Synthesis of National Quality Reports for the 3rd Continuing Vocational Training Survey

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Executive summary

The present report is the result of the synthesis of the national quality reports on the 3rd Continuing Vocational Training Survey (CVTS3). The survey was carried out in 28 European countries – the 27 European Union Member States and Norway – with reference year 2005. The implementation of CVTS3 was based for the first time on a European Parliament / Council Regulation (EC) No 1552 / 2005. This regulation suggests a legal framework and a series of guidelines to be adopted by participating countries. The purpose is to create a common statistical standard that will permit the production of harmonized data on vocational training in enterprises.

According to the regulation, all participating countries should have delivered a national quality report on CVTS3 by the end of September 2007. At the time of reporting there were 25 quality reports available. These reports have been thoroughly studied with a view to evaluating the implementation, the data collection and the quality of statistics of CVTS3.

This report consists of two chapters. The first chapter includes an overall quality assessment of CVTS3 based on seven indicators of quality. These indicators are relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability, coherence and burden and benefit.

Relevance is assessed by the identification of users and their needs regarding CVTS3 statistics. An evaluation of users' satisfaction from the survey is not yet possible since data have just been published. However, the information provided by this survey is of great interest to all users thanks to its detailed approach.

Accuracy is presented in two sections, the sampling errors and the non-sampling errors. The first section consists of a summarised description of the sampling design used in each country. The quality of sampling is assessed by two measures, the sampling rates and the coefficients of variation for some key statistics of the survey. As it is noticed in most of the countries, IVT variables present the highest variance.

The second section covers the four types of errors related to the data quality, i.e. coverage, measurement, processing and non-response errors. The national business register was mainly used as a sampling frame for the selection of enterprises. The main problems encountered during the data collection and editing derive from the general burden of CVTS3 on enterprises (long and detailed questionnaire, lack of required information, etc.). The average response rate in CVTS3 is 63.3%. A list of item response rates for selected indicators is also provided.

With regard to the timeliness and punctuality of CVTS3 data, the majority of countries have managed to deliver their national data to Eurostat within 18 months after the end of the reference year. The dissemination of CVTS3 results and data is or will be made in electronic and paper format. All interested users will have access to these data via the website of each national statistical institute.

Comparability is one of the most important indicators of quality. There are no significant problems mentioned in this section. The proposed guidelines on CVTS3 and the relevant definitions were in general adopted by all participants. Therefore, there are only slight deviations across countries.

The coherence of CVTS3 data is assessed by a comparison with Structural Business Statistics of 2005 and with CVTS2, implemented in 1999. The differences reported at national level are not considered statistically significant.

The last section of this chapter refers to the burden and benefit of CVTS3. The main concern is that this survey is too time-consuming for enterprises. This results in many complaints and refusals regarding their participation in the survey and it has a major effect on the quality of data collected.

The second chapter includes the main conclusions on the quality of CVTS3. Overall, CVTS3 is considered to have a high level of quality. The existence of a common framework and guidelines on the implementation of the survey has improved the harmonisation and the comparability of CVTS3 statistics at national and international level. There are still improvements to be made in future rounds based on the experience gained so far. However, it is worth mentioning that the survey has already achieved to be a very accurate source of information on the interesting field of vocational training.

1 Quality assessment

This chapter includes an overall assessment of quality of the 3rd Continuing Vocational Training Survey (CVTS3). The following seven dimensions of quality are presented:

1. Relevance: it is the degree to which statistics meet current and potential users' needs. It includes the production of all needed statistics and the extent to which concepts used (definitions, classifications etc.) reflect user needs.

2. Accuracy: it denotes the closeness of computations or estimates to the exact or true values.

3. Timeliness and punctuality: they refer to time and dates, but in a different manner: the timeliness of statistics reflects the length of time between their availability and the event or phenomenon they describe. Punctuality refers to the time lag between the release date of the data and the target date on which they should have been delivered, with reference to dates announced in the official release calendar.

4. Accessibility and clarity: they refer to the simplicity and ease for users to access statistics using simple and user-friendly procedures, obtaining them in an expected form and within an acceptable time period, with the appropriate user information and assistance.

5. Comparability: it aims at measuring the impact of differences in applied statistical concepts and definitions on the comparison of statistics between geographical areas, non-geographical domains or over time. It is the extent to which differences between statistics are attributable to differences between the true values of the statistical characteristics.

6. Coherence: the extent to which statistics are in agreement with relevant or related statistics originating from different statistical procedures.

7. Burden and benefit: analysis of the burden and benefit from the survey at the national level. The burden is mainly evaluated from the average time for answering to each questionnaire and the problematic questions and variables.

1.1 Relevance

CVTS3 was implemented according to the guidelines of the European Union as specified in Commission Regulation (EC) No 198/2006 of 3 February 2006 implementing Regulation (EC) No 1552/2005 of the European Parliament and of the Council on statistics relating to vocational training in enterprises and in the CVTS3 European Union Manual of Eurostat, respectively.

The main users of CVTS3 statistics may be classified into the following categories:
o Government institutions, Ministries of Education, Labour and other Ministries
o Universities, Research institutions, Vocational institutions, Students
o Enterprises, Training companies, Management consultants
o Social partners (e.g. trade unions), Media, Multi-national organisations

The aforementioned users have various needs which mostly derive from a general interest on education and training in all European countries. The main requests reported refer to the evaluation and better understanding of training practices across Europe, the publication and analysis of CVTS3 data and the preparation of decisions on vocational training. In addition, there is a general need for reliable and detailed data on training that may be used for either international or national comparisons with relevant data from other sources. Finally, the CVTS3 national data may be also used as a benchmark for the enterprises' training policies.

In consideration of users' satisfaction, most countries reported that it was too early to make such an evaluation since at the time of reporting CVTS3 results had just been published. However, it is generally noted that all efforts were made to meet users' needs. There were only some problems mentioned regarding the timeliness of obtained results which must be improved in future rounds.

1.2 Accuracy

1.2.1 Sampling Errors

The target population in CVTS3 was the enterprises with 10 or more persons employed belonging to the NACE categories C, D, E, F, G, H ,I, J and K+O. For the selection of the sampling units, i.e. the enterprises, the National Statistical Business Register of each country was used as sampling frame. It was therefore suggested that the sample be stratified by NACE and size category into 60 strata (20x3) according to the following specification:

o 20 NACE Rev1.1 categories: C, D (15-16, 17-19, 21-22, 23-26, 27-28, 29-33, 34-35, 20+36-37), E, F, G (50, 51, 52), H, I (60-63, 64), J (65-66, 67), K+O
o 3 size categories, according to their number of persons employed: 10-49, 50-249, 250 and more

The above guidelines, proposed in the CVTS3 EU Manual, were in general accepted by almost all participating countries. In fact, 14 countries stratified their national samples into 60 strata, following the exact NACE and size categories suggested. The rest of the countries used the same stratification variables but with different or more detailed breakdowns, especially in the size categories. Also, two countries have also included region in the sample stratification, divided into three categories.

A simple random sampling within each stratum was chosen for the selection of the sampling units. In some countries, enterprises belonging in the bigger size class (more than 250 persons employed) were all included in the sample due to the limited number of these enterprises. Finally, Malta implemented a census covering all national enterprises in the aforementioned NACE categories.

Table 1 presents in detail the sampling frame, the stratification variables and the sampling method used in each country for the implementation of CVTS3.

Table 1: Sampling frame, stratification variables and sampling method in CVTS3

Country	Sampling Frame	Stratification Variables	Sampling Method	Comments
Austria	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	In the biggest size class there was no sampling unit in NACE C and only one in NACE 67
Belgium	National Statistical Business Register	NACE20 / Size3 / Region3 (Wallonia, Brussels and Flanders)	Simple random sampling within each stratum	The reference date of the sampling frame was the end of 2004. The extrapolation was done on a newer version (end of 2005)
Bulgaria	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	
Czech Republic	Structural Business Statistics	NACE20 / Size3	Simple random sampling within each stratum	
Germany	Statistical Business Register of Länder	Basic strata: NACE20 / Size3 Secondary strata: NACE30 / Size6 (180 strata in total)	Systematic random sampling	The reference date of the register is 2003 since the register of 2005 could not be used as sampling frame due to reasons of survey technique and time constraints
Denmark	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	The reference date of the register is the 2nd quarter of 2005 instead of the 4th quarter in order to have better coverage of the enterprises in activity for the whole year of 2005
Estonia	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	
Spain	File of Enterprises Registered in the Social Security	NACE20 / Size4 (including the class of 5-9 persons employed)	Systematic random sampling within each stratum for the first three size classes and census for enterprises with more than 250 persons employed	

Finland	National Statistical Business Register and the National Board of Taxation	NACE20 / Size3 (10-49, 50-99, 100+)	Simple random sampling within each stratum for the first two size classes and census for enterprises with more than 100 persons employed	The size classes differ since the number of enterprises is rather small, and especially large enterprises
France	SIRENE directory (national register of enterprises)	NACE20 / Size6	Simple random sampling within each stratum	
Hungary	National Statistical Business Register	NACE20 / Size5 (10-19, 20-49, 50-99, 100-149, 150+)	Simple random sampling within each stratum	
Ireland	National Statistical Business Register	NACE20 / Size5 (10-19, 20-49, 50-99, 100-249, 250+)	Simple random sampling within each stratum	
Lithuania	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	
Luxembourg	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	
Latvia	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	
Malta	Malta Employment and Training Corporation Register	NACE20	Census of all enterprises	
Netherlands	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum for the first two size classes and census for enterprises with more than 250 persons employed	

|				
Norway	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum for the first two size classes and census for enterprises with more than 250 persons employed	
Poland	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	In strata where the sample size was bigger than 570 an additional stratification by voivodship was applied
Portugal	National Statistical Business Register	NACE20 / Size3 / Region3 (Mainland, Autonomous Regions of Madeira and Azores)	Simple random sampling within each stratum	
Romania	National Statistical Business Register	NACE20 (3-digit level) / Size4 (10-19, 20-49, 50-249, 250+)	Simple random sampling within each stratum for the first three size classes and census for enterprises with more than 250 persons employed	
Sweden	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	
Slovenia	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	
Slovakia	National Statistical Business Register	NACE20 / Size3	Simple random sampling within each stratum	
United Kingdom	Inter-Departmental Business Register	NACE25 / Size3	Simple random sampling within each stratum	

The number of enterprises in the sample and in the sampling frame for each country is presented in Table 2. The accuracy of the sample may be assessed by the sampling rate, which is the ratio of the number of sampling units in the sample divided by the number of units in the sampling frame. A sampling rate around 20% may denote a good representativity of the sampling units in the sample.

