

Community Survey on ICT Usage and e-Commerce in Enterprises for 2013

Quality report

Please read this first !!!

General guidelines on using this template:

- In the title line of this page, please delete the non-applicable term (Metadata / Quality).
- Fill in the required information in the space (box) foreseen next to or below the item heading, if a box is irrelevant for your national survey, indicate 'non-applicable' to avoid we have to come back to you on this item. An increase of the box' size after inserting several lines or paragraphs is no problem. However, when reporting several pages for one item, we kindly ask you to give a short summary and refer to the full text in an annex.
- It is not required that you follow the text format defined in this template. However, use the tables defined below and don't change its structure (don't insert more rows, more columns or merge cells). Keep the numbering and the headings of the several sections. These rules intend to allow for the automatic extraction of all the information from the report and its introduction in our database. Please use also the formatting for the numerical cells as specified.
- This template is designed to serve both the requirements for the Metadata as well as the Quality reports. **Chapters 1 to 6 shall be completed for the metadata reporting, chapters 7 to 12 can be postponed until the quality reporting.** However, where provisional information for the Quality Report topics is already available, we invite you to provide us with this data in the Metadata Report (and update it in the Quality Report).

We kindly thank you for respecting these guidelines.

1. Cover information

1.1	Country Please insert here the name of the Country to which the survey refers to. GREECE
1.2	Organisation(s) Here you should put the names of the organisations responsible for the survey under Eurostat (e.g. Statistical Office) and / or any other organisations involved in the conduction of the survey. HELLENIC STATISTICAL AUTHORITY
1.3	Contact Person Please indicate the name, unit and the contact information of the person that should be contacted in case there is any question concerning the survey and this report. GEORGIA GOLEMI : golemig@statistics.gr AIKATERINI DEIVEKI : aikdev@statistics.gr
1.4	Name of the statistical operation or collection Here you should put the national name of the survey in its original language and in English if there is any national reference (i.e. in the web-site of the statistical office) to the survey in English. ΕΡΕΥΝΑ ΧΡΗΣΗΣ ΤΕΧΝΟΛΟΓΙΩΝ ΠΛΗΡΟΦΟΡΗΣΗΣ ΚΑΙ ΗΛΕΚΤΡΟΝΙΚΟΥ ΕΜΠΟΡΙΟΥ ΣΤΙΣ ΕΠΙΧΕΙΡΗΣΕΙΣ ΕΤΟΥΣ 2013//ICT Usage & e-Commerce in Enterprises 2013
1.5	Date of this report Please indicate the date of the last update of this report, for the case we have several versions (i.e. use different dates for the <u>metadata</u> report and the <u>quality</u> report). 04-11-2013

2. General methodological information

2.1	Reference period <p>In this section please indicate if the reference periods defined in the model questionnaire for the several variables were followed in the national survey and highlight the differences.</p> <p>THIS REFERENCE PERIODS DEFINED IN THE MODEL QUESTIONNAIRE FOR THE SEVERAL VARIABLES WERE FOLLOWED IN THE NATIONAL SURVEY</p>															
2.2	Survey period <p>Please indicate the dates between which the data collection took place, i.e., when the questionnaires were sent out (or the web-questionnaire made available) and when the last filled in questionnaire treated and used for the results was received. Please indicate also the collection dates for the financial sector and the micro-enterprises (if conducted), even if they are the same as the general survey.</p> <table border="1"> <thead> <tr> <th>Survey / Collection</th> <th>Date of sending out of questionnaires</th> <th>Date of reception of the last questionnaire treated</th> </tr> </thead> <tbody> <tr> <td>General survey</td> <td>APRIL 2013</td> <td>OCTOBER 2013</td> </tr> <tr> <td>Financial sector</td> <td>APRIL 2013</td> <td>OCTOBER 2013</td> </tr> <tr> <td>Micro-enterprises</td> <td>Will not be surveyed</td> <td>Will not be surveyed</td> </tr> </tbody> </table>				Survey / Collection	Date of sending out of questionnaires	Date of reception of the last questionnaire treated	General survey	APRIL 2013	OCTOBER 2013	Financial sector	APRIL 2013	OCTOBER 2013	Micro-enterprises	Will not be surveyed	Will not be surveyed
Survey / Collection	Date of sending out of questionnaires	Date of reception of the last questionnaire treated														
General survey	APRIL 2013	OCTOBER 2013														
Financial sector	APRIL 2013	OCTOBER 2013														
Micro-enterprises	Will not be surveyed	Will not be surveyed														
2.3	Survey vehicle <p>Stand-alone or embedded in another survey. Please introduce an "x" in the column next to the type of survey vehicle used for the general survey (enterprises with 10 or more persons employed). In addition, please indicate if the data collection for micro-enterprises was integrated with the general survey, i.e. the same questionnaire was used and the sending out of questionnaires was simultaneous.</p> <table border="1"> <tbody> <tr> <td>General survey: Stand-alone survey</td> <td>x</td> <td>General survey: Embedded in another survey</td> <td></td> </tr> <tr> <td colspan="2">Was collection of <u>micro-enterprises</u> integrated with the general survey?</td> <td>Yes</td> <td>No x</td> </tr> </tbody> </table>				General survey: Stand-alone survey	x	General survey: Embedded in another survey		Was collection of <u>micro-enterprises</u> integrated with the general survey?		Yes	No x				
General survey: Stand-alone survey	x	General survey: Embedded in another survey														
Was collection of <u>micro-enterprises</u> integrated with the general survey?		Yes	No x													
2.4	Survey type <p>Please give a short description of the survey type (e.g. web survey, face-to-face interviews, self-administered mail survey, telephone interview, combination of techniques, other).</p> <p>A COMBINATION OF FACE-TO-FACE INTERVIEWS, SELF-ADMINISTERED MAIL AND TELEPHONE INTERVIEWS</p>															
2.5	Survey participation <p>Please indicate if the survey was mandatory or voluntary, by introducing an "x" in the column next to the type of survey participation.</p> <table border="1"> <tbody> <tr> <td>Mandatory</td> <td>x</td> <td>Voluntary</td> <td></td> </tr> </tbody> </table>				Mandatory	x	Voluntary									
Mandatory	x	Voluntary														
2.6	Main methodological differences compared to previous survey(s) <p>Please indicate any changes in the survey from the previous year that may have an impact on the comparability over time of the results delivered to Eurostat (and not particularly those relating to results released only nationally).</p> <p>None</p>															

