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ABSTRACT

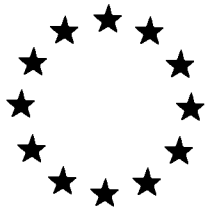
This report summarizes six case studies on different aspects of the issue of evaluating investing in continuing vocational training (CVT). Part 1 (chapters 1-2) contains "Conceptual Introduction" (Jean-Marie Luttringer), which explores practical problems in considering training expenses as an investment, and "Methodological Introduction" (Alan Barrett), which discusses the merits of using qualitative and quantitative research methods in evaluating CVT investments. Part 2 (chapters 3-8) describes and analyzes continuing training schemes in six European Member States: "The Evaluation of CVT in Enterprises in Styria in Austria" (Stefan Lorenzoni, Dieter Mandl) investigates whether certain goals of CVT were achieved; "The Importance of CVT to Enterprises: A Discussion of the Agricultural Foodstuffs Sector in Denmark" (John Houman Sorenson) seeks to understand why CVT is not being used; "Accounting for Enterprise Investment in CVT in France" (J-M Luttringer, N. Pasco) discusses difficulties associated with evaluating CVT investments; "Innovative Models for Financing CVT in Germany" (Uwe Grunewald, Dick Moraal) studies four innovative models of CVT provision; "Measuring the Impact of CVT in Irish Companies" (Alan Barrett, Philip O'Connell) explores whether training and productivity growth are positively related across a sample of firms. "CVT Activity within the Packaging Sector in Italy" (Francesco Garibaldo) provides insights into how CVT can be used to cope with challenges faced by a sector. Part 3 contains two chapters: "Methodological Discussion, Conclusions, and Further Work" (Alan Barrett), which reviews each report individually before drawing general conclusions regarding methodology and "Policy Discussion, Conclusions, and Further Work" (Jean-Marie Luttringer), which examines seven problems in the assessment of training investment. Appendixes provide background to CVT in the six countries. (YLB)

panorama

Approaches and Obstacles to the Evaluation of Investment in Continuing Vocational Training: Discussion and Case Studies from Six Member States of the European Union

Discussion paper/Case studies

CEDEFOP panorama



Approaches and Obstacles to the Evaluation of Investment in Continuing Vocational Training: Discussion and Case Studies from Six Member States of the European Union

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Foreword

Learning and the development of competences has become an encompassing process necessary throughout life. However, broad agreement on the necessity of developing a knowledge-based society through the ongoing acquisition of competences is affected by the different conceptions of the nature of training environments and arrangements. The Member States of the European Union are characterised by a variety of approaches to providing learning and training infrastructures: while some place the major responsibility for the setting of training provisions on government; others strengthen the role of enterprises, social partners or private households. All have in common that the promotion of training, and within that lifelong learning, faces financial scarcity due to restricted public budgets, increased cost-consciousness of enterprises and limited financial resources of private households. The political debate about the role of the different protagonists involved in the process of training has been gaining importance; it is directly linked to the question of who is expected to bear the cost of training and to reap the benefits of improved knowledge and skills.

In addition to forming a basis for policy development, the analysis of training cost, both flows and levels, can be a useful tool for understanding existing policy approaches to the creation and development of training infrastructures in different socio-economic contexts.

To sum up, there are three main reasons for linking tangible and intangible inputs (i.e. costs) with attributable outcomes (i.e. returns):

- Input/cost analysis does not give information on the quality and performance of training arrangements. It must be complemented by the assessment of returns in order to discern successful practice.
- Assessing the returns on 'investment'[1] in training is a pre-condition for establishing schemes promoting the equal treatment of capital investment and investment in human resources.
- The evaluation of investment in human resources and its returns in relation to the actors involved is useful to develop a rationale for defining their role and relative contributions to the process of training provision.

In previous years, CEDEFOP produced a series of monographs[2] which attempted to analyse and compare the flows of training funding in the Member States in order to 'give both the Community and the Member States basic awareness of the financing mechanisms and flows of funds in the area of continuing training'. The monographs led to the conclusion[3] that 'the formulation of comparative information on continuing vocational training in each State of the

1 In accounting terms the cost of training is still regarded as periodical expense, not as investment.

2 CEDEFOP is currently preparing new financing VET 'portraits' for each Member State of the EU, these will be published during 1998 and 1999.

3 CEDEFOP panorama: Financing continuing training: what are the lessons from international comparison - synthesis report, Berlin 1995.

Community is necessary' and considers the evaluation of benefits as an area for carrying out comparative work.

This report is a preliminary step in CEDEFOP's work to contribute to research development in the field of analysing expenditure on CVT within enterprises. For this reason, continuing training schemes in six European Member States (DK, D, F, IRL, I, A), chosen for their heterogeneous training policy backgrounds, were selected for closer description and analysis. At the same time it was important to highlight the complexity of the task, given the lack of standardised concepts for the specification and the evaluation of cost and return categories, for two principal reasons.

- Firstly, the identification of costs is a difficult task. While a number of training cost categories may be defined directly, the attribution of indirect costs appears much less obvious. Many of the costs related to human resource development are of an intangible nature, and their quantification is problematic. In addition, the definition of costs is even more complex where learning becomes less and less formal, being a part of work or leisure.

- The second obstacle relates to the definition and quantifying of training outcomes, whether direct or indirect. In addition, the training causality of effects may not be obvious (it is often supposed, but has to be proved). An assumed outcome (intended or non-intended) could depend on more than training as an input.

The six surveys show six different approaches. While they may be too different to develop the original concept of a cost-benefit analysis, they do indicate the diversity of backgrounds which exist and, therefore, the challenge that this type of work presents. Different approaches and priorities regarding cost-benefit analysis appear in very different contexts. Furthermore, while the economic view may be restricted to clearly identifiable indicators, it leads to a definite comparison of inputs and outcomes and a clear quantification of benefits. A more comprehensive analysis of a system of competence development, on the other hand, may meet difficulties in delimiting costs and benefits but can be used to identify the positive and negative output dimensions of training schemes and to evaluate the policy approach for ensuring the provision of training. In this sense, the present project can be seen as a basis for further work promoting the notion of cost-benefit evaluation within different disciplines. The results lay the ground for a number of further questions which should be faced by the development of evaluation tools for funding policy in continuing vocational training.

As a guide, this publication has been divided into three parts. The first part introduces some of the conceptual and methodological difficulties with evaluating CVT investments. The second part presents summaries of the individual studies, and the third part draws some methodological and policy conclusions and makes recommendations for future work. The full country-specific studies are not reproduced here, but have been edited by Sarah Elson-Rogers at CEDEFOP. Given the differences in the nature of the studies, a comprehensive synthesis has also not been undertaken, instead, two of the project participants (Alan Barrett at the Economic and Social Research Institute in Ireland, and Jean-Marie Luttringer at CIRCE Droit et Politiques de Formation in France) prepared the introductory and concluding sections. As has been

mentioned, this work represents a preliminary step in CEDEFOP's work in this area which will be further targeted and developed in the near future.

Alexander Kohler/Sarah Elson-Rogers
Project Co-ordinators

Stavros Stavrou
Deputy Director, CEDEFOP

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Chapter One

Conceptual Introduction

(Jean-Marie Luttringer - CIRCÉ Droit et Politiques de Formation)

1. Introduction

1.1 *Conceptual discussion*

Applying the concept of investment to the field of training is not an easy task. Assessing this investment is even more difficult. This difficulty, to a large extent, is due to the concept and practice differing according to the context in which it is used. Thus when training professionals refer to investment, their intention is to clarify that their field of activity is a rational economic decision and that it contributes to the creation of wealth as much as to the spreading of knowledge and the personal development of individuals. At the same time, there are only a few examples where a strict analysis of the concept of investment related to training activities has been undertaken. Viewed in this way, the concept of training as an investment is a myth which might lead to illusive practices; however, it is probably a useful myth with prospects.

In macro-economic theory, the concept of investment is well-defined where investment means temporarily diverting resources (time and labour) away from production towards an activity which will form the basis for producing more, or creating a better quality product at or for some time in the future. Applying this definition to the field of training creates a number of problems.

From a micro-economic perspective, investment is the creation of an 'asset'. The notion of investment covers all activities which aim to transform a sum of money into one or several assets to be used by the company on a long-term basis. Though this principle is clear when considering tangible assets, it is not so easy when dealing with intangible elements. For example, research and development expenses must correspond to work that stands a 'reasonable chance of success' in order to be considered as an investment.

Therefore, from both the micro- and macro-economic perspective, the concept of investment is directly linked to production and durability; that is to say it is an asset to the enterprise.

To some extent, the economic logic underpinning the definition of investment can be applied to training without it qualifying as an investment activity. Training is an 'output diversion', i.e. it is an activity which is not directed to consumption via production. For example, when training takes place during working hours, the employees involved are not producing; yet this is not enough to define the training as an investment. Moreover, when employees are trained outside of working hours, they are already out of the production process; how would this be defined as

an investment? Thus, training can be classified as a 'diversion' but not necessarily as an investment.

As with any expenditure, staff training results from arbitrations carried out by the executives of an organisation. Choosing to spend on training is usually considered from a medium- to long-term perspective. This means arbitrating between expenditure which could yield immediate satisfaction (whoever benefits from it: shareholders or staff) and the durability of the organisation through the maintenance or development of human resources.

Therefore, only a general definition of investment can be transposed to training. While the training expenses are 'real', the returns on this expenditure as an investment are uncertain and unproved, making the definition of a resulting asset problematic. However, this is also the case with other types of investment expenditure, for example, corporate brand names, research and development assets etc.

1.2 *Practical problems in considering training expenses as an investment*

Considering training expenditure as an investment implies a number of different problems when referring to public or private expenditure.

1.2(i) Problems from the public perspective

- *How to measure the returns on investment, i.e. what is the outcome from each ECU invested?*
- *How to determine the obsolescence period of the investment? How long does it take to recover the amount invested in training?*
- *How to choose the participants in training?*

The answer to the first two questions posed would enable the calculation of the value of each investment and also facilitate decisions related to:

- *the best possible investment portfolio in training;*
- *the arbitration between training and other investments.*

Regarding public investment, the most significant problem to solve, in order to consider training expenses as an investment, is the technical problem of measuring the training output. This is a problem shared by any other type of investment in human resources, for example, welfare expenses.

1.2(ii) Problems from the private perspective

From the private perspective, in addition to the above, two further problems arise:

- *Who is financing?*
- *To whom does the investment belong?*

From the perspective of a private household, the answer is clear - when they finance, the investment belongs to them.

From the perspective of the enterprise, the issue is not so simple. There is a problem with appropriating the benefits, whether positive or negative, as they cannot be separated from the investment itself. This is in addition to the logistical problem of measuring the investment results making it difficult to consider enterprise training expenditure as an investment.

An employer may pay his employees on the basis of their contribution to the enterprise (time spent on a certain activity, reaching a certain target, etc.) or on the basis of the results obtained (share of the capital), either the global or divisional results. If the training undertaken within the enterprise leads to an increase of employee output (productivity) in an equal or higher proportion to the cost of the training, then the training has had a positive effect. The question is how to appropriate these training outcomes. If the payment system, as is usual, is linked to work time rather than results, then the training benefits are reaped by the employer. Only if the payment system is somehow results related are the benefits shared.

The appropriation of the benefits affects the incentives for the employer and the employee to invest. If the employer reaps all the benefits, then only they have an incentive to spend on training. If the benefits are shared, then there is a joint employer/employee incentive to spend.

In view of these elements, three problems need to be solved before training expenses can be viewed as an investment from the point of view of enterprises:

- *Measuring the output that can be attributed to training and its obsolescence period;*
- *Determining who should appropriate the output;*
- *Determining who should make the investment.*

1.2(iii) The employer meets the training costs

In reality, an employer reaping all of the benefits that training can produce is a hypothetical situation, as it assumes that the employee does not have the freedom to change their employment. If this were the case, only the technical problem of assessing the investment in training would exist. This could be solved through setting accountancy agreements. For example, the cost of the training could be measured fairly easily and the different types of training could be classified according to their amortisation periods. The training expenses

could be subtracted from the trading account and recorded as an intangible asset on the balance sheet.

As the appropriation is usually shared between employer and employee, this is not possible. The employee would always have the option to utilise the skills he/she has acquired through training outside of the company which has paid for it. Given this, two further questions need to be addressed in order to record the training expenses on the balance sheet:

- *The way the employee can appropriate a part of the training outcome*
- *How to guarantee that the period necessary to depreciate the training investment corresponds to the period during which the employee remains within the company.*

The easiest situation, regarding the first point, is when the employee is awarded some of the training benefits through a profit sharing arrangement, although this would have to be deducted from the overall value of the training investment from the balance sheet. The second issue of depreciation time and time within the company could be addressed through negotiations and agreements.

1.2(iv) Employees and employers sharing the costs of investment

This viewpoint is a complex one. Some kind of 'ownership deed' would be necessary in order to record a training investment made by an employee on the balance sheet of the company for which they work. Without such an agreement, the assets side of the balance sheet would outweigh the liabilities side, where investments are treated as separate accounting items. Another situation could occur, where an investment recorded on the balance sheet would not correspond to any operations made by the enterprise.

2. Summary points

While training expenses are, on a pragmatic level, viewed frequently from an investment perspective, this status is not a formal one. In practice, viewing training expenditure as an investment implies that it is somehow recorded on an organisation's balance sheet. In reality, as the above discussion indicates, this is a difficult task and has major consequences both for accounting practice and on the concept of an 'enterprise'. This does not alter the fact, however, that the training undertaken by an enterprise is not considered as part of its value. Assets which are being created on the balance sheet do not currently relate to any investment in training.

The reports undertaken below serve to highlight, in more detail, some nationally based cases where a number of obstacles are apparent in answering even the fundamental question as to what the 'returns' to training actually are. Others discuss and outline certain approaches to some of the problems in evaluating the training activity. As was mentioned at the beginning of this introduction, the concept of training relies greatly on the context in which it is undertaken. The different nature of the studies undertaken for this project clearly indicates this. The final

section ('Policy Discussion and Conclusions') of this publication will discuss a number of the issues which have been outlined above in relation to the outcomes of the individual reports. The following part of this introduction will outline the methodological perspective concerning the evaluation of training in terms of the different methodological techniques.

Chapter Two

Methodological Introduction

(Alan Barrett - Economic and Social Research Institute)

The purpose of this project has been to explore how investments in Continuing Vocational Training (CVT) might be evaluated. Such evaluations present a multitude of methodological issues and difficulties and so it is appropriate that we try to stand back from the country-specific studies and reflect on these issues. In the first part of this Methodological Introduction, we discuss the relative merits of using qualitative and quantitative research methods in evaluating CVT investments. It will be seen from the discussion that this is an area in which both approaches can play complementary roles. In the second part of this introduction we briefly discuss examples of other work that have attempted to evaluate investments in CVT. This will provide additional context for the country-specific studies. The final section (Methodological Discussion, Conclusions and Further Work) will discuss the methodologies which are used in the country-specific studies and outline what might be undertaken in the future to improve research in this area.

1. Qualitative and quantitative methods

The intention here is not to present a detailed discussion of the relative merits of qualitative and quantitative research methods generally, but rather to discuss the usefulness of both approaches in the current context of CVT investment evaluation. As such, we will begin by outlining what we are describing as 'qualitative' and 'quantitative' methods, again focusing on CVT evaluation.

By 'qualitative' research, we are referring to work which concentrates on gathering information on a small number of enterprises; the information should normally be deep and rich in nature and is typically gathered by intensive interviews. While much of the information gathered will be quantitative in nature, qualitative research also allows for more descriptive and subjective information to be included. The objective of such work is to generate as deep an understanding as possible of the enterprises in question. While the information gathered will tell the consumers of the research much about the enterprises studied, the small sample nature of the work limits the extent to which any lessons learned can be generalised to other enterprises.

By 'quantitative' research, we are referring to work which aims to gather a more limited amount of information about a larger number of enterprises. The information is normally gathered by short- to medium-length questionnaires, often administered by post or by an interviewer who will not be involved in the data analysis or write-up. Due to the nature of the information gathering exercise, the questions asked normally require answers which are clear-cut and objective. The end result of the data gathering exercise will be a dataset with a limited amount of information on a large number of firms. The usefulness of the data is that the output of any quantitative analysis is more reliably generalised than the output of 'qualitative'

research, based as it is on a larger number of enterprises. In addition, through the use of standard statistical techniques, it is possible to say how statistically reliable the results are. However, the 'quantitative' output is limited relative to the 'qualitative' output in that no information may be available on some of the mechanisms underlying certain observed statistical relationships or on some variables of importance which do not lend themselves to ready quantification.

As we have loosely defined qualitative research as involving a small number of companies with a large amount of information and quantitative research as involving a large number of companies and a limited amount of information, it can be said that the two forms of research lie along a spectrum. A dis-continuity between the two does arise to the extent that qualitative research incorporates a greater readiness to include more subjective information. However, we would argue that the spectrum view is particularly useful in the context of CVT evaluation; we will now develop this point more fully.

At the outset it was stated that the evaluation of CVT investments presents a multitude of methodological difficulties. It is precisely for this reason that qualitative and quantitative research can play complementary roles. We will point out how qualitative research can play a role as an input in quantitative research and vice versa. We will also discuss the independent roles of both.

As with many research issues, the use of qualitative research can play a vital initial role in identifying the issues of importance. In the case of CVT investment evaluation, this identification role can work in the following ways. As training is a diverse activity, ranging from formal lecture courses to informal assistance being given to employees, qualitative research can play a crucial role in identifying which forms of training are being used and hence which forms should be evaluated. In the absence of such qualitative research, quantitative researchers may simply omit elements of training from their questionnaire design and analysis.

Without an in-depth study of individual firms, it is also possible that a broader quantitative study could miss vital elements of enterprise strategies which interact with company training. For example, a qualitative study may point out that training activities are part of a process of workplace re-organisation in which greater decentralisation of decision-making is a crucial part. A quantitative researcher who is unaware of such workplace developments may again exclude questions relating to such issues from a questionnaire.

In evaluating CVT investment, a precise estimate of the costs of training is crucial. In order to arrive at such an estimate it is necessary to have a full understanding of how training is delivered and what the cost implications are. While the direct costs of training pose no difficulties for quantitative researchers, the identification by qualitative research of indirect costs, such as workplace disruption, allows quantitative researchers to incorporate such issues into their research design.

Qualitative research is perhaps even more important when it comes to identifying the benefits of training. While it will be generally understood that training plays a role in raising

productivity and the wages of trainees, there are a range of other training benefits which may require qualitative research in order to be: (a) identified, and (b) assessed, when the benefits in question are to a large extent unquantifiable. With respect to this latter issue, if a benefit, or indeed a cost, cannot be quantified it will be omitted from quantitative analysis. However, if the cost or benefit is real then its omission weakens the value of the quantitative analysis. Generally, it is only through qualitative analysis that an awareness of such 'unquantifiables' can be created, whereby a truly comprehensive understanding of the costs and benefits of training can be produced. Using as an example, increased job satisfaction which may result from training; this is clearly unquantifiable in the strict sense. We cannot compare one person's level of satisfaction with another; we can ask questions about levels of satisfaction and can create a variety of scales and indices, but we cannot hope to measure satisfaction in the same way that we can measure height, weight or possibly even intelligence. For all these reasons, quantitative analysis will typically omit considerations of satisfaction. In qualitative research, however, through the use of observation and in-depth interview, it will be possible to get some sense of the extent to which job satisfaction is enhanced through training and how it ranks relative to other benefits.

The discussion, so far, has focused on qualitative research, how it feeds into quantitative research and its independent contribution. It is also important to look at the role of quantitative research in the evaluation of CVT investments. As discussed above, the great advantage of quantitative research is the extent to which its results are generalisable relative to qualitative research. Hence, when statistical relationships are found between training inputs and training outputs, we generally know that the relationship applies across firms and is not merely peculiar to a particular firm. From a public policy perspective this is a particularly important feature; governments are typically interested in enterprises in general and how policies will effect them. They are less interested in the specifics of particular plants as policy is rarely aimed at these.

While the discussion of the previous paragraph outlines the usefulness of quantitative research independent of any feedback to qualitative research, such a feedback can arise. Quantitative analysis often produces statistical results which are not readily explainable. For example, a quantitative study might find that a certain type of training raises productivity whereas another type does not. The quantitative researcher can speculate as to why this finding might have arisen, but ultimately it may require the use of qualitative research to study an enterprise again and to work out what the mechanism is lying behind the statistical observation. It may be that different outcomes from different types of training are related to differences in input quality or to differences in the ways employees are encouraged to implement the results of their training. Whatever it may be, it requires qualitative research to answer the question, so in this way, quantitative research can act as an input into qualitative research.

To conclude this section, we can say that both qualitative and quantitative research methods can play important roles in generating insights into the link between training investment and training benefits. These roles can be independent or they can be input-roles. Either way, it is clear that qualitative and quantitative methods should be used in a complementary fashion in order to derive the highest value from research in this area.

2. Existing studies

In this part, we will briefly discuss one quantitative study and one qualitative study on the evaluation of CVT investments. Our purpose here is not to provide any type of literature review; instead, what we want to do is to illustrate some of the points made so far within this introduction.

2.1 *A quantitative study*

The quantitative study which we will draw on is that of Holzer et al (1993). The purpose of this study was to assess if training provided by firms had a positive effect on productivity. The authors generated their dataset by surveying companies engaged in manufacturing which had applied for grants to undertake training. They collected information on training inputs and other characteristics of about 200 firms, including such information as number of employees, payroll and workplace practices. They also collected information on variables which they hoped measured productivity.

In many ways, their measures of training and productivity capture the limitations of quantitative analysis. They measure training by the number of hours of training per employee. Clearly, such a measure misses many dimensions of the training input such as quality. Similarly, their measure of productivity is the "scrappage rate", i.e. the proportion of goods produced that have to be discarded due to defects. As their analysis looks for a statistical link between hours of training per employee and the scrappage rate, they are analysing a very limited dimension of the training input/output relationship. This is not a criticism of the manner in which the study was undertaken; it is merely an illustration of the limitations of quantitative work, even when it is done well.

Having said all that, the study also demonstrates the advantage of quantitative research; evidence is produced that training has a positive impact on productivity (as defined in the analysis) across a large sample of firms. Qualitative research may have shown such a relationship across a richer range of training inputs and outputs, but we would not know if the relationships were specific to the enterprises being studied. It could be said that the Holzer et al result is also specific to the enterprises they studied. However, it is the case that larger samples, if appropriately selected, produce a higher probability of representativeness; in addition, the statistical work includes measures of the statistical reliability of the results, something not included in qualitative studies.

2.2 *A qualitative study*

The qualitative study which we will use to illustrate the strengths and weaknesses of such an approach is that of Mason and van Ark (1994). The purpose of this study was to explore the reasons for productivity differences between engineering plants in Britain and the Netherlands. Based on Production Census data, it had been estimated that productivity was 30 percent higher in Dutch plants than in British plants, and so a detailed qualitative study was undertaken to see

why this was the case. This provides an example of quantitative research producing a result which requires a qualitative approach to produce an explanation.

The approach adopted was to visit twelve plants in Britain and nine in the Netherlands. A half day was spent in each plant during which time managers and supervisors were interviewed and some time was spent on the shopfloor. The contrast with the approach in the Holzer et al piece is already clear; the level of detail collected on each firm was much greater in the Mason and van Ark work, and so the detail they provide in the write-up is a lot deeper also. However, as they looked at a small number of plants and in a specific sector, a question mark remains over what their work tells us about other firms and other sectors.