Table 2: Number of enterprises in the sample and in the sampling frame and sampling rate (%)

Country	Number of enterprises		Sampling Rate (%)
	Sample	Sampling frame	
AT	3435	35316	9.73%
BE	7576	31226	24.26%
BG	3200	24484	13.07%
CZ	9993	45790	21.82%
DE	2857	10615	26.91%
DK	2841	19295	14.72%
EE	3022	7237	41.76%
ES	20883	360775	5.79%
FI	2983	15947	18.71%
FR	8557	194596	4.40%
HU	5951	29741	20.01%
IE	5450	17200	31.69%
LT	4300	13769	31.23%
LU	1672	3684	45.39%
LV	3935	11729	33.55%
MT	1758	1758	100.00%
NL	5838	62050	9.41%
NO	2798	28454	9.83%
PL	17997	84220	21.37%
PT	9834	46656	21.08%
RO	9813	43709	22.45%
SE	3109	31891	9.75%
SI	2262	7521	30.08%
SK	2120	18142	11.69%
UK	4020	178965	2.25%

Figure 1 shows the sampling rates by country in percentages. It is noted that 8 countries have achieved a rate around 20%. In general, countries with many enterprises in their sampling frames, such as Spain, France and the United Kingdom, present the lowest sampling rates. On the other hand, countries with small population, and therefore fewer enterprises, like Estonia, Luxembourg, and Malta, report high sampling rates. In particular, Malta implemented a census, thus all sampling units are covered.

Figure 1: Sampling rates (%) for participating countries

Sampling Rate (%)
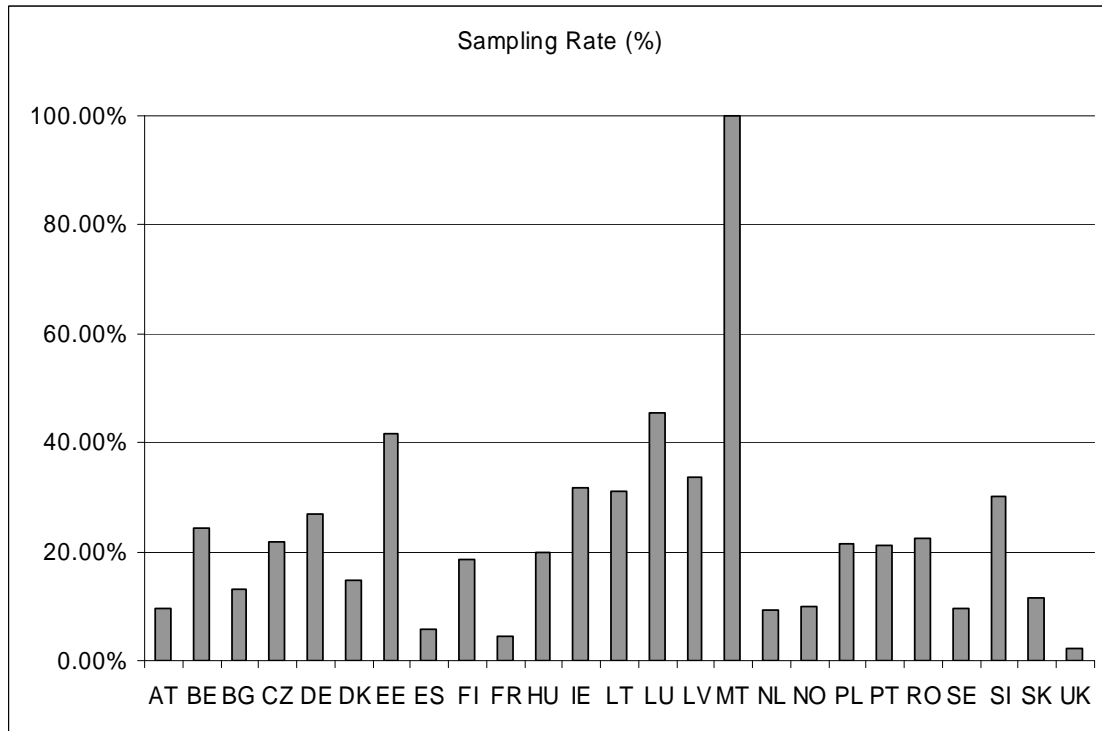
Another indicator of the CVTS3 accuracy at national level is the coefficient of variation. The coefficient of variation (CV) is defined as the ratio of the square root of the variance of the estimator to the expected value. It is estimated by the ratio of the square root of the estimate of the sampling variance to the estimated value. Table 3 and Figure 2 present the CVs for 14 key statistics as requested by Eurostat in the CVTS3 EU Manual.

Table 3: Coefficients of variation of key statistics for all enterprises in selected European countries

Country	AT	EE	ES	HU	LT	NL	NO	PL	PT	RO	SE
Total number of persons employed	4.31%	1.10%	0.86%	1.00%	0.80%	1.50%	3.00%	0.40%	1.60%	1.06%	8.00%
Total number of enterprises providing CVT	3.38%	1.70%	1.26%		2.00%		2.00%	1.70%	2.20%	2.26%	3.00%
Ratio of the total number of enterprises providing CVT to the total number of enterprises	1.96%	1.70%	1.26%	1.00%	2.00%		2.00%	1.70%	2.20%	2.87%	3.00%
Total number of enterprises providing CVT courses	4.16%	2.10%	1.51%		3.00%		6.00%	2.30%			4.00%
Ratio of the total number of enterprises providing CVT courses to the total number of enterprises	3.35%	2.10%	1.51%	1.00%	3.00%		6.00%	2.20%	2.80%		4.00%
Total number of persons employed in enterprises providing CVT	5.07%	1.60%	1.28%	2.00%	1.30%	2.50%	3.00%	0.80%	2.50%	1.62%	9.00%
Total number of participants in CVT courses	6.90%	2.50%	1.92%	4.00%	2.20%	3.20%	7.00%	1.30%	3.70%	1.74%	9.00%

Ratio of the total number of participants in CVT courses to the total number of persons employed	4.60%	2.20%	1.54%	2.00%	1.90%		7.00%	1.20%	2.60%	5.64%	4.00%
Ratio of the total number of participants in CVT courses to the total number of persons employed in enterprises providing CVT	4.44%	2.00%	1.41%	3.00%	1.80%		7.00%	1.10%	2.20%	5.64%	4.00%
Total costs of CVT courses	12.29%	7.50%	2.07%	30.00%	5.50%	2.00%		2.90%	5.10%	3.58%	15.00%
Total number of enterprises providing IVT	4.99%	18.00%	2.89%		3.80%			3.20%	8.50%		
Total number of participants in IVT	7.82%	12.20%	4.21%	25.00%	4.00%	3.00%		4.10%	8.10%	7.43%	
Total costs of IVT		20.40%	56.75%	45.00%	81.30%	1.70%				8.02%	
Ratio of the total number of enterprises providing IVT to the total number of enterprises	4.50%	18.00%	2.89%	4.00%	3.80%			3.20%	8.49%	11.86%	

Figure 2: Box-plots of the coefficients of variation of key statistics for all enterprises

The asterisks denote the outliers in each box-plot

Ind1: Total number of persons employed

Ind2: Total number of enterprises providing CVT

Ind3: Ratio of the total number of enterprises providing CVT to the total number of enterprises

Ind4: Total number of enterprises providing CVT courses

Ind5: Ratio of the total number of enterprises providing CVT courses to the total number of enterprises

Ind6: Total number of persons employed in enterprises providing CVT

Ind7: Total number of participants in CVT courses

Ind8: Ratio of the total number of participants in CVT courses to the total number of persons employed

Ind9: Ratio of the total number of participants in CVT courses to the total number of persons employed in enterprises providing CVT

Ind10: Total costs of CVT courses

Ind11: Total number of enterprises providing IVT

Ind12: Total number of participants in IVT

Ind13: Total costs of IVT

Ind14: Ratio of the total number of enterprises providing IVT to the total number of enterprises

It is worth mentioning that for the indicators referring to CVT courses in terms of participants, persons employed and enterprises providing CVT courses, the coefficients of variations are below 10% in all countries. The figures are higher for the total cost of CVT courses along with the IVT indicators, especially in Estonia and Hungary. In

particular, the variable of IVT total costs presents the highest coefficients of variations in all countries showing that the variance of estimations in this indicator is high.

1.2.2 Non-Sampling Errors

Coverage Errors

The registers used as sampling frames in CVTS3 are presented in Table1. All participating countries have used the most updated versions of the national business registers with only few exceptions. These registers include all the information needed regarding the target population of the survey and the identification of enterprises. With regard to the quality of the sampling frames, there were no particular problems reported. There were only some cases where information on mergings, splittings or closings of enterprises could not have been updated in the register, especially when these changes occurred near the end of the reference year and before the date of contacting with the enterprises.

The coverage of enterprises belonging to the requested strata is assessed by the ratio of the number of enterprises for which the observed strata equals the sampling strata. Figure 3 shows the respective ratios and indicates that in most of the countries there were no significant misclassifications between the strata of the sampling frame and the observed strata in the final sample. Only Portugal reports a quite low percentage in comparison with the rest of the countries.

Figure 3: Ratio of the number of enterprises for which the observed strata equals the sampling strata
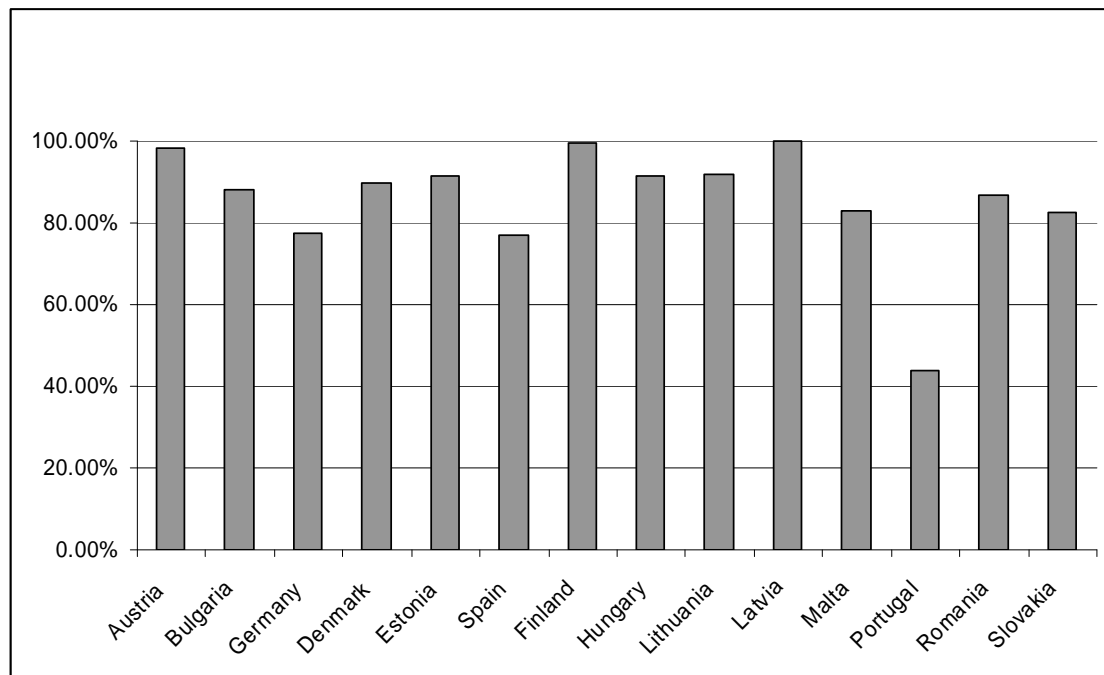
Measurement Errors

Measurement errors refer to potential errors that may have occurred during the data collection. They are focused on respondents' reaction to the questionnaire and the survey as a whole, interviewers' behaviour and the main problems encountered in this phase. All these factors influence the quality of data collection. Therefore, it is important to evaluate them and try to reduce as far as possible their effect on data.

