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Continuing training in enterprises: facts and figures

EUROPEAN
COMMISSION

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Continuing training in enterprises — facts and figures

A report on the results of the continuing vocational training survey carried out in the enterprises of the Member States of the European Union in 1994

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PREFACE

The aging population and increasing rates of technological change, in particular in production systems, will have a considerable impact on the development of vocational training. On the one hand, the decreasing renewal of available manpower will mean that the skills of the workforce are updated less frequently; on the other hand, more frequent changes in production methods require a faster updating of these skills.

Thus, greater significance is accorded to continuing training, which provides the means to ensure that the skills base within the workforce meets the requirements of the economy. European employers have recognised this need and continuing vocational training has a long tradition in some Member States and certain economic sectors. Nearly all large enterprises in the European Union offer training to their employeers, to make them more effective technicians and better managers and to improve their information technology and language skills.

This is why the FORCE Decision (Council Decision 29 May 1990) required that a survey of continuing training be carried out 'on the basis of questionnaires sent to a sample of undertakings'.

The Continuing Vocational Training Survey (CVTS), carried out in 1994, provided for the first time comparable data on continuing training in enterprises. It is based on elaborate questionnaires and interviews with the managers of 50,000 European enterprises in the then 12 Member States. The initial results were first presented at European level in 1997. This publication provides more detailed analytical results.

The CVTS confirms the results of other surveys which indirectly yield statistics on continuing training. Some of the well known facts about training in enterprises are quantified through its findings and some previously unkown issues are raised. We thus learn that 1.6% of labour costs are spent on staff training courses, of which half represents the labour cost of trainees. We also learn that half of training course time is purchased externally and are provided with some of the reasons for training or not training staff. A two page 'key findings' section summarises the main facts to be gleaned from the survey, with reference to the pages of the report where they are dealt with in more detail.

The Directorate-General for Education, Training and Youth - DGXXII -, with the collaboration of the University of Sheffield, Eurostat and the Member States brought to completion this long and sometime difficult process, to produce the first edition of a very complex survey, resulting in the information presented here. This survey serves to support the strategy for lifelong learning in particular with regard to access to training and the development of continuing training policy.

Klaus Draxler

Director

Vocational Training Policy

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KEY FINDINGS

THE SURVEY CONFIRMS THAT:

- More than half (57%) of European enterprises with 10 or more employees offered training to their employees in 1993. Nearly all large enterprises did so but only 52 percent of those with 10-49 employees. Over 80% of employees worked in enterprises which offered training. In addition to the size of the enterprise, country and economic sector were also important factors influencing training behaviour. While these factors interacted they did not do so to any great extent. (pages 16-21)
- The sectors with the highest proportion of enterprises offering training included those which had been undergoing rapid technological and organisational change in recent years and where, therefore, the need to train and re-train existing workers had been the greatest. (page 18)
- Only 17 percent of manual workers participated in training courses in 1993 compared to 34 percent of clerical and shop workers and nearly 45 percent of managerial, professional and technical staff. (page 29-30)
- Using the work-place as a learning situation through job rotation, quality circles etc. and self learning in its different forms was less common than other forms of training (7-8% of all enterprises used these forms). However, self-learning appeared to be particularly strong in the banking and insurance and related financial services sector and other sectors perhaps due to the growth of computer-assisted learning in the sectors. (page 25-28)

THE SURVEY SUGGESTS THAT:

- In enterprises offering training, participation rates of employees did not vary much between size groups. This suggests that **training culture** played an important role: enterprises without such culture did not offer training to any of their employees; enterprises with a training culture

offered training to a proportion of employees which varied little with the size of the enterprise. (pages 22-23)

- There is an association between an enterprises having a **training plan** and the rate at which its employees participated in training courses. However, the survey cannot say which was the cause and which the effect. The action of drawing up a training plan may have identified the need for more training or, alternatively, the more training that was done the greater was the need to have a training plan to help manage it. Perhaps significatively, in three of the four countries in which **equal opportunity polices** were prominent among their enterprises, Belgium, Denmark and Ireland, female participation rates were noticeably higher. (pages 61-62)
- The average time spent on training courses in 1993 was a little over a week per participant and this was similar for participants in enterprises of different size and between gender and occupation groups. Differences between sectors were much larger. (pages 33-36)
- **New forms** of training emerged, such as Self-Learning and Job-Rotation, and small enterprises (10-49 employees) took more advantage of these. This may have been a way to compensate for some of the difficulties they face in offering courses to their employees. (page 23-27)
- Overall, **women** had similar participation rates to **men**. However, this was because their employment was concentrated in occupations, and to a lesser extent in sectors, with high rates of training and not because they were always treated equally within occupations and sectors. (pages 29-32)
- About a quarter of all training course time was concerned with the **techniques of producing** goods and services and this was almost constant across size groups. Other types of training featured prominently in certain sectors according to **specific needs**-for example, health and safety training in mining and quarrying, construction, hotels and restaurants and food manufacture and financial training in the banking and insurance sector. (pages 36-42)
- About a half of all training course time was purchased from **external training providers** - this varied from over 70 percent in Denmark to under 30 percent in Greece and Portugal. External trainers were more frequently used by small enterprises and for some subjects such as management, finance, languages and data processing. In nearly all countries **private providers** were the main suppliers of externally purchased training. Training in production and maintenance techniques and marketing was more likely to be delivered through courses managed by the enterprise itself. (page 42-45)

- About **1.6 percent of labour costs** were spent in delivering **training** courses in 1993. This varied from over 2 percent in the largest enterprises to under 1 percent in those with only 10-49 employees and also from 2 percent or more in France and the United Kingdom to under 1 percent in Portugal. In most countries around a half of all training costs was accounted for by the labour costs of the employees while receiving training. (page 48)
- A little less than a **half of the training course costs were the trainees' labour costs**. Fees to external trainers accounted for 20-25 percent, the outstanding costs being costs of internal trainers, costs of premises and trainees' travel and subsistence. The distribution of training costs was strikingly similar across Member States. (page 46)
- Usually, external providers were more expensive than training organised internally. This was not the case, however, in countries such as Denmark and France, where **special arrangements** existed to allow small enterprises to obtain less expensive forms of external training. (page 50-51)
- Over 60 percent of enterprises that did no training in 1993 said that **recruiting qualified workers** was one of the main ways in which they obtained the skills needed. But many also said that they did train workers even though they had not done so in 1993. (page 67)

I INTRODUCTION

I.1 Background

The Continuing Vocational Training Survey (CVTS) was carried out as part of the FORCE Programme in 1994 in the then twelve Member States of the European Union. The FORCE Decision (Council Decision 29 May 1990) had included, as one of the actions within the programme, the 'exchange of comparable data on continuing vocational training'. Specifically, it required that a survey of continuing training be carried out 'on the basis of questionnaires sent to a sample of undertakings, in co-operation with the competent organisations in the Member States'.

This decision, to include a requirement for a statistical survey within the actions of a training programme, almost certainly had its origins in the early 1980's. That period was one during which massive restructuring took place in the economies of the European Union. Large scale productivity gains were achieved -but employment levels fell and unemployment rose. Training policies at both national and at Community level were designed to provide solutions to what were then seen as essentially short-term problems and whose dimensions were largely national in character - to assist the re-employment of workers who had lost their jobs; to retrain those threatened by unemployment; and to help young people whose employment prospects had been reduced.

However, one of the main messages to emerge as the 1980s progressed was that restructuring economies, supported by short-term training initiatives, could not alone generate the productivity increases required to achieve economic growth on the scale needed for new jobs to be created. The pace of technological and demographic changes caused the debate to be focused more and more on the need to train and retrain those already at work.

This exposed a major weakness in the information available to inform this debate. The education and initial training arrangements were generally well documented. The training provided to the unemployed was also known from the special programmes instituted in the Member states. In contrast, the continuing training provided by enterprises for their employees was relatively uncharted territory. In some Member States special studies had been undertaken to measure the amount and characteristics of the training provided by employers. However, the definitions of CVT used and the type of information collected necessarily reflected national needs.

These national surveys were therefore neither comprehensive nor comparable across the Community.

The CVTS sought to fill this gap. The survey took three years to plan. This was because it was breaking new ground in an area where little or no prior experience existed in many Member States and where no experience existed of trying to collect comparable data for different countries. Although, therefore, the FORCE decision had listed in general terms the type of information to be collected, the detailed requirements, including the concepts and definitions to be used and the methodology to be employed, had to be specified and tested before the survey could take place. This was done by a Working Group comprising both statistical and policy representatives from each Member State under the chairmanship of EUROSTAT(The Statistical office of the European Communities).

I.2 Quality and comparability of the data

The quality and comparability of the data collected will have been affected by a number of factors. These include the initial sample sizes, the response rates achieved, the survey methods used and the ability of enterprises in the Member States to interpret uniformly the requirements of the survey.

The initial sample sizes varied considerably between Member States, In part, but not entirely so, these will have been influenced by the survey design used and will have taken into account the expected proportion of enterprises offering training to their employees. The response rates also varied but were generally satisfactory. The net effect of these two factors, however, was that the number of enterprises actually responding to the survey, in whole or in part, varied from over 16,000 in Italy to under 700 in Ireland.

For the Community as a whole data were collected from 45,000 enterprises - or 1 in 20 of the 900,000 enterprises represented by the survey. As require, the national samples had been stratified by sector and size. Within the overall total, for example, over 1 in 3 of the largest enterprises (those with 1000 or more employees) were surveyed. The rate at which enterprises were sampled was lowered as the enterprise size was reduced. Among the smallest, but most numerous enterprises (those with between 10 and 49 employees), only 1 in 30 enterprises took part in the survey. The effect of the higher sampling fractions among the largest enterprises was that although only 5 per cent of enterprises took part in the survey, these employed some 20 percent of the 55 million employees in the enterprises represented by the survey.

Although the sample sizes and response rates were satisfactory for national estimates to be made for large grouping of enterprises care is needed drawing conclusions from more detailed data which may be based on replies from only a few enterprises.

Concerning the comparability, as opposed to the quantity of the response received, a major factor will have been the extent to which the agreed concepts and definitions were applied in the different Member States. It had been agreed that a standard questionnaire could not be imposed on Member States. This was because the wording of national questionnaires would have to reflect both the language of national training practices and their institutional arrangements.

Member States were free also to design their own survey according to national practices and lessons learned from their national pre-tests and pilot surveys; in particular, on the balance required between postal and interview based approaches and on other procedures needed to ensure a satisfactory rate of response to the more difficult questions.

Inevitably, this freedom in how to administer the survey led to a wide variety of practices being used. It was inevitable, also, that these different practices introduced opportunities for some loss of comparability in the results obtained. It is not possible to make an assessment of the extent to which this occurred but it is further reason why the focus of any analysis should be on the broad patterns which are evident in the results rather than on small differences which may not be significant. Should the survey be repeated, there is a strong case for introducing more standardisation and control over the way in which the national surveys are conducted.

I.3 Structure of the report

In the report which follows, chapter 1 will look at the number and proportion of enterprises offering each of the different types of training and the number of employees who participated in them. As in all chapters, analyses will be made for EU12 as a whole and for each country, sector and size group. Where possible and relevant, the relationships and interaction between them will be examined.

Chapter 2 will focus on training courses (external and internal) by examining the participation in them by gender and occupation, the subjects taught, the types of external training providers used and the costs of training.

Finally chapter 3 will first look at some of the aspects of the way enterprises planned and managed their training (in those enterprises that provided questions). It concludes with the findings on the practices and attitudes towards training among those enterprises which did not offer training to their employees in 1993.

1 TRAINING OFFERED BY ENTERPRISES

1.I Introduction

Chapter 1 looks at which enterprises offered training in 1993 and at the types of training offered and the proportion of employees who participated in each type. The aim is to characterise training in enterprises in terms of training need, economics, and culture.

1.1 Who offered training?

As already mentioned, the CVTS was designed to measure the continuing training practices of nearly 900,000 enterprises, with 10 or more employees, in the then 12 Member States of the EU. It is estimated that nearly 60 per cent of these offered some form of continuing training for their employees in 1993. However, this overall figure conceals marked difference between countries and between the size and sector of enterprises.

1.1.1 -by Country

In four countries, Denmark, Germany, the United Kingdom and Ireland, more than three quarters of the enterprises reported that they offered some continuing training in 1993(see Table 1). In contrast, only a quarter of enterprises in Spain and less than one fifth of those in Greece, Italy and Portugal did so.

Table 1
Enterprises offering training in 1993-by Country

COUNTRY	Number of enterprises ('000s)	Proportion offering training (per cent)
Belgium	26.8	46
Denmark	34.3	87
Germany	178.6	85
Greece	14.9	16
Spain	116.2	27
France	114.3	62
Ireland	7.7	77
Italy	128.8	15
Luxembourg	2.3	60
Netherlands	47.1	56
Portugal	31.9	13
United Kingdom	195.7	82
EU12	**898.7**	**57**

The survey did not provide an explanation of why such large differences exist. Some caution is needed, however, in their interpretation. The survey required that formal initial training programmes should be excluded. In some countries, in which initial training is highly formalised this requirement will have presented few problems for the enterprises responding to the survey. However, it is possible that in other countries the initial training of workers may be less formalised and take place in a way which is indistinguishable from that provided as continuing training. In this case it may have been counted as such.

Also, continuing training may be the way in which some countries seek to fill the skills gap created by a less developed initial training system. While such caveats invite caution in the interpretation of the data, the overall picture of considerable differences between countries remains.