The observations presented by Mason and van Ark provide an insight into the possible advantage of qualitative research. In discussing the reasons for the observed productivity differences, they were able to identify factors such as older equipment in the British enterprises. A more subtle point which they uncovered was that British managers had less assistance from highly qualified technical staff in assessing the need for introducing new technology and in installing new technology. They were also able to point out that the Dutch vocational training system was such that employees had higher levels of vocational training when hired relative to their British counterparts. This allowed Dutch in-company training to focus on raising employee skill levels further; in contrast, the British companies had to provide more basic training.

This detailed analysis of the differences in productivity between engineering plants in Britain and the Netherlands could not have been produced without the type of in-depth observation used by qualitative researchers. However, as noted above, a question remains about whether the insights can be generalised. In addition, the work as it stands tells us little about the relative impact on productivity of the various factors identified. Hence, the need for quantitative research arises again, in particular, the need to explore the issues raised by the qualitative approach.

3. Introducing the methodologies of the reports

In this section, the methodologies employed in the studies presented below, are introduced. It will be seen that both quantitative and qualitative techniques have been employed; in addition, some of the studies have included further discussion on the difficulties of assessing investments in CVT. From the earlier discussion, it is clear that the use of a range of approaches has the potential to yield interesting results and also useful insights into how best to conduct research in this area. We postpone to a later section (Methodological Discussion and Conclusions) a discussion of the extent to which the studies combine to achieve this potential.

The methodologies used in the individual reports are briefly outlined below, beginning with the studies which used qualitative approaches, namely, Austria, Denmark and Italy.

3.1 *Austria*

The aim of the Austrian study was not to produce exact estimates of CVT investment benefits. Instead, the more modest aim was set at investigating whether or not certain goals of CVT were achieved. In order to do this, interviews were conducted with thirteen firms in which they were asked about their training activities. In the context of being asked about whether or not the training goals had been achieved, the firms were also asked for reasons as to why the goals were (or were not) achieved. The thirteen firms were chosen so that small, medium and large firms were included. In the small- and medium-sized groups, different firms were selected according to whether there was a high or low degree of technical innovation and hence, a high or low motivation to provide CVT.

3.2 *Denmark*

The Danish study does not attempt to evaluate CVT investments. Instead, it seeks to understand why CVT is generally not being used in a particular sector of the Danish economy, namely, the agricultural foodstuffs, seeds and fertilisers sector. The lack of CVT could be because of a lack of information as to the benefits of CVT or because employers and employees correctly assess that CVT would not produce a positive return. In order to investigate this, interviews were conducted with managers, foremen, shop stewards and workers in three corporations, covering a variety of tasks. The possible usefulness of this approach for the current study is that it may provide an insight into the benefits of CVT investments as perceived by employers and employees.

3.3 *Italy*

Like the Danish study, this study does not attempt to evaluate CVT investment. Its aim is to provide insights into how CVT can be used to assist in coping with the challenges faced by a particular sector. The potential value of the study lies in the extent to which it can identify possible mechanisms through which CVT can produce benefits. The sector studied is the packaging machinery industry in the Emilia Romagna region. A total of 18 enterprises were studied. Interviews were conducted with the people in charge of training and quality; information was sought on training objectives and the benefits of training, including its effects on product quality and on the careers of employees.

3.4 *Ireland*

In contrast to the three studies just mentioned, the Irish study is quantitative in nature. The aim of the research is to explore, using statistical techniques, whether there is a positive relationship between training and productivity growth across a sample of firms. The researchers had available to them a dataset with information on the training practices of 650 companies for the year 1993. They re-surveyed these firms to gather information on a range of variables including productivity growth between 1993 and 1995. For their analysis, they have information on around 200 firms.

3.5 *Germany*

The German study aims to study four innovative models of CVT provision. Unlike the four studies mentioned above, it does not use surveys or interviews, nor does it attempt to formally evaluate CVT investments. Its approach would best be described as an example of desktop research where details on four models are gathered and presented, with a commentary also being provided. The commentary covers issues such as to whom the benefits accrue. The potential usefulness lies in the possibility of drawing attention to benefits of these innovative approaches, as perceived by the authors of the report.

3.6 *France*

The French study seeks to provide a broad discussion of the difficulties associated with evaluating CVT investments. As such, the observations included in it are relevant across all the studies reported. Like the German study, its approach is neither qualitative nor quantitative but conceptual in nature. However, while the German study focuses on the four models of CVT provision, the French study is broader in its outlook and considers issues such as how human resource investment should be treated in the accounts of firms.

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PART TWO: SUMMARIES OF THE NATIONAL REPORTS

Chapter Three

The Evaluation of CVT in Enterprises in Styria in Austria

(A report by Stefan Lorenzoni/Dieter Mandl from the Institute for Business Pedagogics Karl-Franzens-University Graz and the Academy for Advanced Management GmbH, Graz)

Chapter Four

The Importance of CVT to Enterprises: A discussion of the agricultural foodstuffs sector in Denmark

(A report by John Houman Sørenson of the CARMA group - Aalborg University- and EVU - Roskilde University)

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Accounting for Enterprise Investment in CVT in France

(A report by J-M Luttringer/N. Pasco at CIRCÉ Droit et Politiques de Formation)

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CVT Activity within the Packaging Sector in Italy

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Chapter Three

The Evaluation of CVT in Enterprises in Styria in Austria

(A report by Stefan Lorenzoni/Dieter Mandl from the Institute for Business Pedagogics Karl-Franzens-University Graz and the Academy for Advanced Management GmbH, Graz)

1. Background to the survey

Current surveys within Austria which evaluate the costs and benefits of training conclude that, in general, only a minority of companies document the benefits of CVT on a regular basis and that companies are more likely to record the costs than the benefits. Given this and the available budget and time for this report, the methodology used to estimate the benefits of CVT is not based on a regular survey, neither is it based on different categories of CVT. The aim was not to have exact results on the evaluation of CVT benefits, but to discuss the reasons why defined objectives have or have not been achieved and from this derive some political recommendations to promote CVT in the future. Meeting pre-defined objectives can be seen as the basis on which the benefits of CVT were estimated and evaluated. Regarding the cost aspect, the aim was to discover average amounts of CVT cost. Coupling this with the benefits aspect, a set of political consequences could be identified by the relationship assessed.

This survey has concentrated on enterprise training activity. On the assumption that the problems in small-scale enterprises differ from those in middle- and large-scale enterprises, a distinction is drawn between three categories. Due to the chosen sample of enterprises and to the delineation of the target groups (branches, industrial sectors, territories, etc.), the results obtained should be treated as an hypothesis which should be tested against a more representative sample. As this work is ongoing, the enterprises used for this report cannot be regarded as representative at this time.

The results are based on both primary data (the survey undertaken for this project) and secondary data (existing results/data from other available surveys and statistics). The time period, within which the costs and benefits of CVT were undertaken within enterprises in Styria, was a representative year selected by the company.

2. Definition of cost and benefit categories

2.1 *Cost categories measured in this survey:*

- Personnel costs for time spent in CVT and other costs (e.g. internal trainer etc.).
- Fees and other expenses for CVT paid *by enterprises* to a third party.
- Travel expenses, stay-away allowances paid to employees.

- Costs for premises, CVT equipment (e.g. internal seminar room) and other expenses (e.g. brochures).
- Costs contributed by individuals/employees.

Costs are measured on the basis of available documentation in the enterprises. Those costs defined which have not been documented by the company, are estimated.

2.2 *Costs not measured in this survey:*

- **Other Company costs**
  - Costs of staff fluctuation (recruiting, reduction, education of staff).
  - Cost of decreasing product quality, *caused where staff do not* attend training
- **Costs at the macro level**
  - Regional/provincial/national level

2.3 *Definition of benefit categories*

Benefits are measured by the evaluation of graduated achievements of CVT objectives. The following objective-categories for CVT have been defined:

Table 1

Objectives to Increase Output (quantitative and qualitative) in terms of increases in:	**Objectives to ensure qualification potential**	**General Objectives**
• Productivity • Efficiency • Product-quality • Identification with the enterprise • Increase in work satisfaction • Increase of knowledge • Increase of skills/abilities • Increase of social competence	• Flexibility of personnel capacity • Adjustment of knowledge to future requirements • Development of junior staff • Reduction of qualification deficits • Reduction in personnel fluctuation	• Enhancement of company image on the labour market • Premium for good performance

3. Methodology applied to measure costs and benefits

The survey was undertaken through interviews with management directors and those concerned with personnel development. Thirteen interviews were undertaken. The survey measured the benefits of CVT, in terms of the achievements of pre-defined CVT objectives. Benefits, unlike costs, are measured in relative and not in absolute terms. Through awareness of the CVT costs, the interviewees evaluated and estimated the extent to which defined CVT objectives had been achieved. Moreover, the interviewee also assessed the reasons why these objectives had (or not) been achieved within the examined year.

3.1 *Delineation of target groups*

The survey concentrated on the province of Styria. The firms were chosen according to the following cluster-categories:

- **Category 1** (less than 100 employees, most of them less than 50 employees): CVT-intensive small/middle scale enterprises in an intensively changing environment and with a high incidence of technical innovation

- **Category 2** (less than 100 employees, most of them less than 50 employees): Small/middle scale enterprises with little motivation to promote CVT and little incidence of technical innovation

- **Category 3** (more than 100 employees; mostly more than 1000 employees): CVT active, medium-/large-scale enterprises in an intensively changing environment.

The chosen firms were in the *energy supply, construction, waste management, information technology, furniture production, pharmaceutical, agricultural and steel production and trade* sectors.

3.2 *Definition of CVT in the survey*

- Externally organised seminars, conferences, workshops, courses; organised by third party providers and attended by persons from different companies.

- Internally organised seminars, conferences, workshops, courses; organised by the enterprise. Neither the training venue nor where the trainer (internal or external) came from was a criteria to distinguish internal/externally organised activities.

- Training on the job was defined as 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. The primary purpose of the activity was the development of skills which were delivered on a one-to-one basis.

- Job rotation and quality circles. These activities had the specific purpose of improving the skills of the employees involved. The normal transfer of employees from one position to another was not included.

- Self-learning through open and distance learning, video/audio tapes, computer-based methods. The trainee managed the time and place at which the training occurred.

4. Assessment of the obtained results

In general, the results were not based on a representative size (number of chosen enterprises, territorial area) of the sample and should be regarded as an hypothesis, which ought to be tested further in an adequate sample. Within the defined enterprise cluster categories the following results can be assessed:

4.1 *Evaluation of CVT in category 1 enterprises*

4.1(a) Characteristics

- small-/middle-scale enterprises
- intensively changing environment
- high incidence of technical innovation

4.1(b) Types of costs accounted and planning/budgetary instruments

Expenditure on training fees was documented on separate accounts. Travel expenditures and stay-away allowances relating to CVT were not. In the main, expenditure was not documented according to different organisational units, i.e. CVT costs were documented for the whole company but could not be assigned to the different departments. Personnel costs, in terms of worktime consumption in training, were not documented.

Companies within this category had a separate budget for training. The process of budgeting was not always based on an objective training plan.

4.1(c) Cost in absolute terms and per employee

The total cost (including worktime consumption on CVT) for the documented forms of training was within a range of OS 300 000 to OS 3 million per year. The average cost per employee in this category was from OS 5 500 to a maximum of OS 30 000 per year. Costs for training in relation to overall personnel costs were 1.1% - 5.8%.

Both the absolute and the relative amounts of cost were taken into account concerning the forms of training documented. This excluded costs for certain types of training e.g. training on the job, job rotation and self-learning.

4.1(d) Subsidies and co-financing agreements

Subsidies were mainly given by the Labour Market Service and by the European Social Fund. The average amount of subsidies received was between OS 1 million to OS 2 million per year.

Examples of co-financing agreements included the participation of employees in courses during leisure time or sharing the fees and other costs. Such agreements were made individually. The companies interviewed did not report any cost contribution from employees.

4.1(e) CVT types and those responsible for CVT activity

Most companies in this category were applying all the defined forms of CVT, e.g. externally and internally organised seminars and workshops, training on the job, job rotation and self learning. Within these enterprises, the owner or managing director formulated training guidelines. The organisation and realisation of training was the responsibility of the management.

4.1(f) Evaluating the benefits of CVT

Most companies within this category had informal interviews with participants after the CVT activity. Sometimes the success of seminar-type events and training measures was checked by audits. Most of the time there was no detailed description of the training objectives. There were no institutionalised and standardised instruments to evaluate the benefits.

4.1(g) Assessment of qualification standards

Most companies within this category had instruments to assess qualification standards by organising interviews with the employees. They planned their quantitative personnel requirements but, in most cases, not on the basis of defined qualification standards. Some of them very actively observed the labour market, in particular, the supply from universities.

4.1(h) Key problems in evaluating CVT

- Time was scarce to assess detailed qualification standards and for CVT planning.
- Time available for attending training was scarce.
- There were no objectives defined to indicate the success of the training.
- The application procedure for subsidies was opaque and bureaucratic.
- Specific company CVT requirements were not always covered by external training providers.
- Legislation (Working Time Act) was often considered to be restrictive or inflexible.

4.2 *Evaluation of CVT in category 2 enterprises*

4.2(a) Characteristics

- small-/middle-scale enterprises
- little motivation
- little incidence of technical innovation

4.2(b) Types of costs accounted and planning/budgetary instruments

Expenditure on training fees was documented on separate accounts, whereas other expenditure related to training was not, e.g. travel and accommodation expenses, etc. Most of the time the expenditure was not priced to different organisational units. Personnel costs in terms of worktime consumption on training were not documented. Most companies budgeted for their training on the basis of the previous periods' expenditure.

4.2(c) Cost in absolute terms and per employee

Overall costs, including worktime consumption, for the documented forms of training was between OS 200 000 and OS 900 000 per year. The average amount of cost per employee ranged between OS 2 800 and OS 5 400 per year. Costs for training in relation to overall personnel costs was between 0.8% - 1.4%.

4.2(d) Subsidies and co-financing agreements

Most companies received financial support of between OS 200 000 and OS 400 000 per year. Most companies in this category had no specific co-financing agreements with their staff.

4.2(e) Type of CVT undertaken and those responsible for CVT activity

Most companies were applying externally organised seminars and workshops. In general, there was no responsibility for the organisation and planning of CVT within the enterprises.

4.2(f) Instruments for the evaluation of the benefits

Companies within this category did not use any institutionalised, standardised instruments for benefit evaluation except brief and informal interviews with the participants.

4.2(g) Assessment of qualification standards

Most companies did not have institutionalised instruments to assess qualification standards.

4.2(h) Key Problems in evaluating CVT

- Missing definition of future qualification standards and planning of CVT activities.
- Time capacities for applying basic management instruments were scarce, i.e. managing training activities and applying basic instruments of assessing, planning and controlling the training.
- Time for attending training was scarce, in particular for semi- and skilled workers.
- Opaque and bureaucratic procedure to apply for financial support.
- Little motivation for management to promote CVT measures.
- Little motivation for CVT among the employees.

- Sometimes specific CVT requirements are not covered by external training providers.
- Legislation (Working Time Act) is considered to be restrictive or inflexible.

4.3 *Evaluation of CVT in category 3 enterprises*

4.3(a) Characteristics

- middle/large scale enterprises
- intensively changing environment

4.3(b) Types of costs accounted and planning/budgetary instruments

Expenditure on external and internally organised seminars and workshops, especially concerning fees and other expenses paid to a third party, were documented and were accounted according to different organisational units by inter-company pricing. Personnel costs in terms of worktime consumption, costs for premises, equipment related to CVT were not separately accounted. Expenditure on other forms of CVT like training on the job/job rotation, were not documented.

Each organisational unit had a budget for training. Training demand was assessed on the basis of interviews with employees or through questionnaires. Sometimes targets and activities were defined by the management.

4.3(c) Cost in absolute terms and per employee

Costs (including worktime consumption) in this category of companies regarding the documented forms of training were between OS 3 million - OS 5 million. The average cost per employee ranged between OS 30 000 and OS 70 000. Costs of training in relation to overall personnel costs was between 2.8 - 3.5%.

4.3(d) Subsidies and co-financing agreements

Most enterprises in this category did not receive any subsidies to promote CVT.
Some enterprises did have specific agreements with individuals, for example:

- Company seminars were often attended by employees during their leisure time.
- Costs for these seminars, were borne by the company (at 50%)and by the employees.
- There were arrangements to repay investments in CVT if the employee left the company before an agreed period of time.
- Motivated employees often took the initiative to enhance their qualifications. Where the training met the company's interests, there was often an agreement to co-finance the direct expenditures (one third employee, two third enterprise).

4.3(e) Type of CVT undertaken and those responsible for CVT activity

Most companies in this category undertook different types of CVT. External and internally organised seminars and training on the job were the main categories of CVT practised. Responsibility was shared between personnel and other management.

4.3(f) Instruments for the evaluation of benefits

Most companies arranged informal questionnaires and interviews with participants, but there were no institutionalised and standardised instruments to evaluate the benefits.

4.3(g) Assessment of qualification standards

There were institutionalised (annual and half-yearly) and standardised interviews between management and employees in which qualification standards were assessed and performance appraised.

4.3(h) Key Problems in evaluating CVT

- Time was scarce for employees to attend training, in particular for semi-skilled and skilled workers. Sometimes adequate substitution was not organised.
- The motivation for management to promote CVT measures was low especially in the case of strong profit oriented organisations.
- An adequate evaluation of training benefits was difficult and expenditure in CVT measures were often reduced particularly in periods of economic downturn or intensifying price-competition. Management was not convinced of the need for evaluation instruments.
- The achievement of CVT objectives, in the main, was measured against the description of the seminar contents.
- Offer of specific training in the branch was too little and opaque.
- Legislation was often considered to be restrictive and inflexible; for example, attending seminars causes overtime; on the basis of the existing Act on Working Time, the enterprise has to pay this, which can be twice the price for normal working hours.

Table 2 - Summary of the obtained results

The obtained results referring to the defined cluster categories are stated on the following table:

	Cluster Categories of enterprises		
Examined issues	**Category I**	**Category II**	**Category III**
❶ **Costs** CVT Costs Accounted	• Expenditures without differentiation of CVT categories; no accounting in organisational units	• Expenditures without differentiation of CVT categories; no accounting in organisational units	• Expenditures without differentiation of CVT categories; accounting in organisational units
• Documented cost p.a.	• OS 300 000 - OS 3 million	• OS 200 000 - OS 900 000	• OS 7.5 million - OS 23 million
• Cost/employee/annum	• OS 5 500 - OS 30 000	• OS 2 800 - OS 5 400	• OS 30 000 - OS 70 000
• As % of personnel costs	• 1.1% - 5.8%	• 0.8% - 1.4%	• 2.8% -3.5%
• Subsidies/annum	• OS 0 - OS 2 million	• OS 200 000 - OS 400 000	• None
• Co-financing	• AMS, ESF, individual agreements	• AMS, ESF	• AMS, ESF, specific agreements
❷ **Applied Categories of CVT**	• Internal/external Seminars • Training on the Job • Job rotation • Self learning	• External Seminars/workshops	• Internal/external Seminars • Training on the Job
❸ **Instruments to evaluate benefits**	• No institutionalised, standard instruments other than – informal interviews with participants	• No institutionalised, standard instruments other than – informal interviews with participants	• Institutionalised standard instruments; – formal interviews with participants
❹ **Available manpower**	• Owner/Managing director develop guidelines for training; management staff organises training	• No defined responsibilities for planning and organising training	• Department manager for personnel development in co-operation with managers on duty

	Cluster Categories of enterprises		
Examined issues	**Category I**	**Category II**	**Category III**
⑤ **Applied Management Instruments for CVT**	• Assessment Qualification – Interviews with employees	• Assessment Qualification – None by institutionalised instruments	• Assessment Qualification – Annual/half annual performance appraisals and qualification assessment
	• CVT Planning – Planning quantitative needs – Qualitative requirements not planned on the basis of qualification standards – Separate Budget for CVT – No training activity planning	• CVT Planning – Budgeting on the basis of last period expenditures – No institutionalised instruments for planning/budgeting	• CVT Planning – Budgeting of CVT for every organisational unit – Institutionalised instruments to assess training demand – Sometimes training activities are defined by management
⑥ **Key problems**	• Time is scarce to apply key management instruments for CVT • Time to attend training is scarce. • Assessment: – Detailed assessment of qualification standards and CVT activity planning. – No objectives defined for proving training success. • Inflexible legal framework concerning working time • No branch specific CVT supply • Opaque, bureaucratic application for subsidies	• Available time capacities for applying basic instruments – assessing qualification – planning – controlling • Time to attend training is scarce • Motivation of management and employee is low. • Inflexible legal framework concerning working time • No branch specific CVT supply • Opaque, bureaucratic application for subsidies	• Available time capacities for training in the group of semi-skilled and skilled workers • Motivation of management to promote CVT, especially in strong profit centre organisation is low • Success of CVT is difficult to prove • Inflexible legal framework concerning working time • Offer on specific training need in the branch is too low and opaque.

5. Political consequences

This part provides an overview of conclusions and possible developments based on the current survey results.

5.1 *Redistribution of responsibilities*

5.1(a) General issues to the survey

Based on the status of the survey, i.e. legal framework and tradition of CVT in Austria, there was no justification to recommend a fundamental shift of responsibilities, but there are probably reasonable policies (monetary/non-monetary) which could be undertaken.

5.1(b) Financing

The key problems in CVT for SMEs (Cluster Category 1 and 2 of the survey) were:

- scarce personnel to apply the main management instruments in CVT, e.g. assessing qualification standards, planning and controlling CVT activities
- scarce personnel to encourage employees to participate in CVT
- scarce finance, especially in companies facing price competition.

One way to resolve these key problems in the different categories of enterprises is to grant more specific subsidies to companies. Such subsidies should be programme-based/target-driven (see table 3 - Incentives and Instruments to promote CVT) and organised in the form of a co-financing model, either with the single enterprise or with groups of enterprises within one branch (using qualification synergies). Financial support is suggested for internal and external costs (personnel costs, consultancy etc.).

Furthermore, to ease the time capacity problem of employees participating in training activities, a system of substituting or assisting the employee on training could be introduced. Unemployed, older people and those on retraining courses could be offered to those enterprises on favourable conditions.

For SME's and larger enterprises, financing responsibility should be shifted, in part, from the enterprises to the public by granting certain tax incentives through the introduction of a qualification reserve or a tax free amount for qualification. This could be granted through a change in existing incentives on investment in fixed assets.

Additional involvement of the employee

According to the results of the survey in enterprises (both SME and large enterprises) where employees are motivated to attend training and are integrated in the process of CVT-planning, the estimated benefits of CVT are better than for other companies.

To enhance CVT motivation there should be further involvement of the employee by:

- considering general co-financing agreements in the negotiations on collective agreements,
- granting tax incentives to the employee, e.g. making costs arising from co-financing agreements with the company deductible, to reduce the tax base of the employee,
- introducing a flexible training passport system for employees and individuals at standards acceptable to the labour market.

5.1(c) Enhancing the internal and external organisation of CVT

From a CVT organisational point of view, there are some efforts which could be undertaken to solve existing problems.