Firstly, the mode of data collection implemented by each country plays a major role to the existence of measurement errors. In CVTS3, data collection was mainly made by postal questionnaires. This is a common way of contacting with the enterprises without significant costs. Enterprises received the questionnaires and a number of reminders followed to ensure replies in the survey. Other methods reported were face-to-face interviews and web-based questionnaires. In addition, countries offered various ways to enterprises for returning the questionnaires; post, fax, e-mail, etc. The data collection methods used by each country are presented in Table 4.

Table 4: CVTS3 data collection methods in participating countries

Country	Data Collection Method
Austria	Screening phase: telephone interviews (CATI) Main phase: Postal questionnaires or electronic form (Excel format)
Belgium	(a) Self-administered mail questionnaire for enterprises with less than 380 employees (b) Web-based, postal or face-to-face mode with the possibility of assistance in filling in the questionnaire for larger enterprises
Bulgaria	Postal & Face-to-Face interviews
Czech Republic	Postal collection (92.5%), electronic completion without assistance (2.4%) and with interviewer's assistance (5.1%)
Germany	Postal questionnaires
Denmark	Postal questionnaires
Estonia	Postal questionnaires and few face-to-face interviews with those who did not return the completed questionnaire despite reminders
Spain	By post (49.6%) / fax (12.8%) and by internet (web-based questionnaire - 37.6%)
Finland	Paper and web-based questionnaires
France	CATI or CAWI collection (the website was used only for the quantitative questions - sections A, B, C, F)
Hungary	Postal questionnaires
Ireland	Postal questionnaires returned either by post or by email
Lithuania	Postal (85%) and Face-to-Face (15%) interviews
Luxembourg	Face-to-Face interviews
Latvia	Postal questionnaires returned either by post or in person and electronical (web-based) mode
Malta	Postal (34%) & Face-to-Face - PAPI (66%) interviews
Netherlands	Paper and electronic questionnaires sent by post / e-mail
Norway	Paper, web and CAPI mode
Poland	Postal (83.4%) and Face-to-Face (16.6%) interviews - only for those companies which did not return questionnaires despite reminders

Portugal	First stage (all enterprises): postal questionnaires Second stage (enterprises with CVT courses): Face-to-Face interviews
Romania	Face-to-Face interviews (PAPI)
Sweden	Paper and web-based questionnaires
Slovenia	Postal questionnaires
Slovakia	Postal questionnaires
United Kingdom	CATI collection and Face-to-Face interviews

With regard to the reaction of respondents to the survey, most errors occurred due to lack of attention of respondents when completing the questionnaire. This was mainly caused by the excessive time needed to answer to the detailed questions. In addition to that, the information required for the completion of the questionnaire was not always recorded in the enterprises' registers/accounting systems. Therefore, many questions were partly answered or even left empty due to the lack of the relevant information.

Another problem encountered was the misunderstanding of some questions that led to significant errors when filling the questionnaire. In order to avoid such errors, some countries offered a telephone enquiry service to enterprises during the data collection. In that way, it was possible to give additional explanations and clarifications to respondents at the time of answering to the questionnaire.

The influence of interviewers to the data collection may be assessed in countries that implemented telephone or face-to-face interviews. This approach was chosen especially in larger enterprises in order to ensure their participation in the survey. Moreover, personal interviews were made in cases where respondents had received the questionnaire by post but were unwilling to answer. All interviewers involved in this process were well trained and informed about the survey, thus their interference is not considered to have affected the quality of data collection.

As for the variables in the questionnaire, it is generally noted that section C, which refers to CVT courses, is the most difficult section to be answered. Apart from that, the new section on IVT is considered more as an additional burden to the already lengthy questionnaire. The main problems encountered in the questionnaire as a whole involved the following questions:
o Distribution of employees by gender and age, especially for larger enterprises
o Distinction between internal and external courses
o Distinction between CVT courses and other forms of training
o Questions on paid working time spent on training
o Distribution of CVT costs into the requested categories
o Confusion between CVT and IVT courses
o Costs of IVT courses

Processing Errors
No country raised concerns about processing errors. These errors are detected during the data editing and validation. The most frequent type of error were the missing values, especially in questions related to hours and costs of CVT courses. All efforts have been made to re-contact respondents whenever this was needed and correct / fill in the missing information.

Non Response Errors

The treatment of non-response errors in CVTS3 has been one of the first priorities in all participating countries. Many measures have been taken in order to ensure participation of enterprises and to reduce refusals. The most common measures undertaken are the following:

o Multi-mode data collection: different methods are implemented according to the size class and the type of enterprise. Face-to-face interviews, postal and web-based questionnaires are the most common methods. Especially, personal interviews improve the quality of data since the presence of a qualified interviewer may prevent a lot of errors during the completion of the questionnaire.

o Special instructions were enclosed with the questionnaires sent by post explaining the flow of the questions to be answered. This was particularly useful for enterprises with no training activities.

o Constant activity of telephone or postal reminders: first reminders were made to ensure that respondents have received the questionnaire and to motivate them to answer the survey. These reminders not only served as motivation calls but they also offered support in completing the questionnaire. Once the first questionnaires were received, a second follow-up was made to non-respondents either by phone or email. It was then requested to return the questionnaires in the shortest possible term.

o Free telephone enquiry service, postpaid PO boxes and free fax lines were offered so that the economic cost of contact or postage would not restrict the willingness to return the survey.

Table 5 presents the unit response rates in CVTS3. The average response rate is 63.3%. Latvia reports the highest response rate (96.2%) followed by Lithuania (95.4%). Thirteen countries report response rates over 70%.

Table 5: Unit response rates (%) in CVTS3

Country	Unit Response Rates (%)	Country	Unit Response Rates (%)
AT	43,8%	LV	96,2%
BE	41,2%	MT	76,0%
BG	87,1%	NL	76,9%
CZ	80,2%	NO	37,0%
DE	26,9%	PL	88,6%
DK	31,1%	PT	45,0%
EE	70,6%	RO	83,0%
ES	84,0%	SE	42,0%
FI	42,6%	SI	82,1%
FR	55,5%	SK	76,6%
HU	76,0%	UK	42,0%
IE	55,5%	Minimum	26,9%
LT	95,4%	Maximum	96,2%
LU	47,8%	Average	63,3%

Unit response rates are also shown on a map of Europe, in Figure 4 below.
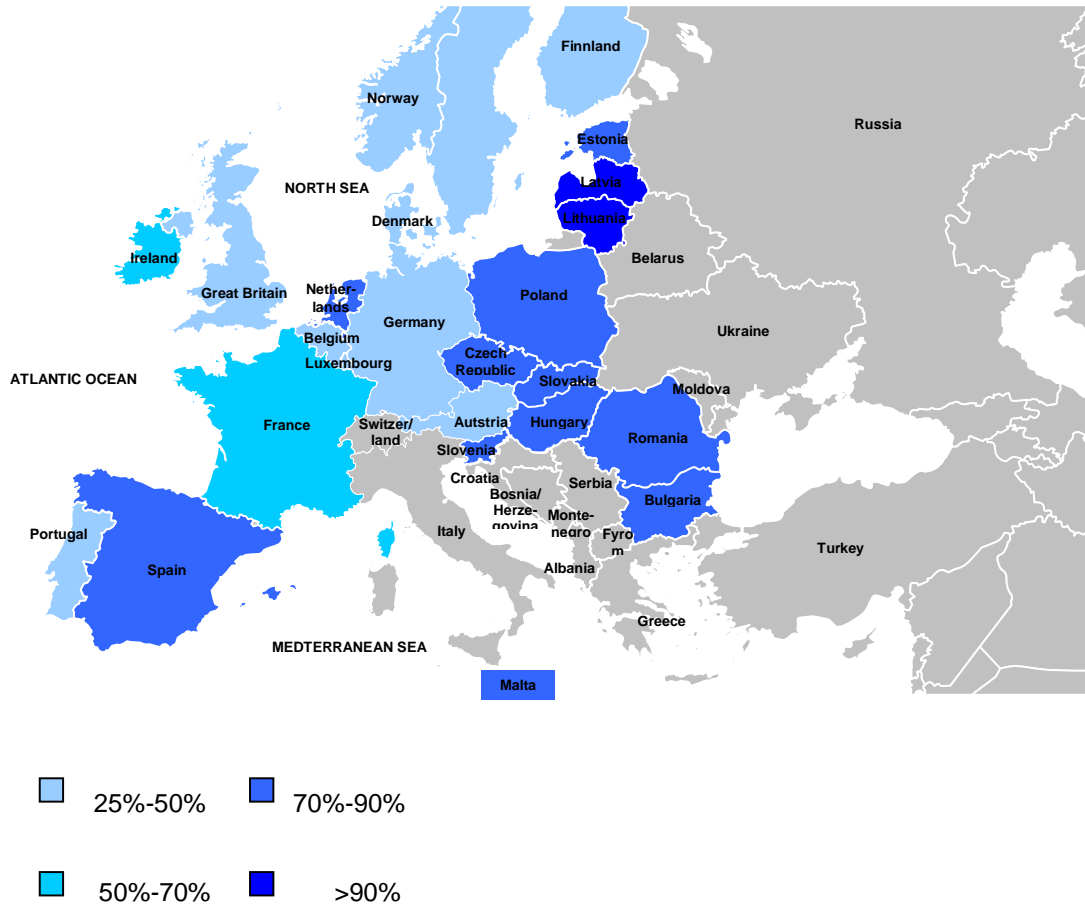
Figure 4: Unit response rates

Table 6 below shows the item response rates for key statistics in CVTS3. The response rates of these variables exceed 90% with the exception of total costs of CVT courses and IVT.