3. Statistical Unit and Target Population

3.1	Statistical Unit															
	Please indicate the statistical unit used. If it wasn't the "enterprise", as defined in the model survey, please mention the reasons.															
	ENTERPRISE															
3.2	Target Population															
3.2.1	Enterprise size															
	As required by Annex I of the Commission Regulation (EC) No 1083/2012 of 19 th November 2012, enterprises with 10 or more persons employed are intended to be covered by the survey.															
	Indicate below what is the scope for the coverage of micro-enterprises in terms of size and if the breakdown in the size classes is provided or not. For each one of the two items below introduce an "x" in the column next to the appropriate response.															
	If the variable used to define enterprise size was not the number of persons employed, indicate which one was used (number of employees, number of FTE's ...), the reason and the possible impact on results.															
	<table border="1"> <tr> <td>Scope in terms of persons employed</td><td>1 to 9 persons employed</td><td></td><td>5 to 9 persons employed</td><td></td></tr> <tr> <td>Breakdown between size classes [1 to 4] and [5 to 9] persons employed provided?</td><td>Yes</td><td></td><td>No</td><td></td></tr> <tr> <td>If different size delimitation or different variable was used, please indicate it.</td><td colspan="4">Enterprises <10 employed, are not surveyed</td></tr> </table>	Scope in terms of persons employed	1 to 9 persons employed		5 to 9 persons employed		Breakdown between size classes [1 to 4] and [5 to 9] persons employed provided?	Yes		No		If different size delimitation or different variable was used, please indicate it.	Enterprises <10 employed, are not surveyed			
Scope in terms of persons employed	1 to 9 persons employed		5 to 9 persons employed													
Breakdown between size classes [1 to 4] and [5 to 9] persons employed provided?	Yes		No													
If different size delimitation or different variable was used, please indicate it.	Enterprises <10 employed, are not surveyed															
3.2.2	Economic Activity															
	All economic activities in the scope of Annex I of the Commission Regulation (EC) No 1083/2012 of 19 th November 2012 are intended to be included in the general survey, covering enterprises with 10 or more persons employed. These activities are: NACE Rev. 2 sections C, D, E, F, G, H, I, J, L and N, divisions 69-74, groups 65.1, 65.2 and 95.1 and classes 64.19, 64.92, 66.12 and 66.19.															
	In this section, please indicate for the <u>micro-enterprises</u> if all the NACE categories were covered – by introducing an "x" in the column next to the appropriate response; if not which ones were included.															
	<table border="1"> <tr> <th>Economic Activity</th><th colspan="4">Micro-enterprises</th></tr> <tr> <td>All NACE Rev. 2 categories covered?</td><td>Yes</td><td></td><td>No</td><td></td></tr> <tr> <td>If not, which ones were covered?</td><td colspan="4"></td></tr> </table>	Economic Activity	Micro-enterprises				All NACE Rev. 2 categories covered?	Yes		No		If not, which ones were covered?				
	Economic Activity	Micro-enterprises														
All NACE Rev. 2 categories covered?	Yes		No													
If not, which ones were covered?																
3.2.3	Geographic scope															
	Please indicate here if all the territory of the country was considered or if any part of the country was not included. All territory of the country should be covered. In case parts of the country were not included indicate which, the reasons why, and an estimate of the percentage of the target population not covered.															
	THE WHOLE COUNTRY IS COVERED															

4. Questionnaire

4.1	<p>Implementation in the national questionnaire of the mandatory variables and adoption of questions for micro-enterprises (Model Questionnaire, version 1.1)</p> <p>All mandatory variables included in Annex I of the Commission Regulation (EC) No 1083/2012 of 19th November 2012 are intended to be included in the general survey, covering enterprises with 10 or more persons employed.</p> <p>In the following table please indicate any deviation of the question from the recommendation as defined in the model questionnaire, for the general survey.</p> <p>For each question or item, an "x" in the column named <i>Question included</i> means that it was included in the national questionnaire directed to micro-enterprises. The national questionnaire(s) (and an English version, if available,) should be present as annex.</p>
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Question / Item		General Survey	Micro-enterprises
		Any deviation from question / item in model questionnaire	Question included
Module A: Use of computers and computer networks			
A1.	<p>Did your enterprise use computers, in January 2013? (Filter question)</p> <p>Computers include Personal Computers, nettops, portable computers (e.g. laptops, notebooks, netbooks, tablets), other portable devices like Smartphones, Personal Digital Assistants (PDA)</p>	None	
Module B: Access and use of the Internet			
B1.	Did your enterprise have access to the Internet, in January 2013? (Filter question)	None	
B2.	Did your enterprise have the following types of external connection to the Internet, in January 2013?		
	a) DSL connection e.g. xDSL, ADSL, SDSL, VDSL etc	None	
	b) Other fixed broadband Internet connection e.g. fiber optics technology (FTTH), cable technology, etc (add national examples for public Wi-Fi, WiMax, etc)	None	
	c) ISDN connection or dial-up access over normal telephone line	None	
	d) Mobile broadband connection via a portable device using mobile telephone networks (so called 3G or 4G) e.g. via a portable computer or other portable devices like Smartphone, PDA phone	None	
	e) Other mobile connection using e.g. analogue mobile phone, GSM, GPRS, EDGE	None	
B3.	<p>What was the maximum contracted download speed of the fastest Internet connection of your enterprise, in January 2013? (tick only one)</p> <p>a) less than 2 Mbit/s b) at least 2 but less than 10 Mbit/s c) at least 10 but less than 30 Mbit/s d) at least 30 but less than 100 Mbit/s e) at least 100 Mbit/s</p>	None	
B4.	<p>How many persons employed used computers with access to the World Wide Web at least once a week, in January 2013?</p> <p>Or</p> <p>Please indicate an estimate of the percentage of the total number of persons employed who used computers with access to the World Wide Web at least once a week, during January 2013. Computers include Personal Computers, nettops, portable computers (e.g. laptops, notebooks, netbooks, tablets), other portable devices like Smartphone, PDA phone.</p>	None	

Question / Item		General Survey	Micro-enterprises
		Any deviation from question / item in model questionnaire	Question included
Mobile connection to the Internet for business use			
B5.	In January 2013, did any persons employed have portable devices provided by the enterprise that allowed a mobile connection to the Internet for business use? Tick 'No' if the devices allowed Internet connection only via wireless networks (i.e. local wireless networks or public hotspots such as [add national examples of Wi-Fi hotspots, hotzones e.g. HotCity for Luxembourg]) and not via mobile telephone networks (<i>filter question</i>) (e.g. portable computers or other portable devices like Smartphone, PDA phone)	None	
B6.	In January 2013, how many persons employed had a portable device provided by the enterprise that allowed a mobile connection to the Internet for business use? (e.g. portable computers or other portable devices like Smartphone, PDA phone) or Please indicate an estimate of the percentage of the total number of persons employed who had a portable device provided by the enterprise that allowed a mobile connection to the Internet for business use, in January 2013? (e.g. portable computers or other portable devices like Smartphone, PDA phone)	None	
Use of a Website or Home Page			
B7.	In January 2013, did your enterprise have a Website or Home Page? (<i>Filter question</i>)	None	
B8.	In January 2013, did the Website or Home Page have any of the following?		
	a) Online ordering or reservation or booking, e.g. shopping cart	None	
	b) A privacy policy statement, a privacy seal or certification related to website safety	None	
	c) Product catalogues or price lists	None	
	d) Order tracking available on line	None	
	e) Possibility for visitors to customise or design the products	None	
	f) Personalised content in the website for regular/repeated visitors	None	
Use of the Internet in contact with public authorities			
B9.	During 2012, did your enterprise use the Internet for interaction with public authorities to: (excluding any interaction via e-mails)		
	a) obtain information from public authorities' websites or home pages?	None	
	b) obtain forms from public authorities' websites or home pages?	None	
	c) submit completed forms electronically? e.g. forms for customs or VAT declaration	None	
	d) declare VAT completely electronically without the need for paper work? (including electronic payment, if required)	None	
	e) declare social contributions completely electronically without the need for paper work? (including electronic payment, if required)	None	
Public electronic Procurement			
B10.	During 2012, did your enterprise use the Internet for accessing tender documents and specifications in electronic procurement systems of public authorities?	None	
B11.	During 2012, did your enterprise use the Internet for offering goods or services in public authorities' electronic procurement systems (eTendering)?		
	a) in your own country	None	
	b) in other EU countries	None	

