

Costs and benefits of in-company vocational training

► In-company vocational education and training activities are not an end in themselves. In fact, they should bring about concrete benefits for the company. Vocational training can therefore be seen as an investment which has to yield a worthwhile return on costs in the long term. In a study by the Federal Institute for Vocational Education and Training (BIBB), a representative survey was conducted of some 2,500 companies involved in vocational training in the year 2001, in order to analyse the costs and benefits of training. It found that companies which directly provide in-company vocational training reap benefits on a substantial scale.



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Central results of the study

1. TRAINING COSTS

- *Cost breakdown:* Average annual costs incurred for in-house vocational training for all companies across Germany per trainee are as follows: staff costs for trainees (wages, social security contributions, mandatory and voluntary additional benefits) total € 8,269; staff costs for all staff involved in training (full- and part-time trainers) total € 5,893; the set-up and material costs of training total € 545.00. Miscellaneous costs (e.g. for training and teaching aids, examination fees, external courses, administration) total € 1,728.
- *Gross and net costs (full costs):* Taking all above costs into account (sum of the full costs), the total annual gross costs come to € 16,435 per trainee. Whilst undergoing training in-house, trainees are generally involved in productive activity, i.e. they are fulfilling tasks which are of economic benefit to the company. After deducting these average training returns of € 7,730, the net costs total € 8,705.
- *Cost differentials:* There are considerable differences between western and eastern Germany in terms of the level of costs (see Figure 1). The gross costs (full costs) are 29% lower in the east than in the west, and the net costs are 32% lower. A main reason for this is the varying level of both trainees' and general wages and salaries.

There are also considerable differences between *training sectors*: The highest gross costs are incurred in trade and industry, closely followed by the liberal professions and the civil service. Conversely, the gross costs are much lower in farming and the manual professions. The returns from training are similarly varied, and this alters the picture in terms of the net costs; the civil service profits least in this respect – the returns from the productive activity of its trainees are relatively small. The

lowest net costs by far were seen in agriculture as this sector achieves the second highest returns.

- **Total costs:** The average gross and net costs (full costs) can be used to calculate the total costs for in-house vocational training across the whole economy in 2000. The gross costs for all trainees in the whole of Germany are therefore € 27.68 billion, of which western Germany's share is € 23.31 billion and eastern Germany's € 4.37 billion. Germany's net costs total € 14.66 billion – € 12.43 billion in the west and € 2.23 billion in the east.
- **Cost trend:** The trend shown by these costs over the last ten years can only be demonstrated for the training sectors industry and trade and the manual professions in western Germany, as these were the only sectors included in the BIBB's prior study from 1991. Between 1991 and 2000, the gross costs (full costs) rose by 17% in trade and industry and by 20% in the manual professions (see Figure 2). There was a slight reduction of 1% of net costs which is due to a strong increase of 49% in returns. Conversely, the net costs in the manual professions increased by 27% due to the fact that the increase in returns was relatively low (13%).

In both training sectors, the increase in costs for training staff was very low and considerably lower than the trend observed for wages and salaries. This indicates a more economical use of in-house trainers. In trade and industry, the high returns indicate a clear shift in the conception of training and the productive use of trainees: Until a few years ago, training in larger industrial companies was predominantly done in the apprentices' workshop. More recently, however, training has moved back to the work place, meaning that the trainees are now more heavily involved in the internal work process.

- **Gross and net costs (direct costs):** Not all costs included in the full cost calculation are additional costs incurred by training. In particular, staff costs for employees who are periodically involved in training alongside their actual tasks (part-time trainers) exist whether training is done or not. If such cost factors which are not training-dependent (direct cost calculation) are omitted, significantly lower costs result: in the direct cost calculation, the gross costs are € 10,178 and the net costs are € 2,448. The direct costs express the companies' additional cost burden caused by training, whilst the full costs provide information about the entire consumption of resources for training.

Figure 1 **Gross costs, returns and net costs (full costs) of in-house vocational training in 2000 (total) in western and eastern Germany by training sector** Average sums per trainee per year in Euro