⇒ Training-supply - to improve the benefits of training the following measures are suggested:
  - Introduction of an electronic database to provide information on training supply.
  - Certification programmes for trainers.
  - Provision of a detailed description of CVT programmes.

⇒ Responsibility for CVT promotion in general - to encourage more CVT activity, there should be a defined responsibility concerning, among others:
  - Defining nation-wide and EU-wide strategies and objectives regarding CVT.
  - Co-ordinating CVT promoting activities on a national and regional level.
  - Organising image campaigns on CVT.
  - Initiating research projects on CVT.
  - Initiative to simplify application for subsidies.

Table 3 - Incentives/Instruments to promote CVT

	Cluster Categories of enterprises		
Incentives/Instruments	**Category I**	**Category II**	**Category III**
❶ **Attitudes on CVT/Motivation**	• Branch specific information campaign – branch newsletters – branch benchmarking on CVT ratios • Introducing a flexible training passport system to enhance employee/individual motivation.	• Branch specific information campaign – branch newsletters – branch benchmarking on CVT ratios • Enhance motivation for the development of training concepts by consultancy and supervision • Introducing a flexible training passport system to enhance employee/individual motivation	• Image campaign – branch newsletters – branch benchmarking on CVT ratios • Initiating and subsidising research projects on developing adequate evaluation instruments • Introducing a flexible training passport system to enhance employee/individual motivation.
❷ **Management instruments on CVT**	• Apply further management instruments – Assessing future qualification standards – Training concept – Evaluation of benefits to training	• Apply basic management instruments – Actual qualification standards – CVT planning – Evaluation of benefits to training activities.	
❸ **Organisation of CVT**	• Electronic data banking of CVT supply. • Certifying programme for training providers and consultants. • Detailed description of training contents.	• Electronic data banking of CVT supply. • Certifying programme for training providers and consultants. • Detailed description of training contents.	• Electronic data banking of CVT supply. • Certifying programme for training providers and consultants. • Detailed description of training contents.
CVT supply	• Introducing new forms of substitution or assisting employees on training.	• Introducing new forms of substitution or assisting employees on training (esp. for semi and skilled workers).	• Introducing a new form of substitution or assisting employees on training.

Incentives/Instruments	Cluster Categories of enterprises Category I	Category II	Category III
Internal Organisation External organisation	• Co-operative CVT projects for companies within one branch. • Simplifying application for subsidies.	• Co-operative CVT projects for companies within one branch. • Simplifying application for subsidies.	• Co-operative CVT projects for companies within one branch. • Simplifying application for subsidies.
❹ **Legal Framework**	• Make legal framework (Act for Working Time) more flexible. • Introduce CVT issues within negotiation for collective agreements.	• Make legal framework (Act for Working Time) more flexible. • Introduce CVT issues within negotiation for collective agreements.	• Make legal framework (Act for Working Time) more flexible • Introduce CVT issues within negotiation for collective agreements.
❺ **Financing of CVT** Incentives for the company Incentives for the employee	• Subsidies on consultancy for introducing further CVT instruments. • Subsidies on substitution system for staff on training. • Tax incentives for the company – Qualification reserve – tax free amount for qualification. • Costs arising from co-financing of CVT should be tax deductible.	• Subsidies on consultancy for introducing basic CVT instruments. • Subsidies on substitution system for staff on training. • Tax incentives for the company – Qualification reserve – tax free amount for qualification. • Costs arising from co-financing of CVT should be tax deductible.	• Subsidies on substitution system for staff on training. • Tax incentives for the company – Qualification reserve – tax free amount for qualification. • Costs arising from co-financing of CVT should be tax deductible.

Chapter Four

The Importance of CVT to Enterprises: A discussion of the agricultural foodstuffs sector in Denmark

(A report by John Houman Sørenson of the CARMA group - Aalborg University- and EVU - Roskilde University).

1. Background

Given the difficulty of undertaking a strict cost/benefit analysis of CVT undertaken by enterprises and their employees in Denmark, this survey considers how it is influenced by other actors and the organisational and working environment. This is to assess whether the aims of the actors at the enterprise and the State level can be achieved. In other words, what benefits to the CVT activity can be realised on the societal level.

Within this survey, the framework conditions under which CVT is undertaken in one sector has been analysed and the merits of undertaking a cost/benefit analysis discussed. The sector used is the *agricultural foodstuffs, seeds and fertilisers* sector. The basis of the survey has been case studies of the personnel and education planning policy within three corporations, each consisting of a number of enterprises and plants with different characteristics responsible for different types of tasks as follows:

- Production of foodstuffs (industrial factory production).
- Transportation/distribution to and between factories, regional stores, sales units and customers.
- Regional stores/retail sales departments, these include small agricultural factories.

The nature of the activities undertaken by this sector is, therefore, diverse. The sector contains a number of small- and medium-sized units working within a larger corporation. Within this sector, a number of different unit clusters can be identified:

- Manufacturing - connected to urban semi- and unskilled factory work. This type of work has been more recently characterised by increasing degrees of automation.
- Land and sea transportation - this primarily concerns lorry/truck drivers who need to know about the product to maintain an effective communication link between production and the customer.
- Store and retail work - characterised by manual work; although there is increasing automation and use of information technology, the need to have some farming knowledge remains. The typical workplace is very small and rurally situated.

In addition to the diverse activities and the number of very small units, there are a number of *regional differences in traditions of industrial relations and in attitudes towards trade unionism* - consequently, the enterprises/management within this sector have to cope with different circumstances of recruitment, stabilising and developing appropriately "qualified" labour.

The ambition of the Danish study has been to examine a number of issues:

- The three dominant types of work functions.
- The different 'cultures' concerning industrial relations and trade unionism.
- The three corporations which each have different philosophies concerning personnel management and the value of CVT planning and activity.

2. The Rationale for the study

This study was co-financed by an "Educational Fund", established through the 1995 agreement between AHTS (employers' organisation for trade, transportation and services) and SiD (a trade union with a large membership of semi- or unskilled workers). They wanted to investigate *"obstacles towards educational planning and CVT of staff"* i.e. why they were not using the CVT instruments traditionally used by the central social partners;. neither workers exercise their right to training leave, nor are there CVT committees at enterprise level (compulsory if requested by one of the social partners). The questions they wanted to address were:

a) Why do the enterprises not participate in CVT planning or activity, given that they could support industrial modernisation?

b) Why do employees not use their contractual right to two weeks training leave per annum?

A number of hypotheses were provided for these questions including a lack of information and counselling, as well as social and economic obstacles, e.g. school alienation, etc. Such hypotheses were used to explore whether a rational basis could be found for such obstacles, for example, if the enterprises and workers were merely un-enlightened concerning the benefits of training or whether there was an active decision not to participate in CVT, in which case what steps were taken in making this decision.

3. Methodology

The case studies were undertaken through a qualitative survey within the three corporations to understand how managers, foremen, shop stewards and the workers, themselves, perceived their qualifications needs in relation to their professional tasks as well as to their everyday life, in general, given their previous experience of formal and informal learning and attitudes to their future development.

4. Attitudes to CVT - The worker experience

Based on their experience of a decline in employment within this sector during the last 20-30 years, the workers expected a continuation of structural rationalisation. As individuals, they hoped to continue within the sector until the earliest possible retirement age without too many changes in their working conditions. Their attitude could be characterised by a willingness to participate in CVT *only* if they were asked to by their employer.

This widespread reluctance to voluntarily participate in CVT activity was examined. In general, the workers had all left formal schooling at the earliest possible time, not necessarily due to failure but due to the social perception associated with this generation, that only children from more wealthy families continued their schooling. A number had undertaken an apprenticeship within traditional rural handicraft trades but had moved to the agricultural foodstuffs, seeds and fertiliser sector.

This sector has long been viewed as a good employment opportunity due to long-term stable employment - most employees have been in the sector for 15-20 years. While a number of the employees have worked in other sectors, they have remained in the agricultural foodstuffs sector due to it being the least dissatisfying job. While criteria for work satisfaction tends to be subjective, it could also include a number of socialisation factors (excluding earnings and the work environment). Such factors are classified within work psychology as:

- interaction/communication possibilities
- disposition possibilities
- the possibility to utilise and expand upon qualifications

The three main types of work function within this sector indicate a different balance between these three aspects of work psychology:

a) **Retail workers** - appreciated the *interaction and communication* aspects of their work. Interaction occurs with the local agricultural community of which they are active members, rather than with other members of the enterprise. They also appreciated the *disposition possibilities* through their autonomy in organising the local store, given that they have more specialised knowledge of customer demand. In practice, this means that they are able to plan their own working day and are loyal to the needs of their customers and thereby to the firm.

b) **Transportation workers** - appreciated their autonomy through driving their "own" lorry and to a large extent planning their working day - the *disposition possibilities.* They also enjoyed the *communication possibilities* through their deliveries to farmers and picking up supplies from the factory.

c) **Factory workers** - enjoyed the *communication possibilities* with their fellow workers which supported their problem-solving abilities. They appreciated the *qualification possibility* of informal on-the-job training, enabling them to gain more experience and to move up the employment 'ladder'. They often refer to their own training as self-learning rather than being

trained by another employee or formal trainer. This implies an active learning process - that employees are seeking opportunities for learning and gaining experience. The pride of those, who by 'self-learning' have reached a high level of qualifications, is an important factor in understanding their attitudes towards CVT:

- they consider formal teaching to be of little value, not due to failure but due to the experience of it having little relevance in real work situations
- they consider themselves to have enough knowledge and experience not to merit further training
- when new technology is introduced, they prefer to learn on-site and keep to a minimum any formal training needed.

4.1 *Overall conclusions for workers*

The survey indicated that the workers were relatively content with their situation. While they did not perceive their work as ideal, they were satisfied that it was the best available given other labour market experiences. Consequently, the introduction of CVT participation was viewed as unnecessary and a risk rather than as a mechanism for improving their situation.

Not all of the workers felt the same way. Some workers did not believe that they had found satisfactory work in this sector, but stayed due to a lack of suitable alternatives or because they expected to achieve a better job status in the sector. For them, CVT participation was perceived as one way to improve their chances of acquiring a better position. This also applied to more junior staff members, especially those that have participated in IVT or the VEUD[1] programme.

A considerable number of the workers within this sector believed that CVT would be of negative or of zero benefit. Consequently, there would be no demand for CVT irrelevant of the fact that there are no economic costs associated with participation. Due to the support of the publicly funded AMU system combined with the collective tariff agreement between AHTS and SiD (which obliges employers to compensate employees on training their full wage costs up to a maximum of DKR 90/hour), most workers would not have to make any economic sacrifice to participate in CVT. The obstacles to CVT participation in this case have to be found elsewhere, perhaps in the reluctance to be away from the home or work environment but also because there is no perceived benefit in participating. For other workers who do receive more than DKR 90/hour there would be a cost, and due to the nature of the work within this sector, it could be difficult to replace certain employees while they were undergoing CVT.

This section has tried to elucidate the obstacles (costs) to participation in CVT; a more general outline of the way in which enterprises meet their needs through training and personnel policies should be presented before discussing the 'benefits' to CVT.

[1] See Annex 2 for more detail on the Background to CVT in Denmark.

5. Forms of enterprise production flexibility and their influence on CVT investments - The enterprise perspective

Flexibility contains two main dimensions in relation to the enterprise:

a) the need for a firm to be able to change the volume of working hours, depending on the seasons as well as changes in demand or other connected changes.
b) the need to be able to change the qualifications structure of the workforce, depending on the need to improve productivity through the application of new technology, by introducing new types of work organisation, changing trade limits etc.

5.1 Numerical flexibility

If the work demands a limited number of and/or a common qualification or if there is a sufficient unemployment pool with the required skills, enterprises can easily practice numerical flexibility i.e. they can meet changes through "hiring and firing".

The agricultural foodstuffs, seeds and fertiliser sector, while enduring seasonal fluctuations in work volume, retains a stable staffing number. If the work volume increases, the sector tends to respond by sub-contracting some of the work or by recruiting a small amount of temporary staff. Enterprises within this sector, therefore, tend not to exercise numerical flexibility.

5.2 Temporary flexibility

Instead, the sector has tended to solve its needs through using temporary flexibility, i.e. there is a flexible work environment where staff can cover each other's work.

Workers within the retail departments would normally have good pre-qualifications and would be trained in a number of elements related to their work-knowledge of the agricultural production process, customer communication, etc. They have also gained a large amount of knowledge through the self-learning process at the workplace, for example the electronic bookkeeping system. This has eased the process of re-structuring and rationalisation in that a few workers could be responsible for a number of different tasks and aspects of the work. In the slacker times of the year, one option is that these workers participate in CVT activity and learn other aspects of the work.

Those working within the factories face a number of skills demands which cannot be met by unskilled workers with no experience. Most of these factories employ a 24-hour production process. The need to maximise production through uninterrupted and optimal flow is therefore of paramount importance. This is the reason why workers tend to stay with the enterprise for a long period of time and participate in self-learning to deal with other, more complex, tasks as well to become familiar with other aspects of the production process, for example, gaining experience in faults that can emerge, etc.

It is important to the factories that their workers can be both flexible and gain a large amount of expertise within their own posts. Such expertise can be used and maximised when there is a need, through overtime. This has encouraged workers to stay within the enterprise and has enabled them to climb the employment 'ladder'.

While such conditions can be beneficial to the worker and enterprise, it can also lead to a fragile employment situation, for example, if an employee leaves there can be an experience gap and the optimum running of production is endangered. Filling such gaps can take 'production' time as more experienced employees are diverted from the production process in order to train. The danger arises that the experience and qualifications profile of the workforce does not match that needed by the production process.
There could be two responses to this problem:

⇒ *Change the qualifications profile* through hiring workers that are already trained through IVT and AMU or supplement informal self-training with formalised CVT.

⇒ *Change the production apparatus and process* to make it simpler for less qualified employees, thereby lessening the need for IVT and CVT.

5.3 *Functional Flexibility - the potential benefits of CVT investment for the enterprise*

The third method of ensuring enterprise flexibility is *functional flexibility,* the main principle of which is that most of the workforce are capable of undertaking tasks outside of their usual job functions. There are two dimensions to this:

⇒ *Horizontal flexibility* - where operators can substitute one another and co-operate in optimising the total production flow, making the training and integration of novices easier. By overlapping job functions, the number of operator staff can also be reduced.

⇒ *Vertical flexibility* - giving operators the skills to enable them to undertake more planning and preparation tasks, quality control, machine maintenance, etc. currently the responsibility of other workers. Increasing their knowledge of other aspects of the production process could enable them to perform more effectively within their own tasks, for example, through identifying any technical faults more quickly.

In the case of vertical flexibility, the possible economic benefit of upgrading the operators could be a reduction in other staff, for example, foremen, technicians etc. An added benefit could also be a more efficient production system through a reduction in interruptions to the process. (This latter 'benefit' also applies to horizontal flexibility, although the reduction in staff would be possible among the operators themselves.) Over time, an upgrading strategy could also imply other types of flexibility in adapting to market changes and new technology when such opportunities arise.

The paradoxical situation, of course, concerning investment in training is that it only makes economic sense to invest in technology when the relevant skills to employ it already exist within the

enterprise. On the other hand, it only makes sense to invest in the skills of employees if there are changes in work organisation or technology. That is to say - *there is a complementary relationship between investment in 'human' and 'material' capital - one cannot take place without affecting the other.*

This paradox clarifies some of the problems associated with the methodological question of undertaking a cost/benefit analysis. When there is an increase in productivity, how much of it can be attributed to investment in 'human' capital and how much to 'material' capital? Furthermore, if an investment were made in improving the vertical flexibility of operators, perceived benefits could arise through reductions in staff in other job categories rather than an increase in the productivity of those operators. It is also difficult to consider this issue pre- and post-training as a number of other factors could also have an influence on production when an enterprise decides to adjust its strategy and considers major investments in 'human' and/or 'material' capital. Therefore, an explicit cost/benefit analysis has not been undertaken in any of the case studies within this study.

Whether the enterprises themselves consider the cost/benefit aspect of participating in training is questionable. Even if they do, there are a number of motivations for keeping such analysis secret, including:

- the maintenance of a good relationship with their employees and their local trade union concerning educational planning and rationalisation
- competitors should not be informed of plans to change the production system

Such issues are important considerations and form obstacles in undertaking effective research concerning the decision making process within enterprises.

5.4 *Influences on management decision-making on personnel policy and CVT*

What actually influences managers when considering to invest in CVT activities and educational planning is not only related to future market and technological development trends; it seems to have a much broader character, involving other considerations such as developments in the labour market and socio-cultural change. Within the case studies, at least, such considerations could, whether implicitly or explicitly, be found in their attitudes towards CVT and other personnel policies, including:

- qualifications and social status of their staff
- the state of industrial relations within the firm as well as on the national level
- labour market developments in general; for example, a decline in unemployment could threaten the ability to recruit
- demographic changes - fewer young people within rural areas as well as the trend for the 'brighter' of them to move away from rural areas
- greater social mobility within society and an increased interest in job content and career development rather than wages, as well as the wish to have a full life outside of the workplace (for example, reluctance to participate in overtime).

When explaining their attitudes towards CVT, the managers undertook a holistic approach to personnel management in:

a) recruitment
b) stabilisation
c) developing
d) de-activating (firing and retirement)

Such an approach is designed to create a staffing system that is beneficial to the enterprise. During the interviews it became clear that such considerations were based on detailed knowledge and that the most important factor in choosing to undertake CVT or not was the mode of flexibility which was dominant.

5.5 *Is there a need for HRD investment if temporary flexibility works effectively?*

Where temporary flexibility is the dominant mode of operation for the production strategy, interest in CVT is low. It has functioned effectively within the agricultural foodstuffs, seeds and fertilisers sector providing a stable employment situation whilst also enabling staff to develop their skills through self-learning. For this system to function effectively, it has been necessary to maintain the sector's reputation for employment tenure, thereby attracting the type of employees who will uphold this system and ensure its continuance. This system, however, has not operated so smoothly in recent years due to a number of factors pertaining to the personnel aspects of the sector.

a) **Recruitment** - The sector is experiencing problems in recruiting appropriate personnel for a number of reasons, not least because the work is of a manual nature. The ability to attract trained recruits and apprentices has been reduced by the need to ensure vertical flexibility within the production process and by the lack of information about the changing nature of the work.

   There are some doubts that the sector can attract young workers both willing to and able to gain the necessary skills through the internal self-learning process. There is also the danger that those they can recruit will leave the enterprise in preference for another job or to continue their education. This problem, to some extent, is also demographic in that a number of young people, especially the brighter ones, within rural areas leave those areas.

b) **Stabilisation** - Ensuring that workers stay within the enterprises is also problematic. A number of trained workers have left the sector in periods of economic 'boom' when they could earn higher wages in other sectors. The current economic situation within Denmark raises the concern that more experienced workers could leave the sector. As mentioned earlier, an enterprise which organises its production on the basis of the temporary flexibility model is more vulnerable to staff losses.

   The countervailing power to the out-flow of experienced workers is the rural culture. Such a culture ties the workers within this sector to the area. Their number, however, is diminishing,

and more are willing to commute to other areas for better paid employment.

Given the training situation in Denmark, organising staff policy on the basis of temporary flexibility is remarkable. The costs for an employer to train a skilled operator are minimal if not neutral, nevertheless it is a loss to the employer if an experienced worker leaves the job. The reproduction/replacement of those skills takes time, and during that time a productivity loss will be the result. The term reproduction costs suggests investing in training through extending worker participation in the production process so that they learn more and more work tasks, not as active investments but as preventative measures.

c) **Development** - The continuous development of staff qualifications becomes problematic within the temporary flexibility model when it is not sufficient to replace what more highly-skilled workers do. While the self-learning referred to earlier has satisfied a number of enterprise needs, it might not be able to do so in the future. Relying on self-learning requires two conditions:

⇒ *the quality of human capital* - the staff must have the ability and the inclination to participate in self-learning; recruiting such people can be difficult.

⇒ *the learning possibilities within the production process* - to foster an environment of self-learning, opportunities must exist within the work environment. Such opportunities may be diminishing within this sector due to the rationalisation process. It could be argued that learning costs which have been integrated in the normal production process have been 'saved' and have to be re-integrated elsewhere. Another reason could be that technological innovation has implied changes in fundamental functional principles which have made previous self-learning redundant.

This could imply that on-the-job training will suffice only for routine tasks. More complex tasks will have to be taught through formal instruction in the absence of experienced workers being able to pass this on.

d) **De-Activating** - The fourth source of crisis is that the de-activation policy can counteract the consistency of the overall production model. The total number of employees within this sector has declined steadily over a number of years. While this did not, in general, threaten the stability of employment, the merger of two large corporations within the sector have, with a number of workers being faced with redundancy. The Trade Union was able to prevent this by negotiating for a number of workers to participate in VEUD but a number of workers which remained were faced with a cut in overtime hours. Some local departments were unable to introduce such cuts due to the danger of losing their more experienced staff.

While the management were able to use the process of rationalisation to formulate a general training strategy aimed at educational planning and the expanded use of CVT, a number of lower-level managers continued with the previous strategy. As the new strategy implied that 5% of the staff should be continuously participating in CVT activity with skilled substitutes, it also meant a reduction in overtime hours. Again, this would have provided a number of employees with an incentive to leave.

In some regions this strategy was viewed as impossible, since their core staff would have deserted them. However, in most of the regional departments within this corporation a move from temporary to functional flexibility is underway.

5.6 *Conditions for changing from 'temporary' to 'functional' flexibility*

As long as 'temporary flexibility' functions , and also gives a good economic output, it is unlikely that any real investments in education and CVT will take place. The four possible sources for a crisis in this model have been elucidated above, and each of them or a combination can upset the model. Within this sector, the strongest one has been the need to reduce staffing. The trade unions' willingness to co-operate and counteract a reduction in staffing has made a change in workplace 'culture' possible.

The best example where this has occurred in practice can be found by comparing the development within two factories in a certain area. One of the factories has had to deal with the challenges raised by a merger and the other has not. The latter still works on the basis of 'temporary flexibility'. The enterprise which underwent a merger placed a number of workers on a VEUD programme. The enterprise soon initiated an educational plan with the co-operation of the management and trade unions. This plan contained a budget and a time schedule which ensured that most of the staff would participate in the three two-week AMU process operator courses. Combined with the natural departure of staff, this meant that very few staff needed to be made redundant and a co-operative climate remained. The outcome has been that 6-8% of the staff permanently participate in CVT activity, and some of the benefits gained by functional flexibility have been realised, although within the survey managers were unable to quantify them. As for the workers, many of them are less resistant to training and a waiting list has developed to enter the VEUD programme.

Participation in VEUD for the workers does involve a cost. Due to the maximum DKR 90/hour compensation for loss of wages, they have foregone a total of approximately DKR 50 000 (ECU 6 700) over two years. In addition, there is an element of evening work involved with the courses.

6. Worker benefits from CVT

As has been mentioned, there are no immediate financial benefits for workers participating in CVT; their salary will not be influenced by undertaking the VEUD for process operator. Nevertheless, the courses are perceived as one way to gain training and experience which will prevent them from being made redundant in the future.

In addition, a number have acquired skills which are relevant to other enterprises within the processing sector. Interacting with other participants in the course has given them a network of workers in other parts of the sector, informing them of other employment opportunities were they to lose their position within their current employment or want to move on voluntarily.