Question / Item		General Survey	Micro-enterprises
		Any deviation from question / item in model questionnaire	Question included
Use of Social Media			
B12.	In January 2013, did your enterprise use any of the following social media? (add national examples; replace existing examples if necessary)		
	a) Social networks (e.g. Facebook, LinkedIn, Xing, Viadeo, Yammer, etc)	None	
	b) Enterprise's blog or microblogs (e.g. Twitter, Present.ly, etc)	None	
	c) Multimedia content sharing websites (e.g. YouTube, Flickr, Picassa, SlideShare, etc)	None	
	d) Wiki based knowledge sharing tools	None	
	e) The enterprise did not use any of the above mentioned social media or used them only for posting paid adverts	None	
B13.	In January 2013, did your enterprise use social media to:		
	a) Develop the enterprise's image or market products (e.g. advertising or launching products, etc)	None	
	b) Obtain or respond to customer opinions, reviews, questions	None	
	c) Involve customers in development or innovation of goods or services	None	
	d) Collaborate with business partners (e.g. suppliers, etc.) or other organisations (e.g. public authorities, non-governmental organisations, etc.)	None	
	e) Recruit employees	None	
	f) Exchange views, opinions or knowledge within the enterprise	None	
B14.	In January 2013, did your enterprise have a formal policy for using social media? (e.g. objectives, rules, procedures, etc)	None	
Module C: Electronic invoicing (Scope: enterprises with Computers)			
C1.	In January 2013, did your enterprise send electronic invoices?		
	a) e-invoices in a standard structure suitable for automatic processing e.g. EDI, UBL, XML, (please add national examples)	None	
	b) Electronic invoices not suitable for automatic processing e.g. emails, email attachment in PDF format	None	
C2.	In January 2013, did your enterprise receive e-invoices in a standard structure suitable for automatic processing? e.g. EDI, UBL, XML, (please add national examples)	None	
Module D: Automatic share of information within the enterprise (Scope: enterprises with Computers)			
D1.	In January 2013, did your enterprise use an ERP software package?	None	
Module E: e-Commerce (Scope: enterprises outside the financial sector with Computers)			
E-commerce Sales			
Web sales			
E1.	During 2012, did your enterprise receive orders for goods or services placed via a website? (excluding manually typed e-mails) (Filter question)	None	
E2.	Please state the value of the turnover resulting from orders received that were placed via a website (in monetary terms, excluding VAT), in 2012. If you can't provide this value, Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via a website, in 2012.	None	
E3.	In 2012, did your enterprise receive orders placed via a website by customers located in the following geographic areas?		
	a) Own country	None	
	b) Other EU countries	None	
	c) Rest of the world	None	

Question / Item		General Survey	Micro-enterprises
		Any deviation from question / item in model questionnaire	Question included
E4.	Please provide a percentage breakdown of the turnover from orders received that were placed via a website in 2012 by type of customer (estimates in percentage of the monetary values, excluding VAT)		
	a) B2C (Sales to private consumers)	None	
	b) B2B (Sales to other enterprises) and B2G (Sales to public authorities)	None	
	c) TOTAL		
E5.	Did any of the following obstacles limit or prevent your enterprise from selling via a website?		
	a) The enterprise's goods or services were not suitable for web sales	None	
	b) Problems in web sales related to logistics (shipping of goods or delivery of services)	None	
	c) Problems in web sales related to payments	None	
	d) Problems in web sales related to ICT security or data protection	None	
	e) Problems in web sales related to the legal framework	None	
	f) The cost of introducing web sales was, or would have been, too high compared to the benefits	None	
EDI-type sales			
E6.	During 2012, did your enterprise receive orders for goods or services placed via EDI-type messages? (Filter question)	None	
E7.	Please state the value of the turnover resulting from orders received that were placed via EDI-type messages (in monetary terms, excluding VAT), in 2012. or Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via EDI-type messages, in 2012.	None	
E8.	In 2012, did your enterprise receive orders placed via EDI-type messages by customers located in the following geographic areas?		
	a) Own country	None	
	b) Other EU countries	None	
	c) Rest of the world	None	
E-commerce Purchases			
E9.	During 2012, did your enterprise send orders for goods or services via a website or EDI-type messages? (Excluding manually typed e-mails)	None	
Module X: Background information (X1-X4) available in some countries from SBS, the business register or administrative data and thus not to be included; latest available information should be provided			
X1.	Main economic activity of the enterprise, during 2012.	None	
X2.	Average number of persons employed, during 2012.	None	
X4.	Total turnover (in value terms, excluding VAT), for 2012	None	