Table 6: Item response rates for key statistics in CVTS3

Country	Total number of hours worked as a function of all respondents	Total labour cost as a function of all respondents	CVT courses by specific age groups as a function of enterprises offering CVT courses	Total number of participants in courses as a function of enterprises offering CVT courses	Total number of male/female participants in courses as a function of enterprises offering CVT courses
AT	97.5%	94.3%	93.7%	98.7%	96.4%
BE	98.2%	99.2%	93.3%		97.8%
BG	100.0%	100.0%	99.8%	100.0%	99.9%
DE	95.0%	93.0%	86.0%	97.0%	90.0%
DK		76.9%		82.6%	
EE	97.7%	96.9%	99.3%	99.3%	99.3%
FI	64.3%	93.1%		97.0%	95.0%
HU	99.8%	99.2%	100.0%	100.0%	100.0%
LT	100.0%	100.0%	100.0%	100.0%	100.0%
LU	98.7%	94.9%		64.3%	
MT	95.8%	93.9%	96.8%	98.0%	
NL	89.0%	89.0%	92.0%		94.0%
NO	86.0%	86.0%		97.0%	
PL	100.0%	99.9%	100.0%	100.0%	100.0%
PT	100.0%	100.0%	100.0%	100.0%	100.0%
RO	100.0%	100.0%	100.0%	100.0%	100.0%
SE	96.0%	94.0%	77.0%	96.0%	
SK	100.0%	100.0%	100.0%	100.0%	99.9%
UK	61.0%	34.0%	87.0%		94.0%
Minimum	61.0%	34.0%	77.0%	64.3%	90.0%
Maximum	100.0%	100.0%	100.0%	100.0%	100.0%
Average	93.3%	91.8%	95.0%	95.6%	97.6%

| Country	Total number of hours on CVT courses as a function of enterprises offering CVT courses	Total number of hours that males spent in CVT courses as a function of enterprises offering CVT courses	Total number of hours that females spent in CVT courses as a function of enterprises offering CVT courses	Number of hours on CVT courses managed internally as a function of enterprises offering CVT courses	Number of hours on CVT courses managed externally as a function of enterprises offering CVT courses	Total costs of CVT courses as a function of enterprises offering CVT courses	Total costs of IVT as a function of enterprises offering IVT
AT	92.6%	86.3%	86.9%	92.0%	91.7%	67.0%	70.1%
BE		91.3%	92.2%	93.3%	93.7%	71.3%	81.9%
BG	100.0%	99.8%	99.8%	100.0%	100.0%	99.9%	99.6%
DE	89.0%	75.0%	75.0%	85.0%	87.0%	84.0%	87.0%
DK							34.5%
EE		96.4%	95.4%	95.4%	95.4%	99.6%	97.5%
FI	95.4%	86.6%	87.1%	90.0%	88.8%	84.8%	76.4%
HU	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	40.2%
LT	98.0%	96.0%	96.0%	98.0%	98.0%	95.0%	100.0%
LU				45.7%	56.7%		24.9%
MT	92.7%			96.8%	96.8%	79.2%	93.4%
NL		83.0%	83.0%	86.0%	86.0%		
NO				91.0%	91.0%	72.0%	
PL	100.0%	100.0%	100.0%	100.0%	100.0%	98.7%	100.0%
PT	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
RO	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
SE				90.0%	90.0%	87.0%	
SK	99.5%	99.5%	99.6%	99.5%	89.2%	89.1%	61.7%
UK		58.0%	61.0%	69.0%	66.0%	66.0%	42.0%
Minimum	89.0%	58.0%	61.0%	45.7%	56.7%	66.0%	24.9%
Maximum	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average	97.0%	90.8%	91.1%	90.6%	90.6%	87.1%	75.6%

1.3 Timeliness and Punctuality

The duration of the survey varies among participating countries. In most of the countries, CVTS3 was carried out from May 2006 to June 2007 with reference year 2005. The main stages of the project were divided as following:

o implementation of the survey – data collection (sending out the questionnaires, reminders and follow-up, face-to-face interviews)
o data treatment (data checking and editing, further validation and imputation, non-response survey, estimations)
o data transmission to Eurostat
o dissemination of national results

According to Regulation (EC) 1552/2005, the transmission of data to Eurostat had to be made by the 30th June 2007, i.e. 18 months after the end of the reference year 2005. By comparing actual transmission dates with the relevant deadline for transmission we can assess punctuality of CVTS3 statistics.

Figure 5 shows the number of months since the end of 2005 which passed until final results for 2005 were transmitted to Eurostat. The vertical line indicates the deadline of 18 months.

Figure 5: Number of months since the end of 2005 until final transmission of statistics to Eurostat
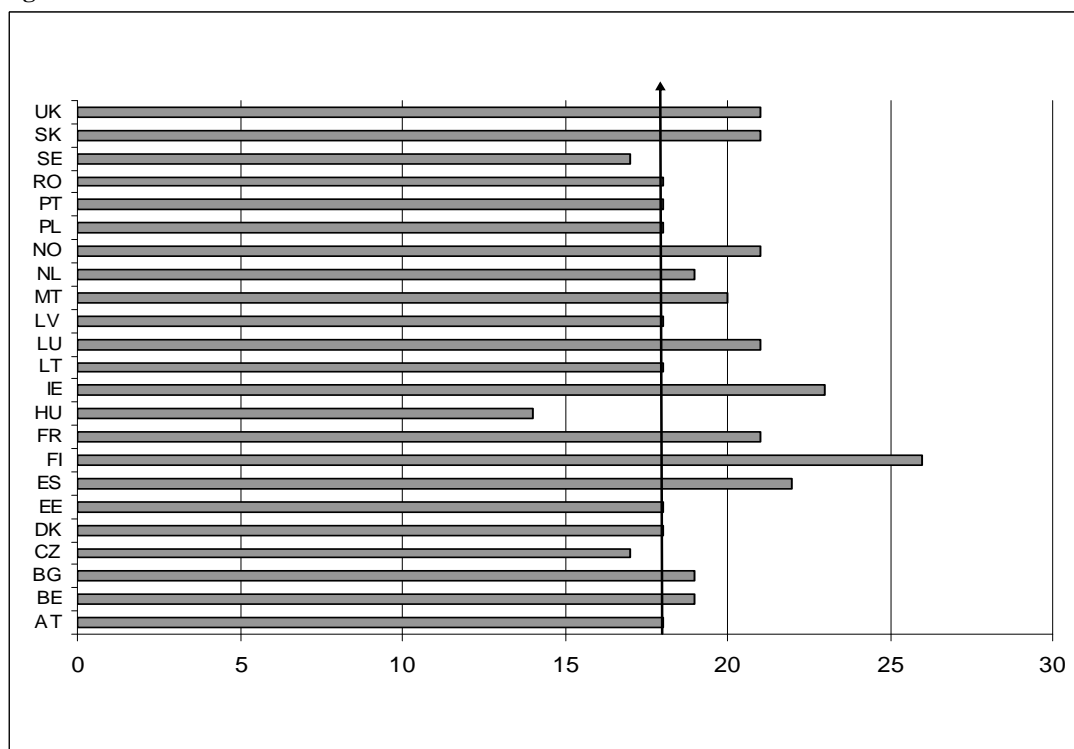

Most of the countries have managed to send their data up to 18 months from the reference year. However, two countries have exceeded the reference date to five months (Ireland)

or even to 8 months (Finland) beyond the deadline for data transmission. On the other hand, three countries delivered their data before the end of June 2007 and in particular, Hungary transmitted their data (not-imputed) in February 2007.

The dissemination of national CVTS3 results depends mostly on each country's policy and varies from December 2006 to March 2008. Figure 6 shows the number of months since the end of 2005 which passed until CVTS3 results were made available to the public.

Figure 6: Number of months since the end of 2005 until dissemination of national CVTS3 statistics
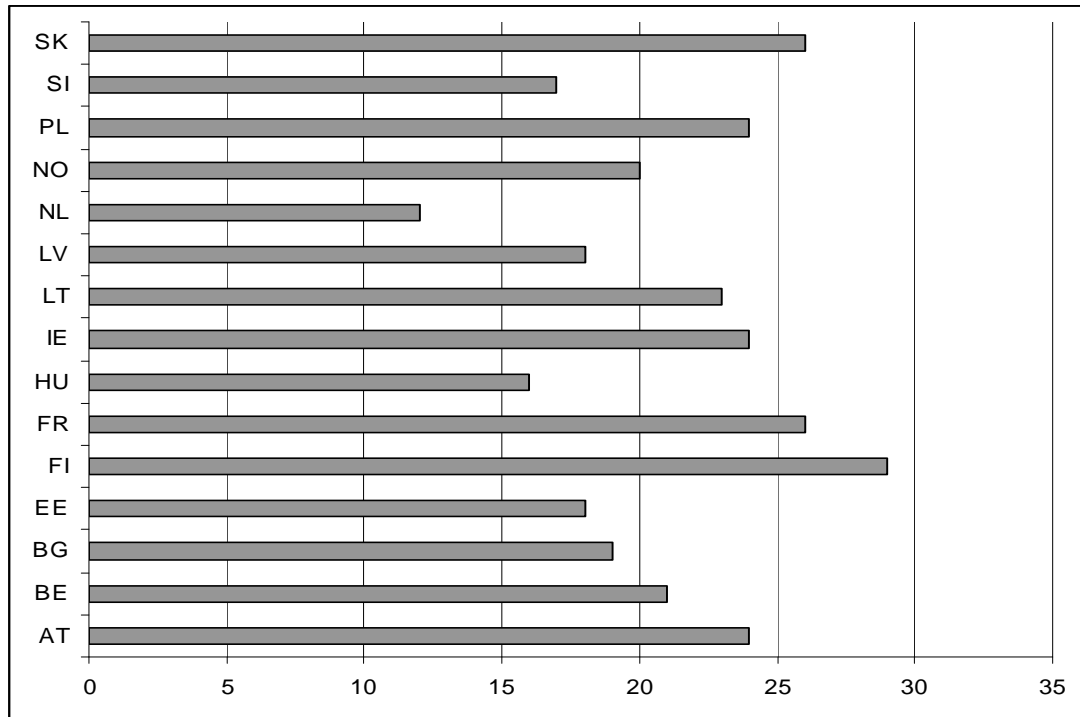
Note: The figure includes countries that had disseminated CVTS3 data at the time of reporting

The Netherlands have been the first to publish CVTS3 results in December 2006. The majority of countries have disseminated their national data in the last two quarters of 2007 following the final acceptance by Eurostat of CVTS3 dataset.

1.4 Accessibility and Clarity

All countries have or will disseminate the CVTS3 statistics on their official statistical website. It is also planned to publish the results either on electronic (CD-ROM) or paper format. Data may also be available under request for any potential user in short publications including information on the methodology of the survey and on other scheduled publications. Other frequent means of dissemination that are reported are press releases / press conferences, publications on statistical yearbooks / vocational magazines.
For participating enterprises, some countries have planned to send them a publication with the main CVTS3 results. If this is not the case, these enterprises will have full access to all national website publications and results.

1.5 Comparability

The CVTS3 EU Manual included all the information required for the planning and implementation of the survey. The proposed guidelines were generally adopted in all participating countries. Therefore, the comparability of CVTS3 data is expected to be high. In this section, comparability is assessed in terms of the questionnaire, the link to other national surveys, the adoption of concepts and definitions and the use of administrative sources to reply to the questionnaire.

Deviations from the European questionnaire
With regard to the CVTS3 questionnaire, there were no significant deviations reported. Most of the countries have only made slight changes regarding the sequence of questions. This resulted in improving the flow of the questionnaire and making it more readable and easy for respondents to complete it. Some of the optional / additional questions proposed were either included or excluded without however serious effect on the comparability. Other questions that were also excluded were mostly from section A to avoid increasing response burden. These questions were fed by administrative sources. Finally, many countries added some questions reflecting the national needs and interests of users.

Link to other national surveys
CVTS3 was conducted independently from other national surveys. In France only, the survey was linked to the AES survey. This was made with a view to being able to include in CVTS3 the enterprises that were covered in the AES sample as well. The linking had an impact only on the sampling process and the weight calculations since each survey had its unique questionnaire.

Concepts and definitions
All participating countries adopted the concepts and definitions included in the CVTS3 EU Manual without any deviations. However, it should be mentioned that some comparability issues may still occur due to misunderstandings of some definitions by respondents.

