Indicators of investment in human capital are becoming increasingly significant, since they reflect the economic and social conditions in society as a whole and are thus of central importance to policy-making both in Europe and nationally. Developing abilities and skills through continuing vocational training at work is an essential part of lifelong learning and reflects the role enterprises play in solving labour-market and employment problems.

With these factors in mind, the European Commission launched a new survey of continuing vocational training following on from the first survey, conducted in 1994, of the then twelve Member States of the European Union. The second survey (CVTS2) was conducted in 2000/2001 in all the Member States, Norway and nine candidate countries. This second survey of continuing vocational training was two-thirds financed by the European Commission.

This publication gives some initial key information on continuing in-service training in Belgium, Denmark, Germany, Spain, Ireland, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden and Norway. A total of some 35 000 enterprises in these countries took part in the survey and provided comparable statistical data on continuing training at work, the supply of and demand for vocational know-how and skills, the need for continuing training on the one hand and the forms, contents and scope of continuing training on the other, own training resources and the use of external training providers, and the costs of continuing training.

For Greece, France, Italy and the United Kingdom the data were not available in time for this publication.

Results for the nine candidate countries were published in comparable form in "Statistics in Focus", Theme 3 – 02/2002.
The proportion of all enterprises in the EU Member States and Norway that provided CVT in 1999 ranged from 22% in Portugal to 96% in Denmark (Fig.1). In the Nordic countries and the Netherlands the proportion was over 80% (Denmark 96%, Sweden 91%, Netherlands 88%, Norway 86%, Finland 82%). In contrast, in Spain only 36% and in Portugal only 22% of all enterprises provided continuing vocational training.

Compared with the 1993 figures from the first European survey of continuing vocational training (CVTS1), the percentage of enterprises providing CVT had risen in seven countries, with very marked increases in the Netherlands (32 percentage points) and Belgium (24 percentage points) but only a slight rise in Ireland (2 percentage points), while in Germany there was a notable decline of 10 percentage points in the proportion of enterprises providing CVT.

The percentage of enterprises providing CVT was higher in medium-sized enterprises than in small enterprises, and higher still in large enterprises, although in nearly all countries the differences were significant only between small and medium-sized enterprises (Table 1). Only in Spain and Portugal did medium-sized enterprises also provide continuing training much less frequently than large enterprises. In Denmark the differences between small and medium-sized enterprises and between medium-sized and large enterprises amounted to only 3 and 5 percentage points respectively. The lowest percentages of enterprises providing CVT were in Portugal, with 17%, 46% and 78% for small, medium-sized and large enterprises respectively.

In nine countries the highest percentage of enterprises providing CVT appeared solely in the ‘Financial intermediation’ (J) branch (Table 2). In Denmark percentages just as high as in financial intermediation were also recorded in ‘Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods’ (G) and ‘Other community, social and personal service activities’ (O). In Sweden percentages just as high as in financial intermediation were recorded also in ‘Other community, social and personal service activities’ (O) and in Ireland in ‘Manufacturing’ (D) and ‘Real estate, renting and business activities’ (K).

If we disregard the ‘Other activities’ branch, the percentage of enterprises providing CVT was lowest in manufacturing (D) in nearly all countries, although in seven countries the figure was still over 70%. It was lowest of all in Portugal, at 19%.

Continuing vocational training at work is given in the form of courses and "other", usually job-related, forms. In five countries (Germany, Belgium, Ireland, Luxembourg, Portugal) the percentage of enterprises providing “other” forms of continuing training was higher than the percentage providing courses (Fig. 2). In Belgium, Ireland and Luxembourg in particular, “other” forms of continuing in-service training clearly predominated over training in the form of courses. In seven countries (Denmark, Spain, the Netherlands, Austria, Finland, Sweden, Norway) the percentage of enterprises providing CVT that provided courses in 1999 was higher than the percentage with “other” forms of continuing training, but in three of those the difference was only slight. In Austria the difference between the percentages of enterprises that provided courses (71%) and of those with “other” forms of continuing training (27%) was particularly striking.
In the EU Member States and Norway, enterprises providing CVT courses organised considerably more external than internal courses in 1999 (Fig. 3). Thus in the Netherlands nearly all of these enterprises (97%) organised external courses, but only about one in three provided internal courses. There was also a strikingly large difference in Spain between the percentages of enterprises providing external and internal CVT courses (59 percentage points).