4.2	Coverage of the optional variables of the Model Questionnaire (MQ version 1.1) Indicate below <u>which</u> optional variables and questions were included in the national questionnaire. For each question or item, an "x" in the column named <i>Question included</i> means that it was included in the national questionnaire. The column "10+" refers to enterprises with 10 or more persons employed and column "Micr" refers to micro-enterprises.			
Optional Question / Item		Question included		Any deviations from question / item in model questionnaire
		10+	Micr	
Module A: Use of computers and computer networks (optional questions/items)				
A2.	How many persons employed used computers at least once a week, in January 2013? If you can't provide this value, Please indicate an estimate of the percentage of the total number of persons employed who used computers at least once a week, in January 2013.	X		
A3.	In January 2013, did any persons employed have remote access to the enterprise's e-mail system, documents or applications (via fixed, mobile or wireless connection to the Internet)?	X		
Module B: Access and use of the Internet (optional questions/items)				
B2.	Did your enterprise have the following types of external connection to the Internet, in January 2013?			
	d1) via portable computer using mobile telephone networks (so called 3G or 4G) e.g. notebook, netbook, laptop, Ultra Mobile PC-UMPC, tablet, etc	X		
	d2) via other portable devices like Smartphone, PDA phone using mobile telephone networks (so called 3G or 4G)	X		
B8.	In January 2013, did the Website or Home Page have any of the following?			
	g) Advertisement of open job positions or online job application	X		
Module D: Automatic share of information within the enterprise (optional questions/items) (Scope: enterprises with Computers)				
D2.	In January 2013, did your enterprise use CRM software to manage:			
	a) the collection, storing and making available information about customers to various business functions	X		
	b) the analysis of information about customers for marketing purposes. (e.g. setting prices, sales promotion, choosing distribution channels, etc.)	X		
Module E: e-Commerce (optional questions/items) (Scope: enterprises outside the financial sector with Computers)				
E10.	During 2012, did your enterprise place orders for goods or services via a website?	X		
E11.	During 2012, did your enterprise place orders for goods or services via EDI-type messages?	X		
E12.	Please indicate for 2012 the value of orders that were sent electronically in relation to the total purchases' value (in monetary terms, excluding VAT) Less than 1% 1% or more and less than 5% 5% or more and less than 10% 10% or more and less than 25% 25% or more and less than 50% 50% or more and less than 75% 75% or more or Please state the value of the purchases resulted from orders placed electronically (in monetary terms, excluding VAT), in 2012. or Please provide an estimate of the percentage of the total purchases that resulted from orders placed electronically, in 2012.	X		

E13.	In 2012, did your enterprise place orders via a website or EDI-type messages to suppliers located in the following geographic areas?			
a) Own country	X			
b) Other EU countries	X			
c) Rest of the world	X			
Module X: Background information (<i>optional questions/items</i>)				
(X1-X4) available in some countries from SBS, the business register or administrative data and thus not to be included; latest available information should be provided				
X3.	Total purchases of goods and services (in value terms, excluding VAT), for 2012	X		

4.3	General remarks on the national questionnaire	
	This section can be filled in with general information about the variables collected. For example if any of the variables was collected outside the scope of the survey (administrative sources, other survey, etc.).	
	None	
4.4	Additional questions introduced in national questionnaire(s)	
	In this section you can introduce general information on the adoption of additional national questions. In the following table you can provide the designation of these questions and any other additional information on that question you wish to provide.	
	Variable	Additional information

5. Frame population

5.1	<p>Description of frame population</p> <p>This section includes a description of the frame population. Please indicate if the frame population is the same as, or is in some way coordinated with, the one used for the Structural Business Statistics. If there was any deviation from the recommendation of the model survey, please refer to it explicitly. Please describe if different frames are used during different stages of the statistical process (e.g. frame used for sampling vs. frame used for grossing up).</p> <p>The sampling frame used for the sample design was based on the Business Register of the ELSTAT. The Business Register is based on the V.A.T. Register of the Ministry of Finance and it is updated through the statistical surveys of the ELSTAT and the Register of the Social Insurance Foundation. This population frame was used for the selection of the sampling units and for compiling the inclusion probabilities of the surveyed units. For the grossing up compilation a new updated register, available at that time, will be used.</p>
5.2	<p>Known shortcomings of the frame population, if any</p> <p>Indicate shortcomings in terms of timeliness (e.g. time lag between last update of the sampling frame and the moment of the actual sampling), geographical coverage, coverage of different subpopulations, data available etc., and any measures taken to correct it, for this survey.</p> <p>The reference year of the survey is not the same with the reference year of the sampling frame, which was used for the sample selection.</p>

5.3	Frame population distribution In the following table, please provide the number of statistical units (e.g. enterprises) <u>in the frame population</u> , by size and by economic activity. Grey cells correspond to optional size classes, and are to be filled in only when these were covered by the survey. Include in the totals all filled in cells listed above the Total.					
Frame Population	1 to 4 persons employed	5 to 9 persons employed	10 to 49 persons employed	50 to 249 persons employed	250 or more persons employed	Total
10-12			696	213	44	953
13-15			389	62	4	455
16-18			342	53	3	398
19-23			556	146	28	730
24-25			394	67	15	476
26			27	4	3	34
27-28			297	15	7	319
29-30			55	5	5	65
31-33			376	28	2	406
35-39			46	31	7	84
41-43			2.336	186	11	2.533
45			643	54	3	700
46			3.727	409	33	4.169
47			1.720	141	42	1.903
49-53			1.202	137	26	1.365
55			1.382	327	13	1.722
56			3.139	84	3	3.226
58-60			351	80	7	438
61			90	15	11	116
62-63			214	31	6	251
68			187	8		195
69-74			1.105	170	21	1.296
77-78+80-82			574	123	24	721
79			281	16	0	297
95.1			12	4	0	16
Total			20.141	2.409	318	22.868
Of which ICT sector (in: 26.1-26.4+ 26.8+46.5+ 58.2+61+ 62+63.1+95.1)			470	76	21	567
64.19+64.92			19	17	12	48
65.1+65.2			7	4	2	13
66.12+66.19			34	21	2	57
Total financial sector			60	42	16	118

6. Sampling design

6.1	Sampling method <p>This section includes a description of the sampling method used (e.g. stratified random sample, quota sampling, cluster sampling; one-stage or two-stage sampling). If stratification was used, please indicate which variables were used to stratify, the categories of those variables, in particular for the NACE categories related to the "possible calculation of European aggregates", and the final number of strata. Include also in this section the method used for the determination of the sample size and the method used for sample selection. In particular, mention if any procedures for the coordination or non- overlapping with samples of other surveys was used.</p>
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The sampling method applied was the one stage stratified random sampling, using as survey unit the enterprise with average annual employment 10 or more persons. For the sample design the sampling frame used was based on the updated Business Register of the EL.STAT. The enterprises with 10 or more employees included in the survey were stratified:

- a. By Region – NUTS 2
- b. By aggregations of NACE Rev.2 subsections, as specified in the relevant contract, within each Region
- c. By size class of the enterprise. In each one of the major strata (major stratum = Region x Economic Activity), the enterprises were stratified into $L = 5$ size classes, according to their size, determined by their average annual number of employees in the Business Register, as follows:

Size Class	Number of employees
------------	---------------------

1	10 - 19
2	20 - 49
3	50 - 99
4	100 - 249
5	250 +

Let h be one of the final strata (Final stratum = Region X Economic Activity X Size Class). The final strata, for the enterprises of the 4th and of the 5th size class, are census strata (take-all), because they comprise the large size units and the element population variance for all

variables is high. In each of the final strata, a systematic sample of n_h enterprises was

selected from the total number of enterprises N_h with equal selection probabilities. In the final strata, the distribution of sampling units was conducted by applying the optimal (Neyman) allocation.

The sample size is 4.624 enterprises (sampling fraction 21,4%). The number of enterprises that belong to the census size classes is 443, while the remaining 4.181 enterprises belong to the first three size classes (surveyed on a sample basis).