Extent in which the survey was realized through existing data in registers
The response burden of the CVTS3 has been the major problem reported by all participating countries. Therefore, administrative sources were used as far as possible in order to reduce burden on respondents and facilitate the questionnaire. The variables that were mostly covered by other sources were: A1 (NACE), A2, A3, A4, A5 and F1. However, there were still countries that did not used existing data in registers, thus, the CVTS3 collection is exclusively made up of primary data collected from enterprises at the point of interview.

1.6 Coherence

The coherence of CVTS3 statistics in each country is assessed by the comparison with other relevant statistics. It is of great interest to see potential deviations in key indicators between different data sources. The first comparison is made with the national Structural Business Statistics with reference year 2005. Moreover, CVTS3 data are compared with CVTS2 data in order to assess any significant differences between the two rounds of this survey.
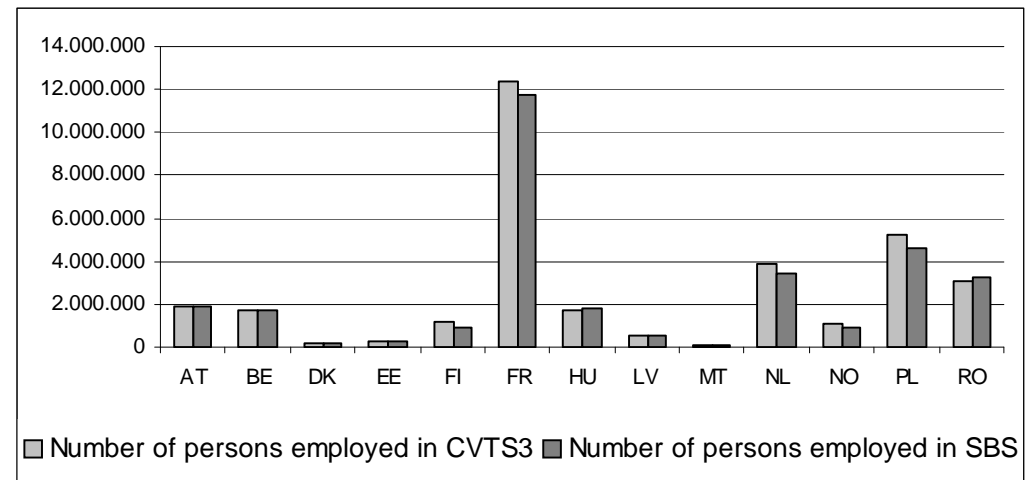
Comparison with SBS

Structural Business Statistics (SBS) describe the structure, conduct and performance of economic activities, down to the most detailed activity level (several hundred sectors). It covers the NACE sections C to K but in some countries section J is either kept separately or is unavailable due to the limited number of business statistics in this area. Data are collected within the framework of a Council Regulation on Structural Business Statistics (EC, EURATOM) No.58/97 of December 1996.

Table 7 and Figure 7 present the relative differences between CVTS3 and SBS in the number of persons employed. These differences are defined as: % (SBS – CVTS3) / SBS. It is noticed that in all countries presented the relative differences in the number of persons employed are low. In general, persons employed in CVTS3 are more than those reported in SBS with the exception of four countries.

Table 7 & Figure 7: Number of persons employed from CVTS3 and SBS

Country	Number of persons employed		Relative difference
	CVTS3	SBS	
AT	1,912,128	1,878,676	-1.78%
BE	1,731,510	1,690,866	-2.40%
DK	188,908	165,873	-13.89%
EE	316,091	312,045	-1.30%
FI	1,154,041	921,672	-25.21%
FR	12,399,110	11,768,872	-5.36%
HU	1,750,481	1,799,989	2.75%
LV	528,949	559,828	5.52%
MT	82,216	104,720	21.49%
NL	3,919,387	3,429,616	-14.28%
NO	1,057,160	943,104	-12.09%
PL	5,226,774	4,608,115	-13.43%
RO	3,102,307	3,287,438	5.63%

Comparison with CVTS2

CVTS2 was the second round of the survey on vocational training and was implemented in 1999 following a gentleman's agreement between countries and Eurostat. It was carried out in all EU Member States, Norway and the then nine candidate countries. With regard to improve data quality, reduce the burden on enterprises and extend the survey to cover users' needs, some changes have been made in the questionnaire and definitions of CVTS3 in comparison with CVTS2. However, these changes are not considered to have any significant effect on the comparability of the two datasets.

The comparison of CVTS3 data with CVTS2 data is made for five key indicators, i.e. (a) Training enterprises with CVT courses as % of all enterprises (b) Percentage of employees (all enterprises) participating in CVT courses (c) Cost of CVT courses per participant (d) Cost of CVT courses per employee and (e) Hours in CVT courses per 1000 hours worked (all enterprises).

For the following comparison it is noted that wherever figures are expressed in absolute numbers the comparison is made on relative differences, i.e. % (CVTS2 – CVTS3) / CVTS2.

(a) Training enterprises with CVT courses as % of all enterprises
Table 8 and Figure 8 show the percentage of training enterprises with CVT courses in CVTS2 and CVTS3. There is no general trend noticed across Europe. Portugal, Romania and Slovenia present the highest growths from CVTS2 exceeding 20%. A significant growth is also reported in Spain, Greece and Luxembourg. On the other hand, Germany, the Netherlands and especially Norway present a reduction of training enterprises that reaches 26% in the latter case. Only two countries have the same percentages of training enterprises with CVT courses in both rounds.

(b) Percentage of employees (all enterprises) participating in CVT courses
In CVTS3, most countries report higher percentages of employees participating in CVT courses in comparison with CVTS2, as it is shown in Table 9 and Figure 9. This trend is more noticeable in Czech Republic and Slovenia. In fact, Czech Republic has the greatest percentage of employees participating in such courses. On the contrary, Northern countries and the United Kingdom show signs of decrease in the respective percentages.

Table 8: Training enterprises with CVT courses as % of all enterprises

Country	Total Population		
	CVTS3	CVTS2	Difference
AT	67.00	71.00	-4.00
BE	48.00	48.00	0.00
BG	21.00	17.00	4.00
CZ	63.00	61.00	2.00
DE	54.00	67.00	-13.00
DK	81.00	88.00	-7.00
EE	56.00	47.00	9.00
ES	38.00	28.00	10.00
EU25	50.00	53.00	-3.00
FI	70.00	75.00	-5.00
FR	71.00	71.00	0.00
GR	19.00	9.00	10.00
HU	34.00	24.00	10.00
IT	27.00	23.00	4.00
LT	26.00	21.00	5.00
LU	61.00	50.00	11.00
LV	30.00	26.00	4.00
NL	70.00	82.00	-12.00
NO	55.00	81.00	-26.00
PL	24.00	26.00	-2.00
PT	32.00	11.00	21.00
RO	28.00	7.00	21.00
SE	72.00	83.00	-11.00
SI	61.00	33.00	28.00
UK	67.00	76.00	-9.00

Figure 8: Training enterprises with CVT courses as % of all enterprises
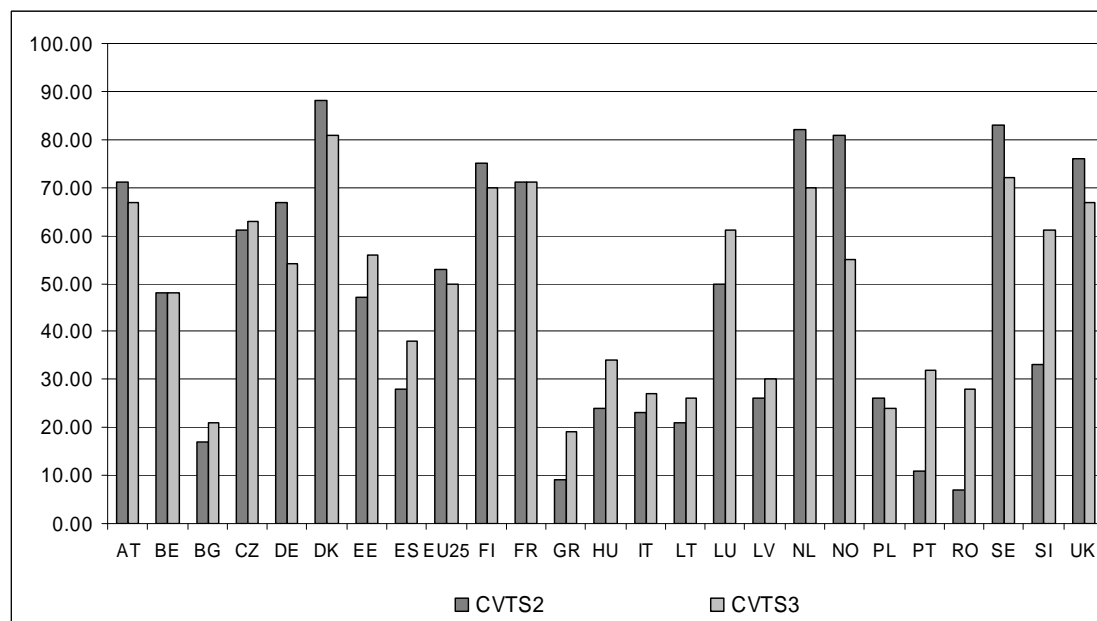
**Table 9: Percentage of employees (all enterprises) participating in CVT courses**

Country	Total Population		
	CVTS3	CVTS2	Difference
AT	33.00	31.00	2.00
BE	40.00	41.00	-1.00
BG	15.00	13.00	2.00
CZ	59.00	42.00	17.00
DE	30.00	32.00	-2.00
DK	35.00	53.00	-18.00
EE	24.00	19.00	5.00
ES	33.00	25.00	8.00
EU25	34.00	39.00	-5.00
FI	39.00	50.00	-11.00
FR	46.00	46.00	0.00
GR	14.00	15.00	-1.00
HU	16.00	12.00	4.00
IT	29.00	26.00	3.00
LT	15.00	10.00	5.00
LU	49.00	36.00	13.00
LV	15.00	12.00	3.00
NL	34.00	41.00	-7.00
NO	29.00	48.00	-19.00
PL	21.00	16.00	5.00
PT	28.00	17.00	11.00
RO	17.00	8.00	9.00
SE	46.00	61.00	-15.00
SI	50.00	32.00	18.00
UK	33.00	49.00	-16.00