1.1.2 -by Size of Enterprise

One of the major determinants of whether an enterprise offers training in any year is its size (see Table 2). In 1993, nearly all large enterprises offered some form of training but only about a half of the smallest enterprises (10-49 employees) covered by the survey and three quarters of those with 50-99 employees did so. Since over 80 percent of all enterprises were in the smallest size class, the overall proportion of

enterprises which offered training in 1993 is largely determined by the behaviour of this size group.

Table 2
Enterprises offering training in 1993-by size of enterprise

SIZE OF ENTERPRISE (Number of employees)	Number of enterprises ('000s)	Proportion offering training (per cent)
10-49	729.7	52
50-99	88.1	75
100-249	51.4	83
250-499	16.7	90
500-999	7.0	94
1000 and over	5.7	98
EU12	**898.7**	**57**

Two comments are needed to put these figures into perspective. First, the smallest enterprises employed only a little over a quarter of all workers. In contrast, enterprises with 1000 or more employees (less than one percent) employed nearly a third of all workers. When this is taken into account it is found that over 80 percent of all employees worked in enterprises which offered some form of continuing training in 1993.

Secondly, it does not follow that enterprises which did not offer any training in 1993 never do so. One of the questions in the survey, put to enterprises which did no training in 1993, asked them whether they had provided training in the two previous years and whether they planned to do so over the following two years. Another question asked them how they obtained the skills they needed. The answers to these questions will be analysed later in the report but together they suggest that continuing training plays at least some part in the skill development strategy of at least a third of the enterprises that did not offer training in 1993.

1.1.3 -by Sector of the economy

The survey also showed that there were marked differences between sectors of the economy in the proportion of enterprises offering continuing training in 1993. This is shown in Table 3. Sectors in which the highest proportion of enterprises offered training were found among financial and related services (banking and insurance was the highest at 87 percent),the public utilities (whether in public or private ownership) and in sectors providing retailing and repair services to the public. In

sectors engaged in all of these activities some two-thirds or more of the enterprises offered some form of continuing training.

Sectors with less than the community average proportion of enterprises which offered training, include the textiles, clothing and leather sector (with the lowest proportion at 27 percent), some manufacturing sectors, mining and quarrying, and the construction sector.

One possible reason for at least a part of these differences between sectors is that the need for continuing training is different. The sectors with the highest proportion of enterprise offering training include those which have been undergoing rapid technological and organisational change in recent years and where, therefore, the need to train and re-train existing workers has been the greatest. In other sectors, the pace of change may have been less marked allowing them to rely more heavily on the skills obtained through initial training.

Table 3
Enterprises offering training in 1993-by Sector

SECTOR	Number of enterprises ('000s)	Proportion offering training (per cent)
Banking and insurance	15.1	87
Electricity, Gas and Water	3.0	81
Other financial services	4.1	79
Sale and repair of vehicles	42.5	78
Real estate, renting and services for enterprises	118.9	72
Post and telecommunications	1.6	66
Retail trade and repairs (ex vehicles)	75.4	64
Manufacture of machinery	48.1	62
Manufacture of metals and metal products	58.4	59
Paper. Publishing and Printing	28.9	59
Hotels and Restaurants	65.7	58
Manufacture of non-metallic products	42.1	57
Wholesale trade (ex vehicles)	89.2	57
Manufacture of transport equipment	8.7	56
Construction	127.2	51
Food, beverages and tobacco	35.9	49
Transport and storage	38.0	46
Mining and quarrying	6.2	43
Other manufacturing (inc. furniture)	33.3	41
Textiles, clothing and leather	56.4	26
EU12	**898.7**	**57**

1.1.4 Interaction between country, size and sector

The analysis so far has shown that the proportion of enterprises offering training varies between countries, between sizes of enterprises and between sectors. These differences, however, may not be independent. Sectors differ both in the distribution of the sizes of their enterprises and in the countries in which they are concentrated. For example, the average enterprise in the post and telecommunications sector has over 1000 employees. In contrast enterprise engaged in the sale and repair of vehicles, hotels and restaurants and construction each have, on average, under 40 employees.

Likewise, two thirds of all enterprises in the textile, clothing and leather sector which had the lowest proportion of enterprises offering training were located in Italy, Greece, Spain and Portugal -countries in the proportion of enterprises offering training were also low. Nearly two-thirds of enterprises in the banking and insurance sector, however, were found in Germany, the United Kingdom and Denmark - the three countries in which the highest proportion of enterprises provided training.

Enterprises also vary in size between countries. According to the survey, the average enterprise (with 10 or more employees)in France had over 80 workers compared to under 40 in Spain.

It is possible to test for interactions between these effects on the results presented above. This can be done by making comparisons using a standard distribution of enterprises. For example, if it is assumed that each sector had the same size distribution of enterprises, then, by applying the size specific training rates within each sector to this distribution, sector training rates can be calculated which are free of the influence of their size structure. This has been done using the size distribution of all enterprises in EU12 as the standard.

What this calculation shows is that had the electricity, gas and water sector had the size distribution of enterprises as EU12 as a whole, then the percentage of enterprises offering training would have been some 12 percentage points lower than that actually observed. The effect on the construction sector would have been to increase its training rate by 2 percentage points. Generally, however the size distribution of sectors appears to have relatively little influence on their overall training effort and that the sector in which it operates remains a significant determinant of whether an enterprise offers training to its employees.

A similar exercise was carried out to see if the sector and size distribution of enterprises in different countries could have influenced the proportion of their enterprises offering training. Some interesting effects were found. These were mainly for the smaller countries whose industrial structures differ most from that for the Community as a whole. For example, the proportion of enterprises offering training in

Luxembourg and Denmark would have been respectively 6 and 5 percentage points lower had they had the same industrial structure as EU12 as a whole. In contrast, the proportion of enterprises offering training in Portugal would have been 3 percentage points higher(see Table 4).

Table 4
Actual and standardised proportion of enterprises offering training in 1993-by Country

COUNTRY	Actual	Standardised using EU12 distributions	
		By sector	By size
Belgium	45.9	44.7	46.2
Denmark	86.8	82.2	87.3
Germany	85.3	84.8	84.5
Greece	16.4	16.6	18.6
Spain	26.5	27.2	29.0
France	62.4	62.3	60.7
Ireland	76.8	78.0	76.1
Italy	15.0	17.4	16.9
Luxembourg	60.3	54.4	59.9
Netherlands	56.1	55.7	55.9
Portugal	13.1	16.2	13.5
United Kingdom	81.6	78.0	81.3

The impact of differences in the size distributions of countries on the proportion of their enterprises offering training is generally small, however - never accounting for more than 2 percentage points in either direction.

Finally, in this analysis of the effects of size and sectors distribution, it is possible to measure the joint effect of sector and size in combination. For this analysis a comparison has been made between countries of more comparable size. It can also only be done for cross classifications of 6 size groups and 7 broad industrial sectors because of the level of detail involved.

In the table above it was seen that the proportion of enterprises providing training in Italy was 15 per cent and in Spain 26.5 per cent. These were considerably less than the rate of over 62 per cent observed in France. To test for the joint effect of sector and size structures on these figures the sector/size specific rates for Italy and Spain have been applied to the sector/size distribution of enterprises in France. This shows that if Italy and Spain had the same size/sector distribution of enterprises as France then the proportion of their enterprises offering training would have been 22 and 32 per cent respectively- significantly above their actual rate but still considerably lower than that that for France.

These analyses have shown that although there is some interaction between the size, sector and country of enterprises in determining whether they offer continuing training, their effects are largely independent of each other.

1.2 Types of continuing training

Although 57 per cent of enterprises offered some form of training for their employees, they will not have offered all the five types identified in the survey (counting external and internal course together as one type). Table 5 show the proportion of all enterprises in EU12 offering each of the different types. The most common types were courses, training in the work situation and attendance at conferences, workshops etc. which were each offered by more than a third of all enterprises. Using the work place as a learning situation through job rotation, quality circles etc. and self learning in its different forms were less common - offered by one in 7 or 8 of all enterprises. As with the overall total, there is an increase in the proportion of enterprises offering each type of training as the enterprise size increases.

Table 5
Enterprises offering different types of training by size of enterprise(per cent)

SIZE	Courses	Training in work situation	Conferences, Workshops, Seminars	Job rotation etc.	Self Learning
10-49	36	34	29	10	10
50-99	63	50	49	21	21
100-249	76	58	63	30	28
259-499	85	69	71	38	38
500-999	93	74	76	47	43
1000+	92	85	80	50	52
Total	**43**	**38**	**34**	**14**	**13**

The pattern of use of the different types of training among sectors of the economy is largely a reflection of their overall rates. Sectors with an above average proportion of enterprise offer training are likely to have above average rates in the different types of training.

A more revealing picture emerges when looking at the types of courses provided by enterprises-see Table 6. When they offer courses over 90 percent of enterprises in all size groups offer courses planned and managed by external training providers. In contrast, less than half of the enterprises with 10-49 employees offered courses designed and managed by the enterprise itself but with this proportion also rising to over 90 percent among the largest enterprises. The percentages in Table 6 add to more than 100 because many enterprises offer both types of courses and this is particularly so as the size of the enterprise increases.

Table 6
Enterprises which offer courses by type offered (per cent)

SIZE	External courses	Internal courses
10-49	91	47
50-99	93	59
100-249	95	69
250-499	96	82
500-999	96	88
1000+	94	94
Total	**92**	**54**

What is interesting, therefore, is that small enterprises are very much more likely to have to resort to the use of external training providers to train their workers. This, no doubt, reflects both the more limited resources available to small enterprises to run internal courses and the dis-economies of doing so for what will be often only a few participants. But it is also the case that for larger enterprises as well, except the very largest, when only one type of training is offered it is also more likely to be provided by an external trainer. Who these external providers are will be considered in the next chapter.

1.3 Participation rates for different types of training

The proportion of enterprises offering different types of training does not say anything about the proportion of employees who participated in them. The figures in Table 7 show the participation rates of employees, by the size of their enterprise, for each type of training. For both training courses and training in the work situation, if enterprises offer these types of training then the average participation rates of employees does not vary greatly between the size groups -although employees in small enterprises are rather less likely than those in larger enterprises to participate in courses.

Table 7
Participation rates in each type of training (percentage of employees in those enterprises offering that type of training)

	Types of training offered				
	Courses	Training in work situation	Conferences, Workshops, Seminars	Job rotation etc.	Self Learning
SIZE	participation rates (%)				
10-49	36	45	23	28	24
50-99	33	42	14	15	10
100-249	37	40	15	14	10
259-499	44	40	15	11	7
500-999	46	39	15	12	8
1000+	49	44	12	13	11
Total	**43**	**43**	**14**	**14**	**11**

The picture is very different, however, for the newer types of training. In the smallest enterprises, which offer these types of training, participation rates in conferences, workshops etc., in job rotation and quality circles and in self learning are double ,or nearly so, those observed among enterprises in other size groups which offer these types of training. These results suggest two things. First, if a training culture exists within the enterprise then the rate at which employees participate is similar. Secondly, very small enterprises are more likely to take advantage of the newer forms of training which may compensate for some of the difficulties they face in offering courses to their worker.

The foregoing has focused on the types of training offered in the different size groups of enterprises for EU12 as a whole. Each of the different types of training will now be examined separately for differences between countries. Three indicators are used. The proportion of enterprises offering each type of training; the participation rate of employees in those enterprises offering the training; and the participation rate of all employees, including those working in enterprises not offering training.

1.3.1 Training courses

As already mentioned, training courses were the most common form of training offered. Differences between countries in the proportion of enterprises offering courses generally followed those described above for all types of training (see Table 8) with rates ranging from nearly 80 percent in Denmark to less than 10 per cent in Italy. It is interesting to note, however that there is much less variation between countries -from 26 per cent in Greece to 52 per cent in Ireland- in the rates of participation in courses among the employees in those enterprises which offered training courses.

One possible conclusion to be drawn from this evidence, therefore, is that the chance an employee in different countries being sent on a training course is determined more by the extent to which employers in their country offers courses and less by variations in the intensity with which they do so. This is reflected in the differences between countries in the participation rates for all employees.

The relatively low participation rates for Germany requires some explanation. In the German survey, four sectors were excluded. In the rest of the EU, these four sectors employed over a quarter of all employees and were also ones which were above average both in the proportion of their enterprises offering training and in their participation rates. Had the Germany survey included these sectors, their overall participation rate in courses would most likely have been closer to the EU average of 28 per cent rather than the 24 percent actually observed.

Table 8
Enterprises offering training courses and participation rates-by Country

COUNTRY	Enterprises offering training courses (per cent)	Participation rates (per cent)	
		Employees in enterprises offering training	Employees in all enterprises
Belgium	42	39	25
Denmark	79	41	32
Germany	60	28	24
Greece	13	26	13
Spain	21	39	20
France	48	45	37
Ireland	64	52	43
Italy	9	31	15
Luxembourg	50	33	25
Netherlands	46	33	26
Portugal	13	35	13
United Kingdom	58	47	39
EU12	**43**	**38**	**28**

1.3.2 Training in the work situation

Variations in the extent to which enterprises offer CVT in the work situation and in the participation rates of their employees are rather more marked than those for courses (see Table 9). In a number of countries, Denmark, Germany, Ireland and the United Kingdom, over half of their enterprises offered training through CVT in the work situation. These figures contrast with 10 per cent or less in Greece, Spain, Italy and Portugal. However, within enterprises offering this type of training, it is only in Ireland and the United Kingdom that high participation rates were reported - over 50 percent.