6.1 *Another reproduction pattern - with logical, internal consistency*

It seems as if another reproduction logic has been established:

- The changing work organisation has given young employees more demanding tasks. Their chances for formal training have improved. Such chances should enable the enterprise to attract younger, and also the brighter, people.
- Personnel stability is no longer based on a few skilled and experienced employees. The capacity to reproduce staff qualifications is higher when practising 'functional flexibility'. Given the training system within Denmark, this implies few economic costs to the enterprise.
- The developmental capacity of enterprises improves, as workers can cope with a number of technological changes and are more willing to attend formal training to enable them to do so.
- Management decisions to reduce staff numbers are no longer met with such hostility, as the workers are aware that they have gained transferable skills and qualifications. In such a situation, the management has to be aware that they might lose their most highly skilled and experienced staff. In addition to this, management can no longer use time of service as a criteria to dismiss staff without undermining the new 'culture'.

When 'functional flexibility' is established, it gains a reproduction logic of its own. In the case of this corporation, its evolution became a necessary response to the inevitable reduction in workers' income due to the reduction in available overtime hours. Where this was not possible, 'temporary flexibility' continued as the dominant mode.

The pattern seems to be that where traditional trade union attitudes prevailed, there was a willingness to work together and accept the new conditions to prevent a redundancy of workers. Consequently, participation in CVT no longer represented an economic cost to the participants. It also reduced the number of redundancies and sackings. Furthermore, such changes made the utility of participating in CVT more visible. From having a sceptical attitude to CVT, a number of workers observed those that participated in CVT reaching a high productivity level quickly and realised that they, themselves, could benefit from the training. This created a situation where most of the workers were asking for more CVT activity. As educational planning is decided within a co-operation committee, the distribution of CVT became beneficial to all workers.

The growing perception of CVT as a benefit has a number of dimensions for the worker: increased job security, the possibility of changing job tasks, the ability to cope with more complex tasks and to gain a theoretical understanding of the work process, gaining transferable qualifications, etc. The changing training culture within this industry could ensure a reputation for well-trained staff, enabling workers to change employment more easily purely on the basis of having worked within the agricultural foodstuffs, seeds and fertilisers sector. The potential benefits to the workers, therefore, are clear.

It must be noted, however, that in departments with a more individualistic culture, as opposed to traditional trade union attitude, the workers did not accept a reduction in overtime-hours. Consequently, temporary flexibility continued as the dominant flexibility structure.

7. Benefits to workers and to society without high costs to the employer

A number of the benefits gained by the workers could constitute a cost to the employer, for example the increased mobility of workers through the transferability of their skills. Arguably, this may be a necessary and unavoidable cost.

To perform the tasks in a production process based on 'functional flexibility', younger workers must be recruited and trained continuously. Such workers will only remain if they are also able to undertake non-firm-specific CVT. Instead of trying to block such training, CVT and the offer of more challenging work within the enterprise could be used as an incentive to remain. When the economic costs to the enterprises are not large, this appears to be a model where the costs could balance the benefits of ensuring high vertical and horizontal flexibility amongst staff.

This represents a large change in the personnel policy of some enterprises within this sector. Whereas previous policy tended to ensure, and to some extent guarantee, lifelong employment, it could, in the future, promote mobility and lifelong careers. This reflects the approach at the macro level, to support and promote labour market and employment policy, through increasing worker mobility and promoting an equitable education policy. These public benefits are the justification for keeping the economic costs of participating in CVT so low.

The necessity of retaining these low costs was mentioned earlier as a pre-condition for establishing a consistent reproduction model - a personnel policy in accordance with the 'functional flexibility' production mode. Public expenditure, therefore, on subsidising CVT seems to be a necessary element in ensuring a positive benefit-to-cost balance for HRD investment at enterprise level.

7.1 Competing business strategies: improving technology vs staff upgrading

The crisis experienced through 'temporary flexibility' could be overcome in other ways than by moving towards an HRD strategy. Another of the corporations used within this case study has not faced the staffing challenges of the one discussed earlier. They have been able to operate effectively and efficiently through following the 'temporary flexibility' model. Nevertheless, they have faced the challenge of replacement of experienced staff that have left.

This corporation has dealt with the problem through considering the use of technology. New standardised production programmes have been introduced which are easier to learn and have reduced the decision-making role of the operators. The production process has, therefore, been 'routinised' in order to lessen the need for skilled workers. Such a strategy means that very little CVT is needed.

Making the work more routine tends to lead to the re-location of production to a lower wage area, but the logistics of production make this impossible due to transportation costs.

8. Conclusions

To recapitulate, within this sector, there are two competing strategies in personnel policy:

a) upgrading staff - through using CVT to broaden and deepen employees' knowledge.

b) simplifying the production process - making the role of operator less demanding and relying more on programmers, technicians and engineers.

Which strategy is the wiser can only be evaluated after time.

The first strategy was initiated by the merging corporations not on the basis of a cost/benefit analysis of training and a technological development strategy, but because the corporation was facing the problem of staff restructuring and needed to undertake this without creating industrial relations problems. These could have undermined confidence in the newly merged corporation and undermined its market share.

The second strategy implies low CVT costs for the enterprise, although hypothetically speaking costs could rise if the workers exercised their right within Denmark to participate in CVT.

The decision to implement an HRD strategy must be seen, therefore, as only one part of an overall business strategy. A cost/benefit analysis alone would not indicate why a decision to invest in CVT is made. Such a decision would have been influenced and balanced by a number of other business strategy factors. In the same way, it is of limited use to try to calculate whether public expenditure on CVT contributed to economic growth; other factors and priorities are of equal or more importance.

Chapter Five

Accounting for Enterprise Investment in CVT in France

(A report by J-M Luttringer/N. Pasco at CIRCE Droit et Politiques de Formation)

1. Background to the study[2]

A significant amount of public and enterprise funding in France is devoted to the provision of continuing vocational training and is supported by legal provision. In 1995, total expenditure on CVT, financed by the State, enterprises, local authorities and individuals, amounted to 1.81% (FF 133 billion) of the gross national product (GNP) - it represented 0.5% of GNP twenty years ago.

The financial significance, and the increase, of the sums allocated to CVT in France has raised the question of how to utilise them in the most efficient way. In the 1990's, the State, as the main financier, encouraged the development of qualitative controls for their training activity as a basis to evaluate their expenditure. This led to the introduction of a qualitative approach to training followed by both enterprises and training institutes and to the development of quality certification processes, e.g. AFNOR, ISO 9000.

Within this new approach, the concept of training as an "investment" emerged. Training was no longer viewed purely as a social concept but also as an investment, the financial results of which should be assessed. Expenditure on training became seen as an economic "immaterial" investment which should be treated in the same way as other "immaterial" expenditure e.g. research or advertising. Within this new context two developments occurred:

1) The practice of evaluating the quality of the training, for example, through audits.
2) Strengthening the professional status of those concerned with training, for example, training managers, trainers etc.

Although enterprises were equipped with different tools and methods designed to evaluate the quality of training, the cost/benefit ratio was never measured. The concept was studied by the *Commissariat General au Plan* but was not pursued, as was the case in North America.

This was partly due to the compulsory training levy[3]. Such a levy cannot be considered as a direct investment for the enterprise. It is viewed to be for the individual and the society at large, rather than directly as an enterprise investment and, therefore, cannot be accounted for in the asset side of their balance sheets.

[2] For more detail, please refer to Annex 3.

[3] See Annex 3 for more detail.

It can be concluded that the assessment of training "investment" is faced with three major issues:

1.1 The ability to measure training investment.
1.2 The recognition of this investment within companies' accounting practices and the need to develop indicators to improve the assessment of the quantitative impact of training and human resources in general on the performance of enterprises.
1.3 The link between quality and costs

1.1 *The measure of training investment*

Investment in training is a key element for developing human resources, an element which is perceived differently by different types of enterprises and employers. For example, the vast majority of SME's view the training contribution as a mere legal obligation which they have no choice but to honour, and their expenditure on training tends to equal that obligation. Analysis of training in SMEs[4] shows weaknesses in the management of training where it is viewed as a possible solution to limited problems and is not considered as a middle- to long-term investment. Training within SME's tends not to be integrated into the company's overall strategy.

Conversely, a number of large enterprises support the idea of training investment and implement systems that enable them to assess both the costs of training and its efficiency. They do this by using the skills of the training 'buyer' department within the company whose task it is to purchase training on a competitive market at the cheapest price. Other companies concentrate on assessment of the quality of the training. In one way or another, therefore, some employers are gradually taking into account the impact of their training expenditure.

The effective assessment and extension of training expenditure, however, raises an accounting problem. While the training effort of a company can be assessed through its statement of expenditure (*'déclaration 2483'*), which is drawn up annually, this statement does not include all of the costs incurred by training. Consequently, there is a difference between the amount of training expenditure recorded and the 'actual' amount devoted to training. The challenge for enterprises is to measure the actual amount which constitutes an investment.

One option would be to employ techniques which are applied to measure other intangible types of investment to identify actual direct and indirect training costs. Some enterprises have done this through systems designed to assess precisely their training costs. These systems are still being tested.

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[4] **Sources : AGEFOS PME, Perspectives, 1993, France**: only 64% of SMEs have set up a training plan. The contribution of the training funds to the financing of training and to establish a training plan is essential for SMEs. The behaviour of SMEs depends on the way it is viewed:
- if it is viewed as an extra legal and tax constraint (70% of SMEs), it is implemented empirically, as an answer to an urgent need and without connection to the company's overall strategy
- either it is considered as a budget, managed in the short term (22% of SMEs)
- or it is included into an overall development programme (8% of SMEs)

At present, it is also impossible to measure the output of training investment. Part of the reason for this is the way in which training costs are recorded in the financial statement. As previously mentioned, this does not include all of the direct and indirect costs of training necessary to measure training investment.

Direct costs correspond to the expenses related to the training courses (wages of the trainers and trainees, pedagogical costs, equipment, functioning costs of training departments and services, transportation and accommodation costs) whereas indirect costs represent the replacement of the employees out of work during training sessions, etc.

Some companies, however, have implemented their own methods designed to assess the precise cost of a training course according to:

- a breakdown of the costs into special categories (costs deriving from the conception, the promotion, the implementation, the follow up, and the management of training),
- measuring the costs necessary to obtain and enhance quality, and, conversely;
- the costs of 'non-quality'.

But the main problem remains in assessing the outcome in terms of the investment. It remains difficult to assess this ratio as it requires assessing skills acquired and their use.

According to a survey conducted in 1997 by INSEE (National Institute for Statistics and Economical Studies)[5], company training expenditure is not the best indicator of their training effort. Other indicators such as trainee numbers or training hours per trainee are more appropriate. The study acknowledges that the measure of training efficiency is a difficult task at company level. Only productivity gains can be assessed. The study measured the links between enterprise training activity and their economic performance. A sample of 1000 companies with 50 to 100 employees were used. The results indicated that :

- *training has a direct impact on productivity which rises after the training process*
- *on the contrary, too much training may have a negative impact (companies reach saturation point when the percentage reaches 5 or 6%, which corresponds to the level of investment of companies which train the most).*

1.2 *Recognition of training as an investment in companies' accounting systems*

The challenge for companies, in the coming years, is the development of indicators to improve the quantitative evaluation of the impact of training and human resources on their performance. The value of human resources needs to be enhanced within the priorities of the management, as skills are key elements of the enterprise's assets. Training must be financed, renewed and considered as a real investment. Taking it into account on a formal basis, however, raises several technical problems as current accounting rules do not cover investment in intangible human resources.

Immaterial investment in training cannot be measured accurately in the same way as material investment. It is more diverse and has only recently been developed as a concept. From an

[5] INSEE, 1997, Economies et statistiques n°303

accounting point of view, immaterial investments are not immediately likely to produce goods, therefore it is difficult to account for expenditure on them in investment terms. Furthermore, there is the view that expenses incurred by a company as a result of its legal obligation to contribute to training (1.5% of the wage bill in France) cannot be considered as an investment, whereas the part of training expenditure which goes beyond the compulsory rate could be regarded as an investment (a view shared by the French *Commissariat Général au Plan*). The National Council for Accountancy's position is much more restrictive, where only exceptional training expenses can be considered as an investment. Some have attempted to define other investment criteria. According to E. Rafinon, only "those expenditures the target of which is to build a capital of skills such as retraining, development and not training which enables the implementation of pre-existing skills[6]" can be considered as an investment.

There is a need for companies to extend their training expenditure and, if possible, to recognise training investment in their balance sheets. After all, one of the key targets of accounting is to measure as precisely as possible the assets and the income of companies. To this end, balance sheets are drawn up annually in order to present the most exact financial situation of companies.

Several major principles have been acknowledged regarding accounting by the International Accounting Standards Committee, the French general accounting programme (*plan comptable général*). They have identified technical and legal impediments which prevent human resources and training from being accounted for on a formal basis. For example, only goods and rights the company possesses can be put on the assets side of the balance sheet according to accounting rules when, in fact, training investment is 'immaterial' and cannot be part of the company's property. It is obvious, however, that the qualification of staff is connected with the value of the company on a competitive market. Therefore, why should training expenses be excluded from balance sheets?

Attempts have been made by enterprises to enhance their training spending and to recognise training investments on their balance sheets in the same way as other immaterial expenses such as research and development. But, unlike expenditure on research, companies that finance training never acquire the property rights on new skills acquired by the workforce. Employees may breach their labour contracts at any time; therefore, a company can never be sure of the benefits it could draw from the training courses it finances. French labour law (article L. 933-2 of the French labour code on *"clauses de dédit formation"*) has addressed this by providing clauses in some labour contracts whereby employees who have undertaken long-term training at the expense of their employer must either stay in the company's service for a certain period of time or refund a part of the training expenses.

6 "la formation est et n'est pas un investissement"- Education Permanente No. 95.

1.3 *The link between quality and costs*

Rather than undertaking a cost/benefit analysis, French enterprises have implemented a rationalisation process for the management of training. The issue of the return on investment, which was central in the 1980's, is now considered of secondary importance. Companies tend to look at overall policies, accompanied by the control and assessment of training costs and their efficiency including an assessment of the training suppliers' performance.

The quality processes implemented within companies aim to:

(i) develop their capacity to identify, as precisely as possible, training needs and to implement follow-up and assessment tools,
(ii) rationalise relations with the training institutes,
(iii) improve the transparency of the training results.

1.3(i) Better identification of training needs by companies

A reduction in training costs is linked with identifying the exact measure of training needs of companies. A number of companies have tried to reduce and/or stabilise their training costs through rationalising their buying policies. Most of the big companies that spend a significant amount on training have been obliged to put a brake on the uncontrolled increase in training expenditure. This has led to a new form of training management. The need to have a better match between existing skills and the future skills needs of companies has led managers to decentralise training management to individual production units, which are now responsible for the analysis of their own needs. The central level is no longer responsible for making decisions on training requirements, but tends to be increasingly concerned with the global coherence of various projects within the policy and the training strategy of the company. In such a context, the training plan has gradually become a co-ordination tool for the training needs in production units.

The shift from a highly centralised training management system to various decentralised systems, closer to demand, has made it possible to implement more flexible training sessions which better correspond to the needs of the trainees. In the meantime, the decentralised levels have been provided with follow-up and monitoring tools required for training management.

This has been the case for the RENAULT company between 1985 and 1994. In order to meet skills needs, RENAULT decided to improve the qualification of existing staff rather than to recruit new staff. This situation has led to a significant growth in training expenses (4.5% of the wage bill for training in 1994 versus 2% in 1984). Two guidelines have been issued as far as the management of training is concerned. On the one hand, local managers have been put in charge of the decisions regarding training and local establishments have been given a direct responsibility for the implementation of training. On the other hand, the central levels have concentrated on the transversal aspects of the function (quality, methods, studies etc.).

1.3(ii) Introduction of a "market-based" relationship with training providers

Purchasing training has tended to become the backbone of company training policy. Quality assurance systems have been implemented to try to optimise the various phases of purchasing. Companies have introduced measures in order to account for the need to improve their knowledge of and relationship with training institutions on the market. These include:

- the promotion of a common language and tools for the buyers of training within decentralised levels as well as the definition of a general buying process (criteria for selection, etc.), and;
- discussions with the training providers on the structure of training costs with a view to improving the cost-efficiency ratio of the training sessions.

By improving the training purchasing process, companies aim to improve the operation of the system through increasing cost-efficiency and monitoring the quality. Some enterprises that invest in training have empowered training purchasers to undertake this and have given them responsibility for the training budget and for negotiating with the social partners regarding prices and the evaluation of training costs. Better management of the relationship with the training suppliers has led to a stricter analysis of the costs by the company and to a better response to their training demand.

The relationship with external providers is all the more important for those companies which are not large enough to afford their own in-company training centres (although even training centres in large companies have to compete with external institutes). Over the past few years, these companies have sub-contracted training to external institutes in order to cut costs. In this way, the need to reduce costs has been transferred from the enterprise to training institutes on the training market. The training providers are therefore in competition with one another and are likely to propose a training service at the cheapest possible price.

FORD FRANCE has implemented training guidelines which have had a direct impact on training costs. The target was to achieve a reduction of 5% in training costs every year through subcontracting. Training has been subcontracted to <u>one</u> external body (there were 70 training providers before). The aim was to create a more flexible management of training through this massive reduction in the number of training providers. The recourse to external training should reduce the costs and improve the quality of the training itself.

Improvement of the quality of training and optimisation of the cost/benefit ratio also depends on the ability of companies to select the most appropriate training institutes. Companies have, therefore, tried to extend and define criteria for the selection of training institutes. Criteria designed to enable the effective selection of training, which impacts the cost of training (e.g. comparison of prices on the training market, certification procedure, etc.) have also been applied to in-company training departments, thereby making them more competitive.

1.3(iii) Improving the transparency of training results.

A number of companies have set up systems to improve the evaluation of training results. In order to do this, it has been necessary to pre-determine training needs and establish qualitative criteria for the expected output. This is defined in terms of the skills produced as a combination of knowledge, abilities and behaviour within the work context.

The outcome of training, however, is not easy to quantify. It requires appropriate tools to measure the quality of the skills produced. Quality is assessed by comparing the outputs with the pre-determined targets after the end of training or in a working context. The complexity involved in measuring the 'worth' of training as an immaterial investment implies that this needs to be undertaken with care. It is usually done by transposing the quality process applied in other sectors and contexts (for example, the provision of services).

According to companies, measuring the transfer of skills acquired through training is the best way to assess the quality of training. That transfer is only effective when the knowledge acquired during the training process is effectively implemented in a real working context. The assessment of indirect effects (change in the working relations after training, emergence of personal projects, etc.) of training is also considered as important in the measure of the quality. Some companies pay particular attention to those changes in the assessment of training.

Quality process and costs: the "FOREVER PROCESS" implemented in Electicité de France - EDF

The high cost of training in EDF (more than 8% of the wage bill) and the development of modular training, have led to a new style of training management. New software to assess the quality of training has been introduced to evaluate the impact of training and to assess the return on the investment. The new method used is designed to assess that:

- *what was realised is in accordance with what was demanded in the schedule of conditions*
- *the training has provided the expected results*
- *the choices made were the best way to reach the targets*

Qualitative criteria are defined when the schedule of conditions is written. There is a negotiation with the training provider on several items (pedagogical means, skills that must be acquired after training, etc.) Questionnaires are composed and sent to trainees, trainers and managers a certain time after training. The processing of the data collected makes it possible to compare the expectations of the training with the output.

The implementation of this method has had an impact on the work of the training managers. They must give special attention to the definition of measurable indicators for success criteria. The ratio between what is expected and what is the outcome is the measure by which the relevance of the training content can be evaluated. This process makes it possible to take quality control into account as soon as the training sessions are worked out.

2. Policy consequences

2.1 *Promotion of incentives for investment in training*

To recapitulate, applying the concept of investment to training is not easy for many reasons.

- Not all training expenditure can be related to the economic concept of investment.
- Company accounts measure training in terms of a cost, not as an investment.
- The company does not own the 'skills' produced by its investment.

In spite of these conceptual, methodological and legal difficulties, it is important to place training within an economic context, as well as in a legal and fiscal framework. Companies and individuals need to be encouraged to invest in the development of skills by funding training.

According to *macro-economic* theory, investing means temporarily "diverting" resources (time and labour) away from production towards an occupation with the aim of forming a "tool" which, it is hoped, will enable increased or improved production or the ability to produce a different product. From a *micro-economic* point of view, "investing" is concerned with creating an asset. The notion of investment covers operations which aim to transform a sum of money into one or several assets, designed to be used by the company on a permanent basis or over a relatively long period. Though the principle poses no particular problems when one is dealing with material property, this is not the case when considering the "immaterial". For example, to be considered as investment, research and development expenditure must correspond to research that stands "a reasonable chance of success".

The notion of investment, in company economics and macro-economics is, therefore, directly intertwined with production and also with durability. It is about creating a company "asset". The economic logic relating to the definition of investment can, in part, be applied to training, yet without it qualifying as an investment, as follows:

- **Training is a "diversion" away from production.**
  Throughout a training period - when this takes place during working hours - the employees involved are not producing. This is not enough to define it as an investment. Moreover, when employees are trained outside working hours, they are already out of the production process. How would this training be recorded as an investment? So, training can be classified as a diversion, but not necessarily as an investment.

- **As is the case with any expenditure, staff training is the result of arbitration carried out by the leaders of an organisation.**
  As with all investment, choosing to train is generally a medium- to long-term consideration. This means arbitrating between expenditure which could yield immediate satisfaction (whoever benefits from this: shareholders or staff) and the durability of the company through the maintenance or development of the human resource.

- **Only a general definition of investment can be applied to training, for while the financial outlay to training is certain, the returns, either in financial terms or employee effectiveness, are uncertain.**
  It can be seen that such investment produces no physical tangible "good". It should be pointed out, however, that there are other investments which do not produce a tangible "good", for example, expenditure on advertising, customer goodwill, research and development, etc.

- **The wish to consider spending on training - even partially - as an investment creates the need to post it as a company asset.**
  This is a difficult concept to tackle due to the impossibility of disassociating the training from the 'trained'. This raises the question of how a company can account for an 'investment' the outcome of which it does not own.

- **The concept of investment is indistinguishably linked to that of production. (Company accounting has adjusted this concept through recording material investment on the basis of its potential in terms of its effect on production.)**
  Training is not directly a productive element. Training and production are more remotely linked. Investment in training is concerned with the potential skills that can be endowed. Such skills can be applied, amongst other things, to ensuring more efficient production. The relationship between expenditure on training and productive potential is necessarily indirect as it is mediated by people.

- **Training is indistinguishable from 'labour'.**
  Training is not linked to the productive capital, but to the other production factor, labour. The issue to be resolved by a company is how best to combine these production factors which are external to it:
  * the capital belongs to the shareholders (who have invested it);
  * labour, to the employees (who sell it: it is a consumption, an operating expense).

2.2 *Rules of business accounting and training*

Despite, and because of, the issues outlined above, the rules of business accounting do not allow training expenses to be posted as an "investment", neither do they allow the returns to be posted as an "asset". It is true, nevertheless, that training incurs certain costs and expenditure. Given this, it is necessary to apply the same principles to it as to any other cost or expense incurred by the company, i.e. to proceed with an economic analysis of training.

This leads to three preliminary questions:

1. Why and how does one decide to allocate resources to training?
2. What cost of training should be chosen and what gain measured?
3. What different types of cost are there corresponding to different types of training?

