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Directorate G :Global Business Statistics
Unit G-4: Innovation and information society

**COMMUNITY INNOVATION
SURVEY 2012**

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**SHORT SYNTHESIS OF THE
QUALITY REPORTS**

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1. INTRODUCTION

The CIS Quality Report fits since CIS 2012 in the new ESS Standard Quality Report Structure (ESQRS) which uses eight main concepts taken from the global SDMX cross-domain concepts and more detailed sub-concepts measuring data quality.

The current structure is the following:

1. Contact
2. Introduction
3. Quality management-assessment
- 4. Relevance**
- 5. Accuracy and reliability**
- 6. Timeliness and punctuality**
- 7. Accessibility and clarity**
- 8. Comparability**
- 9. Coherence**
10. Cost and Burden
- 11. Confidentiality**
- 12. Statistical processing**
13. Comment

The present document focuses and provides information on 4 sub-concepts: unit and item non-response rate (part of concept 5 'Accuracy and reliability'), geographical comparability (part of concept 8 'Comparability'), data collection, sample characteristics and overall sample rate (that all belong to the section 12 'Statistical processing') and finally, the overall assessment of the national methodology (that refers to concept 3 'quality management-assessment').

All EU Member States except Belgium and Poland have provided the CIS 2012 national quality report to Eurostat. Eurostat acknowledges also the transmission of the national quality report from Norway, Serbia and Turkey.

2. UNIT AND ITEM NON-RESPONSE RATE

More than half of the countries (18 in 28) that reported their unit non-response rate show a higher un-weighted non-response rate in the service sector than in the industry sector. However, the difference between the non-response rate in the core industry coverage and in the core service coverage is minor for most countries. The highest differences are found in Italy (-9.2 point of percentage (pp) for the service sector compared to the industry sector) and in Greece (+6.8 pp in the service sector compared to the industry sector).

Considering the non-response rate for the Core NACE coverage, the lowest rates have been found in Cyprus, Malta and Bulgaria and Lithuania (< 1 %) and the highest in Austria, United Kingdom, Greece and Germany for which the non-response rates is greater than 45 %.

Non-weighted and weighted unit non-response rate by NACE categories and for enterprises with 10 or more employees, by country – CIS 2012

	Core NACE (B-C-D-E-46-H-J-K-71-72-73)		Core industry (B_C_D_E - excluding construction)		Core Services (46-H-J-K-71-72-73)	
	Un-weighted unit non-response rate	Weighted unit non-response rate	Un-weighted unit non-response rate	Weighted unit non-response rate	Un-weighted unit non-response rate	Weighted unit non-response rate
BE	n/a	n/a	n/a	n/a	n/a	n/a
BG	0.6	0.6	0.9	0.9	0.3	0.3
CZ	12.2	14.2	12.0	13.2	12.6	15.5
DK	4.0	5.0	4.0	4.0	5.0	5.0
DE	76.4	n/a	75.6	n/a	77.9	n/a
EE	22.2	25.0	21.6	23.9	23.2	26.0
IE	n/a	n/a	n/a	n/a	n/a	n/a
EL	51.1	55.5	47.9	52.6	54.7	58.1
ES	6,8	9.6	6.3	8,7	7.6	10.4
FR	19.8	22.1	18.9	20.9	20.9	23.1
HR	24.3	27.3	24.4	29.1	24.1	25.1
IT	40.6	41.8	45.2	44.0	36.0	37.4
CY	0	0	0	0	0	0
LV	5.8	5.4	5.7	4.9	6.0	5.8
LT	0.9	0.9	0.8	1.2	0.9	0.8
LU	8.8	n/a	9.6	n/a	8.5	n/a
HU	9.1	11.9	7.6	10.9	11.5	12.9
MT	0.2	n/a	0.2	n/a	0.2	n/a
NL	30.0	27.0	26.0	26.0	32.0	28.0
AT	46.4	47.9	47.0	49.1	45.9	46.9
PL	n/a	n/a	n/a	n/a	n/a	n/a
PT	14.5	17.2	14.1	17.4	15.1	17.0
RO	9.2	0	7.4	0	11.9	0
SI	20.7	11.5	21.1	11.7	20.3	11.0
SK	18.0	21.6	14.7	19.2	21.1	24.7
FI	25.7	27.0	24.7	26.0	26.7	27.8
SE	14.1	15.8	14.4	17.0	13.8	15.1
UK	49.2	n/a	48.3	n/a	49.8	n/a
NO	3.6	n/a	3.8	n/a	3.4	n/a
RS	22.6	29.1	25.3	32.8	19.1	24.4
TR	4.1	4.9	3.8	5.6	4.5	4.1

Source: Eurostat

Based on the comments received on the item non-response, the highest difficulty faced by the enterprises answering to the questionnaire might lie in providing information about innovation expenditures. This has been highlighted by 8 of the 13 countries that reported the questions for which the enterprises faced obstacles to answer. Questions on the shares of the turnover from product innovations that are new to the firm or new to the market have also been underlined by 5 countries. The most often reported reason is that the aforementioned financial variables are not available as such in the accounting of the enterprises. This implies that these questions are time consuming and generate difficulties in precise understanding of the concept behind these items. The existence of sensitive questions has also been highlighted by 4 countries. In some cases, the person who answers might not always be the most competent person or at least, the one who holds the information.