The determination of the sample size was carried out so that at each aggregation of NACE Rev. 2 subsection, the coefficient of variation (CV) of the value estimated variable “number of persons employed who used computers with access to the world wide web at least once a week” does not exceed the value of 5% ($CV \leq 5\%$).

Concerning the data processing, the collected data will be inflated, with adequate weights (extrapolation factors) for the estimation of the survey characteristics. The procedure for the survey characteristics estimation, as well as the method to be applied for the sampling error estimation (in the form of coefficient of variation) is the following:

Symbolisms

In each size class h of an aggregation of NACE Rev. 2 subsections let:

y_{hi} : the value of the characteristic y of enterprise of order i belonging to the size class h

N_h : the total number of enterprises belonging to the size class h

m_h : the number of the responded enterprises in size class h

w_h : the weight of the size class h ($w_h = \frac{N_h}{m_h}$)

Y_h : the total of the variable y for all enterprises in size class h

Y : the total of the variable y for all enterprises in all size classes of one economic activity.

$$Y = \sum_h Y_h$$

That is:

Estimation process (estimation for totals)

The estimation of Y_h and Y is given by the following formulas:

$$\hat{Y}_h = \frac{N_h}{m_h} \sum_{i=1}^{m_h} y_{hi} = w_h \sum_{i=1}^{m_h} y_{hi} \quad (1)$$

and

$$\hat{Y} = \sum_h \hat{Y}_h \quad (2)$$

The variance estimation of \hat{Y}_h and \hat{Y} is given by:

$$\hat{V}(\hat{Y}_h) = \frac{N_h(N_h - m_h)}{m_h} S_h^2, \quad (3)$$

where

$$S_h^2 = \frac{1}{m_h - 1} \left[\sum_{i=1}^{m_h} y_{hi}^2 - \frac{\left(\sum_{i=1}^{m_h} y_{hi} \right)^2}{m_h} \right], \quad (4)$$

The coefficient of variation is given by

$$CV(\hat{Y}) = \frac{\sqrt{\hat{V}(\hat{Y})}}{\hat{Y}} * 100$$

6.2	Gross sample distribution In the following table, please provide the number of statistical units (e.g. enterprises) <u>selected for sampling without any posterior correction for misclassification</u> , by size and by economic activity. Grey cells correspond to optional size classes or economic activities, and are to be filled in only when these were covered by the survey. Include in the totals all filled in cells listed above the Total.					
Gross sample	1 to 4 persons employed	5 to 9 persons employed	10 to 49 persons employed	50 to 249 persons employed	250 or more persons employed	Total
10-12			107	129	54	290
13-15			76	57	6	139
16-18			68	42	10	120
19-23			97	108	32	237
24-25			76	47	22	145
26			17	6	5	28
27-28			57	21	7	85
29-30			20	9	6	35
31-33			70	28	6	104
35-39			40	31	6	77
41-43			181	135	25	341
45			106	54	5	165
46			444	268	38	750
47			187	114	60	361
49-53			157	93	41	291
55			149	138	27	314
56			254	52	4	310
58-60			90	52	15	157
61			25	18	9	52
62-63			43	13	7	63
68			24	10	0	34
69-74			123	88	24	235
77-78+80-82			109	70	34	213
79			58	11	0	69
95.1			7	2	0	9
Total			2.585	1.596	443	4.624
Of which ICT sector (in: 26.1+26.4+26.8+46.5+58.2+61+62+63.1+95.1)			126	53	23	202
64.19+64.92			8	7	19	34
65.1+65.2			7	2	2	11
66.12+66.19			5	8	0	13
Total financial sector			20	17	21	58

7. Response and non-response (Quality Report)

7.1	Unit Response The following table should be filled in with the number of units (e.g. enterprises), by type of response to the survey and by the percentage of these values in relation to the gross sample size.				
Type of response		1-9 persons employed		10 or more persons employed	
		Number	%	Number	%
Gross sample size (as in section 6.2)		....	100%	4682	100%
1. Response (questionnaires returned by the enterprise)		....	%	3617	77,25 %
1.1 Used for tabulation and grossing up (<i>Net sample or Final Sample; as in section 7.2</i>)		....	%	3100	66,21 %
1.2 Not used for tabulation		....	%	517	11,04 %
1.2.1 Out of scope (deaths, misclassified originally in the target population, etc.)		....	%	460	9,82 %
1.2.2 Other reasons (e.g. unusable questionnaire, etc.)		....	%	57	1,22 %
2. Non-response (e.g. non returned mail, returned mail by post office, etc.)		....	%	1065	22,75 %

7.2	Net sample distribution In the following table, please provide the number of enterprises <u>used for grossing up and tabulation</u> , by size and by economic activity. Grey cells correspond to optional size classes or economic activities, and are to be filled in only when these were covered by the survey. Include in the totals all filled in cells listed above the Total.					
Net sample	1 to 4 persons employed	5 to 9 persons employed	10 to 49 persons employed	50 to 249 persons employed	250 or more persons employed	Total
10-12			99	116	44	259
13-15			68	36	4	108
16-18			59	28	3	90
19-23			80	78	28	186
24-25			64	37	15	116
26			11	4	3	18
27-28			50	8	7	65
29-30			13	4	4	21
31-33			62	12	2	76
35-39			30	27	7	64
41-43			116	43	11	170
45			83	24	3	110
46			315	151	33	499
47			116	60	42	218
49-53			117	53	26	196
55			111	71	13	195
56			123	19	3	145
58-60			48	23	7	78
61			15	4	11	30
62-63			39	9	5	53
68			15	3	0	18
69-74			84	59	21	164
77-78+80-82			66	33	24	123
79			35	4	0	39
95.1			3	3	0	6
Total			1.822	909	316	3.047
Of which ICT sector (in: 26.1-26.4+26.8+46.5+58.2+61+62+63.1+95.1)			84	33	20	137
64.19+64.92			8	5	12	25
65.1+65.2			6	2	2	10
66.12+66.19			4	12	2	18
Total financial sector			18	19	16	53