Only when these questions are answered will it be possible to elucidate the conditions for considering training cost as an investment. In order to fulfil these conditions, the training function must be conceived within the company as a function that is subject to the same economic management criteria as other functions (production, marketing, etc.). That is to say, more emphasis should be given to training and the personnel responsible for training within enterprises. The training function should, therefore, be 'professionalised' within enterprises.

- **Under what conditions can and/or must training costs be treated as investment costs considering the problems associated with accounting for them?**
  Three criteria appear to stand out, which, in a certain way, are close to the economic concept of investment:
  a) The purpose of training must be to form "a capital of skills" (for replacement, development, conversion, etc.) and not the implementation of pre-existing skills.
  b) The capital only exists if the skills it is composed of have a potentially larger field of application that goes beyond the traditional divisions of labour: i.e. they must be situated at sufficient levels of generalisation in order to be applied to newer and more complex tasks.
  c) The durability of that investment is also inherent in the notion of capital: the skills acquired are relevant for a certain period of time and often require other conditions (for example, hierarchical instruction) to put them into place.

These three conditions must be present if one is to consider training expenditure as an investment. It could be viewed that those training courses aimed at the renewal, development and conversion of skills are of lasting effect through creating additional, new skills, etc. as these skills are not limited to the duration of the "production cycle" alone. They are not limited to merely adapting an employee to small job modifications. For example, "training" an experienced typist to use an Anglo-Saxon keyboard is merely job adaptation. On the other hand, training an employee to use a word processor will be useful over a period of years, those in which a new skill will be used.

Yet training costs are not always isolated. Indeed, training is frequently an integral part of a more general investment programme. If this is the case, one must view training costs as related to the whole project to appreciate the relevance of the investment as a whole. For example, training required as a result of an enterprise introducing new technology should not be viewed in isolation from the overall investment.

Training can also be an element of enterprise development or conversion strategy, for example, the provision of training for workers about to be made redundant. Such training would not lead to any increases in productivity. In this case, training should be considered as an autonomous investment.

It can be seen, therefore, that company training costs have to evaluated according to specific aims in the same way that other investments are evaluated.

- **What accounting procedure should be adopted?**
  This is probably the most delicate issue. Even when training has been totally paid for by the company, and assuming it meets the required criteria for considering it as an investment, it is impossible - as we have seen - to enter its counterpart, the "return", on the assets side of the company balance sheet. It is questionable whether or not this problem can be overcome. Nevertheless, it remains important that economic logic must be applied to training costs.

In practical terms, this means that company trainers must build a framework that allows for:

- quantitatively estimating the costs of any training action;
- assessing with their partners in the company, the costs of the non-resolution of the problems identified (monetary costs and others, even "qualitative" ones);
- measuring the quantitative and qualitative results obtained.

This means detailed identification and justification of a decision to engage in spending on training. From this point of view, the question as to whether one is dealing with investment becomes secondary, as does the issue of posting only a part of the costs and benefits in the company accounts: neither the social climate or the brand image appear on the balance sheet although they are often of the utmost importance.

As was indicated earlier, most investment study files contained no "human resources" section. Companies investing in training should be ready to undertake such studies, as it is no longer a matter of supposing, but rather demonstrating the economic value of training expenditure. A conceptual framework, that could take its inspiration from investment studies, needs to be established. Its scope, however, must not be limited to investment expenditure alone but should cover the whole amount of training expenditure and give an economic and social justification.

Recommendations
How can the promotion of training investment aimed at developing skills be undertaken within the European Union?

1. *Research programmes related to training as "immaterial investment" should be supported. Such studies should propose decision-making tools to company management and training managers: How and why to allocate resources to training? What costs should be chosen and what gains measured? How should one arbitrate between training and other solutions, etc.?*

2. *Ensure that these decision-making and "economic management" training tools are tested and validated by European companies within the framework of LEONARDO projects devoted to this theme.*

3. *Undertake, with the European Accounting Council, a study of accounting and fiscal practices vis-à-vis training expenditure, with a view to entering them on the assets side of the company balance sheet.*

2.3 *Redistribution of responsibilities - Summing-up recommendations for the different actors based on the previous conclusions*

If we accept that training is indistinguishable from the trained person then we cannot account formally for it on the assets side of the balance sheet, as the trained employee is not the property of the company. The central question becomes how to encourage individuals to develop and maintain their own personal skills capital through training. Focusing on the involvement of individuals presupposes that the respective responsibilities of the State and the companies are clearly defined. In this respect, one may refer to the "doctrine" developed by the European social partners in the Common Opinions related to training. This doctrine very likely represents an "average" European opinion on this issue[7].

What courses of action result from these considerations?

1. For **individuals** to adopt skills investment behaviour through training, the conditions must be favourable from a time and monetary perspective. Studies should be launched on the following actions:

   a) a detailed study of training fiscality: current state of fiscal policy in Europe, effect of current incentives for individuals, criteria for an incentive-oriented fiscal policy;
   b) studying prototypes for savings-training products with banks, aimed at the general public, such as the *Caisses d'Epargne* (savings banks).

2. Role of the **social partners**
   As has been said, investing in training means temporarily diverting resources (time and labour) away from production towards forming a tool (skill) which should enable the increase or improvement of production or the ability to produce something else. Investing, therefore, is forfeiting immediate consumption.

   Such investment requires favourable conditions: the wish to obtain a benefit (material, financial), the resources necessary to invest time and money, as well as the existence of a suitable training offer. Time can be working hours which may be released for training through law, collective bargaining or individual contract. Money can be provided by enterprises, if they have an interest in the training, thereby co-investing with the employees. Money can also be provided by individuals, themselves, by the State or through financing systems based on savings or contingency funds.

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[7] Within this it clearly states that enterprises are responsible for the retraining of their workers. Financing CVT, when it is the decision of the enterprise and in accordance with its needs, is their responsibility although it should be possible for the total cost of the training to be tax deductible. Attendance of an employee at training should be subject to agreement between the employer and the employee and/or his/her representative. An employee who wishes to follow their own training corresponding to a personal development need or to his/her own professional project, should be supported by activities financed by public funds or financial deductions. Absences should be treated in accordance with legislation and existing practice. The questions concerning spending on CVT within enterprises need to be developed and practical methods for evaluating the current situation should be defined.

The role of the social partners consists of making, through collective bargaining, the choice in favour of prioritising training investments and acting as arbitrators in that field.

3 The Role of **the State**

Member States should be invited at the initiative of the European Commission to examine their tax systems with a view to encouraging training to provide incentives for enterprises and individuals to become more involved with investment policies.

4 The Role of **Enterprises**

If the accounting rules for enterprises are modified in order to account for training in the assets side of the balance sheet, management will be able to arbitrate more clearly between material and immaterial investment, such as training. In this way, training would become part of the strategic decisions taken by Boards of Directors and would no longer be seen as an expense. Training would also be further integrated into the social dialogue within enterprises.

Chapter Six

Innovative Models for Financing CVT in Germany

(A report by Dr Uwe Grünewald/Dick Moraal at the Bundesinstitut für Berufsbildung - BIBB)

1. Introduction

In this report, we have tried to analyse financing models on a meso-level, through focusing on the costs and benefits of certain "innovative" financing models. Within this, we have considered certain CVT measures and their operation as well as the financiers and their influence on the measure. More detail on the background to the measures can be found in Annex 4.

In the following text, four chosen models, which have also been dealt with in a Leonardo project[1], are outlined, and their innovative nature in terms of the German context is highlighted. The three sub-systems of CVT within the German context[2] are not evaluated themselves; instead, the report focuses on the way in which the models fit into these sub-systems.

Within each of the examined models, the co-ordination problems between the three sub-systems of CVT in Germany can be identified. Under German CVT conditions, intensive networking is necessary in order to implement trans-systemic CVT measures. Each model shows that the co-ordination costs of this networking are high, while the social benefits are also significant. The question is whether the trade-off between the co-ordination costs and the resulting social benefits make such trans-systemic CVT programmes worthwhile.

2. Overview of the four chosen model institutions[3]

The four models represent the most prominent examples in Germany of financing 'innovative' measures of CVT and can be characterised as follows:

- Model 1: **"BGZ Simmerath"** represents a typical case of financing CVT for individual employees, which takes place outside of the enterprise. Such employees undertake full or part-time courses in order to get a Master Craftsman degree. This training can be co-financed by the Federal Office for Labour or other public institutions. Unlike other training institutions (approximately 700) in Germany, BGZ is, in part, run by the national social

[1] Leonardo-project 'Survey and Analysis'- 3895: 'Financing models for CVT and FTU: financing of continuing vocational training of employed (CVT) and further training for the unemployed (FTU) and the role of social partners in this area' Project coordinator: Federal Institute for Vocational Training (BIBB) - Dr. Uwe Grünewald and Dick Moraal. Countries covered: Denmark, Germany, Norway and the Netherlands.

[2] See Annex 4 for an outline of the German CVT system.

[3] For more details on the four models, please see Annex 4.

partners of the building trade.

- Model 2: **"Social Cashdesk in the Scaffolding Sector"** is founded on a collective agreement. This agreement is committed to training and its financing for employees in this sub-sector of the building trade.

- Model 3: **"Promotion Institute for Agriculture and Forestry"** is also founded on a collective agreement. This model includes training for those employees who are subsidised by employment offices as well as the unemployed.

- Model 4: **"SPI-ADAPT Job Rotation Project"** was established under the European Commission in order to combine, as the Scandinavian models did, the CVT of employees with on-the-job training for the unemployed. The social partners have little influence over this model.

The broad spectrum of the selected models should allow an exploration of the usual way in which CVT is financed in Germany as well as some specific arrangements which differ. These models will be evaluated according to their compatibility with the general CVT arrangements as well as with the benefits for the participants.

2.1 *Model 1: "BGZ Simmerath"*[4]

BGZ Simmerath is used to indicate the 'normal' case of financing of CVT in an external training provider, although the arrangements for its management and financing in terms of the participation of social partners is unique. In most other ways, this centre is similar to the other 700 existing training institutions, concentrated mainly in the handicrafts sector. Approximately one third of the DM 4.15 million, which enterprises spent on external CVT in 1993 went to these training centres. But for BGZ the contribution of enterprises is not the main funding source. The course fees paid by the individual trainees with some central government support are much more significant. Below are two training measures provided by BGZ:

- **Measure A:** *Master Craftsman courses - Master Craftsman in Masonry*
- **Measure B:** *Special Training Courses - Courses in 'Quality Management'*

2.1(i) Target group of the measures

- **Measure A:** *Master Craftsman courses - Master Craftsman in Masonry*
  These training courses are aimed at those who have passed their journeyman examination as a skilled worker and who can certify at least three years vocational experience as a journeyman.

- **Measure B:** *Special Training Courses - Courses in 'Quality Management'*
  Approximately 270 people, a declining number, participate in quality management courses.

[4] Further detail of this model can be found in Annex 4.

They are aimed at entrepreneurs and enterprises to help overcome structural change and technological development.

2.1(ii) Innovative character of the measures

- **Measure A:** *Master Craftsman courses - Master Craftsman in Masonry*
  This is not an innovative measure itself. The need, however, to find an innovative financing solution to ensure that the number of participants in these courses remains stable can be considered as an innovative approach to active labour market policy, as such courses are viewed as a way to further employment and training opportunities within SMEs.

- **Measure B:** *Special Training Courses - Courses in 'Quality Management'*
  These tend to be short and, in their content, do not command an innovative status.

2.1(iii) What are and who bears the costs of the measures?

The aim of the CVT measures in BGZ is to advance and update training for individuals financing their own training, although special courses can be financed by enterprises.

- **Measure A:** *Master Craftsman courses - Master Craftsman in Masonry*
  Master Craftsmen courses account for 36% of all courses and 33% of participant hours, but only 10% of the 'customers' in BGZ. In terms of financing, however, they are more significant. A full-time course leading to the Master Craftsman in Masonry, takes over 8 months (approx. 1 450 training hours). The costs including examination fees amount to DM 14 613 per participant. Part-time courses cost more or less the same.

  Due to differing lengths of the Master Craftsmen courses, it is easier to identify costs through examining the number of training hours rather than the number of participants. In 1995, Master Craftsman courses accounted for a total of 13 026 training hours and 229 981 participant hours. The charge for the Master Craftsman courses ranged between DM 5 900 (baker) and DM 13 600 (concrete and reinforced concrete builder). This wide range is due to differing course lengths and infrastructural expenditures (personnel costs, type of machinery required, etc.). DM 1 100 for examination fees are extra as are any accommodation costs incurred.

- **Measure B:** *Special Training Courses - Courses in 'Quality Management'*
  The costs for the individual participant in these special training courses range from DM 250 to DM 300 per day (e.g. the seminar "quality management" costs DM 285). In 1995, the number of training hours in these courses was 4 801 and participant hours 64 530. These training measures are, therefore, less time- and cost-intensive. The charges for a seminar on the subject "quality management in the car-repair sector" (8 hours) are DM 285, for a seminar concerning the "development of an effective quality management system" (72 hours in 9 days) the charge is DM 2 850.

2.1(iv) What are and to whom do the benefits accrue?

- **Measure A:** *Master Craftsman courses - Master Craftsman in Masonry*
  As the training from BGZ is individual training, the benefits are, to a large degree, the labour market value of the Master Craftsman degree to the participants.

- **Measure B:** *Special Training Courses - Courses in 'Quality Management'*
  The qualification effect of the management courses is important for the craft enterprises as well as for participants.

2.1(v) Future of the measures

- **Measure A:** *Master Craftsman courses - Master Craftsman in Masonry*
  Participation in Master Craftsman courses is declining due to modifications to the financing arrangements for the trainees. This is endangering the supply of certain skills (e.g. the supply of bricklayer masters in Aachen). Therefore, co-financing advanced training is strived for.

- **Measure B:** *Special Training Courses - Courses in 'Quality Management'*
  Despite the continuous technological changes faced by craft enterprises, the demand for this type of training is also decreasing. Financial support is also deteriorating and there is a need to encourage further co-financing arrangements.

2.1(vi) Future developments in advanced training

There has been a significant decline in participation in advanced training courses. To reverse this trend the German government, in 1996, proposed the advanced training promotion law. This suggested a monthly allowance of DM 1 045 for single and DM 1 465 for married trainees. Part of this amount represents a grant whereas the remainder a repayable loan. Despite its aim to reverse the fall in training participation, potential participants and the training institutions believe that the new regulation represents a financial decrease compared to the former relief provided by the employment service.

2.2 *Model 2: "Social Cashdesk in the Scaffolding Sector"*[5]

The 'Social Cashdesk' in the scaffolding sector is a rare example of initial and continuing vocational training promotion at the sectoral level. It was established through collective agreement and is financed through a sectoral fund. Two measures funded by the 'Social Cashdesk' are outlined below:

- **Measure A:** *Advanced training of the 'certified scaffolder main engineer'*
- **Measure B:** *Advanced training profession 'certified scaffold group leader'*

[5] Further detail of this model can be found in Annex

2.2(i) Target group of the measures

- **Measure A:** *Advanced training of the 'certified scaffolder main engineer'*
  The criteria for participation is the successful completion of initial training as a scaffolder as well as 4 years work experience within the sector. The training consists of a 5 week course consisting 100 training and practice hours.

- **Measure B:** *Advanced training profession 'certified scaffold group leader'*
  The criteria for participation is the completion of initial VT and the certificate for scaffolder main engineer as well as 5 years work experience. The course, which lasts for 6 weeks, is nationally recognised and has a semi-Master Craftsman status.

2.2(ii) Innovative character of the measures

The innovative character of the measures derives from the way in which they are financed.

2.2(iii) Operation of and financing arrangements for the measures

These advanced training measures are for a sector-specific qualification which is regulated through collective agreement. Employees within this sector can claim from the funds of the 'Social Cashdesk' in order to undertake training.

In 1995, 11 courses for advanced training of the certified scaffolder main engineer (Measure A) were provided, with 231 employees completing the course; 10 courses for the advanced training profession 'certified scaffold group leader' (Measure B) were provided, with 233 employees completing the course.

2.2(iv) What are and who bears the cost of the measures?

The costs of both measures are met by the 'Social Cashdesk' fund. Participating employees can claim payment from their employers for 8 hours per training and examination day. The 'Social Cashdesk' pays the training costs as well as costs for materials and the examination fees to the training institute. It also refunds any living expenses incurred by the participant. The fund is also used to reimburse employers for the participant's wage and 45% of the social contributions paid by the employer. In 1995, the contributions from enterprises in this sector was 26% (DM 742 million) of the total payroll. From this 2.5% (DM 17.8 million) was used for financing initial training and CVT. DM 5.1 million of this was used to meet the costs of advanced training.

2.2(v) What are and who gains the benefits of the measures?

Several benefits can be identified in relation to both measures.

1. Costs are borne by all enterprises (trainers or non-trainers) within the sector.
2. The state does not need to intervene via subsidies.

3. The initial and CVT agreed upon by collective agreement and its financing guarantees individual employees advanced training and secured financial help.

2.2(vi) Future of the measures

- **Measure A:** *Advanced training of the 'certified scaffolder main engineer'*
  This qualification is decreasing in importance due to its incorporation into initial training and advanced training is moving towards the certified masters degree.

- **Measure B:** *Advanced training profession 'certified scaffold group leader'*
  No changes are expected to this measure.

2.3 *Model 3: Promotion Institute and Qualification Fund for Agriculture and Forestry (QLF)*

The 'QLF' is based upon a collective agreement. Its aim is to *'qualify employees from agriculture and forestry'* and *'develop competitive places of work'*. The 'Promotion Institute Agriculture and Forestry' is the training institution which implements its aims. Both employers and employees contribute to the QLF fund, making it unique in Germany. Employers can use these funds for training purposes; two measures are outlined below:

- **Measure A:** *Work-based qualification in the fodder production sector*
- **Measure B:** *Starting a business, marketing agricultural products, creating new jobs*

2.3(i) Target group and description of the measures

- **Measure A:** *Work-based qualification in the fodder production sector*
  This lasts for 2 days, has 10 participants and is a mixture of theoretical and practical training. It is aimed at employees in agricultural companies which produce fodder.

- **Measure B:** *Starting a business, marketing agricultural products, creating new jobs*
  The model project 'market-barn Plessa' is an example of the way in which the QLF can create new jobs through supporting the establishment of new enterprises. Twenty semi-qualified, unemployed people participate in this project. At least 80% of the participants in this project must be women, and in addition, 6 of the 20 participants are unqualified and are funded by the Employment Service.

  The term of this project is three years. Due to its nature, the project requires close co-operation between the agricultural enterprises within the region, the social partners, the Promotion Institute, farming communes and the employment office. The promotion institute co-ordinates and carries out the project.

2.3(ii) Innovative character of the measures

- **Measure A:** *Work-based qualification in the fodder production sector*
  This is a typical in-company CVT measure in agriculture and forestry. It supports restructuring and the adaptation to technical development. The innovation lies in the way in which the training is managed and financed rather than the content.

- **Measure B:** *Starting a business, marketing agricultural products, creating new jobs*
  The main aim of these projects is to reduce and abate the high long-term unemployment rates in the agricultural regions of the new Länder through supporting the establishment of new enterprises. This project can be viewed as innovative in terms of its aims, its mixed financing arrangements and the level of co-operation between the actors.

2.3(iii) Operation of the measures

Unlike with the other models, the individual measures within this model require a significant amount of co-ordination between the different actors:

- **Measure A:** *Work-based qualification in the fodder production sector*
  The individual regional co-ordination offices of the Promotion Institute Agriculture and Forestry (in every federal state) implement and co-ordinate these qualification measures. The measures are currently financed by the fund although some states are aiming to introduce a co-financing mechanism.

- **Measure B:** *Starting a business, marketing agricultural products, creating new jobs*
  This project is carried out by the Promotion Institute and is supported by a network of regional actors. This demands close co-operation between those actors.

2.3(iv) What are and who bears the costs of the measures?

The Fund is supported through employer contributions of DM 7 per employee per month and employee contributions of DM 3 per month. In 1996, there were 89 500 employees within this sector making a total contribution of DM 10 741 200 (DM 120 per employee per year). There are problems, however, in collecting the fund from enterprises in the new Länder which is creating some funding instability and making long-term planning difficult.

- **Measure A:** *Work-based qualification in the fodder production sector*
  The following table shows the implementation costs of this measure.

1	Project planning and development costs	23%
2	Accommodation of participants	5%
3	Costs for trainers	51%
4	Organisational costs of the Promotion Institute	20%
5	Total costs of the measure	100%
6	Income	-----
7	Applied financial means of the Qualification Fund	100%

According to information from the Promotion Institute, the structure of costs for this measure is typical for all of the work-based qualification measures. Co-financing does not take place, although some states are aiming to introduce a co-financing mechanism. This measure costs DM 740 per participant. In Brandenburg, over the last year, 300 participants, were funded by the QLF.

- **Measure B:** *Starting a business, marketing agricultural products, creating new jobs*
  As this is a new scheme, quantitative information about costs is not yet available, although some figures are available for the 'Market Barn - Plessa' project. For this project, the employment service pays DM 1 982 per participant for qualification. The agriculture department of Brandenburg pays DM 3 000 per participant, while enterprises pay 20% of the entire project costs. The QLF paid DM 30 000 for the necessary scientific expertise.

2.3(v) What are and to whom do the benefits of the measures accrue?

- **Measure A:** *Work-based qualification in the fodder production sector*
  As an in-company CVT measure, it is the agricultural enterprises which benefit most.

- **Measure B:** *Starting a business, marketing agricultural products, creating new jobs*
  The main aim of this project is to support new enterprises, thereby creating new jobs and combating long-term unemployment in the region.

2.3(vi) Future of the measures

- **Measure A:** *Work-based qualification in the fodder production sector*
  Within this sector, there is a growing demand for work-based qualifications due to the process of industrial re-structuring. To further improve the CVT measures, the Promotion Institute co-operates with regional organisations, i.e. agriculture chambers, employment offices, etc. The establishment of regional networks should facilitate co-financing arrangements for in-company vocational training measures.

- **Measure B:** *Starting a business, marketing agricultural products, creating new jobs*
  The project 'Market-Barn Plessa' is a model project and it is hoped that there will be others. It is also hoped that the example of mixed financing and co-operation between a number of different bodies can be transferred to other regions.

In more general terms, the dramatic restructuring which has occurred in this sector has raised the importance of maintaining employment levels. The Qualification Fund is viewed as a potential mechanism for contributing to a stabilisation of full- and part-time work placements and to more stable incomes within this sector.

2.4 *Model - 4: 'SPI-ADAPT Project Job Rotation' in Berlin*

The main aim of this pilot project is to encourage CVT for employees within SMEs. This is fulfilled by replacing employees undertaking CVT with unemployed people. The project, therefore, has the dual aim of encouraging the development of human resources within SMEs and promoting the re-integration of unemployed people into the labour market. The pilot project in Germany, therefore, combines the needs of different target groups, qualification demands and financing models. Two measures are outlined below:

- **Measure A:** *CVT to be a manager in a handicraft firm*
- **Measure B:** *Customer-oriented management and improving quality in SMEs*

2.4(i) Description and target groups of the measures

- **Measure A:** *CVT to be a manager in a handicraft firm, targeted at*:
  - ◊ A four month managerial course for employees in handicraft firms.
  - ◊ CVT for one year for the 'substitute' employee in order to become a qualified employee within the handicrafts sector (financial/administrative professions).