It is also interesting to note that in Spanish enterprises which offer CVT in the work situation, the participation rate is higher than that of similar enterprise in both Denmark and Germany - in contrast to the fact that a very much higher proportion of enterprises in Denmark and Germany offer this type of training.

Table 9
Enterprises offering training in the work situation participation rates-by Country

COUNTRY	Enterprises offering training in the work situation (per cent)	Participation rate (per cent)	
		Employees in enterprises offering training	Employees in all enterprises
Belgium	31	23	10
Denmark	58	23	15
Germany	57	19	16
Greece	5	13	3
Spain	10	28	7
France	36	30	17
Ireland	56	56	37
Italy	5	12	3
Luxembourg	26	22	11
Netherlands	21	28	12
Portugal	8	19	5
United Kingdom	68	55	47
EU12	**38**	**33**	**20**

The effect of these differences on the overall participation rates of employees is to show the important role played by training in the work situation (or on-the-job training) in the United Kingdom and Ireland. In these two countries more than twice the proportion of all employees take part in this type of training than in any other country. The United Kingdom alone accounting for more than half of all participants in EU12 as a whole.

1.3.3 Conferences and workshops etc.

Enterprises using conferences, seminars, workshops etc. as a training medium are most likely to be found in Germany where over three-quarters of all enterprises reported that they use these types of training(see Table 10). Rates of over 40 percent were also seen in Denmark Luxembourg and the Netherlands. Countries in which enterprises were least likely to offer this type of training were again the southern members of the EU. But, as with training in the work situation, the was no consistent pattern between the proportion of enterprises offering conferences etc. and the participation rate of their employees. For example, 24 percent of enterprises in France said that they used conferences etc. as a learning experience for their employees but among these only 4 percent of employees attended such events. In

contrast, within the 3 percent of enterprises in Greece which offered these type of training, 18 percent of employees went on them.

Table 10
Enterprises offering training through conferences and workshops etc. and participation rates-by Country

COUNTRY	Enterprises offering training through conferences (per cent)	Participation rate (per cent)	
		Employees in enterprises offering training	Employees in all enterprises
Belgium	28	n.a.	n.a.
Denmark	47	10	5
Germany	76	14	13
Greece	3	18	3
Spain	10	15	4
France	24	4	2
Ireland	39	20	11
Italy	8	4	1
Luxembourg	42	17	11
Netherlands	42	8	5
Portugal	7	7	2
United Kingdom	37	24	16
EU12	**34**	**14**	**8**

1.3.4 Job rotation, quality circles etc.

Using the workplace as a learning environment has always been a way in which some employers will ensure that their employees develop a broad range of skills and knowledge relevant to the needs of the enterprises. The planned rotation of workers between jobs is a example. The use of quality circles as a way in which employees in a team share their knowledge and skills to improve their joint performance is a newer development. Because these types of training were combined in one question, the survey cannot be used to distinguish between the use of these two different types of training.

Also, in the CVTS job rotation was only to be counted as formal training if such movements were planned in advance as part of a training programme. Simply moving workers from one job to another as part of their normal career development was not to be counted as training for the purpose of the survey. It cannot be certain that this distinction was interpreted consistently by enterprises in all Member States.

The answers to this question(see Table 11) in the survey, therefore, must be treated with some caution.

Table 11
Enterprises offering training through job rotation and quality circles and participation rates-by Country

COUNTRY	Enterprises offering training through job rotation (per cent)	Participation rate (per cent)	
		Employees in enterprises offering training	Employees in all enterprises
Belgium	18	n.a.	n.a.
Denmark	28	6	2
Germany	18	5	3
Greece	2	10	1
Spain	4	15	1
France	20	3	2
Ireland	15	16	5
Italy	2	6	1
Luxembourg	12	13	4
Netherlands	9	10	3
Portugal	3	12	1
United Kingdom	19	25	11
EU12	**14**	**11**	**4**

For example, although a similar proportion (one fifth) of enterprises in France and the United kingdom offered these types of training, in these enterprises only 3 per cent of employees participated in them in France compared with 25 per cent in the United Kingdom. Such a difference would only seem possible if in the United Kingdom a high proportion of workers participated in quality circles since it is unlikely that anything approaching a quarter of workers could have participated in planned job rotation, exchanges etc. Denmark and Germany also had a similar pattern to that seen in France with a relatively high proportion of enterprises offering these learning opportunities but with low participation rates. In contrast, although only a small percentage of enterprises in Greece and Spain offered training through job rotation etc. the participation rates in these enterprises, at 10 and 15 per cent respectively, were quite high.

1.3.5 Self learning

Self learning by employees appears to be supported mainly by enterprises in Northern Europe. In Denmark, Germany, Ireland, the Netherlands and the United

Kingdom nearly a fifth or more of all enterprises offered this type of training. It was also supported - by between 7 and 12 per cent of enterprises in Belgium, France and Luxembourg. In the Mediterranean countries however, very few enterprises used this type of training in 1993.

Table 12
Enterprises offering training through self learning and participation rates-by country

COUNTRY	Enterprises offering training through self learning (per cent)	Participation rate (per cent)	
		Employees in enterprises offering training	Employees in all enterprises
Belgium	12	n.a.	n.a.
Denmark	22	8	2
Germany	21	4	2
Greece	1	2	-
Spain	3	9	1
France	11	2	1
Ireland	21	9	4
Italy	1	8	1
Luxembourg	7	7	1
Netherlands	28	11	6
Portugal	1	3	-
United Kingdom	19	18	8
EU12	**13**	**9**	**3**

In those enterprise offering self-learning opportunities, the participation rate of employees is much less variable between countries. This is shown in Table 12. Only in the United Kingdom, which arguably has been in the lead in developing open and distance learning material was the participation rate in these enterprises, at 18 per cent, significantly above that of other Member States.

As already mentioned this type of training is particularly attractive to small enterprises where the opportunity to learn at a pace and time to suit both the employee and the enterprise means that lost working time can be reduced compared to other types of training with correspondingly lower costs to the enterprise. Sectors in which self learning appears to be most popular are financial services, retail trade, hotels and the sale and repair of vehicles. The latter, no doubt benefiting particularly from the development of computer based learning material for this sector. Although, overall, only some 3 percent of all workers participated in self learning activities supported by their employer in 1993, this represented over 1.7 million employees in those sectors and sizes of enterprises covered by the CVTS.

2 TRAINING COURSES

2.1 Introduction

Chapter 1 has looked at which enterprises offered training to their employees in 1993; the types of training offered and the proportion of employees who participated in each type. The focus of Chapter 2 is on the training provided through courses, whether internal or external. Although these types of training are perhaps the most structured of all the types examined, the focus on them in this chapter is not meant to imply that courses are in any way a better form of training than other methods used. Rather, it is because their more formal nature means that enterprises are more likely to have records about them. This meant that more questions to be asked for a fuller analyses to be made.

The additional information collected on training courses included;

- the sex and occupation of the participants and the duration of their training;
- the subject matter of the courses;
- for external courses the types of training providers used to deliver the training;
- and the costs of training.

As before analyses are possible for different size groups and sectors of the enterprises and for each country separately. The only exception is that the question asking for the occupation of participants was not asked in the Netherlands.

2.1 Participation by gender and occupation

It was shown earlier that in the then 12 Member States of the European Union, 28 percent of all employees in the sectors and sizes of enterprises covered by the CVTS participated in training courses in 1993. The difference between men and women was small - 29 percent of male employees and 27 percent of female employees took part in training courses. The differences between occupation groups were much larger, however, with participation rates of over 40 percent among managers, professional and technical staff contrasting with less than 20 percent among craft and trade workers and operatives (see Table 13). The figures by occupation exclude

the Netherlands because the question was not asked in that country The CVTS therefore supports the evidence from other surveys which show that those who have the highest initial qualification and who are therefore more likely to occupy the more senior posts also have the most continuing training throughout their working lives.

Table 13
Participation rates by gender and occupation, 1993

Type of employee	Participation rates in courses (percent)
Gender	
Males	29
Females	27
Occupation[1]	
Managers[2]	43
Technicians[3]	45
Office and shop workers	34
Manual workers	17
TOTAL	**28**

(1) Excluding Netherlands
(2) Including professional staff
(3) Including associate professionals

As was shown for all employees, the participation rates for the different groups of workers increased with the size of the enterprise but, relatively, women were rather more likely than men to participate in courses if they were in small enterprises and less likely to do so in the larger enterprises. When looking at the sectors however it would appear that the differences in the participation rates of men and women are often greater than for EU12 as a whole.

In four sectors, the manufacture of transport equipment, manufacture of non-metallic products, post and telecommunications and banking and insurance the participation rates of men in courses was 8 percentage points or more above those for women (see Table 14). There were exceptions such as in the construction industry and in the gas electricity and water sector in which a higher proportion of women than men participated in courses. This may be due to the differences in the occupations of the two sexes within these sectors. For example, in the construction industry in which only 15 percent of employees are women these are more likely to have office jobs in which training rates are higher-as shown in Table 13.

Table 14
Distribution of employment and participation rates in courses-by gender, 1993

SECTOR	Distribution of employment (percent)		Participation rates in courses (percent)	
	Males	Females	Males	Females
Mining and quarrying	87	13	33.0	31.7
Manufacture of:				
Food, beverages, tobacco	63	37	24.5	21.9
Textiles, clothing, leather	37	63	10.7	6.0
Paper, publishing, printing	69	31	21.0	20.1
Non-metallic products	74	26	37.7	28.8
Metals, metallic products	82	18	19.2	20.1
Machinery, electrical equipment	75	25	30.7	28.4
Transport equipment	85	15	34.3	24.1
Other types of manufacture	73	27	10.3	9.0
Electricity, gas and water	79	21	47.5	52.2
Construction	89	11	14.7	18.2
Wholesale, retail, repair:				
Sale and repair of vehicles	80	20	29.9	24.9
Wholesale trade	67	33	22.1	18.1
Retail trade and repairs	36	64	29.5	25.8
Hotels and restaurants	45	55	23.5	24.0
Transport and communication:				
Transport and storage	80	20	29.5	31.9
Post and telecommunications	67	33	57.2	47.5
Financial intermediation:				
Banking and insurance	52	48	59.6	51.9
Auxiliary activities	54	46	37.9	39.0
Services for enterprises, renting and real estate	56	44	34.0	31.5
TOTAL	**66**	**34**	**29.0**	**27.2**

Table 14 also shows the distribution of employment between males and females within each of the sectors and how these might influence the overall training rates of the two sexes. For example, in the financial services sectors, in which training participation rates are high, nearly a half of all employees are
women. In contrast, in construction and many of the manufacturing sectors, in which participation rates are lower, men account for three-quarters or more of total employment. There are exception to this patter, particularly in enterprises concerned with the manufacture of textiles, clothing and leather which low participation rates and a high concentration of female employment

It is possible to test for the impact on the overall participation rates of the two sexes of these differences in the gender composition of employment between the sectors. This has been done by assuming that the distribution of employment between the sectors is the same for both males and females and by then applying to this distribution the sector specific participation rates for the two sexes. The effect is not

large, however. If the two sexes did have the same sector employment pattern then the gap between their observed participation rates is only widened from two to three percentage points; indicating that the sectors in which women's employment is concentrated gives them only a slight advantage in terms of their training opportunities.

A rather more significant effect was found when looking at the impact of the different occupational structures of men and women on their likelihood of participating in courses. This could not be done directly using the data from the survey because cross tabulations of gender and occupation were not possible. However, data from the Labour Force Survey show that, in the sectors of the economy covered by the CVTS, two thirds of office and shop workers are women while three-quarters of manual workers are men. Because office and shop workers were found to be twice as likely as manual workers to participate in training courses, women are generally more favourably placed than men to receive training. This is so despite the fact that among managers, professional and technical staff, which have the highest training rates, 55 percent are men and 45 percent are women.

The effect of these gender differences in occupational patterns is that the overall rate for women would have been nearly 5 percentage points higher than that of men if the two sexes had had the same occupation specific participation rates.

Because occupations are strongly associated with sectors the two effects noted above cannot be added together but it does seem possible to conclude that, in EU12 as a whole, women are disadvantaged in their training opportunities to a far greater extent than is shown by the overall situation. In the sectors and occupations covered by the survey, the true difference in the participation rates of the two sexes is probably nearer to 7 percentage points than the 2 percentage point difference actually observed.

2.2 Duration of training courses

On average each employee who participated in training courses in the European Union in 1993 did so for about 45 hours - or a little over a working week. The differences between the enterprises grouped by size and between the gender and occupations of employees were generally quite small. However it does appear that participants in both the largest and smallest enterprises did receive longer training than participants in the other size groups as also did managers and technicians when compared with employees in other occupations.(see Table 15).

Table 15
Time spent on training courses per participant by size of enterprise, gender and occupation, 1993

	Hours spent on training courses per participant
Enterprises size	
10-49	47
50-99	41
100-249	43
250-499	39
500-999	41
1000 and over	48
Gender	
Males	45
Females	46
Occupation (1)	
Managers	45
Technicians	44
Office and shop workers	40
Manual workers	39
Total	**45**

(1) Excluding France and the Netherlands

Much greater differences in the hours spent on training courses were observed between countries(see Table 16) and between sectors. In Portugal and Greece, countries which had the lowest participation rates, the average time spent on courses was 84 hours and 139 hours respectively - two and three time the average for all participants in EU12. The high figure in Greece is attributed to the fact that many of the training courses are intensive programmes supported by the Commission's Social Fund. The same is also probably the case in Portugal. In contrast, the shortest duration of training courses was found in Ireland which had among the highest participation rates but in which the average duration was only 25 hours per participant.