Figure 9: Percentage of employees (all enterprises) participating in CVT courses
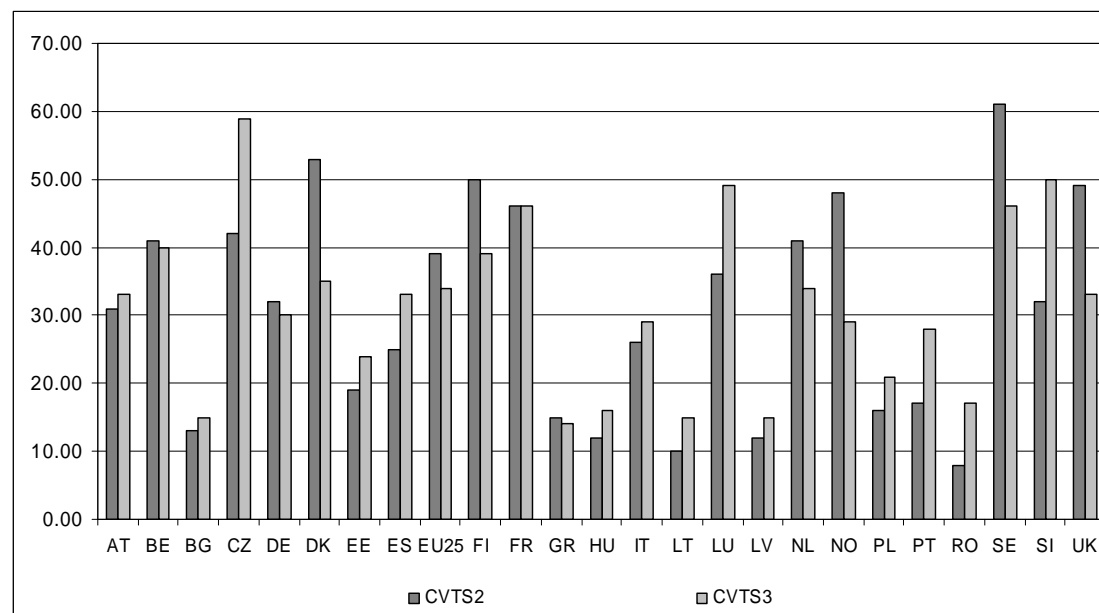
(c) Cost of CVT courses per participant
The total costs of CVT courses per participant are shown in Table 10 and Figure 10. The highest costs of CVT courses are reported in Denmark. Some countries report a sharp increase from CVTS2. This is the case of Hungary and Slovenia who have doubled the respective costs in CVTS3. On the other hand, Bulgaria, Poland and Portugal present the greatest decreases from CVTS2. The costs of CVT courses per participant have remained the same in Germany and the Netherlands.

(d) Cost of CVT courses per employee
The relative differences in total costs of CVT courses per employee are similar to the respective differences of costs per participant. As it is shown in Table 11 and Figure 11, Slovenia and Hungary present the higher growths followed by Austria and Luxembourg. Significant reduces from CVTS2 are presented in Bulgaria and the United Kingdom.

(e) Hours in CVT courses per 1000 hours worked (all enterprises)
No significant differences between the two rounds are reported in the percentage of hours spent in CVT courses. The figures presented in Table 12 and Figure 12 show that most of the countries have maintained the respective percentages at the same level in CVTS2 and CVTS3. The greatest decreases in the percentage of hours in CVT courses are reported by Denmark and Finland.

Table 10: Cost of CVT courses per participant

Country	Total Population		
	CVTS3	CVTS2	Relative Difference
AT	1637.00	1160.00	41.12%
BE	1731.00	1644.00	5.29%
BG	457.00	1053.00	-56.60%
CZ	555.00	602.00	-7.81%
DE	1637.00	1593.00	2.76%
DK	2685.00	2141.00	25.41%
EE	811.00	1030.00	-21.26%
ES	1101.00	1514.00	-27.28%
EU25	1408.00	1487.00	-5.31%
FI	1083.00	1393.00	-22.25%
FR	1898.00	1625.00	16.80%
GR	1005.00	1529.00	-34.27%
HU	2526.00	1166.00	116.64%
IT	1452.00	2177.00	-33.30%
LT	754.00	659.00	14.42%
LU	1801.00	1666.00	8.10%
LV	683.00	729.00	-6.31%
NL	2134.00	2132.00	0.09%
NO	1462.00	1844.00	-20.72%
PL	838.00	598.00	40.13%
PT	813.00	1387.00	-41.38%
RO	507.00	541.00	-6.28%
SE	1691.00	1434.00	17.92%
SI	1038.00	515.00	101.55%
UK	1068.00	1286.00	-16.95%

Note: Figures are expressed in Purchasing Power Standard (PPS)

Figure 10: Cost of CVT courses per participant
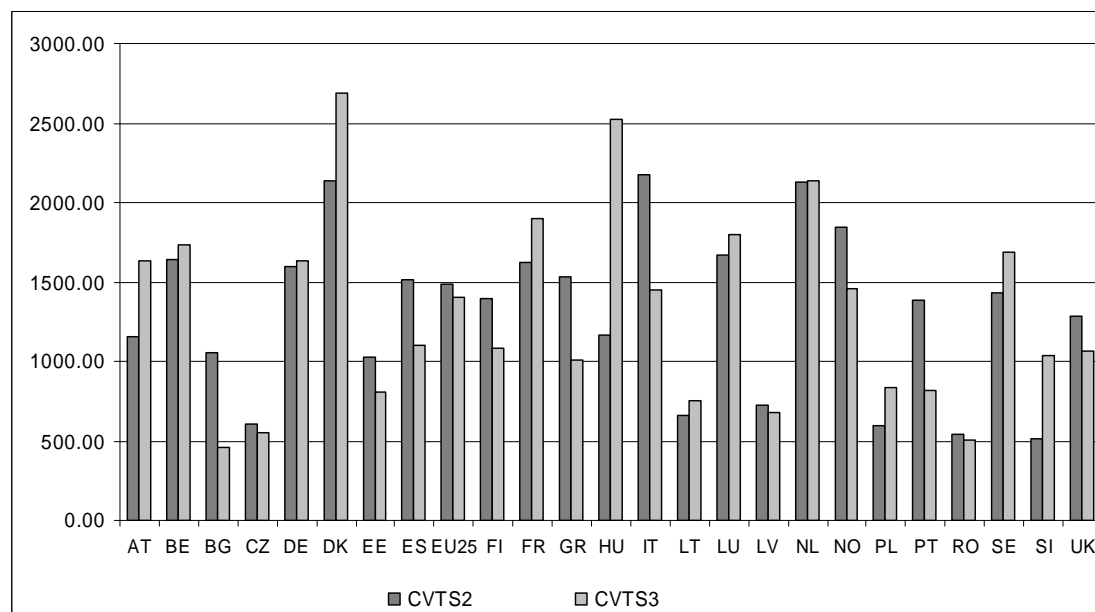
Table 11: Cost of CVT courses per employee

| Country | Total Population | | |
	CVTS3	CVTS2	Relative Difference
AT	545.00	365.00	49.32%
BE	690.00	675.00	2.22%
BG	67.00	134.00	-50.00%
CZ	326.00	250.00	30.40%
DE	486.00	506.00	-3.95%
DK	997.00	1132.00	-11.93%
EE	198.00	197.00	0.51%
ES	367.00	385.00	-4.68%
EU25	474.00	575.00	-17.57%
FI	424.00	698.00	-39.26%
FR	864.00	753.00	14.74%
GR	137.00	223.00	-38.57%
HU	404.00	144.00	180.56%
IT	418.00	563.00	-25.75%
LT	110.00	65.00	69.23%
LU	884.00	592.00	49.32%
LV	60.00	90.00	-33.33%
NL	693.00	875.00	-20.80%
NO	423.00	666.00	-36.49%
PL	173.00	97.00	78.35%
PT	228.00	240.00	-5.00%
RO	88.00	41.00	114.63%
SE	780.00	868.00	-10.14%
SI	514.00	167.00	207.78%
UK	348.00	628.00	-44.59%

Note: Figures are expressed in Purchasing Power Standard (PPS)

Figure 11: Cost of CVT courses per employee
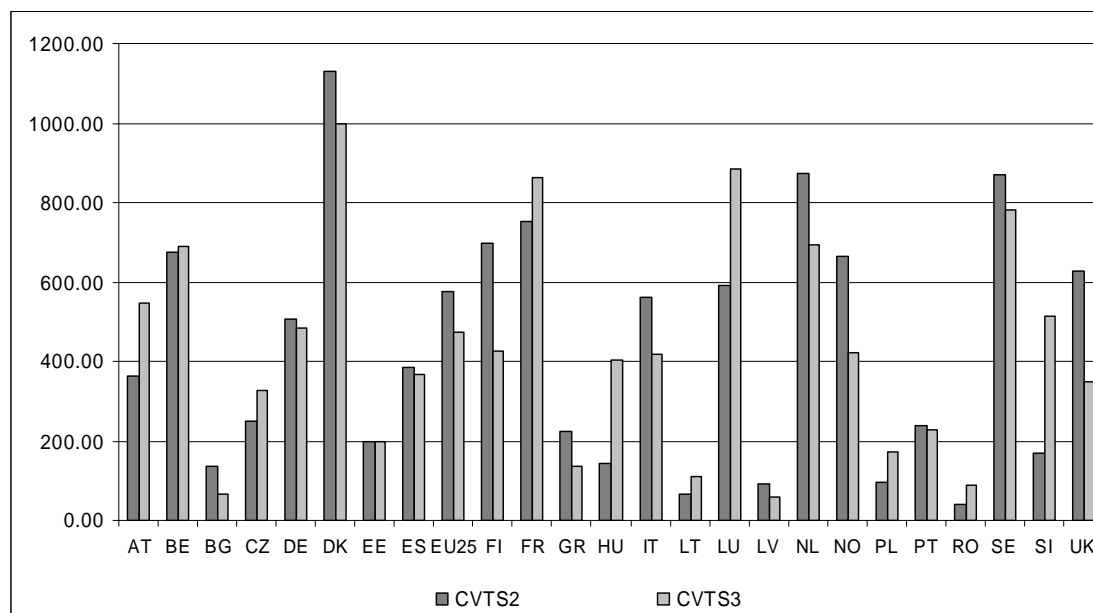
Table 12: Hours in CVT courses per 1000 hours worked (all enterprises)

Country	Total Population		
	CVTS3	CVTS2	Difference
AT	5.00	5.00	0.00
BE	9.00	8.00	1.00
BG	3.00	3.00	0.00
CZ	8.00	6.00	2.00
DE	6.00	5.00	1.00
DK	9.00	14.00	-5.00
EE	4.00	3.00	1.00
ES	5.00	6.00	-1.00
EU25	5.00	7.00	-2.00
FI	6.00	11.00	-5.00
FR	8.00	10.00	-2.00
GR	2.00	3.00	-1.00
HU	3.00	3.00	0.00
IT	5.00	5.00	0.00
LT	3.00	2.00	1.00
LU	9.00	8.00	1.00
LV	2.00	2.00	0.00
NL	8.00	11.00	-3.00
NO	6.00	10.00	-4.00
PL	4.00	2.00	2.00
PT	4.00	4.00	0.00
RO	3.00	2.00	1.00
SE	10.00	12.00	-2.00
SL	8.00	4.00	4.00
UK	3.00	7.00	-4.00