7.3	Comments on unit response, if any

7.4	<p>Methods used for minimizing <u>unit non-response</u></p> <p>Where applicable, give a description of measures taken to reduce the unit non-response: advance notification in the form of a letter or phone call; showing respondents how the data they are providing are being used; system of reminders; etc.</p> <p>Initially, in the form of the letter, we inform all the enterprises about: the scope and the use of the survey, the legislation and we ask the correspondents to answer the questionnaire in a time period not more than a month. Later, when this period passes we send a reminder.</p> <p>When this extra period passes, we take phone to the responsible person, and we try to investigate the causes of non-response.</p> <p>We offer them our help for filling the questionnaire, or in other cases we try to persuade them for the need of statistical data.</p> <p>After all, if the enterprise continues to refuse the collaboration with our service, we try to find another enterprise (with the same characteristics) to survey and we take the information we need.</p>
7.5	<p>Methods used for <u>unit non-response</u> treatment</p> <p>Indicate the method used to correct for unit non-response (Please tick the appropriate box)</p> <p>1. No treatment for unit non-response <input type="checkbox"/></p> <p>2. Treatment by re-weighting <input type="checkbox"/></p> <p>2.1 Re-weighting by the sampling design strata considering that non-response is ignorable inside each stratum (the naïve model) <input type="checkbox"/></p> <p>2.2 Re-weighting by identified response homogeneity groups (created using sample-level information) <input type="checkbox"/></p> <p>2.3 Re-weighting through calibration/post-stratification (performed using population information) by the groups used for calibration/post-stratification <input checked="" type="checkbox"/></p> <p>3. Treatment by imputation (done distinctly for each variable/item) <input type="checkbox"/></p> <p>4. Please briefly describe below the method(s) and the model(s) corresponding to the above or other method(s) used for the treatment of unit non-response. (e.g. Re-weighting using Horvitz-Thompson estimator, ratio estimator or regression estimator, auxiliary variables, etc.)</p> <p>In order to reduce the bias due to unit non-response, the units of the net sample were post-stratified according to the following criteria: a) NUTS 2 Region b) enterprise economic activity and c) enterprise size class, as this is defined by the number of its employees, The weight that was applied is</p> $w_h = \frac{N_h}{m_h}$
7.6	<p>Other comments relating to the unit non-response</p> <p>If any, please use this box to inform on additional issues on the non-response calculation (e.g. method used in national publications, etc.).</p>

<p>7.7</p>	<p>Questions or items with item response rates below 90% If any, identify the items with low response rates (the cut-off value to be used is 0.90) and indicate their respective response rates. The item non-response rate should of course be calculated taking into account the routing and filtering in the questionnaire.</p>
<p>7.8</p>	<p>Methods used for <u>item non-response</u> treatment Indicate whether imputations are made for item non-response and give a short description of the methods used. Please see also guidance on this subject in the model questionnaire and the Methodological Manual.</p> <p>1. No treatment for item non-response <input checked="" type="checkbox"/></p> <p>2. Deductive imputation <input type="checkbox"/> <i>An exact value can be derived as a known function of other characteristics.</i></p> <p>3. Deterministic imputation (e.g. mean/median, mean/median by class, ratio-based, regression-based, single donor nearest-neighbour, etc) <input type="checkbox"/> <i>Deterministic imputation leads to estimators with no random component, that is, if the imputation were to be re-conducted, the outcome would be the same</i></p> <p>4. Random imputation (e.g., hot-deck, cold-deck etc) <input type="checkbox"/> <i>Random imputation leads to estimators with a random component, that is, if the imputation were re-conducted, it would have led to a different result</i></p> <p>5. Re-weighting <input type="checkbox"/></p> <p>6. Multiple imputation <input type="checkbox"/> <i>In multiple imputation each missing value is replaced (instead of a single value) with a set of plausible values that represent the uncertainty of the right value to impute. Multiple imputation methods offer the possibility of deriving variance estimators by taking imputation into account. The incorporation of imputation into the variance can be easily derived based on variability of estimates among the multiply imputed data sets.</i></p> <p>7. Please briefly describe below the method(s) and the model(s) corresponding to the above or other method(s) used for the treatment of item non-response.</p>
<p>7.9</p>	<p>Other comments relating to the item non-response If any, please use this box to inform on additional issues on the non-response calculation (e.g. method used in national publications, etc.).</p>

8. Grossing-up

(Quality Report)

8.1

Grossing-up procedures

Please give a description of the extrapolation or weighting procedures used to gross up the number of enterprises, number of persons employed, turnover and purchases in the net sample to the (target) population. Please present the different steps taken or factors applied to the design weighting to take into account the (post)stratification, balancing for unit non-response, etc. Please describe the different categories of questions – if any – that have been grossed up differently (see also the model questionnaire and the Methodological Manual).

In order to reduce the bias from unit non-response, the units of the net sample were post-stratified according to the following criteria: a) NUTS 2 Region b) enterprise economic activity and c) enterprise size class, as this is defined by the number of its employees. The

weight that was applied is $w_h = \frac{N_h}{m_h}$, as already presented in paragraph 7.5. In order to

estimate all survey characteristics we used the same grossing up factor (weight) in every stratum for NACE Rev.2 classification.

9. Standard error

(Quality Report)

9.1 Standard error (for a selection of indicators)

Precision measures related to variability due to sampling, unit non-response (the size of the subset of respondents is smaller as compared to the size of the original sample) and other (imputation for item non-response, calibration etc.) are not (yet) required from the Member-State for all indicators. Eurostat will make basic assumptions to compute these measures for all indicators produced (e.g. stratified random sampling assuming as strata the crossing of the variables "Number of Persons Employed" and "Economic Activity" as it was defined in the tables of sections 5.3, 6.2 and 7.2).

In order to evaluate the reasonability of the assumptions made by Eurostat, we need to compare the estimated standard error computed under these assumptions and those computed by the country, taking into account the real sampling design used and other sources of variability, for at least some of the indicators. We also need to compare these measures not only for the overall population, but also for the several breakdowns, in which case the standard error is commonly higher. Please, describe also the method used for the estimation of the standard error in §9.2 below.

We kindly ask you to provide in the following table the estimated standard error **in percentage points** for each of the listed indicators. Both aggregates for "possible calculation of **national** aggregates" and for "possible calculation of **European** aggregates" are included in the table.

Grey cells correspond to optional size classes, and are to be filled in only when these were covered by the survey.

In the third column of the table, a technical reference is made to the question and scope in the same terms as used in the Transmission Format.

Indicator ¹			Question associated	Estimated proportion % ²	Standard error Percentage points ³	Flag C: Confidential U: unreliable
Variable	Breakdown	Unit				
e_pmd	10_C10_S951_XK	% ent	B5. In January 2013, did any persons employed have portable devices provided by the enterprise that allowed a mobile connection to the Internet for business use?	27.4	0.93	
e_webord	10_C10_S951_XK	% ent	B8. In January 2013, did your enterprise have a website that offered online ordering or reservation or booking, e.g. shopping cart?	15.0	0.75	
e_erp1	10_C10_S951_XK	% ent	D1. In January 2013, did your enterprise have in use an ERP software package?	37.1	1.05	
e_invsndap	10_C10_S951_XK	% ent	C1a. In January 2013, did your enterprise send electronic invoices in a standard structure suitable for automatic processing e.g. EDI, UBL, XML?	4.8	0.46	
e_invrecap	10_C10_S951_XK	% ent	C2. In January 2013, did your enterprise receive e-invoices in a standard structure suitable for automatic processing e.g. EDI, UBL, XML?	20.1	0.91	
e_awsell	10_C10_S951_XK	% ent	E1. During 2012, did your enterprise receive orders for products or services placed via a website? (excluding manually typed e-mails)	9.1	0.59	
e_aws_b2c	10_C10_S951_XK	% ent	Derived from E4a. Enterprises which sold to private consumers (B2C) via a website over the last calendar year	8.0	0.57	
e_axsell	10_C10_S951_XK	% ent	E6. During 2012, did your enterprise receive orders for goods or services placed via EDI-type messages?	1.1	0.20	U
e_aebuy	10_C10_S951_XK	% ent	E9. During 2012, did your enterprise send orders for goods or services via a website or EDI-type messages (excluding manually typed e-mails)	20.0	0.89	
e_web	10_C10_S951_XK	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	60.6	1.21	
e_web	MC_C10_S951_XK	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?			
e_web	MI_C10_S951_XK	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?			