It was noted earlier that the highest average duration of training in the Community as a whole was found in the smallest and largest enterprise size groups. This is not generally the case within individual countries except for the United Kingdom and Italy. In France, participants in courses in enterprises with 1000 or more employees did so for 66 hours on average - 40 percent longer than participants in other size groups. On the other hand, in the Netherlands participants in enterprises with only 10-49 employees spent nearly 100 hours on training courses in 1993; almost double the duration of those in the largest enterprises.

Table 16
Time spent on training courses per participant by country, 1993

Country	Hours spent on training courses per participant
Belgium	41
Denmark	39
Germany	34
Greece	139
Spain	50
France	54
Ireland	25
Italy	41
Luxembourg	40
Netherlands	66
Portugal	84
United Kingdom	40
Total	**45**

This greater intensity of training in the smallest and sometimes also in the medium sized enterprises was usually found in the smaller Member States or those, with the exception of Italy, which had low participation rates. One possible reason for this is that small enterprises are playing a more important role in the development of the economies of these countries.

It is possible from the survey to combine the joint effect of participation rates and the average hours spent on training courses by calculating the ratio of the total hours of training to the total hours worked. This is shown in Table 17. Two ratios have been calculated each showing the hours of training per 1000 hours worked in the enterprise covered. The first calculates the ratio using the hours worked only in those enterprises offering training courses. The second uses the working hours in all enterprises(including those not offering training) as the denominator.

Table 17
Hours of training per 1000 hours worked-by country

COUNTRY	Hours of training per 1000 hours worked	
	Enterprises offering courses	All enterprises
Belgium	9.9	6.4
Denmark	9.6	8.1
Germany	5.6	n.a.
Greece	19.4	9.9
Spain	11.4	5.9
France	13.5	11.1
Ireland	7.3	5.9
Italy	7.6	3.6
Luxembourg	7.5	5.5
Netherlands	n.a.	12.1
Portugal	16.3	n.a.
United Kingdom	10.5	8.7
Total	**10.0**[1]	**n.a.**

(1) Including data for the Netherlands based on hours worked in all enterprises

The results are interesting. As expected, within those enterprises offering training courses, the hours of training per 1000 hours of working time was highest in those countries which had the highest hours per participant, i.e. Greece and Portugal, even though the proportion of employees participating in courses in their enterprises was the lowest of all Member States. This ratio was also high in France where high participation rates combined with relatively high average durations of training. The low figure for Germany is explained by the small average amount of time per participant spent on courses in that country and, as already mentioned, because the survey in Germany excluded some of the sectors in which participation rates were high.

Expressing the hours of training as a ratio of all hours worked in the sectors covered by the survey, gives a measure of the relative total training effort of each country - at least as far as courses are concerned. Data are not available for all Member States but among those countries for which data are available, France with over 11 hours of training for every 1000 hours worked by all employees provided the most training in 1993. The lowest ratio was found in Italy. This was due to the effect of relatively small percentage of enterprises offering training in Italy being combined with low participation rates in those enterprises that did offer training. Perhaps the most interesting result is that for Greece. Despite the small percentage of enterprises

offering training in Greece and the low participation rates, the very high duration of the training courses in that country resulted in Greece having the second highest ratio of training hours to total hours worked among those countries for which data are available.

The largest variation in the time spent on training courses per participant was that found between sectors. Table 18 shows those sectors in which the average duration of training was either 50 hours or more per participant or less than 40 hours. The other sectors with average durations of between 40 and 50 hours were close to the EU12 average of 45 hours. The high average duration in the textile, leather and clothing sector contrasts with the low participation rate found in that sector. The reverse situation is found in the mining and quarrying. Participation rates in this sector were above the community average but the average time spent on training courses was the lowest of all sectors.

Table 18
Time spent on training courses per participant-by sector, 1993

Sector	Hours per participant
Textiles, leather and clothing	63
Electricity, gas and water	57
Manufacture of transport equipment	54
Post and telecommunications	52
Banking and insurance	50
Manufacture of metals, metal products	39
Auxiliary services	38
Sale and repair of vehicles	36
Paper and printing	35
Wholesale trade (except vehicles)	34
Mining and quarrying	28

2.3 Subjects of training

In the CVTS enterprises were asked to allocate the training time spent on courses to eight subjects together with an 'other' category for courses which either could not be allocated to one of the eight subjects or which may have combined more than one subject.

Overall, throughout the EU, over a quarter of all the training time spent on courses was devoted to training in the techniques required for the production and development of the goods or services produced by the enterprise or the maintenance of the equipment used. Over a fifth was allocated to the 'other' category although as will be seen later this varied quite markedly between countries as was also the case for other subjects. Training in data processing techniques and management skills

which accounted, respectively, for 13 and 10 per cent of training time were the next most important subjects covered. The proportion of training time spent on language training (4 percent) was the least among those subjects specifically identified in the survey.

As Table 19 shows, the distribution of subjects did not vary to any great extent between the different sizes of enterprises. Comparing the smallest and largest enterprises, the smallest devoted a rather lower percentage of their training time to management, human resource development and languages and a higher percentage to training in accounts and finance.

Table 19
Distribution of time spent on training courses by subject, 1993

SUBJECT	SIZE OF ENTERPRISE (Number of employees)						
	10-49	50-99	100-249	250-499	500-999	1000+	TOTAL
Management	7.7	11.4	10.5	13.6	10.3	10.4	**10.4**
Human resources	3.8	4.4	4.5	5.4	5.3	5.8	**5.2**
Safety	6.4	8.4	7.3	8.0	6.8	7.6	**7.5**
Data processing	13.1	9.4	12.1	13.9	12.8	13.0	**12.7**
Accounts/finance	8.0	7.0	5.2	5.8	6.5	3.9	**5.2**
Marketing	7.5	8.0	8.1	6.2	6.9	7.3	**7.3**
Languages	3.0	4.6	4.4	4.5	5.5	4.2	**4.2**
Production	25.1	26.2	22.9	24.9	24.8	27.4	**26.1**
Other	25.5	20.7	25.1	17.6	21.2	20.5	**21.5**
TOTAL	**100**	**100**	**100**	**100**	**100**	**100**	**100**

These patterns do not take into account, of course, the fact that the larger the enterprise the more likely it is to provide training. It will not follow that an enterprise size group which spends a higher proportion of its training time on a given subject will actually give more hours of training per employee on that subject. Another way of looking at the data, therefore, is to look at the hours of training courses devoted to each subject per 1000 employees in all enterprises. This gives a measure of the intensity of the training in each subject. This data analysed by size of enterprise is shown in Table 20. The Table shows the impact of the fact that the largest enterprises offered nearly 21000 hours of training per 1000 employees - more than three times the rate in smaller enterprises. Even though large enterprises devoted only 3,9 percent of their training time to accounting and financial matters - less than half the proportion among the smallest enterprises - they never-the-less still offered considerably more training hours per employee to this subject.

Table 20
Hours of training courses per 1000 employees (all enterprises) by subject, 1993

SUBJECT	SIZE OF ENTERPRISE (Number of employees)						
	10-49	50-99	100-249	250-499	500-999	1000+	TOTAL
Management	485	852	1060	1609	1514	2163	1331
Human resources	237	326	451	644	770	1207	669
Safety	400	632	745	951	995	1593	954
Data processing	823	704	1229	1650	1879	2702	1633
Accounts/finance	502	520	522	689	958	814	662
Marketing	468	600	820	731	1014	1511	933
Languages	185	342	448	534	805	874	542
Production	1577	1965	2319	2953	3630	5707	3340
Other	1598	1551	2550	2086	3104	4281	2750
TOTAL	**6276**	**7492**	**10144**	**11848**	**14669**	**20852**	**12814**

Much bigger differences in the distribution of the subjects of training were found between sectors. The following analysis looks first at the proportions of training time spent on each subject, (their relative importance), within sectors.

Perhaps predictably, training in health and safety was particularly strong in those sectors where work is of a more hazardous nature or where issues of public health are important. Although in the EU as a whole only some 7.5 percent of training time was devoted to this subject the proportion was around 20 percent in the mining and quarrying and the hotels and restaurant sectors. And nearly twice the community average proportion was spent on health and safety in construction and the manufacture of food sectors.

The share of language training was highest, at twice the community average or more, in some industries within the manufacturing sector and also in wholesale trade; perhaps reflecting the increasing international competition and movements of goods within the community. Language was least important in the retail sectors and, more surprisingly, in hotels and restaurants.

The proportion of time devoted to Management training was less variable between sectors although it was given greater emphasis in enterprises engaged in retail trade and construction. Similarly, training in Human Resource Development only feature prominently in the post and telecommunications sector. Table 21 provides an overall summary of the sectors in which the different types of training were significantly above or below the community average in the importance attached to them.

Table 21
Relative importance of different subjects of training within sectors

SUBJECT	High proportion of training time	Low proportion of training time
Management	-Retail trade -Construction	-Post and telecommunications
Human resource development	-Post and telecommunications	-Sale and repair of vehicles
Health and safety	-Mining and quarrying -Hotels and restaurants -Construction -Manufacture of food	-Banking and insurance -Other financial services
Data processing	-Other financial services -Gas, electricity and water -Real estate, renting etc. -Post and telecommunications	-Sale and repair of vehicles; -Hotels and restaurants
Finance	-Banking and insurance -Other financial services	-Hotels and restaurants -Transport
Marketing	-Wholesale trade -Retail trade -Banking and insurance	-Construction -Mining and quarrying
Languages	-Manufacturing generally -Wholesale trade	-Retail trade construction -Hotels and restaurants -Sale and repair of vehicles
Production and maintenance of goods and services	-Textiles -Manufacture of transport -Transport	-Wholesale trade -Hotels and restaurants -Financial and business services generally
Other (not specified or mixed courses)	-Sale and repair of vehicles -Hotels and restaurants	-Manufacture of: Metals Transport Textiles -Mining, quarrying

As was shown in the analysis by size of enterprise it will not always follow that a sector in which the proportion of time spent on a subject is high will necessarily spend more time on that subject per employee than another sector in the proportion is much lower because the overall levels of training in the sectors may be different. It should be remembered, also, that continuing training in some sectors may also be used to fill gaps in the skills obtained through the education and initial training systems.

In both the post and telecommunication and gas, electricity and waters sectors, nearly 28 hours of training time was offered per employee, well over twice the Community average. Because of this, both sectors spent more time of health and safety training than any other sector even though in neither sector did this represent a particularly high share of their total training time. Conversely, although the proportion of the training time in the construction industry devoted to health and

safety was high, the actual time per employee was less than the average for the community as a whole.

The relative importance attached to training in different subjects between countries. The results shown in Table 22 in which the relevant percentages are also given. These are important for interpreting some of the analysis and this can be illustrated by looking at the relative significance of management training. This was high in both the United Kingdom and Germany. But because these are two of the largest countries within the EU they have a big influence on the community average. In fact, the proportion of training time devoted to this subject was below the community average in all other countries except Belgium.

There also appears to have some confusion in the allocation of training time between, techniques in support of the production of goods and services and the maintenance of equipment and the time allocated to the 'other' category which will include courses in which more than one topic is covered. In the United kingdom and Denmark and Germany only 2, 8 and 10 percent, respectively, of their training time was allocated to former category. This was in contrast to all the other countries in which over 30 percent of the time on training courses was allocated to production and maintenance skills and as high as 55 per cent in the Netherlands. Conversely, 45 per cent of all training time in the United Kingdom and 33 per cent in Denmark was allocated to 'other' subjects - a far higher proportion than in other countries.

Table 22
Relative importance of different subjects of training within countries

SUBJECT	High proportion of training time	Low proportion of training time
Management (10.4%)	Germany (15.0%); United Kingdom (12.5%)	Greece (5.0%); Luxembourg (4.6%)
Human resource development	Denmark (16.9)	Spain (2.9); Greece (3.4); Luxembourg (2.3); Portugal (1.9)
Health and safety	Ireland (11.1); United Kingdom (14.0)	Spain (2.8); Germany (3.9); Italy (3.3); Portugal (2.7)
Data processing	Belgium (17.3)	Ireland (5.3); Netherlands (5.4)
Finance	Denmark (11.8); Germany (10.8)	Luxembourg (2.6); Belgium (3.2); Portugal (3.4); United Kingdom (3.7)
Marketing	Ireland (12.3); Spain (10.8); Germany (16.3)	Denmark (3.4); Netherlands (4.1); United Kingdom (3.9)
Languages	Belgium (9.3); Spain (11.5); Luxembourg (10.0)	Ireland (1.4); Netherlands (1.5); Portugal (2.3); United Kingdom (0.9)
Production of goods and services	Ireland (44.2); France (43.6); Greece (48.5); Italy (44.7); Netherlands (55.8); Portugal (45.8)	Denmark (8.3); Germany (10.7); United Kingdom (1.7)
Other (not specified or mixed courses)	Denmark (32.6); United Kingdom (45.1)	Belgium (6.7); Ireland (7.3); France (7.3); Italy (4.0); Netherlands (7.3)

Other significant features highlighted in Table 22 include the high proportion of training human resource development in Denmark, informatics in Belgium, finance in Denmark and Germany, and marketing in Ireland and Germany. The share of language training was high in Spain and Luxembourg but, probably for different reasons, low in the United kingdom, Ireland and the Netherlands.