In seven countries (Denmark, Germany, Ireland, Austria, Portugal, Sweden, Norway) more than 50% of enterprises organised internal courses, the highest percentage being in Sweden (63%).

Among the “other” forms of continuing in-service training the most frequent in six countries (Denmark, Germany, Austria, Finland, Sweden, Norway) was attendance at information events (“Instruction at conferences, workshops etc”) not originally intended as training but used by enterprises for the continuing training of individual employees (Table 3). The highest percentages of enterprises using this option were found in Austria (86%), Germany (85%) and Finland (82%).

In the Netherlands the highest figure (72%) was found for both information events and for job-related measures (“Training using normal tools of work”); the latter also played the biggest part in five other countries (Ireland 95%, Belgium 83% Luxembourg 70%, Portugal 69% and Spain 55%).

Denmark (75%) had by far the highest percentage of enterprises using self-learning. In Portugal (11%) this form of continuing in-service training was not at all widespread.

In four countries (Belgium, Ireland, Luxembourg, Sweden) job rotation and exchange programmes were a form of continuing training used in more than 40% of enterprises. The highest percentage recorded was 48% in Ireland, while in Germany (6%) this form of continuing training was very rarely used.

The differences between countries were smaller for learning and quality-improvement groups; the percentages of enterprises using this form of continuing training ranged from 16% in Germany and Luxembourg to 33% in Spain.

In nine countries (Denmark, Sweden, Netherlands, Norway, Finland, Austria, Germany, Ireland and Luxembourg) the percentage of enterprises providing CVT courses was higher than the participation rate. In Belgium, Spain and Portugal, on the other hand, the participation rate was higher than the percentage of enterprises providing CVT courses.

As already mentioned, the percentages of enterprises that organised CVT courses in 1999 varied between 11% (Portugal) and 88% (Denmark). The differences between countries in terms of participation rates (participants as a proportion of employees in enterprises providing CVT courses) were much less marked and were in fact generally quite high (Fig. 4). In ten countries these rates were over 40%, and the total spread was from 35% in Austria to 63% in Sweden.

In the Netherlands the participation rate (35%) was found for both information events and for job-related measures (“Training using normal tools of work”); the latter also played the biggest part in five other countries (Ireland 95%, Belgium 83% Luxembourg 70%, Portugal 69% and Spain 55%).
enterprises providing courses. In Spain and Portugal the percentage of enterprises providing courses was particularly low, but where enterprises did organise courses nearly half of the employees attended them.

In only three countries (Belgium, Ireland and Luxembourg) did the participation rate rise as enterprise size increased – from 45%, 47% and 52% respectively in small enterprises to 60%, 59% and 52% in large enterprises (Table 4). In five countries (Spain, Austria, Portugal, Finland, Sweden) the figure for small enterprises was lower than for large enterprises but higher than for medium-sized firms. In four countries (Denmark, Germany, Netherlands, Norway) small enterprises even had the highest participation rate.

If we disregard the ‘Other activities’ branch, in eight countries (Belgium, Denmark, Spain, Netherlands, Austria, Finland, Sweden, Norway) the participation rate was highest in ‘Financial intermediation’ (J; Table 5). In Germany the highest participation rate of 42% was found both in ‘Financial intermediation’ and in ‘Real estate, renting and business activities’ (K).

Since in many branches of activity the participation rates were relatively high in all countries, there were only a few countries with striking differences in these rates from one branch to another. In Norway, for example, the participation rate was 98% in ‘Financial intermediation’ (J) and 44% in ‘Manufacturing’ (D).

The lowest participation rates of all (under 30%) were found in Austria and Portugal in ‘Other community, social and personal service activities’ (O; 22% and 23% respectively) and in Germany in ‘Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods’ (G; 29%).

In nine countries the participation rates for men and women were either the same or within 5 percentage points of each other (Fig. 5; for Belgium no data are available).

Only in Norway was the percentage of female employees taking part in in-service CVT courses (73%) more than 5 percentage points higher than that of male employees (43%). In the Netherlands, on the other hand, the percentage was higher for men (47%) than for women (38%).