3. GEOGRAPHICAL COMPARABILITY

Use of optional questions

The CIS Harmonised Questionnaire includes mandatory and optional questions. Most of countries for which information in the quality report is available do not mention any deviations to the CIS 2012 Harmonised Questionnaire (16 in 24 countries) apart from the imputation of the turnover and the number of employees from the Business Register. In very few cases (less than 3), the number of employees with a tertiary degree as well as being part of an enterprise group have been also imputed from external sources.

However, some countries did not include all optional questions. The most often removed CIS 2012 questions are listed below and are sorted, by descending order, on the number of countries that removed these questions from the national questionnaire.

The number of countries that transmitted the results to Eurostat referring to these questions is also provided¹.

- Q 2.5. Share of total turnover from world first product innovations. According to the national quality reports, 7 in 24 countries did not include this question in the national CIS questionnaire.

CIS 2012 results for Q 2.5 have been transmitted by 18 in 31 countries that provided Eurostat with aggregated data.

- Q 11 Ad-hoc module on strategies and obstacles to reach the enterprise's goals: 6 countries reported that these ad-how module was not covered (or partially) in the national questionnaire.

CIS 2012 results for Q 11.1 (Goals) have been transmitted by 22 in 31 countries that provided Eurostat with aggregated data.

¹ The CIS 2012 results are available on the Eurostat website: <http://ec.europa.eu/eurostat/web/science-technology-innovation/data/database>

CIS 2012 results for Q 11.2 (Strategies) have been transmitted by 22 in 31 countries that provided Eurostat with aggregated data.

CIS 2012 results for Q 11.1 (Obstacles) have been transmitted by 20 in 31 countries that provided Eurostat with aggregated data.

- Q 12.3 Number of employees with a tertiary degree: 6 countries mentioned that this question was not included in the CIS 2012 national questionnaire

CIS 2012 results for Q 12.3 have been transmitted by 22 in 31 countries that provided Eurostat with aggregated data.

- Q 3.3 Novelty to the market of process innovations: according to the national quality reports, 4 in 24 countries didn't include this question in the national questionnaire.

CIS 2012 results for Q 3.3 have been transmitted by 22 in 31 countries that provided Eurostat with aggregated data.

The results derived from other questions are more frequently transmitted.

This reporting can be used to assess the relevance of these optional questions and to identify the difficulties faced by enterprises in answering to some parts of the questionnaire.

As regards questions added to the Harmonised questionnaire at the national level, 12 countries reported that they made the CIS Harmonised Questionnaire more detailed or that they collected information on new topics. Four countries proposed more detailed or new breakdowns for innovation expenditures. Three countries have collected information on the most important innovation implemented by the enterprise or an example of one the innovations undertaken by the enterprise. Three countries have also asked more detailed information on the cooperation activities in which the enterprises were engaged.

4. DATA COLLECTION, SAMPLE CHARACTERISTICS AND OVERALL SAMPLE RATE

In the CIS 2012 context, it was mandatory for the enterprises to answer the survey in almost all of the countries that delivered the national quality report. Only Germany, Austria and the United Kingdom conducted the survey on a voluntary basis.

Based on the information collected, most of countries carry out the survey combining both methods: census and sample. Bulgaria and Malta conducted a complete census of the target population.

In case of combination, the size class is the predominant criterion to conduct a census of the enterprises but the threshold applied could be different from one country to another. Most often enterprises with more 250 employees are covered by a census. Nevertheless, the threshold varies from 'more than 20 employees' to 'more than 500 employees' according to the country.

There were also other criteria applied (e.g. in Denmark, Greece, Spain and Norway) such as the previous reporting of R&D performance, R&D expenditures or the sector category (e.g. in Denmark, Sweden and Norway).

Types of data collection and criteria applied in case of combination of sample and census, by country – CIS 2012