The question on the subjects of the training offered was asked in respect of all the hours of training through courses, whether these were provided internally or

externally. A distinction cannot be made directly, therefore, between the subjects offered on internal and external courses respectively when the enterprise offered both types. However, for enterprises in which all the training was through internal courses then the subjects of the training will apply only to this type; and similarly for enterprises only offering external training. Using this limited evidence it is possible to examine whether the subjects covered did vary between the two types of courses.

Such data are only available for the ten countries that provided micro data to EUROSTAT(i.e. excluding Germany and the Netherlands) For many of these countries the sample sizes available for this analysis are not large. Also, over half of all the hours of training in the ten countries provided both through external courses only and internal courses only were in the UK where different pattern were seen. Some general messages can be made, however.

It would appear that external trainers are more likely to be used for training in management techniques, finance and languages and, excluding the UK, in human resource development, and data processing. Conversely, training in production and maintenance skills and in marketing were more likely to be delivered through internal courses. A conclusion, therefore, is that subjects in which standards and requirement are externally set or where the skills obtained are more transferable between enterprises then the more likely they are to be provided by external trainers.

Training courses provided by the enterprise itself are more likely to be in subjects specific to the production and sale of the goods and services produced by the enterprise.

2.4 Providers of training courses

In EU12 as a whole a little over half (53.5%) of all the time spent on training courses was that offered through those designed and managed by the enterprises themselves (internal courses). The rest, (46.5%), was purchased from external training providers who organised and managed the courses. The focus of this part of the report is on who these external providers are and in particular to look at differences between countries. However the individual countries were not uniform in their use of external training providers.

Table 23
Proportion of time spent on external and internal training courses

Country	Proportion of Training Time	
	External Courses(%)	Internal Courses(%)
Belgium	36.3	63.7
Denmark	71.5	28.5
Germany	45.6	54.4
Greece	27.0	73.0
Spain	34.1	65.9
France	62.3	37.7
Ireland	36.7	63.3
Italy	36.4	63.6
Luxembourg	41.8	58.2
Netherlands	50.0	50.0
Portugal	27.8	72.2
United Kingdom	37.3	62.7
EU12	**46.5**	**53.5**

As Table 23 shows, over 70 percent of all training in Denmark was delivered by external providers and over 60 percent in France. In contrast, external providers delivered less than 30 percent of all training course time in Greece and Portugal and only a little over a third in Belgium, Spain, Ireland, Italy and the UK. Such differences will in part reflect special funding arrangements (Denmark) and legal requirements (France) as well as other national practices and traditions including whether the training is in transferable skills or for skills which are specific to the needs of the enterprise.

The training providers used by enterprises for the external training courses (see Table 24) will inevitably also reflect, in part, the institutional arrangements in different countries, the responsiveness of different types of providers to the needs of enterprises and the corporate structure of enterprises within the country.

In all countries, with the exception of Denmark and Luxembourg, private training providers are the most dominant external supplier of training courses. These account for between a third (Germany)and two-thirds (France)of all the training time delivered through external providers in these countries and nearly a half in EU12 as a whole. For other types of training provider the EU average share masks considerable differences between countries. Universities, for example, have established a market share of around 10 percent in Belgium, Ireland, the Netherlands and the United Kingdom but are less significant providers in other countries. In Denmark the main

external providers of training (45%) are training colleges which also provide a fifth of all such training in the United Kingdom. In no other country do similar institutions provide more than 10 percent of all external training.

Table 24
Proportion of external training provided by different types of training provider-by country

Country	University (%)	College (%)	Private trainer (%)	Supplier (%)	Non-profit (%)	Parent company (%)	Other (%)
Belgium	9.4	9.6	42.3	12.5	4.0	7.7	14.6
Denmark	1.9	45.0	18.5	6.3	22.2	3.1	3.0
Germany	2.6	4.4	31.8	17.5	31.6	0	12.1
Greece	0.7	0.2	41.6	2.3	20.0	8.5	26.7
Spain	5.3	2.3	49.3	13.5	14.4	10.1	5.1
France	4.9	5.2	61.0	6.6	8.1	8.7	5.5
Ireland	12.5	4.4	34.9	9.9	23.4	8.8	6.2
Italy	2.8	1.6	51.0	21.3	5.9	16.1	1.4
Luxembourg	2.4	8.2	27.5	27.0	13.5	18.7	2.8
Netherlands	9.2	9.6	47.1	3.1	22.6	2.0	6.5
Portugal	2.4	2.6	n.a	5.3	13.0	17.5	59.1
United Kingdom	10.8	19.6	45.0	7.1	4.0	6.7	6.9
Total	**6.1**	**10.0**	**47.4**	**9.1**	**13.1**	**6.6**	**7.9**

Non-profit making organisations play a significant role in the delivery of training in a number of countries. This is particularly so in Germany but these organisations are also important in Denmark, Greece, Ireland and the Netherlands.

The suppliers of goods and services to enterprises are important providers of training in Germany, Italy and Luxembourg. In the Community as a whole, suppliers provide a high proportion of external training (between 40 and 50 percent)for enterprises engaged in the sale and repair of vehicles and in post and telecommunications. They are also prominent in Germany, Luxembourg and Italy in the retail trade sector and in Luxembourg also in the wholesale trade and transport sectors.

In Italy and Luxembourg, parent companies appear to be major providers of training as they are also in Portugal. It is possible that this could be due to the way in which enterprises were defined in these countries. In Germany, for example, the definition of an enterprise excluded the possibility of a parent company being a supplier of training - presumably if the boundary of the enterprise is drawn wide enough all such training would be classified as internal to the enterprise.

In Portugal, it would appear that the exclusion of private external training providers from their questionnaire is the reason for such a large proportion of their external providers being classified as 'Other'.

Table 25
Proportion of external training provided by different types of training provider-by size of enterprise

Enterprise Size	University (%)	College (%)	Private trainer (%)	Supplier (%)	Non-profit (%)	Parent company (%)	Other (%)
10-49	5.9	13.8	31.5	14.2	18.9	4.4	11.5
50-99	6.3	11.2	38.2	10.0	18.5	2.9	13.0
100-249	4.7	13.6	43.2	8.1	16.0	4.5	9.9
250-499	6.1	12.3	45.1	6.0	16.2	4.9	9.5
500-999	5.5	10.1	50.2	5.7	14.2	5.8	8.5
1000 and over	6.6	6.3	57.3	8.7	7.5	9.7	4.0
Total	**6.1**	**10.0**	**47.4**	**9.1**	**13.1**	**6.6**	**7.9**

There were differences between enterprises of different sizes in types of external provider used. In the EU as a whole, small enterprises (see Table 25) were more likely to rely on their suppliers, non-profit making organisations and training or further education colleges while the larger the enterprises the more likely they were to use private commercial training providers.

2.5 Costs of training courses

2.5.I Introduction

In the CVTS enterprises were asked to estimate the cost of CVT courses. In order to ensure that, as far as possible, the same costs would be taken into account enterprises were required to identify separately the different types of costs that may have been incurred. These were:

- The labour costs of the participants
- The costs of travel and subsistence when attending courses
- The labour costs of trainers and personnel involved in training
- The costs of premises and equipment used
- The fee paid to external training organisations

In addition enterprises were asked to include the net cost of any training levies paid minus any grants received from external organisations.

2.5.1 Training costs by country

The structures of the main cost items for the 11 countries for which these data are available are shown in Table 26. Differences are to be expected because, as already

has been shown, the ratio of internal to external training is not the same in all countries. Also, courses given by external providers may take place on the premises of the enterprise and the fees paid to providers will be different for different subjects and by the duration of the courses given. The similarity in broad patterns of the cost structures observed between countries, however, does suggest that enterprises in the different country were able to interpret the requirements of the survey in the same way. There are two exception however.

Table 26
Structure of training costs in 1993-by country

COUNTRY	Labour costs of Trainees (%)	Travel and Subsistence (%)	Labour costs of trainers (%)	Costs of premises etc. (%)	Fees to external trainers (%)	TOTAL (%)
Belgium	57	2	19	5	17	100
Denmark	53	9	7	3	28	100
Germany	43	10	14	7	26	100
Greece	54	6	15	17	8	100
Spain	52	7	13	7	20	100
France	47	7	13	9	24	100
Ireland	43	8	16	4	30	100
Italy	58	0	11	5	26	100
Luxembourg	59	7	14	2	18	100
Portugal	39	8	17	12	24	100
United Kingdom	38	3	36	5	18	100

The proportion of the costs attributed to the fees paid to external trainers in Greece does look low while the costs of premises used is high in relation to other countries (even allowing for the higher proportion of internal training courses in Greece). No explanation for this is available but it was reported that a high proportion of the training in Greece was funded by the European Social Fund and these payments may have been made directly to external trainers used; thereby offsetting the cost to the enterprise. If such training also took place on the premises of the enterprise then the costs of the premises uses will also have been high - as was shown earlier the duration of the training per participant in Greece was the very much higher than in all other countries.

The other exception is the high proportion of the costs (36%)in the United Kingdom attributed to internal trainers (including the cost training personnel). This is well above the proportion reported any other countries. The reason for this difference is that in the survey carried out in the United Kingdom the questions on the wage costs of personnel engaged in training matters were more detailed than those asked in other countries. In particular, the UK questions could have helped the enterprise identify costs which may have been overlooked if only a simpler question had been asked. The United Kingdom authorities have reported that "asking these questions

would explain at least a part of the variation in the figures". It would also explain, in part, the high overall cost figures for the United Kingdom which needs to be borne in mind in comparisons which follow.

The costs of training, of course, were reported in national currencies. In order to make comparisons between countries two approaches have been used. First training costs have been calculated as a percentage of total labour costs. The labour costs used are those for all enterprises covered by the survey whether or not they offered training through courses. The percentage is therefore a measure of the total training effort on courses by all enterprise. It takes into account the proportion of enterprises offering training, the participation rates of employees in those enterprises and the duration of the training.

The second approach has been to express the costs of training courses in terms of Purchasing Power Standards(PPS) These are agreed internationally and attempt to eliminate differences in price levels between countries and variations in exchange rates, so as to produce more comparable results.

Overall, in the European Union, 1.6 percent of the total labour cost was spent on training in the sectors of the economy and the sizes of enterprises covered by the CVTS. How the countries compare is shown in Table 27.

The highest recorded percentage was that in the United Kingdom at 2.7 percent with the lowest in Portugal where 0.7 percent of labour costs were devoted to training. For reasons already mentioned, however, the figure for the United Kingdom almost certainly included some costs not identified by other countries. While no measure of this effect is available, it is possible that as much as a quarter of the UK costs could be attributed to this factor. On a more comparable basis, therefore, training costs as a percentage of labour costs in the United Kingdom would be nearer to 2 percent - or similar to that observed in France.

Table 27
Cost of training courses as a percentage of labour costs and per participant, 1993-by country

COUNTRY	Training costs as % of labour costs	Training costs per trainee (PPS)
Belgium	1.4	2065
Denmark	1.3	930
Germany	1.2	1216
Greece	1.1	1607
Spain	1.0	1450
France	2.0	1563
Ireland	1.5	764
Italy	0.8	1591
Luxembourg	1.3	1535
Netherlands	1.8	1775
Portugal	0.7	1112
United Kingdom	2.7	1539
TOTAL(EU12)	**1.6**	**1420**

Reported training costs per participant were highest in Belgium and lowest in Ireland. The figure for Belgium looks exceptional and cannot be explained by the duration of the training courses in that country, the subjects taught or the types of provider used. In fact, in Belgium a high proportion of training courses were provided internally and there is evidence to suggest that these were usually less expensive than those provided by external trainers. Because training costs as a percentage of labour costs were below the community average in Belgium the explanation of the high training cost per participant in Belgium must be due to the higher labour costs per employee in that country. This is, in fact, the case. Using the PPS conversion an index of the relative labour costs per employee reported in the survey by each country can be calculated. These were as follows:

Index of labour costs per employee(CVTS), EU12 =100

Belgium	143	Germany	96
Italy	119	Denmark	88
Luxembourg	114	Portugal	88
Spain	112	Ireland	87
France	101	United Kingdom	85
Netherlands	99	Greece	70

Because labour costs of participants and of training personnel account for a large part of total training costs a better indicator of the relative investment in training per participant is obtained by deflating the costs shown in Table 24 by the index of labour costs. The analysis can be further refined by then calculating the training costs per participant hour. These figures shown in Table 28.

Table 28
Costs of training courses adjusted for relative labour costs

Country	Training costs adjusted for relative labour costs (PPS)	
	Per Trainee	Per hour
Belgium	1441	35
Denmark	1052	27
Germany	1273	37
Greece	2292	17
Spain	1300	26
France	1544	28
Ireland	883	35
Italy	1339	33
Luxembourg	1366	34
Netherlands	1798	27
Portugal	1265	15
United Kingdom	1805	45
EU12	**1420**	**31**

Differences between countries remain in the cost of training per participant but as is shown these are largely explained by the differences in the hours of training per participant. Most countries reporting costs per hours in a range close to the EU12 average. The major exceptions are the low costs per hour in Greece and Portugal and high costs per hour in the United Kingdom. The figures for Greece and Portugal can be explained by the high contribution made by the European Structural Fund to the training of employees in these countries. The high figure for the United Kingdom is almost entirely due to the different approach adopted when collecting the cost data in that country as explained above.