The CVTS1 results demonstrated for the then EU Member States that generally there was no direct correlation between the percentages of enterprises providing CVT courses, the likelihood that employees attended CVT courses at work, and the intensity of training. This finding is largely confirmed by the results of the second European survey of continuing vocational training, CVTS2. Although Sweden had the second-highest percentage of enterprises providing continuing vocational training courses (83%) and the highest participation rate (63%), when it came to the intensity of training, it was on a par with Belgium in only ninth place, with 31 course hours per participant (Fig. 6). In Spain, however, where only 28% of enterprises organised CVT
courses and the participation rate was 44%, the figure for the duration of training was highest, at 42 course hours per participant.

It is notable that Germany and Austria, which were in the middle of the field with regard to the percentage of enterprises providing CVT courses, had both the lowest participation rates (36% and 35% respectively) and the lowest training intensity (27 and 29 hours per participant respectively). In Denmark, on the other hand, the likelihood of having the benefit of CVT courses at work was very high and went hand-in-hand with a high training intensity: besides the highest percentage of enterprises providing courses (88%) and the second-highest participation rate (55%), Denmark was also found to have the second-highest training intensity (41 course hours per participant).

Just as with the participation rate, no uniform relationship can be found between training intensity and size of enterprise. In six countries the training intensity was highest in large enterprises (Luxembourg 45, Netherlands 42, Norway 40, Portugal 39, Sweden 32 and Austria 31 course hours per participant), while in four it was highest in small companies (Spain 54, Ireland 48, Finland 43 and Belgium 36 course hours per participant). The lowest number of course hours per participant was found mostly in medium-sized enterprises (Table 6).

In seven countries the highest figure for training intensity was found in 'Real estate, renting and business activities' (K; Denmark 60, Luxembourg 53, Norway 51, Finland 49, Germany 40, Belgium 38 and Sweden 36 course hours per participant; Table 7). If we disregard the 'Other activities' branch, the lowest training intensity in six countries was in 'Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods' (G; Sweden 23, Portugal 24, Luxembourg 26, Finland 26, Denmark 30 and Spain 36 course hours per participant). In Belgium the lowest figures, at 29 course hours per participant, were found both in 'Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods' (G) and in 'Manufacturing' (D).

In all countries, except Denmark, Luxembourg and Finland, the differences between men and women in the number of course hours per participant were very small (Fig. 7; for Belgium no data are available).

Only in Denmark was the training intensity for women (55 course hours per participant) significantly higher than for men (31 course hours per participant). In Luxembourg and Finland respectively men had eight and six more course hours than women.

### 1.2% to 3.0% of labour costs invested in CVT courses

Financial expenditure on CVT courses at work per employee and its share in the labour costs of all enterprises are important indicators for assessing the willingness of enterprises to invest in this field.

The total costs of CVT courses in 1999 ranged from 410 PPS per employee in Austria to 1169 PPS in Denmark. These total costs are the sum of direct costs, labour cost of participants and the balance of contributions to national or regional organisations and receipts from national or other funding arrangements.

The direct costs per employee of CVT courses ranged from 242 PPS in Spain to 645 PPS in Denmark, and labour cost of participants ranged from 168 PPS in Austria to 522 PPS in Denmark (Fig. 8).

In terms of total costs per employee, receipts from national or other funding arrangements and contributions to national or regional organisations were of minor importance. In six countries the receipts per employee from national or other funding arrangements exceeded the contributions to national or regional...
organisations, though in Germany and Austria only very slightly. Only in Portugal at 38 PPS and in Spain at 37

PPS per employee was there any appreciable excess of receipts over contributions (Table 8; "Contributions and receipts": enterprises with missing data are excluded; no data for, L, NL, NO).

The costs of CVT courses as a proportion of the labour costs of all enterprises in 1999 ranged from 1.2% in Portugal to 3.0% in Denmark (Table 9). Compared with 1993, the percentages for the then Member States showed sometimes considerable increases, having ranged in the earlier survey from 0.7% in Portugal to 1.8% in the Netherlands.