¹ The first item of the indicator consists of the variable code as included in the Transmission format, the second is the breakdown (by activity and/or size class), whereas the third indicates to what the proportion (and standard error) should be related, i.e. % ent: as a percentage of the total number of enterprises within the scope; % turn: as a percentage of the total turnover of enterprises within the scope; % emp: as a percentage of the number of persons employed in the enterprises within the scope.

² The estimated proportion is to be expressed as a percentage; please use decimal points only and as many decimals as needed. **Values should correspond to the latest transmitted data.**

³ The standard error is to be expressed in percentage points (absolute precision measure); please use decimal points only and as many decimals as needed. **Values should correspond to the latest transmitted data.**

Indicator ¹			Question associated	Estimated proportion % ²	Standard error Percentage points ³	Flag C: Confidential U: unreliable
Variable	Breakdown	Unit				
e_web	S_C10_S951_XK	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	57.6	1.37	
e_web	M_C10_S951_XK	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	81.8	1.32	
e_web	L_C10_S951_XK	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	91.5	0.00	
e_web	10_C10_12	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	58.5	3.74	
e_web	10_C13_15	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	66.2	5.10	
e_web	10_C16_18	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	75.2	6.20	
e_web	10_C10_18	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	64.1	2.72	
e_web	10_C19_23	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	66.7	4.19	
e_web	10_C24_25	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	76.3	4.35	
e_web	10_C26	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	89.7	8.76	U
e_web	10_C27_28	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	91.3	3.70	
e_web	10_C29_30	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	84.1	8.94	
e_web	10_C31_33	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	70.4	5.62	
e_web	10_C26_33	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	80.4	3.22	
e_web	10_D35_E39	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	76.8	2.59	
e_web	10_F41_43	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	50.2	4.50	
e_web	10_G45	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	65.1	5.43	
e_web	10_G46	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	67.4	2.50	
e_web	10_G47	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	40.6	4.05	U
e_web	10_G45_47	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	59.6	1.99	
e_web	10_H49_53	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	65.6	4.32	
e_web	10_I55	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	82.5	4.02	
e_web	10_I55_56	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	51.0	3.53	
e_web	10_J58_60	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	75.1	6.76	
e_web	10_J61	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	73.4	10.53	U
e_web	10_J62_63	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	90.7	3.82	
e_web	10_J58_63	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	79.8	4.15	
e_web	10_L68	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	67.1	11.55	U
e_web	10_M69_74	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	73.0	3.95	
e_web	10_N77_82_X79	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	65.6	7.16	U
e_web	10_N79	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	62.8	7.67	U
e_web	10_N77_82	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	64.8	5.54	
e_web	10_S951	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	100.0	0.00	
e_web	10_ICT_T	% ent	B7. In January 2013, did your enterprise have a Website or Home Page?	89.0	2.88	

Indicator ¹			Question associated	Estimated proportion % ²	Standard error Percentage points ³	Flag C: Confidential U: unreliable
Variable	Breakdown	Unit				
p_empm	10_C10_S951_XK	% emp	B6. Please indicate an estimate of the percentage of the total number of persons employed who had a portable device provided by the enterprise that allowed a mobile connection to the Internet for business use, in January 2013	7.4	0.18	
e_awsval	10_C10_S951_XK	% turn	E2. Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via a website, in 2012.	1.2	0.13	U
e_axsval	10_C10_S951_XK	% turn	E7. Please indicate an estimate of the percentage of the total turnover resulting from orders received that were placed via EDI-type messages, in 2012.	0.4	0.06	u

9.2	Calculation of the standard error
	<p>Various methods can be used for the calculation of the standard error for an estimated proportion. The aim is to incorporate into the standard error the sampling variability but also variability due to unit non-response, item non-response (imputation), calibration etc. In case of census / take-all strata, the aim is to calculate the standard errors comprising the variability due to unit non-response and item non-response.</p> <p>Please, describe below the approach which you have followed. This information will help Eurostat to evaluate the comparability of the standard errors supplied in the previous section by the different statistical institutes participating in the survey.</p>
	a) Name and brief description of the applied estimation approach
	<p>We applied single stratified random sampling and Horvitz-Thompson estimator. In addition, an analytic method was applied for the variance estimation.</p>
	b) Basic formula

Following the procedure for the survey characteristics estimation as well the method applied for the sampling error estimation are presented.

Symbolisms

In each size class h , in one economic activity and NUTS 2 Region:

y_{hi} : the value of the characteristic y of enterprise of order i belonging to the size class h

x_{hi} : the value of the characteristic x of enterprise of order i belonging to the size class h

N_h : the total number of enterprises belonging to the size class h

m_h : the number of the responded enterprises in size class h

w_h : the weight of the size class h in the economic activity ($w_h = \frac{N_h}{m_h}$)

Y_h : the total of the variable y for all enterprises in size class h

X_h : the total of the variable x for all enterprises in size class h

Y : the total of the variable y for all enterprises in all size classes of one economic activity. That is:

$$Y = \sum_h Y_h$$

X : the total of the variable x for all enterprises in all size classes of one economic activity. That is:

$$X = \sum_h X_h$$

Estimation process

The estimation of Y_h and Y is given by the following formulas:

$$\hat{Y}_h = \frac{N_h}{m_h} \sum_{i=1}^{m_h} y_{hi} = w_h \sum_{i=1}^{m_h} y_{hi} \quad (1)$$

and

$$\hat{Y} = \sum_h \hat{Y}_h \quad (2)$$

If the specific subpopulation of interest (the domain) is denoted by U_d , where $U_d \subset U$ (U : whole population) and the size of U_d is denoted by N_d , then the values y_{hi} and x_{hi} for the element (enterprise) of order i , belonging to the size class h of the domain indicator variable are as follows:

$$y_{hi} = \begin{cases} 1 & \text{if } i \in U_d, (i = 1, 2, \dots, m_h) \\ 0 & \text{otherwise} \end{cases}$$

$$x_{hi} = \begin{cases} 1 & \text{if } i \in U_d, (i = 1, 2, \dots, m_h) \\ 0 & \text{otherwise} \end{cases}$$

These variables were used as special cases for the estimation of their totals according to the formulas (1) and (2) above

The variance estimation of \hat{Y}_h and \hat{Y} is given by:

$$\hat{V}(\hat{Y}_h) = \frac{N_h(N_h - m_h)}{m_h} S_h^2, \quad (3)$$

and

$$\hat{V}(\hat{Y}) = \sum_h \hat{V}(\hat{Y}_h) \quad (4)$$

where:

$$S_h^2 = \frac{1}{m_h - 1} \left[\sum_{i=1}^{m_h} y_{hi}^2 - \frac{\left(\sum_{i=1}^{m_h} y_{hi} \right)^2}{m_h} \right] \quad (5)$$

For indicators, which are proportions or ratios of two variables, the estimates are produced using the ratio estimator, which is usually *slightly biased*.