2.5.2 Training costs by size of enterprise and sector

A comparison of training costs by enterprise size shows that for EU12 as a whole, training costs as a percentage of labour costs increases with the size of the enterprise (see Table 29). This is largely explained by the fact that the proportion of enterprises offering training also increases with size. However, this overall picture of training costs as a percentage of labour costs is not seen in all countries. In Denmark, Greece and Ireland, the largest investment is made by enterprises in the middle of the size distribution with lowest rates seen in both the smallest and largest enterprises.

Table 29
Training costs as percentage of labour costs and per participant, 1993-by size of enterprise

ENTERPRISE SIZE	Training costs as % of labour costs	Training costs per trainee (PPS)
10-49	0.8	1281
50-99	1.0	1254
100-249	1.1	1166
250-499	1.4	1232
500-999	1.7	1380
1000 and over	2.3	1585
TOTAL (EU12)	**1.6**	**1420**

Differences between the cost of training per participant are relatively small with only the largest enterprises, particularly those with 1000 or more employees, spending significantly more on training per participant. But again, there were marked differences in this respect between countries. In Portugal, Ireland, the Netherlands and the United Kingdom the highest costs per participant were incurred in the smallest enterprise. In contrast, training costs per participant were very much higher in the largest enterprises in Denmark, Germany and France.

Differences of this kind may be expected due to the way training is organised and the types of training providers available. It was seen earlier that small enterprises are more likely to use external training providers because they do not have the resources or knowledge to provide the training within the enterprise. There is evidence from the survey that, in some countries such as the United Kingdom, Portugal and Ireland, training purchased from an external provider is more expensive than that provided internally.

In other countries special funding or institutional arrangements exist, such as in Denmark, which will enable the smaller enterprises to obtain less expensive forms of

external training. There is evidence that this is so from the results for Denmark and France.

Table 30
Training costs as a percentage of labour costs and per participant, 1993-by sector

SECTOR	Training costs as % of labour costs	Training costs per trainee (PPS)
Mining and quarrying	1.3	1172
Manufacturing	1.3	1434
Electricity, gas and water	2.8	2098
Construction	0.6	1014
Wholesale, retail trade and repairs	1.1	947
Hotels and restaurants	1.2	941
Transport	1.6	1518
Post and telecommunication	2.6	1775
Finance	2.9	1876
Business services, renting and real estate	1.8	1412
TOTAL (EU)	**1.6**	**1420**

An analysis of training costs by sector show a much greater variation than that seen in the enterprise size groups at Community level. This shown in Table 30.

In the construction sector, for example, only 0.6 percent of labour costs are spent on continuing training. This is partly explained by the fact that many construction firms are small and therefore less likely to provide training and also because this sector is perhaps more able to rely on skills obtained through initial training such as apprenticeships and other forms of dual systems. In contrast, the finance, gas electricity and water and post and telecommunications sectors all spent over two and half percent of their labour costs on training in 1993 at a cost per trainee well in excess of the average for the community as a whole.

3 TRAINING POLICIES AND MANAGEMENT

3.I Introduction

In addition to asking for data about the volume and cost of training offered, the CVTS also, asked questions to find out how the enterprises planned and managed their training. Enterprises that did not offer any training in 1993 were asked why they did not do so, whether they had or planned to offer training for their employees and how they obtained the skills they needed. This section of the report begins by looking at the management practices and attitudes of those enterprises that did offer training in 1993. The analysis for this section has had to be based largely on the data for those countries that provided micro-data to EUROSTAT. This means that data for Germany and the Netherlands are not available. Also, in some countries certain questions were either not asked or asked in a different way that the data cannot be used.

3.1 Assessment of future manpower and skill needs

Enterprises offering training were first asked whether they analysed their future manpower or skill needs and then whether they assessed the skill and training needs of individual employees. The results are given in Table 31. In total, in the nine countries for which data are available, nearly a half of all enterprises said that they made some assessment of their future manpower or skill needs (the question was not asked in Belgium). In most countries more than a half did so with the highest proportions at around 80 percent found in Spain and Ireland.

It is likely that the way these needs were assessed will have varied considerably between enterprises. The results should therefore be treated with some caution. This must be particularly so for France in which only 10 percent of enterprises reported that they assessed their manpower or skill needs. Many enterprises in France did not answer this question or, surprisingly, said that it was not applicable. Even if these are excluded, however, the proportion of enterprises reporting positively to this question in France still only increases to 14 percent.

Table 31
Enterprises assessing manpower and skill needs, 1993-by country

Country	Enterprises Offering Training	
	Assessed manpower or skill needs(%)	Assessed individual needs(%)
Belgium	n.a.	30
Denmark	55	68
Greece	56	80
Spain	81	70
France	10	51
Ireland	80	89
Italy	65	65
Luxembourg	58	59
Portugal	64	67
United Kingdom	48	74
EU10(1)	**45(2)**	**66**

(1) Excluding Germany and Netherlands
(2) Also excluding Belgium

Some two-thirds of enterprises reported that they carried out assessments of the skill needs of individual worker ranging from 30 percent in Belgium to nearly 90 percent in Ireland. Again it must be stressed that no information is available on the extent to which such assessments take place or whether they cover all employees in the enterprise or are made only for some workers. If the enterprises not answering this question in France are excluded then the percentage answering positively in that country would be increased from 51 percent to 71 percent.

When analysed by the size of the enterprise it is clear that both for the assessment of future manpower/skill needs and the needs of individual employees, the proportion of enterprises responding positively increases as the size of the enterprise increases - See Table 32

Table 32
Enterprises assessing manpower and skill needs, 1993-by size of enterprise

Size Group	Enterprises Offering Training(1)	
	Planning future skill needs(%)(2)	Planning individual needs(%)
10-49	42	63
50-99	47	70
100-249	57	79
250-499	59	78
500-999	59	85
1000 +	68	85
EU10	**45**	**66**

(1) Excluding Germany and Netherlands
(2) Also excluding Belgium

Relative few enterprises looked for outside help in assessing their skill or training needs. Overall, only 17 percent did so in the ten countries for which data are available although 40 percent or more did so in Greece and Ireland. It was also found that larger enterprises (29% of those with 1000 or more employees)) were more likely to seek advice than smaller ones (15% among enterprises with 10-49 employees). In most countries the main source of advice was private organisations. In Italy, however, enterprises reported that they were much more likely to seek advice from other companies.

In the ten Member States, only 15 percent of enterprises said that they were party to an agreement or joint action on training. The proportion was as high as 24 percent in Denmark falling to only 7 percent in Spain. As with other questions of this kind the proportion increased with the size of the enterprise from 13 percent in the smallest size group(10-49 employees) to 37 percent among enterprises with 1000 or more employees.

3.2 Training plans and budgets

3.2.I Introduction

One of the key sets of questions in the qualitative section of the survey was about training plans and budgets. Enterprises were asked whether they had training plans and budgets, whether the plans were the result of some joint action with their employees or their representative and whether the plans were published for information to their employees. The design of the survey also made it possible to see if there is an association between the existence of training plans in enterprises and the training participation rates of their employees. These issues are discussed below.

3.2.1 Plans and budgets by country, size of enterprise and sector

Overall, some 28 percent of enterprises offering training in 1993 had training plans. 24 percent had training budgets (see Table 33). Two thirds of enterprises in Ireland reported that they had training plans as did between 40 and 50 percent in Greece Italy and Portugal. In contrast, only 15 percent of enterprises in Germany said that they had training plans. The survey does not explain why such differences exist. It is possible that in certain countries plans are a necessary requirement in order to obtain financial support from external sources such as the EC. It is also possible that in countries in which the training culture is more strongly embedded and in which enterprises have more resources available that there is less need for the training to be planned and budgeted for.

Table 33
Enterprises with training plans and budgets, 1993-by country

Country	Enterprises Offering Training	
	With Training Plan (%)	With Training Budget (%)
Belgium	26	26
Denmark	30	38
Germany	15	10
Greece	51	30
Spain	27	20
France	35	37
Ireland	67	36
Italy	44	20
Luxembourg	23	29
Netherlands	29	36
Portugal	40	33
United Kingdom	33	26
EU12	**28**	**24**

It is interesting to note that there is not a uniform pattern of enterprises being more likely to have training plans than budgets. In Denmark, Luxembourg, Netherlands and to a lesser extent France, enterprises are more likely to have training budgets than training plans. In contrast, in Greece, Ireland and Italy, the proportions of enterprises with training budgets are much lower than those with training plans. In consequence, there is rather less variation between countries in the proportion of enterprises with training budgets.

Table 34
Enterprises with training plans and budgets, 1993-by size of enterprise

Size Group	Enterprises Offering Training	
	With Training Plan (%)	With Training Budget (%)
10-49	21	16
50-99	37	35
100-249	50	49
250-499	58	61
500-999	70	75
1000 +	79	76
EU12	**28**	**24**

Table 35
Enterprises with training plans and budgets, 1993-by sector

Sector group	Enterprises Offering Training	
	With Training Plan(%)	With Training Budget(%)
Mining, quarrying; gas, electricity and water	27	31
Manufacture of metals, metal products, machinery and transport equipment	29	24
Other manufacturing	25	23
Construction	16	9
Wholesale, and retail trade; hotels and restaurants	25	19
Transport, storage and communications	28	26
Financial services; renting, real estate	40	41
Total	**28**	**24**

Where there is a marked variation in the existence of both training plans and budgets is between the different enterprise size groups. For both plans and budgets the proportions of enterprises with them increases from around one fifth of the smallest size group to over three-quarters among the largest enterprises - see table 34

As shown in Table 35, both plans and budgets are more common in the sectors covering financial and related services and least common in the construction sector. The is little difference between the other broad groupings of sectors where the figures are clustered around the community averages.

The similarity in the proportions of enterprises with training plans and training budgets would suggest that these will often co-exist within same enterprises, i.e. if

enterprises have a training plan then they are likely also to have a training budget. This does not appear to be the case. As the analysis in Table 36 shows, 43 percent of enterprises in the ten countries for which analyses are possible had a training plan and or training budget. But less than half of these (20%) had both a training plan and budget. A further 14 percent only had a training plan and 9 percent only had a training budget.

Table 36
Enterprises with training plans and/or budgets, 1993-by country

Country	Enterprises Offering Training			
	Training Plan only (%)	Training Budget only (%)	Training plan and Budget (%)	Training plan or budget (%)
Belgium	11	11	15	37
Denmark	10	18	20	48
Greece	27	5	26	57
Spain	15	7	13	35
France	0	2	35	37
Ireland	36	4	32	71
Italy	25	2	19	46
Luxembourg	8	14	15	38
Portugal	12	5	28	45
United Kingdom	19	12	14	45
Total (EU10)	**14**	**9**	**20**	**43**

These averages over the ten countries, however, conceal quite marked differences between countries. Only in France, for example, are plans always accompanied with budgets and only 2 percent of enterprise reported that they had training budgets without a training plan. In a number of other countries such as Greece, Spain, Ireland, Italy and Portugal training budgets were almost always associated with a training plan but many more enterprises in these countries also had a training plan but no budget. In the remaining countries the existence of both training plans and training budgets independent of each other were much more common.

When analyses by the size of the enterprise it is seen (see Table 37) the coexistence of training plans with training budgets is least likely among the smallest enterprises with the proportion of enterprises in this category generally increasing as the size of the enterprise increases. The proportion of enterprises which either have only a training plan or only a training budget does not vary greatly with the size of the enterprise.

Table 37
Enterprises with training plans and/or budgets, 1993-by size of enterprise

Size of enterprise	Enterprises Offering Training			
	Training Plan only (%)	Training Budget only (%)	Training plan and Budget (%)	Training plan and/or budget (%)
10-49	15	8	11	34
50-99	14	11	33	57
100-249	13	13	47	74
250-499	8	12	54	74
500-999	7	12	71	90
1000 +	14	10	64	87
Total (EU10)	**14**	**9**	**20**	**43**

If enterprises had a training plan they were asked whether this was the result of some joint action with their employees or their representatives and whether the plan was published as information for their employees. In addition to Germany and the Netherlands the answers to this question are also not available for France.

In three of the nine countries for which data are available (see Table 38), Denmark, Portugal and the United Kingdom, over a half of enterprises with a training plan said that these were the result of some joint action with their employees. In Italy, only 4 percent of enterprises involved their employees in drawing up the plans. In the other countries around a quarter to a third did so.

In all countries, with the exception of Portugal, enterprises were more likely to make their plans available to their employees than they were to consult with them when preparing the plans.

Table 38
Training plans; whether joint action with employees and whether published-by country

Country	Training Plans of Enterprises Offering Training (1)	
	The result of Joint Action(%)	Plan Published(%)
Belgium	37	48
Denmark	69	93
Greece	31	61
Spain	30	59
Ireland	11	19
Italy	4	38
Luxembourg	26	52
Portugal	57	19
United Kingdom	61	88
EU9	**50**	**75**

(1) Excluding France, Germany and Netherlands

3.2.2 Plans and participation rates

As mentioned earlier, the survey design makes it possible to cross-analyse the existence of a training plan in the enterprise with the rates of participation in training in the enterprise. This could be instructive since it would show whether the existence of a training plan is associated with the amount of training offered. The results for individual Member States, comparing participation rates in courses(internal and External) are shown in Table 39 and for the different size groups of enterprises in Table 40.

The results are interesting. In all countries, with the exception of France, the participation rates in training courses are higher, and often much higher, in those enterprises which have a training plan. In the case of France, the vast majority of enterprises offering courses do have a training plan; the estimated participation rate among those without a plan is therefore based on such a small sample size that the observed higher participation rate for this group is probably not significant.