In enterprises not providing CVT staff skills matched needs

The percentages of enterprises that gave neither courses nor other forms of continuing training in 1999 ranged from 4% in Denmark to 78% in Portugal (Figure 1).

The first European survey of continuing vocational training showed that not all enterprises which do not provide such training take this decision as a matter of principle. Roughly one in four enterprises in the EU that training in the previous two years was much lower, and was only remarkable in the Netherlands (19%), Norway (14%), Sweden (10%) and Denmark (9%). (For Austria and Belgium there are no reliable data.)

On the other hand, enterprises not providing CVT in 1999 especially in Luxembourg (92%), Norway (51%), Spain and the Netherlands (42% in each case), and Portugal and Sweden (41% in each case) thought they gave no continuing training in 1993 had given such training in the previous two years. (For Austria, Belgium and Denmark there are no reliable data.)
"Other" forms of continuing vocational training at work were planned, for example, by 92% of the enterprises not providing CVT in Luxembourg, by 50% in Portugal and by 45% in Spain. In a further three countries this figure stood at 34%, while in Ireland and Germany (12% and 11% respectively) it was by comparison very low. (For Austria, Belgium and Denmark there are no reliable data.)

The fact that the existing skills of the persons employed already met the needs of the enterprise was the main reason in 1999 why enterprises in the EU Member States and Norway did not provide continuing vocational training (Table 10). The percentage of enterprises giving this response ranged from 61% in Norway to 89% in Ireland.

Many of the enterprises not providing CVT also mentioned the possibility of recruiting people with the required skills via the job market; this applied above all in Ireland (77%) and Denmark (74%), whereas the job market was of relatively little importance in, for example, Austria (9%).

Other important reasons for not providing continuing vocational training were the ability to obtain suitable staff through initial vocational training (particularly in Denmark, 58%, and in Belgium, 40%) and employee workloads, above all in Denmark (32%), in Austria and Germany (28% in each case), and in Finland and Luxembourg (27% in each case).

The supposed costs were mentioned above all by enterprises not providing CVT in Germany (28%) and Sweden (24%). A notable feature was the relatively high percentage of enterprises in Denmark (38%) who reported that they did not provide CVT because it was too difficult for them to gauge their needs. In Belgium 24% of enterprises replied that they had only recently been arranging CVT measures.

**ESSENTIAL INFORMATION — METHODOLOGICAL NOTES**

Abbreviations: B – Belgium; DK – Denmark; D – Germany; E – Spain; IRL – Ireland; L – Luxembourg; NL – Netherlands; A – Austria; P – Portugal; FIN – Finland; S – Sweden; NO – Norway

**In-service continuing vocational training:** training measures or activities financed wholly or partly by enterprises for employees with employment contracts. For the purposes of this survey, "employees" means the total number of persons employed, excluding apprentices and trainees.

**Continuing vocational training courses:** events designed solely for the purpose of providing continuing vocational training that take place away from the place of work, e.g. in a classroom or training centre, at which a group of people receive instruction from teachers/tutors/lecturers for a period of time specified in advance by those organising the course.

**Internally managed courses:** courses designed and managed by the enterprise itself, even if held at a location away from the enterprise.

**Externally managed courses:** courses designed and managed by an organisation that is not part of the enterprise, even if they are held in the enterprise.

**Other forms of in-service continuing vocational training:** planned periods of training, instruction or practical experience, using the normal tools of work, either at the immediate place of work or in the work situation, planned learning through job rotation, exchanges or secondments, participation in learning or quality-improvement groups, self-learning, information events: conferences, workshops, lectures and seminars.

**Course participants:** a course participant is a person who took part in one or more CVT courses at some time during 1999. Each person was counted once only, irrespective of the number of times he or she participated on a CVT course.

**Hours spent on CVT courses:** the total number of hours of CVT relates to the total paid working time that all participants spent in CVT courses during 1999.


**NACE D** Manufacturing

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

**NACE J** Financial intermediation

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

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

Other (C, E, F, H, I) Mining and quarrying; Electricity, gas, water; Construction; Hotels and restaurants; Transport, communication

**PPS (purchasing-power standards):** costs are indicated in PPS to allow for price differences between countries. The PPS conversion factors indicate how many national currency units the same quantity of goods and services would cost in individual countries.
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