Note: Figures are expressed in Percentage of total

Figure 12: Hours in CVT courses per 1000 hours worked (all enterprises)
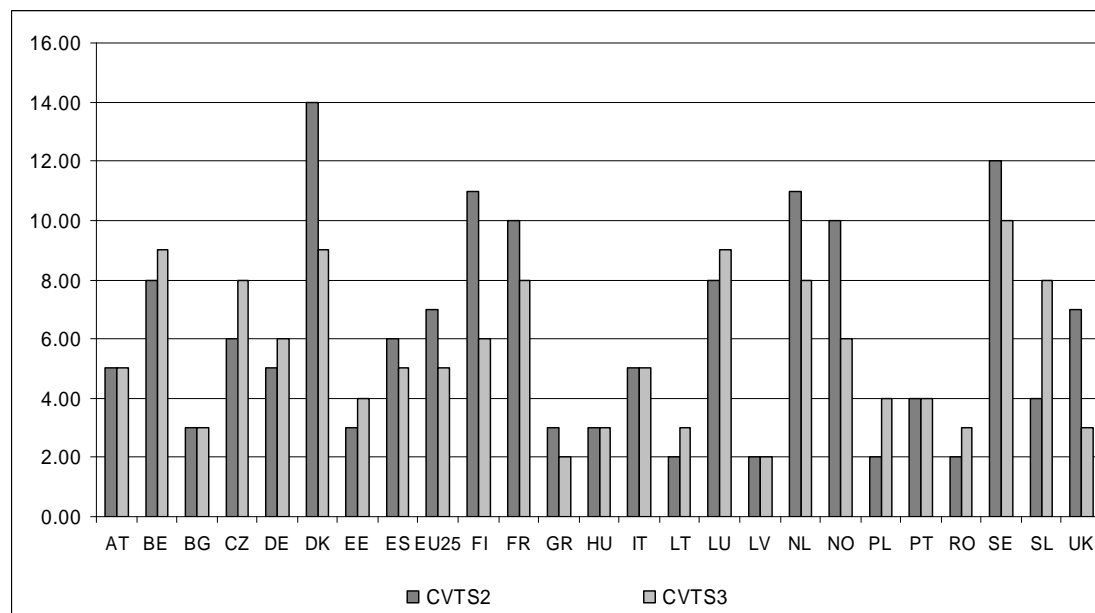
1.7 Burden and Benefit

The CVTS3 is considered by many respondents (enterprises) a burdensome and time-consuming task. Almost all countries have reported complains about the excessive length of the questionnaire. Response time varies depending on the extent of the enterprise's training activities, the size of the enterprise and the extent to which records of training data were kept.

The burden is often bigger for large enterprises as they have more extensive training activities to cover and may need to do synthetic work to gather the requested information on CVT courses. In some cases, many different divisions/units in the enterprise have to be involved. On the other hand, in small enterprises there is not enough personnel employed and in most of the cases all official inquiries and surveys are treated by the same person. This may have a very negative effect on the burden of these enterprises and the time spent in completion of the questionnaire.

The average time needed for answering the CVTS3 questionnaire varies across the European countries. Enterprises with no training activities need less than 10 minutes to complete the questionnaire while the average response time grows as the size of the enterprise and its training activities increase. In such cases, response time varies from 15 minutes to 1 hour in small enterprises and from 2 hours up to 8 hours in large enterprises with training activities. Especially in the latter case, some countries report that enterprises may have even spent few working days for this survey when the information required was not easily at hand.

Table 13 shows the average response time broken down by size and type of enterprise in Spain, Lithuania, Romania and Sweden.

Table 13: Average Response Time (in hours) by Type of enterprise and Size class

Country	Size class	Enterprises which provided CVT courses	Enterprises which did not provide CVT courses	All enterprises
Spain	10-49	2.4	1.4	1.9
	50-249	3.8	2.0	2.9
	250+	7.1	2.8	5.0
Lithuania	10-49	3.0	1.5	2.3
	50-249	4.5	2.0	3.3
	250+	7.5	3.5	5.5
Romania	All sizes	15.4	1.2	8.3
Sweden	10-49			1.9
	50-249			3.4
	250+			5.7

Finally, it should also be mentioned that the mode of data collection may affect the response time. For example, countries that implemented telephone interviews report an average time of 30 minutes per interview regardless the size and the training activities of each enterprise.

2 Conclusions

CVTS3 is considered to have a high level of quality. The adoption of a common legal framework has resulted in more harmonized and comparable statistics. The information provided by this survey is valuable considering the great interest from all parties in vocational training in enterprises. All variables included in the questionnaire and especially those related to hours and costs of CVT courses are very important since CVTS is the only survey that covers the field of vocational training at such detailed level.

In consideration of the quality indicators presented in this report, relevance, accuracy and comparability of CVTS3 data are considered to have a high level of quality across all participating countries. As for the coherence of statistics with relevant data from other sources, there are no significant deviations between CVTS3 data and the respective data from other sources. However, it is noticed that in many countries there are not enough sources available at national level in order to make valuable comparisons. Moreover, with regard to the dissemination of CVTS3 results, all efforts must be made to publish up-to-date statistics on vocational training as soon as possible in order to satisfy the general demand from users.

The most significant disadvantage of CVTS3 is the great burden on enterprises that participate in the survey. All countries have reported complaints about the excessive length of the questionnaire and the amount of time spent in completing all sections. These two factors have a major effect on the quality of data collection. Therefore, there is the need of reducing the burden on respondents as far as possible with a view to improving the quality of information provided on vocational training.
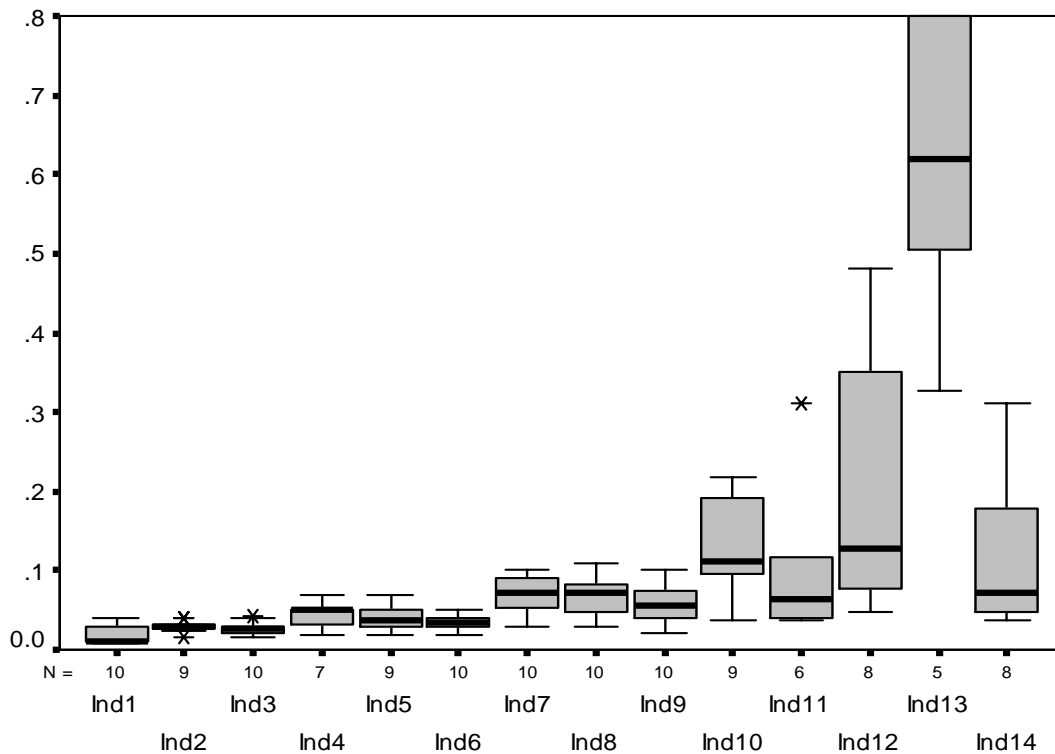
3 Annex

Coefficients of Variation for key statistics broken down by size class

(1) Size class 1: 10-49 persons employed

Country	AT	EE	ES	HU	LT	NO	PL	PT	RO	SE
Total number of persons employed	3.17%	1.40%	0.66%	1.00%	1.10%	3.00%	0.80%	1.20%	1.01%	4.00%
Total number of enterprises providing CVT	4.13%	2.30%	1.54%		2.90%	3.00%	2.60%	2.90%	3.11%	4.00%
Ratio of the total number of enterprises providing CVT to the total number of enterprises	2.44%	2.20%	1.54%	2.00%	3.00%	3.00%	2.60%	2.90%	4.20%	4.00%
Total number of enterprises providing CVT courses	5.24%	2.90%	1.89%		5.00%	7.00%	3.70%			5.00%
Ratio of the total number of enterprises providing CVT courses to the total number of enterprises	4.27%	2.80%	1.89%	3.00%	5.00%	7.00%	3.70%	3.80%		5.00%
Total number of persons employed in enterprises providing CVT	3.72%	2.70%	1.81%	5.00%	3.30%	4.00%	2.90%	3.40%	3.33%	5.00%

Total number of participants in CVT courses	8.33%	4.90%	2.88%	9.00%	8.30%	10.00 %	5.20 %	5.20%	6.02%	9.00%
Ratio of the total number of participants in CVT courses to the total number of persons employed	8.25%	4.60%	2.75%	7.00%	8.20%	11.00 %	5.10 %	4.80%	7.44%	8.00%
Ratio of the total number of participants in CVT courses to the total number of persons employed in enterprises providing CVT	7.97%	4.20%	2.22%	4.00%	7.50%	10.00 %	4.30 %	4.00%	7.44%	7.00%
Total costs of CVT courses	18.06 %	19.20 %	3.64%	157.00 %	21.70 %		9.70 %	11.20 %	9.36%	11.00 %
Total number of enterprises providing IVT	6.13%	31.20 %	3.55%		6.40%		3.90 %	11.80 %		
Total number of participants in IVT	8.15%	32.40 %	7.53%	48.00%	10.30 %		4.90 %	15.00 %	37.93 %	
Total costs of IVT		62.00 %	79.96 %	80.00%	50.50 %				32.55 %	
Ratio of the total number of enterprises providing IVT to the total number of enterprises	5.62%	31.20 %	3.55%	8.00%	6.50%		3.90 %	11.84 %	23.98 %	

Box-plots of the coefficients of variation of key statistics for enterprises with 10-49 persons employed

The asterisks denote the outliers in each box-plot

Ind1: Total number of persons employed

Ind2: Total number of enterprises providing CVT

Ind3: Ratio of the total number of enterprises providing CVT to the total number of enterprises

Ind4: Total number of enterprises providing CVT courses

Ind5: Ratio of the total number of enterprises providing CVT courses to the total number of enterprises

Ind6: Total number of persons employed in enterprises providing CVT

Ind7: Total number of participants in CVT courses

Ind8: Ratio of the total number of participants in CVT courses to the total number of persons employed

Ind9: Ratio of the total number of participants in CVT courses to the total number of persons employed in enterprises providing CVT