Table 40 shows that the differences in participation rates between enterprise with and without a training plan is most marked in the smaller enterprises. Among enterprises with more than 500 employees the differences in the participation rates between the two groups is quite small.

Table 39
Participation rates in training courses of enterprises with and without a training plan-by country

Country	Participation Rates of Employees in Enterprises Offering Training Courses (1)	
	Enterprises With Training Plans (%)	Enterprises Without Training Plans (%)
Belgium	48	28
Denmark	44	38
Greece	26	25
Spain	45	21
France	48	53
Ireland	54	33
Italy	33	14
Luxembourg	40	22
Portugal	38	28
United Kingdom	52	38
EU10	**47**	**34**

(1) Excluding Germany and Netherlands

Table 40
Participation rates in training courses of enterprises with and without a training plan-by size of enterprise

Size Group	Participation Rates of Employees in Enterprises Offering Training Courses (1)	
	Enterprises With Training Plan (%)	Enterprises Without Training Plan (%)
10-49	44	33
50-99	40	25
100-249	41	30
250-499	47	33
500-999	46	42
1000 +	49	45
EU10	**47**	**34**

(1) Excluding Germany and Netherlands

There is therefore clearly an association between an enterprise having a training plan the rate at which its employees participate in training courses. What the survey cannot say is which is the cause and which is the effect. It is possible that the action of drawing up a plan makes the enterprise more aware of the need for training and that as a result it offers more training. It is also possible, however, that enterprises which intend to offer a lot of training anyway then find that they need a plan to help them manage it; i.e. it is the higher volume of training that makes a plan necessary.

3.3 Training policies for special groups of workers

Nearly 30 percent of enterprises which offered training in the ten Member States for which analyses are possible said that they had training policies for special groups of workers or which address special issues. Table 41 shows for each country the percentages of enterprises which responded positively to having policies for each of the special groups mentioned in the survey questionnaire. The latter percentages may add to more than 100 because many with have policies for more than one special group of workers.

Table 41
Enterprises offering training which have policies for special groups of workers, 1993-by country

Country	Enterprises with policies for special groups of workers [1] (percentages)							
	Equal opportunity	Under qualified	Handicapped	Young workers	Ethnic groups	Redundancies	others	No policy
Belgium	10.6	13.5	0	20.5	1.6	5.3	11.1	63.4
Denmark	35.4	4.7	0.1	0.9	0.1	1.2	30.3	64.1
Greece	65.8	42.8	8.0	54.1	13.0	5.5	0.6	21.1
Spain	6.7	24.1	0.6	15.6	0.9	0.9	24.2	61.5
France	2.0	10.9	1.4	7.1	0.9	3.7	4.1	82.0
Ireland	35.8	25.3	7.9	20.5	6.1	6.5	0	58.0
Italy	3.0	10.0	1.3	14.9	0.7	1.2	0	77.1
Luxembourg	0	8.9	2.5	6.9	0.6	1.5	0.2	85.7
Portugal	9.3	32.1	0.6	16.9	0.0	3.5	5.0	55.7
United Kingdom	0	13.5	5.1	12.6	4.6	3.9	7.5	72.6
EU10 [2]	**5.9**	**13.6**	**3.1**	**11.6**	**2.8**	**3.3**	**9.8**	**72.0**

(1) Some enterprises will have policies for more than one group of workers
(2) Excluding Germany and Netherlands

In Greece, nearly four out of every five enterprises offering training had training policies for special groups. In contrast, only 14 percent of enterprises in Luxembourg and 18 percent in France said that they had such policies.

In the ten countries as a whole, 14 percent of enterprises had policies supporting equal opportunities for men and women and 13 percent had policies for young workers. Policies for these groups were prominent in many countries as also were those for the under-qualified. Only in Greece did more than 10 percent of the enterprises offering training have policies in favour of the ethnic minorities and in no country did more than 10 percent have policies for handicapped workers and those threatened with redundancy.

The effectiveness of these policies cannot be assessed directly from the information collected in the survey. It is interesting to note, however, that in three of the four countries in which policies in favour of equal opportunities were prominent (Belgium, Denmark and Ireland) the participation rates in training courses among females was higher than that for males - the reverse of that seen in the community as a whole.

3.4 Future trends

Enterprises offering training were asked whether they thought that over the following three years the different types of training would increase, decrease or be at about the same level as in 1993. In general enterprises only answered this question in respect of the types of training which they had offered in 1993 and this is the basis for the analysis which follows. The data are available from only nine Member States with those for Portugal not available in addition to those for Germany and the Netherlands.

Many enterprises, varying between 40 and 60 percent for the different types of training, said that they thought the volume of that type of training would be about the same over the following three years. While most of the remaining enterprises thought that the volume of training would increase a comparison between the types of training can be made by looking at the difference (the balance) between the percentage of enterprises reporting an expected increase in training and the percentage expecting a decrease. This shown in table 42 for the nine countries as a whole and in Table 43 for internal and external courses separately by size groups of enterprises.

On this basis, while the balance is favourable for all types of training, those which offered internal courses and job rotation etc. were more like to say that these forms of training would increasing. The message is least positive in respect of training through conferences, workshops etc. and through self-learning opportunities.

Table 42
Expected trends over the following three years-balance of enterprises expecting increases over decreases, 1993-by type of training

Type of Training	Balance(1) of percent increasing over decreasing
Internal courses	45
External Courses	33
Training in the work situation	35
Conferences, workshops etc.	25
Job Rotation, Quality Circles etc.	41
Self Learning	29

(1) Excluding Germany, Netherlands and Portugal

When considering the balance of expectations for internal and external courses separately for the different size groups, the results are interesting. Although for all size groups the favourable balance was higher for internal course than external ones, within the two types of training, a higher proportion of the larger enterprise thought that internal training would increase while the smaller enterprises were much more likely to expect an increase in the use of external courses.

Table 43
Expected trends over the following three years-balance of enterprises expecting increases over decreases, for internal and external courses, 1993-by size of enterprise

Size Group	Balance of percent increasing over decreasing	
	Internal Courses	External Courses
10-49	42	37
50-99	48	29
100-249	53	26
250-499	45	18
500-999	63	12
1000 +	54	16
EU9 (1)	**45**	**33**

(1) Excluding Germany and Netherlands and Portugal

3.5 Attitudes of enterprises not offering training in 1993

3.5.1 Reasons for not training in 1993

Enterprises that did not offer any training in 1993 were asked to give the main reasons why they did not do so. As was shown earlier, most of these enterprises were in the smallest size category. The number of enterprises in the larger size categories available to answer this and other qualitative questions put to the non trainers in other size categories, therefore, were too few for more detailed analyses to be made. Also, the results for sectors were also dominated by the proportion of small enterprises in them. In some countries also, such as France and Portugal and to lesser extent Italy the response rates to these questions were not good. For these reasons only broad analyses of the results to these questions have been possible.

Table 44
Reasons for not training in 1993-by country

Country	Main reasons for not offering training among enterprises not providing training in 1993	
	Existing skills satisfactory	Other Reasons (10 percent or more)
Belgium	40	Personnel too busy(19%), Initial training sufficient(11%), Difficulty with finance(10%)
Denmark	26	Personnel too busy(25%), Recent training investment made (18%), Initial training sufficient(12)
Greece	60	Personnel too busy(12%), Difficulty with finance(11%)
Spain	65	Initial training sufficient(11%), Difficulty with finance(10%)
France	55	Personnel too busy(13%), Other - not specified(14%)
Ireland	74	
Italy	71	Personnel too busy(13%)
Luxembourg	70	Initial training sufficient(11%), Personnel too busy(10%)
Portugal	50	Personnel too busy(12%), Difficulty with finance(12%)
United Kingdom	49	Initial training sufficient(18%)
EU10 (1)	**61**	**Personnel too busy(10%)**

(1) Excluding Germany and Netherlands

Nearly two-thirds (61%)of the enterprises that did not offer continuing training in 1993 said that the main reason for this was that they the thought that the existing skills of their workers were satisfactory (see Table 44). This proportion varied from as high as 70 percent in Luxembourg to 26 percent in Denmark. In addition 10 percent or more of the enterprises in some countries said that a main reason for not training was that initial training was sufficient to develop the skills required (Belgium, Denmark, Spain, Luxembourg and the United Kingdom) and, only in Denmark, that a recent investment in training had been made. These reasons may also be taken to imply that the enterprises were satisfied with the existing skills of their adult workers. The other main reason given by enterprises in the ten countries for which data are available(excluding Germany and the Netherlands) was that their personnel were too busy or had no time for training (10 percent of enterprises). In Belgium, Greece, Spain and Portugal more than 10 percent of enterprises reported that they had difficulty in financing training.

Overall, there was little difference in the reasons given for not training between enterprise with 10-49 employees and those in the larger size groups combined

3.5.2 Training in two previous years and next two years

Enterprises which did not offer training in 1993 were also asked whether they had provided training in the two previous years and whether they planned to do so over the following two years. About a quarter of the enterprises said that they had offered recent training and a quarter also said that they planned to do over the following two years. Belgium and Ireland (around 40%) were the countries in which most enterprises said that they had provided training in the two previous years with 50 percent of Belgian enterprises also saying that they expected to provide training in the following two years.

Table 45
Enterprises not offering training in 1993 by whether offering training in two previous or next two years

Enterprise size	Enterprises not offering training in 1993 by whether offering training in previous or next two years	
	Previous two years (%)	Next two years
10-49	22	24
50+	29	33
EU10 (1)	**23**	**25**

(1) Excluding Germany and Netherlands

As Table 45 shows enterprises with 10-49 employees were less likely to have previously offered training or expected to do so. If training had been provided or was planned it was likely to be through training courses or through training in the work situation.

3.5.3 How enterprises not training in 1993 obtained their skills

When asked how they obtained the skills needed 62 percent of enterprises said that recruiting qualified workers was one of main methods used. 38 percent said that they would training existing workers in the work situation and some would send workers on courses or train them in other ways; in these enterprises it may be assumed that training was not necessary in 1993 but was or would be carried out in other years. The figures, shown in Table 46 can add to more than 100 percent because some enterprises will use more than one method. Enterprises which did not offer training in 1993 in the United Kingdom were the ones most likely to find the skills they needed by recruiting skilled workers and the countries most likely to resort to training existing workers were France, Ireland, Denmark and Belgium although enterprises in Ireland and France also relied heavily on recruiting the skills they needed.

Table 46
Methods of obtaining skills by enterprises not offering training in 1993

Method of obtaining skills needed by enterprises not offering training in 1993	**Percent** (1)
Workers attending courses in other years	13
Workers trained in the work situation in other years	38
Other types of training in other years	7
Recruiting qualified workers	62
Other (not specified)	23

(1) Excluding Germany, Netherlands and Italy. Figures add to more than 100 per cent because more than one reason was given by some respondents

Differences in the way skills were obtained did not vary greatly with the size of the enterprise but there is some evidence that the smallest enterprises are more likely than the larger one to resort to offering training in the work situation. Conversely, the larger enterprises were more likely to send workers on courses.

CONCLUSIONS AND THOUGHTS FOR THE FUTURE

The Continuing Vocational Training Survey (CVTS) was the first survey of its kind designed to measure, on an international basis, the continuing training offered by enterprises to their employees on an annual basis. It was therefore very much a pioneering venture with ambitious objectives made possible by the close collaboration between Eurostat and the statistical offices and training experts of the then 12 Member States.

Key features of the survey content and design included the recognition that training, as major contribution to human resource development, could take different forms and that no single simple definition could be used to capture the diversity of this training effort. In this regard it was also important that comparable concepts and definitions were developed and could be applied in all the Member States. It was also recognised that a successful survey would be with regard to the limitations in availability of data within enterprises and that asking enterprises for too much information would have caused response rates to be at an unacceptably low level.

On balance, and given its ambitious objectives, the survey was a success. Lessons were clearly learned that can be developed and applied in future surveys but for the first time reliable comparable data exists, which provides a benchmark against which future levels of continuing training offered by enterprises can be judged.

For the first time management and economics of continuing training offered by enterprises in each of the twelve 1994 Member States could be analysed, with particular regard to:

- Type of training
- Size and sector of the enterprise
- Providers of externally purchased training courses
- Subjects of training courses
- Costs of courses
- Whether enterprises have training plans or budgets and some features of the planning process
- How enterprises that did not train obtain the skills they need

The survey was able to confirm the importance of the size of the enterprise as a major determinant of whether workers are offered training and how the opportunities for receiving training varied considerably between sectors of the economy. Although training courses and training in the work situation were the forms of training most

used by enterprises, other methods, which included open and computer-based learning, were also significant.

Although enterprises organised about half of the training offered from within, when the training was purchased from an external provider, private training companies were the largest single group of suppliers in nearly all countries. This suggests that a significant training market exists. This market is particularly important for small- and medium-sized enterprises, which used external providers more extensively, perhaps because they found it more affordable to have their employees trained externally.

The high labour costs of releasing employees for training was revealed by the survey, which also showed how training courses were mainly of short duration unless external financial support was available such as that through the European Social Fund.

Although the most common subjects of training were in the techniques of producing goods and services and the maintenance of equipment used, the important role of health and safety legislation in stimulating training in these subjects was evident in certain sectors.

Information of the kind illustrated above would not have been available on a comparable international basis without the CVTS. Additional information collected by the CVTS, such as that on the gender and occupation of participants in training courses, was also available from the Labour Force Survey, although the data from the two sources were not directly comparable. Both, however, confirmed that occupation was also one of the key determinants of whether employees received training and how the favourable occupational structure of female employment in terms of their training opportunities offset their relative disadvantage within occupations.