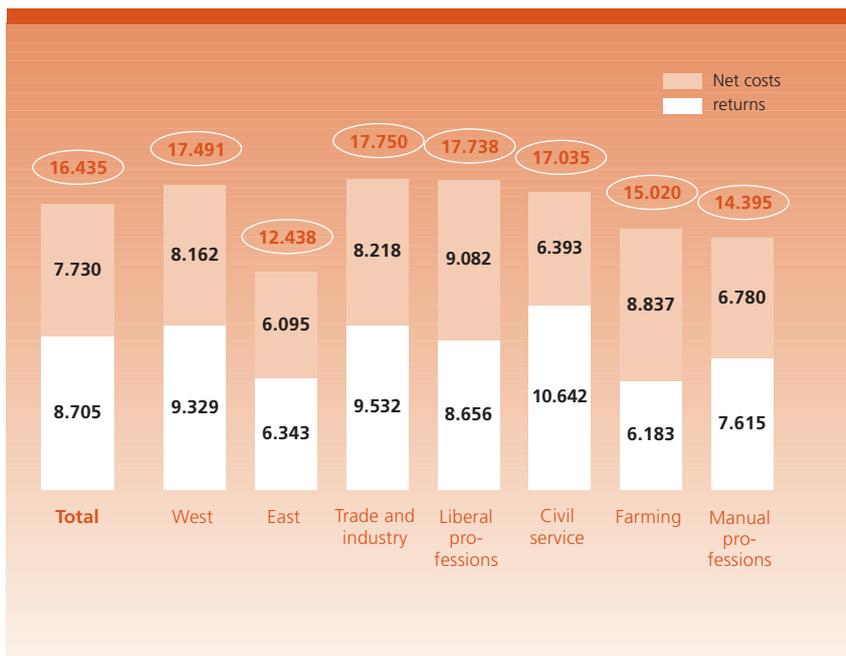


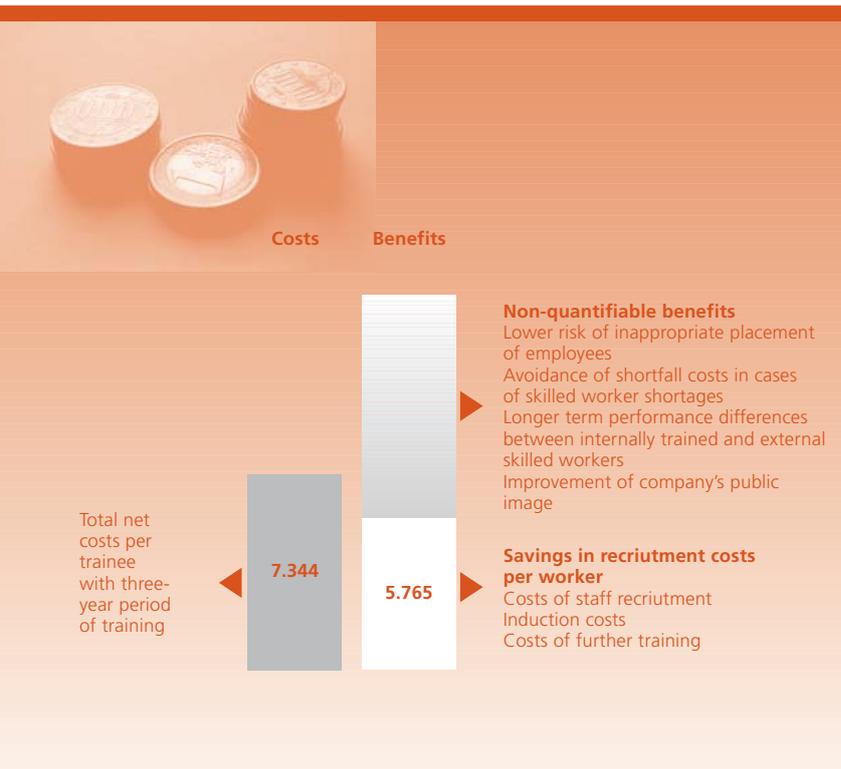
Figure 2 **Gross costs, returns and net costs (full costs) of in-house vocational training in trade and industry and the manual professions in western Germany from 1991 to 2000** Average sums per trainee per year in Euro



2. THE BENEFITS OF TRAINING

The provision of vocational training is linked to many advantages which companies that offer training have over those that do not. One significant advantage consists of *savings on costs* which would be incurred through the *use of external skilled workers* if no training is provided (see Figure 3). This benefit can be estimated and expressed in monetary terms.

Figure 2 **Net costs (direct costs) and benefits on in-house vocational training in 2000**
Average sums in Euro



The *savings on recruitment costs* consist of the following elements:

- Companies that provide training save on *staff recruitment costs* (advertising costs, staff to carry out interviews and select applicants). The average value of these savings across all companies was € 1,429 per new skilled worker.
- Above all, companies that provide training save on *induction costs* for staff recruited via the job market. The average cost here is € 3,927. Additionally, *savings of € 722* are made on *further training* for the new staff.

It should also be considered that, for a certain period of time, some companies pay skilled workers recruited via the job market wages or salaries which deviate from those of employees trained in their own company. Lower wages for external staff are more common than higher ones. External workers receive an average of € 313 per year less. If this advantage of employing external skilled workers is offset

against the savings resulting from providing training in-house discussed above, then the result is an average total of € 5,765 in savings on recruitment costs for each skilled worker trained

in-house and then taken on permanently. However, it must also be added that there are considerable differences between individual companies in the level of the savings which can be made on recruitment costs.

In addition to the training benefits expressed in monetary terms, there are *other important benefits* of training which cannot be quantified precisely:

- The risk of *inappropriate placement of employees and fluctuation* are considerably lower for skilled workers trained internally than for people recruited via the job market.
- Particularly significant is the avoidance of *shortfall costs* which arise when the demand for skilled workers cannot be met, resulting for instance in production bottlenecks and rejection of contracts.
- Even after induction, there are often *performance differences* between internally trained skilled workers and those recruited via the job market. Internally trained workers have a better understanding of the company's working processes and its production and service programme, for instance.
- Finally, training can play an important part in *improving the company's public image*, particularly amongst customers and suppliers.

A comparison of the costs and benefits of training should include the net costs after the direct cost calculation. This examination shows that the average full costs of € 7,344 incurred during a three year training period are offset by a considerable, quantifiable benefit of € 5,765. If the beneficial aspects which cannot be measured in monetary terms are also taken into account, it becomes clear that recruiting skilled workers via the job market is on the whole more expensive than training new staff in-house.

Literature

BEICHT, U.; WALDEN, G.; HERGET, H.:
Costs and Benefits of In-Company Vocational Education and Training in Germany. Federal Institute for Vocational Training (BIBB), Bielefeld 2004