  The measure is carried out in co-operation with the Chamber of Handicrafts and the Chambers of Industry and Commerce. Participants were selected on the following basis:
  - **Enterprises** - SMEs can exempt 1 employee in each case. For this measure, contracts with 11 crafts enterprises (10-25 employees) have been agreed.
  - **The replacing persons** - the selection, preparation and procurement of suitable replacing persons by the Employment Offices proved to be especially time-consuming. Additional occupational guidance and qualification measures before the start of the programme were not possible. Fifteen substitute employees currently participate in this measure.
  - **Training institutes** - they needed experience in training for office professions.

- **Measure B:** *Customer oriented management and the improving quality in SMEs*
  In a pre-evaluation, 80% of the enterprises indicated that the lack of organisational ability and the absence of effective customer service are the prevailing problems in SMEs. This measure took these problems as its starting point and entailed:
  - ◊ A four month qualification in the field of customer-orientation management and improvement of quality in industrial and craft enterprises.
  - ◊ One year CVT for the replacements as a skilled office worker.

  Central to this measure was imparting basic knowledge such as computer skills. The enterprises defined the aspects, which had to be addressed and which were the starting point for the implementation of this measure, for example, the lack of basic business qualifications in SMEs partly due to their traditional family structure.

2.4(ii) Innovative character of the measure

It is not the programmes themselves that are innovative but the combination of CVT for employees and for the unemployed in Germany.

2.4(iii) What are and who bears the costs of the measures?

The pilot project has been possible through linking different types of financing instruments. The costs of the co-ordination office and the CVT for employees have been provided by the European Union ADAPT programme and through additional funding from the Berlin Senate. Participating employees retain their salaries and their legal rights from their employer. Training and placement costs for the unemployed are financed out of advanced training funds (BPF) from the Federal Labour Office, although the Berlin Senate may also contribute.

The total sum for the three year project was DM 3.5 million, DM 1.1 million from the Berlin Senate and DM 2.4 million from ADAPT funds. Other sources include participating enterprises (e.g. continuation of salary costs) and Federal Labour Office.
To summarise:

- **Individuals** - qualification of employees is financed from ADAPT funds. This money goes mainly to the CVT institution. The qualification and integration measures for unemployed persons are paid by the employment service.
- **Enterprise** - they pay the salaries of their exempted employees.
- **CVT Institute** - ADAPT funds: DM 8 per participant per 500 hours = DM 4 000.
- **Co-ordination office** - ADAPT funds and by the co-financing of the Berlin Senate.

Distinction between the direct and indirect costs of the measure:

- *Direct qualification costs for the exempted employee are paid from ADAPT funding.*
- *Indirect costs are the payment of wages for the employees.*
- *Training costs (and/or the preliminary qualification) for the unemployed are direct.*
- *Maintenance costs for the unemployed person are indirect.*
- *Enterprises have no direct costs. Indirect costs appear through the loss of work (less/more efficient working of the substitute person).*

2.4(iv) What are and who gains the benefits of the measures?

The benefits of the overall programme are numerous:

1) Employees gain more job security and opportunities in the general labour market.
2) Employers retain good, qualified colleagues and also, motivated substitute persons. The benefits for SMEs, however, are much more significant:
   - ◊ they receive support in their development of human resources and increased employee motivation and work performance,
   - ◊ they safeguard and increase their competitiveness, through gaining an enterprise oriented qualification,
   - ◊ they gain additional employees for at least 6 months without any extra expense,
   - ◊ their costs are reduced due to the replacement of employees by the substitute.

- ◊ they can get to know future employees,
- ◊ they reduce the time-consuming selection of future employees,
- ◊ they may take part in trans-national exchanges in order to become familiar with new partners and the development of markets,
- ◊ they receive information, advice and support from the co-ordination office,
- ◊ they can achieve prestige due to their participation in the pilot project.

3) Employment agencies benefit from the pilot project as they become more familiar with new methods of re-integration.

4) The unemployed gain a number of benefits, through:
   - ◊ the chance to obtain work and to acquire vocational experience in SMEs.
   - ◊ the possibility as an employee substitute, to become familiar with a potential future employer, the enterprise structure and colleagues.
   - ◊ the opportunity to decide whether they like the type of work.

5) Employment agencies, through their participation, gain further access to enterprises as well as participating in preventative, active labour market policy.

6) Employment agencies and the unemployed can profit from the trans-national activities of the co-ordination office and use their resources in terms of expertise.

7) Training institutions can improve their image through co-operating with employment offices.

2.4(v) Future of the measures

The success of the project in Berlin and the support offered by enterprises in other parts of the country is high. Considering the few employees working in the co-ordination office, its work has been very successful. The initiation and implementation of job rotation measures has required an intense level of co-operation and co-ordination, which raises some problems:

1) Acceptance of job rotation through reconciling different interests:
   - ◊ The selection of the replaced persons.
   - ◊ Employment service aims to re-integrate specific groups of unemployed persons.
   - ◊ CVT institutions are striving for many skilled participants.
   - ◊ Co-ordination office wants 'successful' employment of the unemployed.

2) Financing (mixed)
   - ◊ ADAPT financing will cease after 3 years, who/what will replace it?

3) Conception of CVT measures
   - ◊ The training needs of enterprises must be considered.
   - ◊ Concrete training offers are required.
   - ◊ Equilibrium between enterprise and employees' interests/needs is necessary.
   - ◊ The innovative character should remain clear.
   - ◊ Training has to be certified.

The approval of ADAPT funding in Berlin seems to be complicated and time-consuming. Co-ordination costs are therefore higher than necessary. The experience of these measures should contribute to the decision on whether the overall 'Job Rotation' programme should be maintained and extended in Germany.

Synoptic Table 1: Some central features of the chosen models

	Model 1: BGZ of Simmerath	Model 2: 'Social Cashdesk'	Model 3: Promotion Institute	Model 4: Job Rotation Project
Supply of CVT and target groups	Supply of individual measures of career advancement as well as refresher training courses for employees in SMEs	Individual measures for career advancement. Target group - only employees in this sector.	National collective agreement. Broader target groups: employees in the sector, those in the employment service implementing labour market measures and the unemployed.	European model project. Combination of training for employees and unemployed people. Region: only Berlin.
Financial arrangements	Individual co-financing. Financing is changing because of worsening conditions (credit based financing).	Financing through employer fund. Funds individual claims for training by employees of the sector, costs for loss of work, due to training.	Financing by employer and employee contributions. Nearly all enterprises in West Germany are paying. Fewer in East Germany.	Mixed financing - EU-ADAPT, Berlin Senate, local employment offices
Social Partners	The Social Partners only influence the 'global' policy of the training centre.	Basis: Collective agreement thus the influence of the social partners is very intensive.	Basis: Collective agreement thus the influence of the social partners is very intensive.	No influence by social partners. But after the end of the project, the EU contributions will stop. Could social partner contributions fill the gap? Project cost neutral for enterprises.
Trends	Trend for declining participation in the courses. The centre has to open itself to other qualification fields.	Tendency to shift from CVT to initial vocational training.	Focus: Especially restructuring process in East Germany.	Employment of substitutes is still an aim. Great danger that the project will be used improperly by 'Politics'.
Evaluation	Impression: The enterprises do not finance training intensively anymore. Co-financing is strived for. Co-ordination costs will increase.	Employers want to reduce their contributions. Co-financing is strived for. Co-ordination costs will increase.	The financing by the sector fund is not enough. Co-financing exists. Co-ordination costs will increase.	Structure of financing is complicated. Co-financing is important. Co-ordination costs are high.

3. Evaluation of the financing models

It can be concluded that an accurate quantitative cost/benefit evaluation of CVT financing is not yet possible. The models selected are too recent to have established reliable information. In the following discussion, the models will be classified within the overall system of CVT and a possible cost/benefit evaluation will be outlined.

3.1 *Evaluation of the model institutions*

The aims of the models are all different; some are concerned with both initial and continuing training, making it difficult to distil the costs and benefits of the CVT part. The approach used in this report, therefore, has been to consider how the measures explored differ from the usual CVT arrangements in Germany and to try to indicate the complexity of the models. The further the model deviates from the traditional CVT structure, the more complex the organisational and financing structures are. Yet expansion and extension are implicit aims within all the models, in terms of target group, CVT and co-financing arrangements. It is likely, however, that these would lead to an increase in co-ordination costs.

- Model 1: **'BGZ Simmerath'** represents a typical case of CVT structure and financing. It differs organisationally, as the social partners are represented in the governing body of the centre. The financing of BGZ is comparable to other training centres. The co-ordination costs for implementing the CVT can be classified as 'normal', although this could change if there were an expansion of activity.

- Model 2: **'Social Cashdesk'** is based on collective agreement establishing a sectoral fund. Both the organisational structure and the financing of this model are very different from what is usual in Germany. The aims of the CVT arrangements to increase training activity within this sector are clear. The current co-ordination costs associated with this model can be classified as 'normal', although this could change if there were an expansion of the target group, e.g. by including the unemployed.

- Model 3: **'Promotion Institute Agriculture and Forestry'** is also based on collective agreement establishing a sectoral fund. Both the organisational structure and the financing arrangements are very different from what is usual in Germany. The fund does have problems, especially in collecting contributions from enterprises in the new Länder. The co-ordination costs for this project are high, partly due to the inclusion of unemployed people into the measure.

- Model 4: **'SPI-ADAPT Project: Job Rotation'** is a pilot project drawing on experience within the Scandinavian countries. It aims to combine the organisation and financing of CVT for employees with training measures for the unemployed. This model is very different from the usual CVT system in Germany. The co-ordination costs, however, are very high.

Expanding or extending any of the models would affect the cost/benefit aspects. The level of co-financing needed could lead to high co-ordination costs, although it could also increase the benefits in 'societal' terms. This aspect is specific to Germany, where there are strict and rigid divisions between the sub-systems of CVT provision.

Table 2: Possible changes in costs and benefits if the models were expanded.

	Cost	**Benefit**
Current situation	Financing models have defined target spectrum and target groups. Little co-financing. Co-ordination costs can be classified 'normal'.	Social benefit of CVT is limited. Only CVT in specific professions and/or in specific sectors.
If the models were expanded	Integration of the unemployed into the model. Many actors (employment service, communes, enterprises etc.). Intensive networking. High(er) co-ordination costs	Societal benefits of CVT is higher. Closeness to CVT at societal requirements e.g. abatement of long-term unemployed.

The success in implementing 'innovative' forms of CVT is hindered by the general conditions of CVT in Germany, i.e. a centralised, regulated employment service and an enterprise dominated system of in-company CVT. This rigidity creates obstacles to introducing CVT models with dual aims for both employees and the unemployed. Table 3 below pinpoints the main features of the models which have been examined.

Synoptic Table 3: Features of the chosen models

Features	Model 1: BGZ of Simmerath	Model 2: 'Social Cashdesk'	Model 3: Promotion Institute	Model 4: Job Rotation Project '
Type of model	Regional training centre.	Sector fund by collective agreement.	Sector fund by collective agreement.	EU-Model project Job-Rotation.
Role in the overall educational structure	Focus: individual training for career advancement purposes (Training for master craftsmen).	Focus: individual training for career advancement purposes (Training for master craftsmen).	CVT courses (refresher training courses) and active labour market and qualification measures.	Combination of CVT for employees and training for the unemployed (adjustment to work and training).
Co-ordination costs	'Normal'.	Practically 'normal'.	High.	Very high.
Structure of financing	Contributions from Chamber of Handicrafts. Individually financed training. Rarely co-financed by the employment service.	Sector-fund with contributions only from the enterprises and no co-financing.	Sector-fund with contributions from employees and employers - no co-financing by employment service or the Ministry of Agriculture.	Complicated structure of co-financing. EU-financing, Berlin Senate, local employment service.
Benefits of the institution	Furtherance of individual vocational training. Training in the area of the Chamber Aachen and in certain occupations.	Furtherance of individual vocational training in a specific sector.	Refresher courses for the employed and those who are within employment offices' schemes and also active labour market and qualification measures in regions.	Refresher courses for employees of SMEs and work adjustment and training measures for the unemployed.
Flexibility and financing	Financing the model is dependent on course fees. A flexible use of financing because the lack of co-financing is difficult.	Basic financing for initial and CVT exists. This increases the flexible use of financing.	Basic financing for initial and CVT exists. This increases the financing flexibility, but for the quantity of activities, it is not enough. More co-financing is strived for.	Basic financing from EU. Restrictive policies of the Berlin Senate and the employment service reduces the flexible use of the financing.
Role of the social partners	Training centre is run by national social partners in the building trade.	They are partners in collective agreement and are therefore responsible for its implementation.	They are partners in collective agreement and are therefore responsible for its implementation.	No role for the social partners.
Potential for innovation	Training by a training centre is normal in Germany.	Training paid out of a sector-fund is unusual in Germany.	Training paid out of a sector-fund is unusual in Germany.	The project is innovative. Job-Rotation does not exist in Germany..
Model as an example of 'good practice'	The integration of the social partners in the training centre could realise a regional labour market and training network.	Co-operation in the sector between social partners for the furtherance of initial and CVT.	Co-operation in the sector between social partners for the furtherance of refresher training courses and training for the unemployed.	Regional network for the introduction of 'innovative' active labour market and qualification measures.

Table 4: Description of the training measures of the chosen models (cost/benefit dimensions)

Cost/benefit dimensions	Model 1 BGZ Simmerath		Model 2 Social Cashdesk		Model 3 Qualifications Fund		Model 4 Job Rotation	
Form of the measure	Measure A: Master Craftsman Bricklayer	Measure B: Quality Management	Measure A: Scaffolding Engineer	Measure B: Scaffolding Master	Measure A: Training in fodder production	Measure B: Establishment of enterprises	Measure A: Manager in SMEs	Measure B: Improvement of quality in SMEs
Content of the measure	Individual VT for Master Craftsman	Updating courses for employees	Individual VT for Master Craftsman	Individual VT for Master Craftsman	Updating courses for employees	Labour market and qualification measure	Labour market and qualification measure	Labour market and qualification measure
Duration - participants	7-9 Months	Weekend seminar	100 training courses	6 weeks	2 days courses	2 years	Employees 3 months Unemployed 1 year.	Employees 3 months Unemployed 1 year.
Bearer of costs	Individual (Master crafts fees)	Enterprises and employees	Sector fund - contribution of employers	Sector fund - contribution of employers	Sector fund - Contributions (employers and employees)	Sector fund - Contributions (employers and employees)	EU financing, Employment Service and Berlin Senate	EU financing, Employment Service and Berlin Senate
Benefits:								
for individuals	Individual career advancement	Refresher training courses in enterprises	Individual career advancement	Individual career advancement	Refresher training courses in enterprises	Employment and Qualification for individuals	Refresher training in enterprises and Employment and Qualification of the unemployed	Refresher training in enterprises and Employment and Qualification of the unemployed
for enterprises	Indirect	Refresher training for employees	Indirect	Indirect	Refresher training for employees	Indirect	Refresher training for employees only	Refresher training for employees only
for social partners	Influence on qualification in the region (certain jobs)	Influence on qualification in the region (certain jobs)	Influence on qualification in the sector	Influence on qualification in the sector	Influence on qualification in the sector	Influence on qualification in the sector	No benefits	No benefits
for educational policies	Supply oriented training in the region	Supply oriented training in the region	Supply oriented training in the sector	Supply oriented training in the sector	Supply oriented training in the sector	Supply oriented training and employment (Berlin)	Supply oriented training and employment (Berlin)	Supply oriented training and employment in Berlin
for labour market policies	Indirect	Indirect	Indirect	Indirect	Indirect	New employment	Qualification of employees and new employment	Qualification of employees and new employment

Table 5: Appraisal of the models/measures according to their innovative character

Model institution			Selected single measures		
	Procedure/ organisation	**Financing**		**Contents**	**Financing**
The BGZ Simmerath	Not innovative	Can be innovative	Measure A: Master Craftsman in Masonry	Not innovative	Not innovative
			Measure B: Quality management	Not innovative	Not innovative
The Social Cashdesk in the scaffolding sector	Innovative through sectoral fund arrangements	Innovative through sectoral fund arrangements	Measure A: Advanced training 'certified scaffolder chief engineer'	Can be innovative	Innovative through the sectoral fund.
			Measure B: Advanced training 'certified scaffold group leader'	Can be innovative	Innovative (as above)
Promotion Institute agriculture and forestry / Qualification Fund agriculture and forestry	Innovative	Innovative	Measure A: Work qualification measures. Fodder production.	Can be innovative	Innovative through fund arrangements.
			Measure B: Starting a new business, marketing products, creation of new jobs.	Very innovative (aims and target groups)	Very innovative through co-financing.
SPI ADAPT job rotation project	Very innovative - broad aims and target groups	Very innovative through co-financing	Measure A: CVT to be a manager in a handicraft firm.	Very innovative (broad aims and target groups)	Very innovative - co-financing
			Measure B: Improvement in the qualifications profile in SMEs.	Very innovative (as above)	Very innovative (as above)

4. Some policy related conclusions

4.1 *Possible ways in which the models can be expanded*

The expansion of these four models within the German system is possible only if the individual actors in the CVT system interpret their role as one of supporting an integrated and active labour market and qualification strategy.

The four models could expand their aims, widen the target groups and increase their financing. For example, the BGZ Simmerath could be an important partner in a regional training network. The aims of the 'Social Cashdesk in the Scaffolding Sector' could be broadened by including the unemployed into the initial and CVT plans of the sector, thereby contributing to an active labour market policy. The 'Promotion Institute Agriculture and Forestry' and Qualification Fund could strengthen its efforts in the field of active labour market policy on a regional basis. These models already operate according to an institutional and financial structure which allows such an expansion in order to establish a more effective and efficient labour market and qualifications policy. The 'SPI-ADAPT' project is an example of a scheme which has tried in practice to combine and realise these aims. The future means of finance for this project, however, remain unclear.

4.2 *The model institutions*

A modification of the role of the actors within these models is possible. While the social partners are more active than usual in the management and organisation of BGZ Simmerath as well as with the funding in the 'Social Cashdesk' and the 'Promotion Institute', they are not actively involved in the 'Job Rotation' programme. It might be necessary for the social partners to become more involved in this project, given that EU financing will soon come to an end.

4.3 *At the macro level*

Overcoming the barriers created by the strict division of the three sub-systems of CVT at the national level does not seem to be a realistic goal in Germany. The principle of subsidiarity, which still governs CVT in Germany politically, makes decisive changes to the national general conditions of CVT difficult. The situation in Denmark, however, indicates that the successful principle of an integrated, active labour market and a qualification strategy for enterprises associated with 'job rotation', is not possible without national framework laws, e.g. an effective training leave law. Changing general national laws in the field of CVT, which furthers co-operation between the actors and supports the combination of financing of the three sub-systems, is not realistic for Germany. Moreover, there is disagreement between the national employer organisations and trade unions about vocational training policy. An approach to implement an active labour market and qualification policy on the regional level, however, could be realistic. The four selected models are examples which indicate an expansion of the aims and target groups of the measures and the search for co-financing. They could be used to

overcome the strict barriers between the sub-systems in the nature of CVT prevailing in Germany.

4.4 *General recommendations for the different groups of actors*

The goal of implementing an integrated, active labour market and qualification policy, as shown by the situation in Denmark, is only realistic with the co-operation of the actors at the regional level. The creation of regional networks for co-ordination of the reduction of long-term unemployment presupposes co-operation at the regional level of many actors (i.e. the social partners , regional employment office , communes and local training centres). The social benefit, however, of an integrated, active labour market and qualification policy is accompanied by a rise in co-ordination costs. This 'trade-off' between benefits and costs should not be, as the example of Denmark shows, over-emphasised. In Germany, the realisation of an integrated, active labour market and qualification policy seems feasible at the moment only at the regional level.

Chapter Seven

Measuring the Impact of CVT in Irish Companies

(A report by Alan Barrett/Philip O'Connell at the Economic and Social Research Institute - ESRI)

1. Background

In a world of rapid technological change, where employee skills are seen as a key determinant of national competitiveness, it has become something of a mantra that the continuing training of employees is a crucial business activity. In addition, it is believed that companies may well under-invest in training. This may be due partly to the difficulty of capturing the returns if trained employees quit, or because companies are simply ignorant as to the benefits of continuing training. Whatever the reason, the possibility of under-investment in continuing training by companies has led governments and the EU to subsidise such activities in an effort to correct the market failure (Department of Enterprise and Employment - Ireland, 1997).

Given that the importance of continuing training and the desirability of subsidising it appear to be generally recognised, it is somewhat surprising that direct evidence of the effect of such training on productivity is quite limited; in the case of Ireland, such research is simply non-existent. It is true that there has been much research on the indirect effects of training, whereby the effects of training are measured by considering the wage rates across individuals of different levels of training. This approach, however, suffers from possible flaws. The assumption implicit in such work is that wages are closely related to productivity and so higher wages must result from a positive effect of training on productivity. We know from other research, however, that the wage/productivity link may not be perfect. For example, Medoff and Abraham (1981) show that in a large company they were studying, more experienced workers in a job category received higher wages, even though they received less favourable evaluations from supervisors than less experienced colleagues. For this reason research is required that examines directly how productivity is affected by continuing training; specifically, there is a need to consider the issue at the firm level and to see if, and to what extent, output and productivity respond to such training.

In this study, the firm level approach is considered in an effort to measure the effect of continuing training on output and productivity. The analysis is based on a unique data set which was generated through two surveys which were conducted on a group of Irish companies at two points in time. This panel-type structure of the data set makes it possible to look at changes across the companies in output productivity between 1993 and 1995 and at how these changes may be related to differences in the provision of training in 1993. While some studies have been undertaken using this approach, our study has two important advantages. First, as no study of this

type has ever been undertaken using data from Irish firms, the results contribute to filling an important information gap and so will be of general use to companies in Ireland and to policy makers here. Second, and in addition to the nation specific advantage, the data set used in the study is considerably richer than those used in the existing studies, both in terms of the sample size and variables included. This richness allows us to arrive at the most illuminating conclusion in this study: it is the type of training, and not simply the amount, which appears to be important in increasing output and productivity.

Before, we discuss the research design and the model used for this study, we review the work which has been done in this area in which approaches similar to ours have been used.

2. Literature Review[1]

The vast majority of investigations into the returns to training expenditure have approached the issue from the perspective of the individual. In addition, a number of studies have considered the issue from a national perspective by examining differences in national productivity levels and how these relate to national investments in training. Rather than discuss any of those studies, we will focus here on the few studies that share our approach, that is, measuring the returns from the perspective of the company. We will outline in brief the content of three such studies and explain the advantages of our work over these pieces.

2.1 *de Koning and Gelderblom (1992)*

In their paper, de Koning and Gelderblom (1992) use information from a survey of 51 companies to measure the effect of training. The companies included come from six sectors. As they are using data on training input and productivity from the one year, they encounter a statistical problem in establishing the relationship between the two. If they were to find that firms which had high levels of training in a particular year also had high levels of productivity, it could be for two reasons. Whilst training may be making the workers more productive; those firms which have higher productivity levels may also be better able to afford training. In the former case, the causation runs from training to productivity whereas in the latter case the causation runs in the opposite direction. In order to overcome this problem, they used a particular statistical technique; the approach they used is called the *two-stage least squares estimation technique*[2]. In essence, this approach allows the two directions of causation to be estimated simultaneously.