The CVTS provided a snapshot of the the training effort of enterprises in 1993. While it would not be necessary for policy purposes for such a survey to be carried out annually, and the burden on enterprises would be too great for this to be done anyway, a regular but less frequent survey of enterprises does merit serious consideration at a time of rapid technological and industrial change and the training policy responses needed to meet these challenges. In particular, training policies have substantially developed since 1993 and a second survey would allow an evaluation of the impact of these policies on skill renewal and training management and economics.

The value of an employer based survey on training could be enhanced by including the effort devoted to initial training and by extending its coverage to public administration and health and education sectors. If another survey is undertaken, consideration could be given to seeing whether the content and coverage of the survey could be extended to fill these gaps. It would also be worth considering, as is being done in some countries, how the methods of carrying out related surveys, such as the Labour Force Survey, could be linked to have data from several sources in a coherent framework, thus developing useful synergies.

ANNEX 1

Key aspects of the survey

A description of the work undertaken by the Working Group is contained in *Continuing Vocational Training Survey- A report on the procedures adopted and steps taken to implement the survey.* The conclusions of the Working Group were set out in three documents:

- Main Features of the Survey
- Community Outline Questionnaire
- Definitions

The *Main Features of the Survey* included guidelines on the sample sizes and survey methods to be used and the levels of detail in which the results would be required. Only some key aspects of the survey are mentioned now. Further descriptions will be given as necessary at the appropriate points in this report.

The FORCE decision had the effect of limiting the survey in two ways. First, it would cover only continuing vocational training - initial training could not be included; and secondly it would be a survey of enterprises. The latter limitation meant that certain sectors of the economy had to be excluded. These were public administration(national regional and local) and the health and education sectors. Publicly owned enterprises, however, were within the scope of the survey. The working group also decided that, in accordance with national practices concerning enterprise based surveys, the agriculture, forestry and fishing sector would not be covered and also that enterprises with fewer than 10 employees would not be surveyed.

It was further agreed that the national samples would be selected in such a way that analyses of the results could be made for 20 sectors and for six size groups of enterprises and for cross analyses to be made for 7 broader sector groups by six size groups. Member States were free, however, and at their own expenses, to extend the scope of the survey for their national purposes provided that this not affect the quality and coverage of the data required at community level.

The FORCE decision did not specify the concept of training to be adopted for the survey. The Working Group agreed therefore that it should be an activity financed wholly or partly by the enterprise, whether directly or indirectly, and have the following characteristics:

- The primary objective must be the acquisition of new skills or the development and improvement of existing skills. Routine induction training (e.g. basic familiarisation with the job, organisation or work environment) and routine information passing should be excluded.

- The activity must be the result of a decision that some skill development is needed. (This would normally be taken by the employee's line manager or the general management of the enterprise.

- There must be an actual activity or even or set of activities or events having a specific allocation of time (rather than an on-going process that cannot be distinguished form normal work, such as learning by experience).

- There must be a training mediator (either a person, e.g. trainer or supervisor, or a computer programmed to manage a training programme).

Within this definition, it was thought that six different types of training actions could take place. These were:

- **Education and training courses designed and managed by organisations not part of the enterprise**(called external courses).

- **Education and training courses designed and managed by the enterprise itself**(internal courses).

- **Planned periods of training, instruction or practical experience in the work situation** (i.e. using the usual tools of work, either at the immediate place of work or in a simulated work situation).

- **Conferences, workshops and lectures/seminars** where the primary purpose of an employee attending them is training/learning.

- **Job rotation, exchanges, secondments and quality circles** which are planned in advance and have the specific purpose of improving the skills of the workers involved.

- **Self learning** through open and distance learning courses, video/audio tapes, correspondence courses, computer based methods or through the use of a Learning Resource Centre.

Information was collected in the survey on the number of enterprises offering each of these types of training. The number of participants was also collected for training

course combined(external and internal) and separately for each of the other types of training.

Within each type of training a participant was defined as an employee who participated in one or more training events during the year. That is, if an employee attended two or more training courses or attended two or more conferences in the reference year (1993) they would only be counted as one participant in each of the types of training.

The reason for this definition of a participant was because one of the objectives of the survey was to measure the number of employees who participated in each type of training rather than measuring the number of separate training events that occurred. While it was possible to adopt this approach within each of the separate types of training, the pre-tests had shown that enterprises would not be able provide information that required bringing together or estimate all the different types of training undertaken by each individual employee during the year. It is not possible from the survey, therefore, to estimate the number of employees who participated in at least one training event of any kind during the year.

Practical reasons also dictated that more detailed information on such aspects of training as the breakdown by the gender or occupation participants, its duration, the subjects of training, the types of external training provider used and the costs of training could be collected only for training courses. Experience from pre-test had shown that only for this type of training did records exist within the enterprise from which reasonable estimates of the survey's requirements could be made.

ANNEX 2
Statistical Classification Of Economic Activities (NACE Rev.1) - obligatory from 1993 onwards

Section A **Agriculture, hunting and forestry**

01 Agriculture, hunting and related service activities
02 Forestry, logging and related service activities

Section B **Fishing**

05 Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing

Section C **Mining and quarrying**

10 Mining of coal and lignite; extraction of peat
11 Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying
12 Mining of uranium and thorium ores
13 Mining of metal ores
14 Other mining and quarrying

Section D **Manufacturing**

15 Manufacture of food products and beverages
16 Manufacture of tobacco products
17 Manufacture of textiles
18 Manufacture of wearing apparel; dressing and dyeing of fur
19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
20 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
21 Manufacture of pulp, paper and paper products
22 Publishing, printing and reproduction of recorded media
23 Manufacture of coke, refined petroleum products and nuclear fuel
24 Manufacture of chemicals and chemical products
25 Manufacture of rubber and plastic products
26 Manufacture of other non-metallic mineral products
27 Manufacture of basic metals

28 Manufacture of fabricated metal products, except machinery and equipment
29 Manufacture of machinery and equipment n.e.c.
30 Manufacture of office machinery and computers
31 Manufacture of electrical machinery and apparatus n.e.c.
32 Manufacture of radio, television and communication equipment and apparatus
33 Manufacture of medical, precision and optical instruments, watches and clocks
34 Manufacture of motor vehicles, trailers and semi-trailers
35 Manufacture of other transport equipment
36 Manufacture of furniture; manufacturing n.e.c.
37 Recycling

Section E Electricity, gas and watersupply

40 Electricity, gas, steam and hot water supply
41 Collection, purification and distribution of water

Section F Construction

45 Construction

Section G Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods

50 Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
51 Wholesale trade and commission trade, except of motor vehicles and motorcycles
52 Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods

Section H Hotels and restaurants

55 Hotels and restaurants

Section I Transport, storage and communication

60 Land transport; transport via pipelines
61 Water transport
62 Air transport
63 Supporting and auxiliary transport activities; activities of travel agencies
64 Post and telecommunications

Section J **Financial intermediation**

65 Financial intermediation, except insurance and pension funding
66 Insurance and pension funding, except compulsory social security
67 Activities auxiliary to financial intermediation

Section K **Real estate, renting and business activities**

70 Real estate activities
71 Renting of machinery and equipment without operator and of personal and household goods
72 Computer and related activities
73 Research and development
74 Other business activities

Section L **Public administration and defence; compulsory social security**

75 Public administration and defence; compulsory social security

Section M **Education**

80 Education

Section N **Health and social work**

85 Health and social work

Section O **Other community, social and personal service activities**

90 Sewage and refuse disposal, sanitation and similar activities
91 Activities of membership organization n.e.c.
92 Recreational, cultural and sporting activities
93 Other service activities

Section P **Private households with employed persons**

95 Private households with employed persons

Section Q **Extra-territorial organizations and bodies**

99 Extra-territorial organizations and bodies

ANNEX 3
International Standard Classification of Occupations (ISCO-88 (COM))

100 Legislators, senior officials and managers

110 Legislators, senior officials and managers
- 111 Legislators and senior government officials
- 114 Senior officials of special-interest organisations

120 Corporate managers
- 121 Directors and chief executives
- 122 Production and operations managers
- 123 Other specialist managers

130 Managers of small enterprises
- 131 Managers of small enterprises

200 Professionals

210 Physical, mathematical and engineering science professionals
- 211 Physicists, chemists and related professionals
- 212 Mathematicians, statisticians and related professionals
- 213 Computing professionals
- 214 Architects, engineers and related professionals

220 Life science and health professionals
- 221 Life science professionals
- 222 Health professionals (except nursing)
- 223 Nursing and midwifery professionals

230 Teaching professionals
- 231 College, university and higher education teaching professionals
- 232 Secondary education teaching professionals
- 233 Primary and pre-primary education teaching professionals
- 234 Special education teaching professionals
- 235 Other teaching professionals

240 Other professionals
- 241 Business professionals
- 242 Legal professionals
- 243 Archivists, librarians and related information professionals
- 244 Social science and related professionals
- 245 Writers and creative or performing artists
- 246 Religious professionals
- 247 Public service administrative professionals

300 Technicians and associate professionals

310 Physical and engineering science associate professionals
- 311 Physical and engineering science technicians
- 312 Computer associate professionals
- 313 Optical and electronic equipment operators
- 314 Ship and aircraft controllers and technicians

315 Safety and quality inspectors

320 Life science and health associate professionals

321 Life science technicians and related associate professionals
322 Health associate professionals (except nursing)
323 Nursing and midwifery associate professionals

330 Teaching associate professionals

331 Primary education teaching associate professionals
332 Pre-primary education teaching associate professionals
333 Special education teaching associate professionals
334 Other teaching associate professionals

340 Other associate professionals

341 Finance and sales associate professionals
342 Business services agents and trade brokers
343 Administrative associate professionals
344 Customs, tax and related government associate professionals
345 Police inspectors and detectives
346 Social work associate professionals
347 Artistic, entertainment and sports associate rofessionals
348 Religious associate professionals

400 Clerks

410 Office clerks

411 Secretaries and keyboard-operating clerks
412 Numerical clerks
413 Material-recording and transport clerks
414 Library, mail and related clerks
419 Other office clerks

420 Customer services clerks

421 Cashiers, tellers and related clerks
422 Client information clerks

500 Service workers and shop and market sales workers

510 Personal and protective services workers

511 Travel attendants and related workers
512 Housekeeping and restaurant services workers
513 Personal care and related workers
514 Other personal services workers
516 Protective services workers

520 Models, salespersons and demonstrators

521 Fashion and other models
522 Shop, stall and market salespersons and demonstrators

600 Skilled agricultural and fishery workers

610 Skilled agricultural and fishery workers

611 Market gardeners and crop growers
612 Animal producers and related workers
613 Crop and animal producers
614 Forestry and related workers
615 Fishery workers, hunters and trappers

700 Craft and related trades workers

710 **Extraction and building trades workers**
- 711 Miners, shotfirers, stone cutters and carvers
- 712 Building frame and related trades workers
- 713 Building finishers and related trades workers
- 714 Painters, building structure cleaners and related trades workers

720 **Metal, machinery and related trades workers**
- 721 Metal moulders, welders, sheet-metal workers, structural-metal preparers, and related trades workers
- 722 Blacksmiths, tool-makers and related trades workers
- 723 Machinery mechanics and fitters
- 724 Electrical and electronic equipment mechanics and fitters

730 **Precision, handicraft, craft printing and related trades workers**
- 731 Precision workers in metal and related materials
- 732 Potters, glass-makers and related trades workers
- 733 Handicraft workers in wood, textile, leather and related materials
- 734 Craft printing and related trades workers

740 **Other craft and related trades workers**
- 741 Food processing and related trades workers
- 742 Wood treaters, cabinet-makers and related trades workers
- 743 Textile, garment and related trades workers
- 744 Pelt, leather and shoemaking trades workers

800 Plant and machine operators and assemblers

810 **Stationary-plant and related operators**
- 811 Mining and mineral-processing-plant operators
- 812 Metal-processing plant operators
- 813 Glass, ceramics and related plant operators
- 814 Wood-processing- and papermaking-plant operators
- 815 Chemical-processing-plant operators
- 816 Power-production and related plant operators
- 817 Industrial robot operators

820 **Machine operators and assemblers**
- 821 Metal- and mineral-products machine operators
- 822 Chemical-products machine operators
- 823 Rubber- and plastic-products machine perators
- 824 Wood-products machine operators
- 825 Printing-, binding- and paper-products machine operators
- 826 Textile-, fur- and leather-products machine operators
- 827 Food and related products machine operators
- 828 Assemblers
- 829 Other machine operators not elsewhere classified

830 **Drivers and mobile plant operators**
- 831 Locomotive engine drivers and related workers
- 832 Motor vehicle drivers
- 833 Agricultural and other mobile plant operators
- 834 Ships' deck crews and related workers

900 Elementary occupations

910 **Sales and services elementary occupations**
- 911 Street vendors and related workers
- 912 Shoe cleaning and other street services elementary occupations
- 913 Domestic and related helpers, cleaners and launderers
- 914 Building caretakers, window and related cleaners

915 Messengers, porters, doorkeepers and related workers
916 Garbage collectors and related labourers

920 Agricultural, fishery and related labourers
921 Agricultural, fishery and related labourers

930 Labourers in mining, construction, manufacturing and transport
931 Mining and construction labourers
932 Manufacturing labourers
933 Transport labourers and freight handlers

000 Armed forces

010 Armed forces
011 Armed forces

European Commission

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