit category (NACE 64), the sum of both, can be published.
Price indices are available for wired and wireless telephone, but these data are also not published for confidentiality reasons.
In the near future, we will switch to the new NACE and provide turnover statistics for NACE 61.1, 61.2, 61.3 and 61.9. Since the telecommunications sector moves to a completely different section with more economic actors active, we expect no confidentiality issues there.