Their indicator of training intensity is the proportion of employees who participate in a training course in the year; their measure of productivity is constructed to reflect value added, that is the difference between the value of raw materials as they enter the plant and the value of sales as they leave. Although they find that higher levels of productivity tend to increase the amount of

[1] The references for the studies used in this paper are given at Annex 5a.

[2] In general, least squares estimation is a statistical technique in which the sizes of the effects of a range of variables on another variable (the dependent variable) are estimated. For example, least squares estimation could be applied to examine how productivity growth across firms is effected by training, capital investment and investment in research and development.

training provided, they do not find a statistically significant effect of training on productivity. It is difficult, however, to conclude from this that training has no effect on productivity; the difficulty arises because of the small sample size. This is particularly problematic given that six sectors are included.

The following points summarise the study:

- *Sample size: 51 companies, from six sectors;*
- *Training indicator: proportion of employees who participated in a training course in the year;*
- *Productivity measure: value added*
- *Result: training had no effect on productivity*

2.2 *Holzer et al (1993)*

The study of Holzer et al (1993) is based on a sample of firms who applied for a state training grant; all the firms are in manufacturing. With three years of information on each firm, the authors are able to look at how changes in productivity may be related to differences in training input. In this way, they did not face the two-way causation problem that confronted de Koning and Gelderblom and so were able to base their analysis on a single equation. Their training indicator is the annual hours of training per employee; their productivity measure is based on the "scrappage rate" in each firm (by "scrappage rate" they mean the proportion of output that could not be sold due to faults). Working with a sample size of between 90 and 60, they found a significant effect of training on the productivity measure across a range of equation specifications; for example, a doubling of training per worker was found to be associated with a 7% fall in the scrappage rate.

The finding of a positive training effect by Holzer et al is in line with the theory of training, but the interpretation of their result is limited by the nature of their dependent variable; changes in the scrappage rate. It could be that the scrappage rate fell in response to more care being taken during production; this, however, could be the result of slower as opposed to more productive processes, whereby productivity may not have increased. For this reason, the Holzer et al study still falls short of showing a clear link between training and productivity.

The following points summarise the study:

- *Sample size: 60 to 90 companies, all in manufacturing;*
- *Training indicator: annual hours of training per employee*
- *Productivity measure: scrappage rate*
- *Result: training had an effect on productivity; for example, a doubling of training per worker was found to be associated with a 7% fall in the scrappage rate.*

2.3 *Bartel (1994)*

The final study which we will mention is that of Bartel (1994). Her work is based on a survey of firms conducted in 1983 by the Columbia Business School; the survey gathered information on human resource policies in these firms, including training policies. For the purpose of the study, only information on manufacturing firms was used and this left a sample of 155 for analysis. The measure of training intensity was the proportion of seven groups of workers in each enterprise who received training; the productivity measure was "net sales". As the survey contained two years of data, Bartel, like Holzer et al, was able to overcome the two-way causation problem by estimating how the *level* of training is related to the subsequent *growth* in productivity. She found evidence of training effectiveness; for example, evaluated at the average level of her training measure, the introduction of new training produced a productivity gain of 18.86%.

While Bartel's study uses a preferable dependent variable than that used by Holzer et al, her measure of training remains very crude. What is more, starting from a given level of training, she measures the effects of an incremental increase in training, rather than the level of training. It is the level which is of greatest interest.

The following points summarise the study:

- *Sample size: 155 companies, all in manufacturing;*
- *Training indicator: the proportion of seven groups of workers in each enterprise who received training*
- *Productivity measure: value added*
- *Result: training had an effect on productivity; for example, evaluated at the average level of her training measure, the introduction of new training produced a productivity gain of 18.86%.*

2.4 *Conclusions*

From this discussion it can be seen that while the studies have contributed to filling a gap in the research on training, we are still a long way from understanding the relationship of interest. Given that the common problem across the studies is one of poor data, the data used below go some way towards reducing the size of that difficulty, for the following reasons:

- While our sample size is small relative to many cross-sectional studies, in percentage terms it is considerably larger than those used in the studies just outlined. Bartel's study uses a sample size of 155, whereas our data set contains 276 observations.

Our information on training is richer than that available to the other researchers. With data on numbers trained, hours per trainee and types of training we can explore the question further.

3. Research design and the data set

The starting point for this research was the survey of Irish industry undertaken in 1993 By R. Fox[3]. The survey asked detailed questions about training practices in a sample of enterprises employing more than 10 people in the manufacturing industry, construction and private services. Its focus was on continuing vocational training, not initial training, and so apprentices are excluded.

A total of 654 useable returns were obtained. The information obtained includes the following:

- the activity of each company;
- its workforce and a breakdown in terms of managers, operatives, etc;
- whether or not different types of training were undertaken;
- how many days employees spent in training;
- how much the company spent in training courses, including the labour costs of employees while participating in courses.

In order to obtain the information required to measure the effects of training on turnover and productivity, it was necessary to re-survey the 654 companies at a later point in time. This was done in April/May 1997. Given that the sample which we were re-surveying was quite small, the strategy adopted was to ensure that the response rate was as high as possible. To achieve this, the amount of information sought was kept to a minimum. The main aspects were as follows:

- turnover in 1993 and 1995;
- the value of fixed assets at the same two points in time;
- the size of the workforce, again in 1993 and 1995.

Excluding 12 public authorities, the original survey consisted of 642 firms. The follow-up survey achieved 292 responses, an effective response rate of 45.5%. Eliminating responses with incomplete or poor quality data reduced the number of useful cases to 276. In order to check for bias in the response we compared the second-wave cases with the first-wave and found that the distribution of companies by sector and size category was very similar in both surveys. We also found that the mean values of training measures - proportion of employees receiving training and total training days per employee - were very similar, and not statistically different. Some descriptive statistics on the firms who responded to the second survey can be found in Table 1 in Section 5 below.

[3] Fox, R. (1995), Company Training in Ireland, Dublin: FAS. As no national register of companies was available for sampling purposes, the sample of 1 000 companies was drawn at random from the following sources: the FAS Levy/Grant Register of companies in manufacturing, construction and garages the Dun and Bradstreet register of distribution companies and the Kompass register of service companies.

4. The model

In order to place our empirical work in a theoretical context, the model on which our estimation is based is presented below. The model is drawn from the paper by Bartel[4]. For those who are not concerned with the theoretical derivation of the equations which we will use to estimate the effect of training, it is sufficient to realise that Equations 5 and 8 below are the equations used. A simple explanation of each is given in the sub-section at the end of this section.

4.1 *Deriving the equations to be estimated*

We assume that the relationship between output and inputs which holds for the companies we are studying has a structure that is commonly used in economic modelling, the "Cobb-Douglas" structure; its precise form is shown in Eq. 2 below. Output is a function of two inputs, capital (K) and 'effective labour' (EL). Effective labour can be thought of as the amount of labour services employed by the company. It comprises the amount of labour employed (RL, or reported labour) and the amount of training that the workforce have received (T). It should be noted that training as we are defining it here is a "stock" variable, that is, an amount accumulated over time; the training provided to employees in any year can thus be thought of as a "flow" variable, that is an amount that is added to a stock over a period of time.

The relationship between effective labour (EL), reported labour (RL) and training (T) is as follows:

$$EL = RL(1 + \lambda T) \quad (1)$$

According to Eq. 1, if training (T) was equal to zero, effective labour (EL) and reported labour (RL) would be the same. However, as λ is a number greater than zero, if training is greater than zero, then effective labour is greater than reported labour. This is because reported labour is being multiplied by a number greater than one. The bigger is λ, the stronger is the effect of training in transforming reported labour into effective labour.

4.1(i) Equations concerning the effect of training on output

The production for each firm can be written as follows:

$$Q = AK^{\beta}EL^{\gamma} \quad (2)$$

β and γ are numbers greater than zero, as is A. This equation tells how much output is produced when units of capital and labour are combined. Although we have written the equation in a general form, if we had values for β, γ and A we could say how much output is produced when various level of capital and labour are combined.

[4] Bartel, A. (1994), Productivity Gains from the Implementation of Employee Training Programs, Industrial Relations Vol. 33 - See Annex 5b.

Substituting Eq. 1 into Eq. 2 gives

$$Q = AK^{\beta}(RL(1 + \lambda T))^{\gamma} \quad (3)$$

This equation tells us nothing new; its usefulness arises as part of our effort to arrive at a model which we will be able to estimate and which will tell us about the relationship between training and output and productivity. In that estimation, we will want to work with a more simple model and so we will perform another adjustment. We take the natural logarithm of both sides of Eq 3 which gives us the following:

$$\ln Q = \ln A + \beta \ln K + \gamma \ln RL + \gamma\lambda T^{5} \quad (4)$$

Estimating an equation such as Eq. 4 could potentially produce a biased estimate of the effect of training on output[6]; this would arise if there are unobserved characteristics of firms which are correlated with training (T) and which effect output (Q).

For example, if the managers of a firm are particularly effective, they may be able to generate high productivity and to have funds made available for training. In this case we will observe high productivity and high levels of training, but without information on manager quality, we might be led to overstate the contribution of training to the high productivity. Assuming these unobservable characteristics are unchanged over time, the bias problem can be eliminated in the following way: we subtract a version of Eq. 4 in one year from a version in subsequent year. In this way we are modelling changes in variables, as can be seen in Eq. 5:

$$\ln Q_t - \ln Q_{t-1} = \beta(\ln K_t - \ln K_{t-1}) + \gamma(\ln RL_t - \ln RL_{t-1}) + \gamma\lambda(T_t - T_{t-1}) + \alpha X + \varepsilon_t - \varepsilon_{t-1} \quad (5)$$

where ε_t and ε_{t-1} are error terms, $T_t - T_{t-1}$ is the training provided over a year, or alternatively, the increase in the stock of training. X is a vector of control variables.

To summarise so far, Eq. 5 says that changes in output are influenced by changes in a range of variables including changes in the amount of training which the employees possess ($T_t - T_{t-1}$); this quantity is equal to the amount of training provided to employees in a given year. Estimates of Eq. 5 will be presented below.

[5] This transformation uses the approximation $\ln(1+x) = x$ for small x.

[6] By a "biased" estimate we mean that the true size of the relationship between training and our variables of interest may be either over- or under-stated because of the statistical problem we are considering.

4.1(ii) Equation concerning the effect of training on productivity

While the effect of training on output is of interest, we are also interested in the effect of training on productivity. Hence, we need to alter the model so that the dependent variable is output per worker. Returning to Eq. 3, we divide through by reported labour (RL), thereby producing output per worker (Q/RL) as follows:

$$Q/RL = AK^{\beta}RL^{\gamma-1}(1+\lambda T)^{\gamma} \quad (6)$$

Again, in order to arrive at a model that can be estimated using linear techniques, the logarithm of both sides is taken. This leads to the following:

$$\ln(Q/RL) = \ln A + \beta \ln K + (\gamma-1)\ln RL + \gamma\lambda T + \alpha X + \varepsilon \quad (7)$$

As was the case with output, it is possible that the estimation of Eq. 7 could produce a biased estimate of the effect of training on productivity. Again, we difference Eq. 7 which leads to the following:

$$\ln(Q_t/RL_t) - \ln(Q_{t-1}/RL_{t-1}) = \beta(\ln K_t - \ln K_{t-1}) + (\gamma-1)(\ln RL_t - \ln RL_{t-1}) + \gamma\lambda(T_t - T_{t-1}) + \varepsilon_t - \varepsilon_{t-1} \quad (8)$$

This equation says that changes in output are related to a range of variables, including training. Eq. 5 and Eq. 8 encapsulate the core concern in this study and so their estimation will be presented below.

4.2 *Summary*

Our empirical analysis involves using the data from our data set to estimate the values of the parameters in Eq. 5 and Eq. 8. For Eq. 5 this means estimating the values of β, γ, $\gamma\lambda$ and α. The value of $\gamma\lambda$ will tell us how training impacts upon output. If the estimate of this value is not statistically different from zero, then we will have found no evidence of training effecting productivity. In Eq. 8 the parameter that tells us about the effect of training is again $\gamma\lambda$.

We should stress that when we talk about training we are referring to training undertaken in 1993 and reported in the survey of Fox, described in section 2. In order to see if this training is related to output or productivity changes, we will be using the difference in the firms' output and productivity levels between 1993 and 1995, reported in the later survey and described in Section 4. *In essence, we are asking if training in 1993 brought about output and productivity growth between 1993 and 1995.*

5. Results

5.1 *Descriptive statistics*

Before presenting the results of our estimation of Eq. 5 and Eq. 8, we will present some descriptive statistics on our sample of firms. These are contained in Table 1. The definitions of 'Specific Training' and 'General Training' are determined by the 1993 survey[7].

Table 1 - Summary Statistics on Principle Variables

	Firms with no training in 1993		Firms which trained in 1993	
	Mean	Std. Dev.	Mean	Std. Dev.
Turnover 1993 (IR£,000s)	2 569	3 264	28 363	66 520
Prop. Change in Turnover	0.31	0.32	0.18	0.26
Labour Productivity (IR£1,000s)[8]	104	140	142	216
Prop. Change in Labour Productivity	0.04	0.40	0.02	0.37
Assets, 1993 (IR£1,000s)	5 027	27 206	9 947	47 938
Prop. Change in Assets	0.13	0.37	0.14	0.35
No. of Employees, 1993	33	33	200	477
Prop. Change in No. of Employees	0.12	0.45	0.14	0.36
Training Days/Employees	0	--	2.19	3.13
Trainees/Employees	0	--	0.46	0.33
Specific Training Days/Employees	0	--	1.04	1.93
General Training Days/ Employees	0	--	0.93	2.09
No. of Cases	52		224	

Of the 276 firms who responded to the second survey, 52 reported in the 1993 survey that they had conducted no training in that year. For the 224 companies that did undertake training in 1993, the average amounts of training can be summarised in the following statistics: on average, employees had 2.19 days of training and 0.46 of all employees received some. It is clear from the table that the firms which undertook some training are larger firms, in terms of turnover, number of employees and fixed assets. One surprising point to emerge from the table is that both turnover and productivity grew faster in the non-training firms. This initial view points to a less than simple relationship between these output measures and training. However, in order to isolate the separate effects of the different variables which might influence output and productivity it is necessary to employ the statistical technique of multivariate regression.

5.2 *Results with changes in output as the dependent variable*

In Table 2, we present the results of estimating Eq. 5, derived in the previous section but presented again here for clarity:

$$\ln Q_t - \ln Q_{t-1} = \beta(\ln K_t - \ln K_{t-1}) + \gamma(\ln RL_t - \ln RL_{t-1}) + \gamma\lambda(T_t - T_{t-1}) + \alpha X + \varepsilon_t - \varepsilon_{t-1} \quad (5)$$

[7] The companies were asked to categorise their training into that which could be used outside their firm (general) and that which would be useful only within (specific). Clearly, this was designed to capture Becker's distinction in training types (Becker, 1975). See Annex 5 for more detail.

[8] Labour Productivity is turnover divided by the number of employees

Two specifications of the model are shown, each containing a different definition of the training variable. In Specification 1, training is defined as the number of days of training per employee; the corresponding variable in Specification 2 is the proportion of employees who received training. Although variables representing the various sectors from which the firms are drawn were included in earlier estimations of the model, they were not significant and had no impact on the other coefficient estimates. For this reason, estimates of the simplest form of the model are shown in the table.

Table 2 - Dependent Variable: Proportionate Change in Turnover, 1993-1995
(t-values in parenthesis)[9]

	(1)	(2)
	Training Variable:	
	Training Days/ Employees	Trainees/ Employees
Training	0.004	0.046
	(0.78)	(1.03)
Change in Assets	0.282***	0.285***
	(6.05)	(6.21)
Change in Employment	0.240***	0.238***
	(4.49)	(4.48)
Intercept	0.096***	0.086***
	(4.70)	(3.40)
Adj R^2	0.25	0.25
N	210	210

* p[10] < 0.10, ** $p < 0.05$, *** $p < 0.01$, (two-tailed tests)[11]

Given our primary interest in the effect of training, the results on the output variable are noteworthy. The estimates reveal that the effect of training on output growth, controlling for the effects of capital and labour growth, is not significantly different from zero. This same result also emerged from the equations in which we included variables which captured the different sectors from which the firms were drawn.

5.2(i) Interpretation of the results

An initial reaction to this might be that our data are too imprecise to capture the effect. However, a quick look at the rest of the table shows that this simple response is probably not the case. The effects of increases in both capital and labour are measured with statistical precision, as can be seen from their 't-values' across both specifications. It could also be argued that the effect of training is felt most directly on productivity changes and not on output changes. If this is true then the estimation of Eq. 8 should show a significant effect of training.

[9] T-values are statistical constructs which allow us to determine if the effects we estimate are statistically different from zero. In general terms, a t-value greater than 2 indicates an estimate that is statistically different from zero.

[10] P is a statistical term which indicates the degree of certainty with which a result has been arrived at. For example, $P < 0.10$ indicates that there is a 90% certainty that our estimate differs from zero.

[11] A two-tail test considers the possibility that our estimate is greater or less than zero.

5.2(ii) Results with changes in productivity as the dependent variable

The estimation of Eq. 8 is shown in Table 3; we will repeat the equation for clarity:

$$\ln(Q_t/RL_t) - \ln(Q_{t-1}/RL_{t-1}) = \beta(\ln K_t - \ln K_{t-1}) + (\gamma-1)(\ln RL_t - \ln RL_{t-1}) + \gamma\lambda(T_t - T_{t-1}) + \varepsilon_t - \varepsilon_{t-1} \quad (8)$$

Table 3 - Dependent Variable: Proportionate Change in Labour Productivity, 1993-1995
(t-values in parenthesis)

	(1)	(2)
	Training Variable:	
	Training Days/ Employees	Trainees/ Employees
Training	0.005	0.053
	(0.89)	(1.19)
Change in Assets	0.262***	0.266***
	(5.82)	(6.00)
Change in Employment	-0.759***	-0.761***
	(-14.14)	(-14.26)
Intercept	0.097***	0.085***
	(4.74)	(3.37)
Adj R^2	0.51	0.52
N	212	212

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, (two-tailed tests)

As was the case in our estimation of Eq. 5, we have used two definitions of training. We have also included variables representing sectors in earlier estimations but excluded them in the final model because of their lack of impact.

5.2(iii) Interpretation of the results

Once again, we find that the impact of training is statistically indistinguishable from zero. The large, negative effect of the change in employment on productivity is perhaps surprising, but can be explained as follows. If a firm has a large increase in its workforce, a high proportion of the workforce will be inexperienced and so less productive. In addition, the more experienced staff will be diverted from their tasks while assisting the newcomers. Hence, the negative coefficient is not surprising. The size of the effect may still appear to be an overestimate; however, Bartel in her estimation of Eq. 8 found a value identical to this across a range of specifications. This raises the important issue of the effects of newly hired workers on productivity and how they can be optimally spaced.

5.2(iv) Summary of the results

To summarise our initial round of estimation, we could not identify an effect of training on either output growth or productivity growth, using our initial measures of training. While we might have expected the possibility that the effect of training could be smaller than was

generally thought, the finding of no effect seems implausible. At this point, we can exploit the relative richness of the data-set and ask if some *types* of training have an impact.

5.3 *Analysing the effects of different types of training*

In order to investigate the possibility of a differential impact according to training type, we draw on the distinction introduced in Table 1, that of *specific* and *general* training. As mentioned, general training is defined in the 1993 survey as being training that could be used outside the firm; specific training, on the other hand, is only of use within the firm. In the case of each type of training, we know the number of days spent on each by all employees; hence, we can compute the number of general and specific training days per employee in each firm. We then multiply these variables by the training measures used in the estimations presented in Tables 2 and 3, thus producing what are called "interaction terms". The resulting variables are as follows:

(a) **Specific Training Days (STD)/ Total Training Days (TTD) x Total Training Days (TTD)/ Employees (RL)**
= STD/ RL , that is, specific training days per employee.

The same type of variable was created for General Training Days (GTD).

(b) **STD/ TTD x Trainees (Tr)/ RL.**
The first part of the variable gives the proportion of training that is specific. In order to scale it up to be a measure of specific training input, we multiply by a measure of training intensity, that is the proportion of the workforce which is trained. Again, the same type of variable was created for GTD.

Using the general and specific training variables just described, we re-estimated Eq. 5 and Eq. 8 with the two training variables in each of the two specifications. Looking firstly at Eq. 5, the results are presented in Table 4.

5.3(i) Results of the analysis

The most striking point in Table 4 is that general training now has a positive and statistically significant effect on output growth. The direction and significance is consistent across both specifications. The effect of specific training cannot be distinguished from zero and this is also consistent across both specifications. This implies that the findings of no measurable effect in Tables 2 and 3 were masking the different impacts of general and specific training.

Table 4 - Dependent Variable: Proportionate Change in Turnover, 1993-1995
Differentiating General and Specific Training
(t-values in parenthesis)

	(1)	(2)
	Training Variable:	
	Training Days/ Employees	Trainees/ Employees
Specific Training	-0.011	-0.098
	(-0.08)	(-0.075)
General Training	0.015**	0.161**
	(2.00)	(2.45)
Change in Assets	0.281***	0.276***
	(6.10)	(6.04)
Change in Employment	0.261***	0.245***
	(4.83)	(4.65)
Intercept	0.099***	0.089**
	(4.90)	(3.68)
Adj R^2	0.27	0.27
N	210	210

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, (two-tailed tests)

In Table 5 we present the results of the re-estimation of Eq. 8 using the general and specific measures of training. The effects uncovered in Table 4 are seen again in the effect on changes in productivity. While general training consistently shows a positive and significant effect, the effect of specific training is consistently indistinguishable from zero.

Table 5 - Dependent Variable: Proportionate Change in Labour Productivity, 1993-1995, Differentiating General and Specific Training
(t-values in parenthesis)

	(1)	(2)
	Training Variable:	
	Training Days/ Employees	Trainees/ Employees
Specific Training	-0.010	-0.095
	(-1.179)	(-1.22)
General Training	0.016**	0.170***
	(2.08)	(2.61)
Change in Assets	0.261***	0.257***
	(5.86)	(5.84)
Change in Employment	-0.738***	-0.754***
	(-13.60)	(-14.29)
Intercept	0.100***	0.089***
	(4.95)	(3.64)
Adj R^2	0.52	0.53
N	212	212

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, (two-tailed tests)

The figures in Tables 4 and 5 show that general training has a statistically significant effect on both the change in output and in productivity. The figures, however, are less useful in getting a

sense of the magnitude of the effect, due to the logged form of the dependent variable. In order to derive a meaningful measure of the effect of training, it is necessary to evaluate the impact at particular values of the training variables. This is done by calculating the product of the variable's value and the coefficient estimate and then calculating the value of "e" to that power[12]. The results of these calculations are presented in Table 6 for both the output and productivity equations and the two measures of general training.