We assume that the population parameter to be estimated is the ratio:

$$R = \frac{\sum_{i=1}^N y_i}{\sum_{i=1}^N x_i} = \frac{Y}{X} = \frac{\bar{Y}}{\bar{X}} \quad (6)$$

where y_i and x_i are the values of the variables y and x , respectively, for each unit of order i in the population of size N . If the stratified random sampling scheme is applied, then the combined estimate of R is:

$$\hat{R} = \frac{\sum_h \frac{N_h}{m_h} \sum_{i=1}^{m_h} y_{hi}}{\sum_h \frac{N_h}{m_h} \sum_{i=1}^{m_h} x_{hi}} = \frac{\hat{Y}}{\hat{X}} \quad (7)$$

	<p>The variance estimate of \hat{R} is calculated using the following formula:</p> $\hat{V}(\hat{R}) = \frac{1}{\hat{X}^2} (\hat{V}(\hat{Y}) + R^2 \hat{V}(\hat{X}) - 2RCov(Y, X)) \quad (8)$ <p>where:</p> $Cov(Y, X) = \sum_h \frac{N_h(N_h - m_h)}{m_h} \frac{1}{m_h - 1} \left[\sum_i y_{hi}x_{hi} - \frac{(\sum_i y_{hi})(\sum_i x_{hi})}{m_h} \right] \quad (9)$ <p>The coefficient of variation for the indicators of \hat{Y} and \hat{R} are given by:</p> $CV(\hat{Y}) = \frac{\sqrt{\hat{V}(\hat{Y})}}{\hat{Y}} * 100 \quad (10)$ $CV(R) = \frac{\sqrt{\hat{V}(\hat{R})}}{\hat{R}} * 100 \quad (11)$ <p>c) Main reference in the literature</p> <p>Cochran, W.G. (1977). Sampling Techniques, New York: John Wiley and Sons Kish, L. (1965). Survey Sampling, New York: John Wiley and Sons Kish, L., (1987). Statistical Design and Research, New York: John Wiley and Sons</p> <p>d) How has the stratification been taken into account?</p> <p>The variance estimation procedure adds the final stratum variance estimates to compute the overall variance estimate.</p> <p>e) Which strata have been considered?</p> <p>Final strata, where each the final stratum is defined by crossing (Region – NUTS 2) X (Aggregation of NACE Rev.2 subsections) X (Size class of the enterprises)</p>
<p>9.3</p>	<p>Comments on reliability and representativeness of results and completeness of dataset</p> <p>These comments should reflect on the standard errors reported for the indicators and subgroups in section 9.1 as well as on the other indicators and breakdowns. The estimated standard error should not exceed 2% for the overall proportions and should not exceed 5% for the proportions relating to the different subgroups of the population (for those NACE aggregates for calculation and dissemination on national aggregates). If problems were found, these could have implications for future surveys (e.g. need to improve sampling design, to increase sample sizes, to increase the response rates etc.).</p> <p>Indicators and breakdowns in section 9.1:</p> <p>In most of the cases (78.7%), the indicators of the above table have coefficient of variations up to 10%.</p> <p>Other indicators and breakdowns:</p>

	For all indicators and breakdowns:				
	If significant standard errors were found, were data cells in the transmitted dataset flagged as unreliable?	Yes	X	No ⁴	

⁴ Please note that if data were not flagged as unreliable they will be released

9.4

Reliability of aggregates for the "possible calculation of European aggregates"

- Please indicate for both the general survey and for micro-enterprises the aggregates for the "possible calculation of **European** aggregates" that have a sufficiently high quality to be released at **national** level by introducing an "x" in the column next to the Y/N responses.
- **Note:** In the case there is a grant agreement that foresees that certain breakdowns will be provided with sufficiently high quality to allow the release at **national** level, the following table should reflect the grant agreement ("x" next to "Yes" for the respective breakdowns).
- In the case data for few variables/breakdowns cannot be released - although the particular breakdowns had been taken into account in the sampling design as foreseen in the grant agreement - it is expected that the breakdowns are marked with "Yes", data are accordingly flagged as unreliable and explanations should be provided in point 9.3.
- In all cases the data will be evaluated for completeness and compliance with the grant, based on the grant agreement's technical annex and the current quality report; clarifications may be requested.

Economic Activity	Micro-enterprises				General Survey			
10-12	Yes		No		Yes	X	No	
13-15	Yes		No		Yes	x	No	
16-18	Yes		No		Yes	X	No	
26	Yes		No		Yes	X	No	
27-28	Yes		No		Yes	X	No	
29-30	Yes		No		Yes		No	x
31-33	Yes		No		Yes	X	No	
45	Yes		No		Yes	X	No	
46	Yes		No		Yes	X	No	
47	Yes		No		Yes	x	No	
55-56	Yes		No		Yes	X	No	
58-60	Yes		No		Yes	X	No	
61	Yes		No		Yes		No	x
62-63	Yes		No		Yes	X	No	
64.19+64.92	Yes		No		Yes		No	X
65.1+65.2	Yes		No		Yes	x	No	
66.12+66.19	Yes		No		Yes		No	x
77-78+80-82	Yes		No		Yes	X	No	
79	Yes		No		Yes		No	x
95.1	Yes		No		Yes	X	No	

10. National dissemination of results

(Quality Report)

10.1	National dissemination of results Please indicate if there was any dissemination of results or if any dissemination of results is foreseen. If possible, provide links to any results available on-line. No, there wasn't any.
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11. Closing remarks

(Quality Report)

11.1	Problems encountered and lessons to be learnt These comments can relate to methodological issues as well as to the questionnaire itself (item construction, clarity of definitions to respondents, routing and filtering, etc.) No comments
11.2	Other comments, if any

12. Annexes

Note: Please also provide the annexes in a computer-readable format and in English

12.1	Questionnaire in national language
12.2	Questionnaire in English (if available)
12.3	National reports on methodology (if available)
12.4	Analysis of key results, backed up by tables and graphs in English (if available) 12.4.1 Survey of enterprises (except NACE Rev. 2 section K) 12.4.2 Financial sector