Ind10: Total costs of CVT courses

Ind11: Total number of enterprises providing IVT

Ind12: Total number of participants in IVT

Ind13: Total costs of IVT

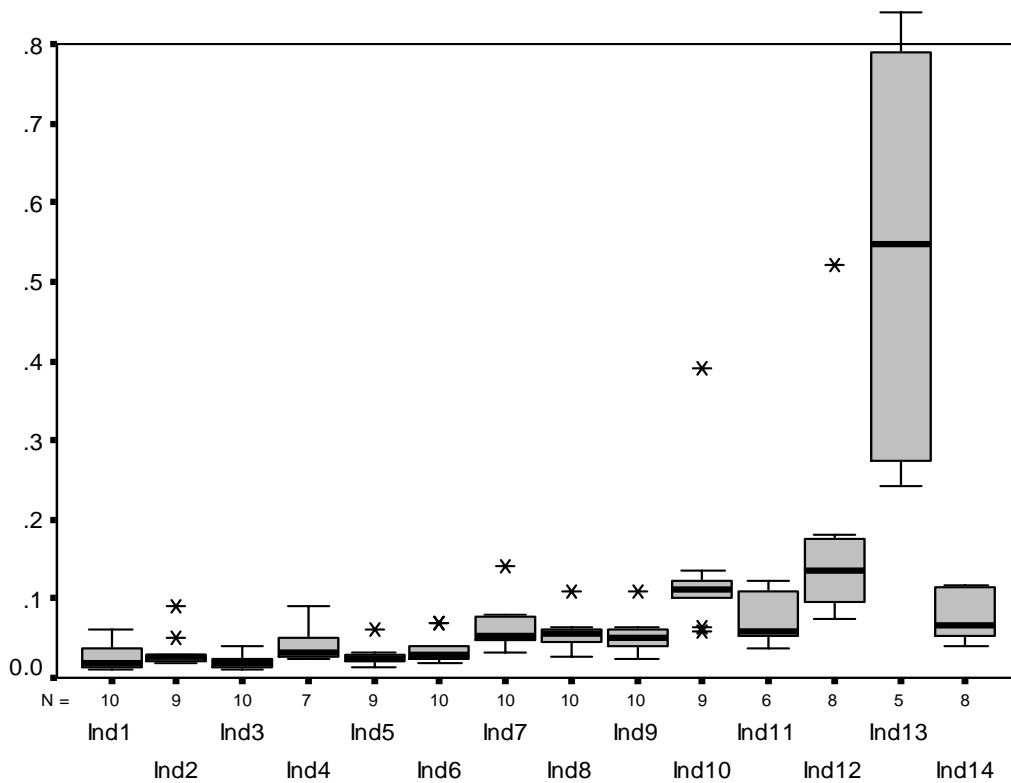Ind14: Ratio of the total number of enterprises providing IVT to the total number of enterprises

(2) Size class 2: 50-249 persons employed

Country	AT	EE	ES	HU	LT	NO	PL	PT	RO	SE
Total number of persons employed	3.71%	1.60%	1.61%	2.00%	1.00%	6.00%	1.40%	2.40%	1.03%	6.00%
Total number of enterprises providing CVT	2.78%	2.20%	2.18%		1.80%	5.00%	2.60%	2.90%	2.38%	9.00%
Ratio of the total number of enterprises providing CVT to the total number of enterprises	1.46%	1.30%	1.99%	1.00%	1.80%	4.00%	2.50%	2.40%	2.89%	1.00%
Total number of enterprises providing CVT courses	3.32%	2.30%	2.43%		2.70%	7.00%	3.30%			9.00%
Ratio of the total number of enterprises providing CVT courses to the total number of enterprises	2.20%	1.40%	2.33%	2.00%	2.60%	6.00%	3.30%	2.80%		2.00%

Total number of persons employed in enterprises providing CVT	3.92%	1.80%	2.55%	3.00%	2.00%	7.00%	3.00%	3.50%	2.53%	7.00%
Total number of participants in CVT courses	7.84%	3.20%	5.02%	6.00%	4.10%	14.00%	5.70%	4.90%	5.09%	8.00%
Ratio of the total number of participants in CVT courses to the total number of persons employed	5.83%	2.70%	4.64%	6.00%	4.20%	11.00%	5.50%	4.50%	6.36%	6.00%
Ratio of the total number of participants in CVT courses to the total number of persons employed in enterprises providing CVT	5.65%	2.50%	4.26%	5.00%	3.90%	11.00%	4.90%	4.10%	6.36%	6.00%
Total costs of CVT courses	11.09%	6.50%	5.84%	39.00%	12.30%		12.00%	13.50%	10.25%	10.00%
Total number of enterprises providing IVT	5.43%	11.00%	5.26%		3.80%		6.50%	12.20%		
Total number of participants in IVT	9.59%	18.00%	10.13%	52.00%	7.40%		9.70%	16.90%	17.28%	
Total costs of IVT		24.30%	83.88%	79.00%	54.80%				27.25%	

Ratio of the total number of enterprises providing IVT to the total number of enterprises	5.11%	11.10%	5.26%	7.00%	4.00%		6.40%	11.70%	11.68%	

Box-plots of the coefficients of variation of key statistics for enterprises with 50-249 persons employed

The asterisks denote the outliers in each box-plot

Ind1: Total number of persons employed

Ind2: Total number of enterprises providing CVT

Ind3: Ratio of the total number of enterprises providing CVT to the total number of enterprises
Ind4: Total number of enterprises providing CVT courses
Ind5: Ratio of the total number of enterprises providing CVT courses to the total number of enterprises
Ind6: Total number of persons employed in enterprises providing CVT
Ind7: Total number of participants in CVT courses
Ind8: Ratio of the total number of participants in CVT courses to the total number of persons employed

Ind9: Ratio of the total number of participants in CVT courses to the total number of persons employed in enterprises providing CVT
Ind10: Total costs of CVT courses
Ind11: Total number of enterprises providing IVT
Ind12: Total number of participants in IVT
Ind13: Total costs of IVT
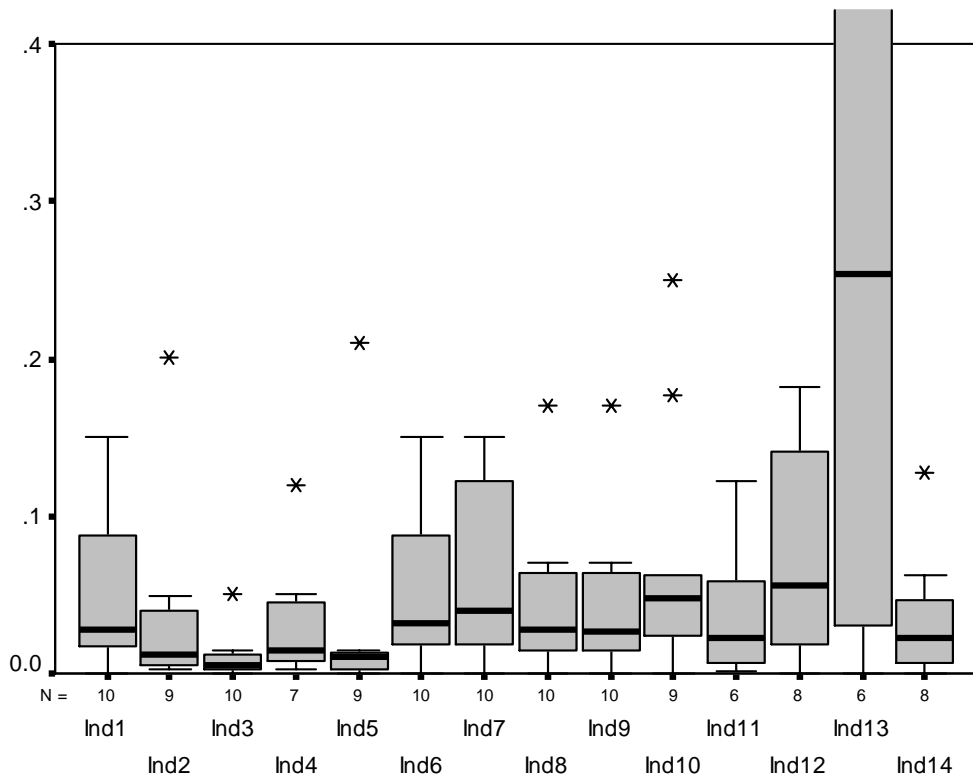Ind14: Ratio of the total number of enterprises providing IVT to the total number of enterprises

(3) Size class 3: 250 and more persons employed

Country	AT	EE	ES	HU	LT	NO	PL	PT	RO	SE
Total number of persons employed	8.82%	3.70%	1.88%	0.00%	1.70%	13.00%	0.30%	4.70%	1.89%	15.00%
Total number of enterprises providing CVT	1.20%	4.90%	0.23%		0.50%	20.00%	0.90%	2.60%	0.45%	4.00%
Ratio of the total number of enterprises providing CVT to the total number of enterprises	0.57%	1.40%	0.22%	0.00%	1.10%	5.00%	0.20%	1.20%	0.53%	0.00%
Total number of enterprises providing CVT courses	1.48%	5.00%	0.25%		0.70%	12.00%	1.00%			4.00%

Ratio of the total number of enterprises providing CVT courses to the total number of enterprises	0.82%	1.30%	0.25%	0.00%	1.40%	21.00%	0.30%	1.30%		1.00%
Total number of persons employed in enterprises providing CVT	8.84%	4.20%	2.00%	0.00%	1.80%	15.00%	0.30%	5.00%	2.20%	15.00%
Total number of participants in CVT courses	12.17%	5.30%	2.50%	0.00%	2.70%	15.00%	0.30%	6.40%	1.90%	15.00%
Ratio of the total number of participants in CVT courses to the total number of persons employed	6.40%	4.70%	1.66%	0.00%	2.40%	17.00%	0.20%	3.20%	1.49%	7.00%
Ratio of the total number of participants in CVT courses to the total number of persons employed in enterprises providing CVT	6.40%	4.50%	1.66%	0.00%	2.30%	17.00%	0.20%	3.10%	1.49%	7.00%
Total costs of CVT courses	17.73%	6.20%	2.42%	0.00%	4.80%		0.20%	4.80%	4.10%	25.00%
Total number of enterprises providing IVT	3.13%	12.20%	0.74%		1.50%		0.10%	5.90%		
Total number of participants in IVT	18.16%	17.30%	5.61%	0.00%	3.50%		0.10%	10.90%	5.63%	

Total costs of IVT	42.64 %	46.00 %	55.01 %	0.00 %	3.10 %				8.11 %	
Ratio of the total number of enterprises providing IVT to the total number of enterprises	3.03%	12.70 %	0.74%	0.00 %	1.90 %		0.70 %	6.26%	2.65 %	

Box-plots of the coefficients of variation of key statistics for enterprises with more than 250 persons employed

The asterisks denote the outliers in each box-plot

Ind1: Total number of persons employed

Ind2: Total number of enterprises providing CVT

Ind3: Ratio of the total number of enterprises providing CVT to the total number of enterprises

Ind4: Total number of enterprises providing CVT courses

Ind5: Ratio of the total number of enterprises providing CVT courses to the total number of enterprises

Ind6: Total number of persons employed in enterprises providing CVT

Ind7: Total number of participants in CVT courses

Ind8: Ratio of the total number of participants in CVT courses to the total number of persons employed

Ind9: Ratio of the total number of participants in CVT courses to the total number of persons employed in enterprises providing CVT

Ind10: Total costs of CVT courses

Ind11: Total number of enterprises providing IVT

Ind12: Total number of participants in IVT

Ind13: Total costs of IVT

Ind14: Ratio of the total number of enterprises providing IVT to the total number of enterprises