Country	Status of data collection	Sample/census	Criterion to enumerate the enterprises
BE	n/a	n/a	n/a
BG	Mandatory	Census	
CZ	Mandatory	Combination sample/census	Expected CVs
DK	Mandatory	Combination sample/census	Size class (>100); previous reporting of R&D expenditures greater than a certain threshold; R&D service industry; belong to the "Advanced Technology Group"
DE	Voluntary	Combination sample/census	Size class (500+)
EE	Mandatory	Combination sample/census	
IE	Mandatory	Combination sample/census	Size class (50+)
EL	Mandatory	Combination sample/census	Size class and R&D performers
ES	Mandatory	Combination sample/census	Size class (200+) and R&D performers
FR	Mandatory	Combination sample/census	Size class (250+)
HR	Mandatory	Combination sample/census	Size class
IT	Mandatory	Combination sample/census	Size class (250+)
CY	Mandatory	Combination sample/census	Size class (20+)
LV	Mandatory	Combination sample/census	Size class (250+)
LT	Mandatory	Sample	
LU	Mandatory	Combination sample/census	Size class
HU	Mandatory	Combination sample/census	Size class (100+)
MT	Mandatory	Census	
NL	Mandatory	Combination sample/census	
AT	Voluntary	Combination sample/census	Size class (250+)
PL	n/a	n/a	n/a
PT	Mandatory	Combination sample/census	Size class
RO	Mandatory	Combination sample/census	Size class (100+)
SI	Mandatory	Combination sample/census	Size class (50+)
SK	Mandatory	Combination sample/census	Size class (250+)
FI	Mandatory	Combination sample/census	Size class (250+)
SE	Mandatory	Combination sample/census	NACE 72 and size class
UK	Voluntary	Combination sample/census	Size class (250+) except for G46 and K64 ; SMEs in D35.1/2 (electric power generation) and E36 (water collection, tmt and supply)
NO	Mandatory	Combination sample/census	NACE, size class and R&D performers: (NACE 72, all) ; (F,G,H, 100+) ; (remaining industries,50+) + R&D performers
RS	Mandatory	Combination sample/census	
TR	Mandatory	Combination sample/census	Size class

Source: Eurostat

Regarding the overall sample rate, it varies quite strongly from one country to another. Amongst the participating countries, Turkey, Germany, United Kingdom and Italy present the lowest sample rates (less than 20 %). In Ireland and Estonia, the sample covered more than 60 % of the total population.

Target population, sample size, sampled and enumerated units and overall sample rate, by country – CIS 2012

Country	Target Population	Sample	In case of combination sample/census:		Overall sample rate
			Sampled units	Enumerated units	
Number of enterprises					% of enterprises
BE	n/a	n/a	n/a	n/a	n/a
BG	Census				
CZ	22,253	5,449	3,554	1,895	27.0
DK	17,231	4,909	4,415	494	26.0
DE	165,704	22,951	19,715	3,236	13.9
EE	n/a	n/a	n/a	n/a	64.4
IE	6,964	4,650	n/a	n/a	67.0
EL	14,987	4,212	3,998	214	28.1
ES	76,338	27,279	15,072	12,207	35.7
FR	71,015	22,296	19,249	3,049	31.4
HR	11,148	4,305	n/a	n/a	38.6
IT	114,517	20,246	17,910	2,336	17.7
CY	1,588	1,205	286	919	n/a
LV	n/a	n/a	n/a	n/a	32.0
LT	9,243	2,289	n/a	n/a	24.8
LU	1,618	881	389	492	54.2
HU	15,163	6,032	4,398	1,634	39.8
MT	Census				
NL	25,242	6,234	n/a	n/a	25
AT	16,451	5,624	4,848	776	34
PL	n/a	n/a	n/a	n/a	n/a
PT	21,724	8,963	8,514	449	41
RO	-	-	5,829	3,290	31
SI	4,249	2,500	1,516	984	46.4(only for small enterprises)
SK	7,202	2,313	1,944	369	n/a
FI	8,700	3,585	3,154	431	38.1(for enterprises <250 employees)
SE	17,876	6,192	5,381	811	35
UK	28,365	14,487	-	-	51
NO	8,948	4,185	2,013	2,172	47
RS	-	+/-2000	-	811	23
TR	94,721	10,980	8,774	2,206	12

Source: Eurostat

5. OVERALL ASSESSMENT OF THE NATIONAL METHODOLOGY

In this section countries were asked to give an overall assessment of the quality of the CIS methodology. In general, positive opinions were given highlighting the constant improvement of the methodological aspects of the Community Innovation Survey. However, some weaknesses seem to remain, in particular in the quantification of the turnover from innovative products (question 2.3) and of the innovation expenditures (question 5.2) for which the concepts were not easily marked out. The main strengths and weaknesses of the CIS 2012 methodology, as reported by the countries in the national quality reports, are summarised as follows with the number of countries sharing the same opinion (a count of at least 2 countries was needed to include the item):

Highlighted strengths

- Good data quality (15)
- High unit response rate (9)
- On-line questionnaires which decrease the number of errors in data (8)
- Re-contacting enterprises when data were missing or inconsistencies were observed (8)
- Better knowledge and understanding of the questionnaire by the users (8)
- Coherence with data from other surveys (SBS, R&D) (6)
- Eurostat methodological guidelines were followed (5)
- Data comparability since part of the questionnaire has been reused for CIS2012 (5)
- Cross-checks with administrative data (4)
- Punctuality of time schedule (4)
- Checks were incorporated into data entry and data processing program (4)
- On-line help-desks and a phone line were made available for respondents (2)
- Face-to-face interviews (2)
- Confidentiality was respected (2)

Highlighted weaknesses

- Quantification of the innovation expenditures (question 5.2) in particular (e.g. difficulties in splitting R&D from other activities) (7)
- “Innovation concept” as a whole, which makes it difficult for the enterprise to assess their own activities as innovative or not innovative (5)
- Quantification of the turnover from innovative products (question 2.3) because of the difficulty in highlighting these origins of the turnover (4)
- No user satisfaction survey was conducted (2)
- Low response rate (2)