Table 6 - Evaluating the Effects of Training on Productivity at Mean Training Values

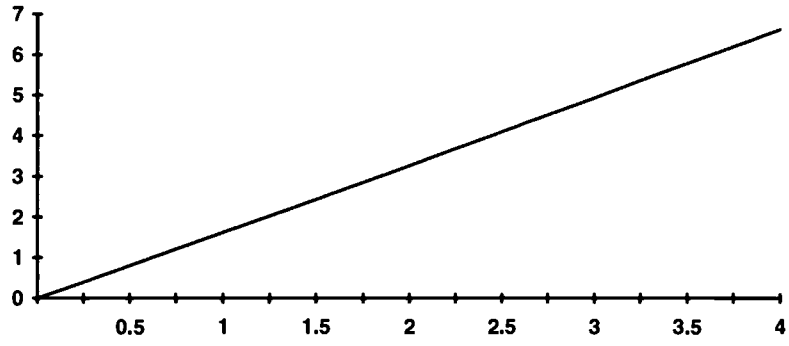
Training Measure	Mean	Coefficient estimates	Effect
		Turnover	
General Training Days/Employee	0.75	0.015	1.011
General Training*Trainees/Employees	0.50	0.161	1.084
		Productivity	
General Training Days/Employee	0.75	0.016	1.012
General Training*Trainees/Employees	0.50	0.170	1.089

The 'effect' column shows that a firm which provided the average level of general training days per employee experienced a growth in turnover of 1.1 per cent between 1993 and 1995 as a result of that training. Similarly, for a firm that provided the average proportion of its employees with training, that is 50 per cent, output growth of 8.4 per cent was experienced. The percentage effects on productivity are very similar.

In order to illustrate how the percentage gain in productivity varies with the level of general training days per employee, we evaluate a range of values and plot them in Figure 1. It should be viewed with some caution, especially for values away from the sample mean. From Table 6 we know that the average level of general training days per employee was 0.75; this level of general training yields a percentage productivity gain of 1.2 per cent. From Figure 1, it can be seen that a doubling of this input to 1.5 days per employee would produce a productivity gain of around 2.5 per cent, although this estimate is somewhat tentative.

[12] Drawing on the notation of the model, we calculate $e^{\lambda\gamma(\text{training})}$.

Figure 1 - The Impact of General Training Days on % Change in Productivity



General Training Days per Employee

6. Conclusion

Our objective in this paper has been to estimate the effect of continuing training on output and productivity, using information drawn from Irish companies. What we have discovered is that the relationship between training, broadly defined, and these other variables is not simple. Furthermore, we have discovered that the type of training matters; in particular, training which is general in nature yields a positive impact whereas training which is specific to the company does not yield an impact which is statistically different from zero.

This finding gives rise to the obvious question of why this should be the case. There may be a number of explanations. First, companies which offer general training may be displaying a more rounded approach to human resource management than companies who only train for the immediate tasks at hand. It is the broader human resource policies which produce the positive effects and not the general training alone. Second, it could be that while some firms described certain activities as being 'specific training' in their responses to the 1993 survey, others may have viewed these same activities as routine parts of overall operations. If this occurred, no impact of specific training would be derived from the data. It is likely that general training was more accurately reported across firms and so the positive effect could be identified.

The nature of the result we have uncovered clearly determines the need for further work and exploration into the relationship between training and enterprise output/productivity. From the work presented here, however, we can conclude that while some types of training have been shown to have a positive effect on output and productivity, this cannot be said of other types of training. Hence, it is important that firms take care in designing their training strategies and that governments aim their subsidies towards effective training.

Chapter Eight

CVT Activity within the Packaging Sector in Italy

(A report by Francesco Garibaldo[13] at Istituto di Richerche Economiche e Sociali - IRES)

1. Premise

This study focuses on a qualitative analysis of Continuing Vocational Training (CVT) in an industrial district[14] of the packaging machinery industry in the Emilia Romagna region in Italy. The work is based on assessing case studies through interviews. It is not a formal assessment of the costs and benefits of CVT; it is concerned with exploring ways in which such training can cope with the challenges facing this sector. This project was co-funded by the Emilia Romagna region on the condition that it covered aspects of quality within this sector.

2. Background

The *Packaging Valley* is in the administrative area of the Province of Bologna. This sector, concerned with producing automatic packaging machines, includes enterprises that produce machines and production lines that form, measure out, divide and pack products. These machines are sold to producers of consumer goods.

This sector, according to the sector association (UCIMA), comprises about 250 industrial enterprises and about a hundred artisan enterprises. At the end of 1995, the total turnover of the sector was LIT 3 800 billion (LIT 2 610 in exports). Italian and German producers are leaders in this sector and cover almost 60% of world export. In the 1980-1992 period, the competitive position of Italian enterprises, in terms of world market share rose from 14.8%

[13] Francesco Garibaldo (Director of IRES) co-ordinated and participated in the research group. Other contributors were:F. Belussi, L. Lugli, F. Sbordone, F. Tuccino, Saul Meghnagi (Director of ISF – Istituto Superiore per la Formazione)

[14] The following elements characterise a district, according to the Marshall definition:

- the presence of a group of small, medium and very small enterprises that undertake the same kind of production activity within a geographically demarcated area;
- a few of these small and very small enterprises sell their own products on the market, whereas the others contribute to the manufacturing process or produce parts for the final product;
- there isn't a rigid separation between the enterprises that sell the product and those that form the supplier chain, in the sense that it is possible for enterprises that work on behalf of another enterprise to arrive at the market;
- the relationship between the enterprises that sell on the market is characterised by a mixture of competitiveness and co-operation, in that the enterprises try not to create conflict amongst themselves but instead strive to find formal or informal agreements, in order to share market space.

(1980) to 23% (1992). Their success is based on their innovative capacity, flexibility and ability to meet customer need - critical factors in a market where requirements are changing frequently.

The Emilia Romagna region occupies a central role in the Italian market within this sector with 336 local units that employ 60.8% of total workers. During 1971-81, there was a sharp rise in local units in Emilia Romagna (+246%) and number of employees (+70%), while the average size of the enterprises went from 66 to 32 workers per production unit.

During 1981-91, the process of growth started to slow: the number of workers grew by 19% and local units by 18.3%. Growth was sustained by medium-sized enterprises with 20 to 49 workers, whose influence, in terms of the concentration of employees, went from 12.5% to 18.4%.

The first half of the 90's was characterised by high growth rates in the fundamental indicators of this sector. In 1995, turnover reached LIT 3 800 billion, an increase of 20.3% compared with the previous year. Investments increased by 19.5% in 1994/93 and 28.6% in 1995/94. In recent years the sector has directed itself more towards export activities. In 1995, foreign sales represented 83.2% of the turnover, almost double that of 1992 (Source: Ufficio Studi UCIMA). Much of this growth was attributable to "emerging" markets e.g. South Korea, Brazil. The biggest customers operate in the food sector, tea, paper, tobacco, pharmaceuticals, confectionery, cosmetics and drinks.

3. Introduction to the study

Three influential economics books - *The Competitive Advantage of Nations (1990)* by Michael Porter; *Lean and Mean (1994)* by Bennett Harrison and *Industrial Districts and Inter-firm Co-operation in Italy (1990)* by Pyke, Becattini, Sengenberger - utilise the so-called ***packaging valley*** which illustrates the international relevance of this case. There are a number of reasons for this, partly due to the way the sector is structured and how it has developed, i.e. as a district characterised by a highly skilled workforce, a web of firms spun-off by a single firm that acted as ***an incubator***, a strong supplier chain, a strongly export-oriented industry, etc. Also, a specific relationship has developed between this web of firms, even concerning training, with the establishment of a unique technical school - the Istituto Aldini - Valeriani per le Arti e i Mestieri (created in 1978 - please see below). In short, it seemed relevant to the CEDEFOP project on CVT to assess what happened in a successful and dynamic industry, traditionally based on a widespread diffusion of knowledge as a basic requirement for success.

3.1 *The Emilia-Romagna packaging sector framework*

Certain framework characteristics can be identified within this regionally based sector.

- There is a high level of employment:

Table 1

Males and Females (in thousands)[15]			
	Working population	*Employment rate*	*Unemployment rate*
1993	60.0	56.4	6.0
1994	59.9	56.2	6.1
1995	59.9	56.3	6.1
1996	60.0	56.6	5.6

- The local education and initial vocational training system is characterised by a fall in participation partly due to a declining birth rate. The need to ensure an adequate supply of technical workers and entrepreneurial activity in the sector led to the establishment of the Aldini-Valeriani foundation to encourage the development of a 'technical culture' in the region for the supply of training places for technical training.

The Aldini-Valeriani Foundation was established on the recommendations of Bologna City Council with the support of the employer's confederation (Assindutria). Its aims are:

1. *Promote a 'technical training' culture, by encouraging young people to train for this sector*
2. *The provision of middle- to high-level training courses for young people leaving school and technicians with work experience; it should be highlighted that its objective is not only to use public funding, but also to economically involve the enterprises;*
3. *Distribution of technological services in research and development;*
4. *Documentation centre on new technologies and innovation in industrial processes.*

Foundation members are the Bologna City Council, the Industrialist Association of the province of Bologna and the Chamber of Commerce of Bologna that provide:

a) *Part of the Institutes' equipment (LIT 1.5 billion) and premises for 20 years (10 of these, free of charge), as well as the use of the Aldini-Valeriani brand-name;*
b) *LIT 2.5 billion to be used to adapt the premises, the purchase of material and to initiate the activity. In addition, CFP Ktema (a school promoted by Confindustria - Employers' association) was given to the foundation;*
c) *LIT 1.3 billion was given to fund the training activities.*

The collective investment in human capital for training activities aimed at packaging enterprises was LIT 16.4 billion in 1994. This paid for 200 workers attending training courses, 150 of these 5-year courses and 50 3-year courses. It is expected that there will be a new investment of LIT 5 billion for enterprise activities and LIT 7 billion for the cost of the building. Out of the total funding quota aimed at training activities, 70% is referred to packaging enterprises (approx LIT 8.4 billion). Funding is usually provided by the City Council of Bologna, the Province and the enterprises in various percentages depending on the training type and objective.

As an example, the cost of training a technician is LIT 580 million. During 1995-96, the Aldini-Valeriani Foundation ran, with the vocational training centre of the Bologna City Council, a training course for the industrial assessors of the metal sector. The course lasted 600 hours, including the in-company part, and aimed to create skills for new technology. There were 12 participants, 6 of whom were already employed in the enterprises. The course, financed by the Emilia Romagna region, stemmed from a request by an enterprise and they agreed the course content and taught part of it. At the end of the course, a joint evaluation process was conducted with the enterprises involved. Those who participated in the courses but weren't employed, were hired; those with contracts, had them renewed.

[15] Source: 1997 Report Osservatorio del Mercato del Lavoro della Regione Emilia Romagna

- The public agencies concerned with CVT in this region are ASTER and ERVET, the former for technology transfer and the latter for regional development. They are both engaged in monitoring the utilisation of Objective 4 of the European Structural Funds and to assess the CVT situation in the main industrial sectors in the region. In order to gain access to the funds, the association of SMEs established COFIMP - centre for vocational training.

In 1992, at the request of the enterprises, the Emilia Romagna region issued a law (37/92) in order to support the need to enhance quality standards to maintain industrial competitiveness. At this time it was decided to adopt community legislation and ISO 9000 regulations as parameters for enterprises to implement the regulation. Through law 37/92 the region provided a number of financial incentives to facilitate and maintain the introduction of a quality system, e.g. through providing incentives to undertake quality evaluation studies and incentives for the certification of the production system.

The question to ask is - **what kind of relationship exists between this changing and restructuring branch of industry and the nature and scope of vocational training?**

3.2 *Recent developments within the sector*

Two developments within the production process of the enterprises have implications for the maintenance and promotion of quality:

1. The production process has become far more complex.
2. The growth of decentralisation and the emergence of complex company networks has made it more difficult to maintain an integrated production process.

Both have made it difficult to assess the training requirements of the sector. Traditionally, assessment was undertaken by looking at the overall organisation of the enterprise and trying to identify the strengths and the weaknesses through the support of external consultants. Assessment of training needs, therefore, has been typically top-down, and training has usually focused on a central core of workers.

The importance of maintaining quality has led to a new approach to training. While on-the-job informal training remains the prevalent form, there has been an increase in formal CVT initiatives. The impetus for this has been driven partly by international markets to implement a formal ISO 9000 standard and/or by the necessity to obtain a new specific skill, usually in the area of information technology. The nature of these formal CVT initiatives is that they tend to be undertaken outside of the enterprise.

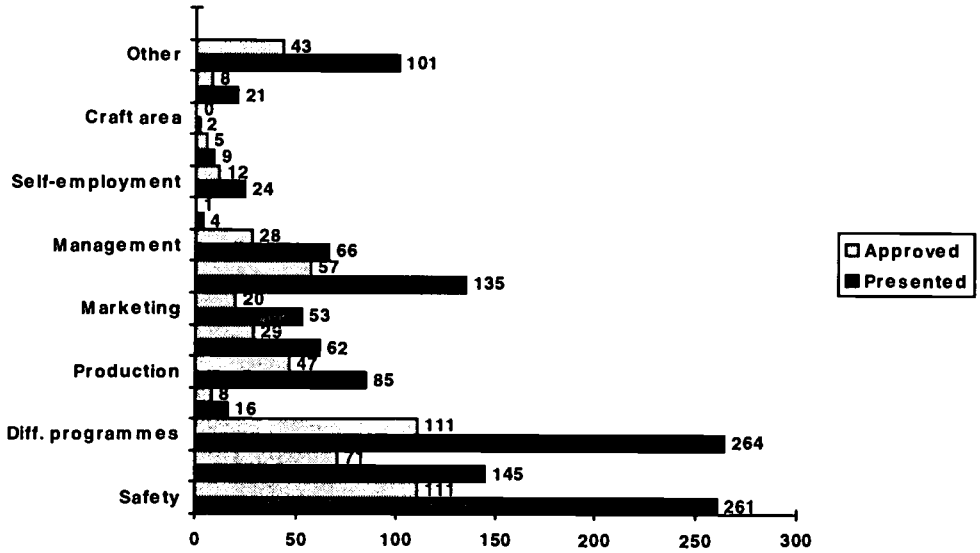
4. Analysis of regional CVT plans from Objective 4 of ESF

Under the regional plans of Objective 4 it is difficult to analyse the characteristics of training projects as they are aimed at various people and can be of differing lengths. By comparing data on the distribution of public funding over a number of years, it can be seen that the demand for

in-company training is increasing (40% rise in 1996 compared with 1995). Financial resources, however, have decreased from LIT 56 billion in 1995 to LIT 38 billion in 1996.

In 1996 the Emilia Romagna region organised three 'calls' for the presentation of training projects. The projects submitted were evaluated on the basis of enterprise training needs and, more generally, the need for industrial development within the area. A total of 1 248 projects were submitted; 551 were approved funded. It is not possible to distinguish how many of these projects were submitted by enterprises.

Graph 1 Functional areas, projects presented and approved, Summary 1996



From these three calls, the average approved project cost was approximately LIT 85 million. The total amount distributed to the public sector was LIT 37 billion and to the private sector LIT 9 billion.

Table 2 Division of funding for training projects that come under Objective 4 of the ESF

Funding covered by:	Percentage (%)
ESF	45%
private sector, including the income lost by the course participants	20%
National Rotation Fund (FNR)	28%
region	7%

4.1 *Type of training approved*

The types of training given priority in the approval of training projects and those given funding were: **training interventions to support enterprise innovation processes.** The Emilia Romagna region distinguishes, in their information bulletin, between the different functional areas where training interventions were carried out or requested.

Table 3

FUNCTIONAL AREAS	AIMS AND TARGET GROUPS
Administration/Finance	Projects aimed at personnel in this field.
Craft Sector	Updating and developing craftsmen/women's skills and other personnel in this sector.
Self-employment	Updating and qualification of the self-employed.
Enterprise Creation	Addressed to employers, workers etc.
Information Technology	Aimed at training enterprises on the use of information technology. Between 1994-5, there was an increase in the demand for training in this field.
Marketing and Sales	
Organisation/Personnel	
Production	Addressed to personnel in the production and logistics area.
Planning	Updating and proficiency courses for planning personnel.
Widespread Projects	Transversal projects that involve different enterprise areas, but not management (language refresher courses, communication, projects on several specific areas).
Quality	Diffusion of enterprise quality systems within the enterprises and training of professional figures (Projects on quality were 11.6% of those presented, 11.4% of those financed).
Safety	Aimed at the creation and development of professional figures concerned with enterprise safety. (In the two-year period 1995-6, there was an increase in training courses on enterprise safety)

4.2 *Training providers*

The training providers were organisations (enterprises, enterprise groups, training institutes, schools, etc.) that submitted projects and/or received public and EU funding, as well as funds paid from the obligatory funding quota (20%) allocated by enterprises for training projects. 80% of the training projects were presented by public and private organisations and training schools, as well as unions. However, the actual percentage of enterprises that directly present and manage projects is very small. This report analyses four approved enterprise training projects.

4.3 *Analysis and description of four projects*

The survey considered four training projects undertaken by enterprises. The training differed among the four projects as did the cost, although for 1996 the Aster Survey indicated that the average hourly cost per trainee per enterprise was between LIT 25 000 and LIT 30 000;

1995 Data:

1. G.D. SpA: *Insertion of a 3D and a new 2D graphic system that can be integrated and connected to the 3D systems;* 3 courses with a total of 182 participants for a total of 5,056 hours. Total cost was LIT 194 656 000, divided as follows:

Table 4

Source	Percentage	Million LIT
ESF	45%	87 595 200
Rotation fund	25%	48 664 000
Other public	0	0
Firm	**30%**	**58 396 800**
Other private	0	0
Total	**100**	**194 656 000**

Cost/hour covered by the enterprise was LIT 11 550, compared with a total of LIT 38 500.

2. G.D. SpA: Training *Information technology personnel to develop a widespread data elaboration in a PC network*; 6 courses - 182 participants for a total number of 2,088 hours. The total cost was LIT 47 815 200, divided as follows:

Table 5

Source	Percentage	Million LIT
ESF	45%	21 516 840
Rotation fund	25%	11 953 800
Other public	0	0
Firm	**30%**	**14 344 560**
Other private	0	0
Total	**100**	**47 815 200**

Cost/hour covered by the enterprise was LIT 6 870, compared with a total of LIT 22 900.

1996 Data:

3. Sasib Beverage SpA: *Foreign language courses*: an option to support the globalisation process at the company; 9 courses with 65 participants for a total number of 5,580 hours. The total cost was LIT 188 325 000, divided as follows:

Table 6

Source	Percentage	Million LIT
ESF	45%	84 746 250
Rotation fund	28%	52 731 000
Emilia Romagna	7%	13 182 750
Other public	0	0
Firm	**20%**	**37 665 000**
Total	**100**	**188 325 000**

Cost/hour covered by the enterprise was LIT 6 750, compared with a total of LIT 33 750.

4. Sasib Packaging Italy: *Training to support quality and safety in the enterprise;* 9 modules each with a total of 191 participants for a total number of 7,370 hours. The total cost was LIT 221 100 000, divided as follows:

Table 7

Source	Percentage	Million LIT
ESF	45%	99 495 000
Rotation fund	28%	61 908 000
Emilia Romagna	7%	15 477 000
Other public	0	0
Firm	**20%**	**44 220 000**
Participant fees	0	0
Total	**100**	**221 100 000**

Cost/hour covered by the enterprise was LIT 6 000, compared with a total of LIT 30 000.

5. Evaluation of the projects[16]

The research to establish the qualitative costs and benefits of training was undertaken through interviews with the people in charge of training and quality in some packaging enterprises in Emilia to identify the characteristics of the training courses: their objectives, benefits and effects on the product quality and on the personnel's career.

Eighteen enterprises were interviewed. The size of these firms was evenly distributed (4 had more than 500 employees, 6 had less than 100 employees, the remaining 8 between 100 and 500 employees). Eleven of these firms were involved with production, seven were supplier enterprises. Each enterprise interviewed had undertaken some form of training in the previous year.

The interviews confirmed a clear trend; there were two main reasons for participating in CVT:
a) specific courses for a defined target: normally for personnel at the medium/top level;
b) generic courses to support a cultural shift in undertaking and managing job tasks,

Union representatives said that, on the whole, management determined the training goals and the timetable. In the medium term, training often leads to negative results, as the top-down approach can hinder people's willingness to discharge old habits and competences, due to the risk of making their traditional skills obsolete for unclear and doubtful new techniques. Concerning general training, the main problem is that the course often becomes the occasion in which cultural messages are delivered to employees.

Interviews with managers and those in charge of training activities highlighted certain types of re-qualification training for employees that complemented enterprise needs. The fundamental characteristic of the enterprises analysed was that they employ a highly qualified labour force, with many years of service, due to the specific nature of the product and process.

The most common type of training was "self-training" (a reciprocal exchange of skills and experience among workers of the same enterprise: from the senior labour force to the younger workers and vice versa). When faced with information and technological innovation, training was focused on the transfer of skills among different generations of workers through various forms of meeting (workshop, on-the-job training, etc.) with the support of specialised technicians from both inside and outside the enterprise. Traditional training methodology, such as classroom teaching, was used for more traditional courses, e.g. language courses.

There was also a tendency to organise training on organisational and enterprise culture, for all workers; this was especially common in large enterprises. This was due to the introduction of initiatives in the development of quality procedures. In particular, one enterprise had carried out formalised training activities on organisational and managerial problems, directed at all personnel of the 10 enterprises linked to an information, collaboration and involvement system according to a partnership type of procedure. Another enterprise, with a more traditional structure, was developing an organisational strategy at the request of the leading enterprise that was currently managing 140 sub-suppliers and suppliers. To conclude, training tended to be for high-level personnel, with a less structured form to ensure quality certification at lower levels.

Within this sector, it was also important to 'network' the training especially from the leader enterprise to its sub-suppliers. For example, Tetrapak is one of the enterprises that carried out direct training activities for its own personnel and also for those of its supplier enterprises as one way to impart their organisational culture, experience and expertise. Various methods were used: external courses and assistance, courses within the enterprises and at the leader enterprise. One specific example of this, is training courses organised by Tetrapack to train outside supplier enterprises in their own drawing and planning technique in order that the supplier enterprise can become an effective partner at the planning stage of production.

The case of sub-supplier enterprises is important; in general, courses are jointly agreed on and planned with the leader enterprise in order to initiate a strategy for the sharing of quality instruments, methodologies and organisational principles according to a position of leadership of the main enterprise. However, some enterprises do not deal with the training of their suppliers, even though there is an awareness, among the larger enterprises, of the benefits.

From the interviews it emerged that few enterprises carry out training activities in a systematic and programmatic way. The largest enterprises in the division did not have structured training projects. One enterprise carried out differentiated training initiatives for the directors/line managers, so-called managerial training, and for manual workers, technical training. Ad hoc training activities were also undertaken in order to apply the procedures and provide documentation for quality certification. The supplier enterprises of the largest enterprises did not carry out any kind of training activity; in general. At sub-supplier enterprises, training was carried out on-the-job.

[16] The projects analysed within this section are different from those considered in the previous section (4.3)

5.1 *Results of the interviews*

- **Training and Planning** - only a few enterprises carried out training in a planned and systematic way. Evidence suggests that a number of training activities were organised in order to overcome current problems rather than to meet the companies' future needs.

- **Training and Production** - the interviewees were asked whether training was merely a matter associated with quality in the production process. A number of issues arose from this including:
  - ◊ much training is covered informally through on-the-job training, staff interaction and meetings
  - ◊ training is related to enterprise need
  - ◊ training is rarely evaluated in any terms
  - ◊ some concern was expressed that the supply of formal training is not tailored to meet enterprise needs.

- **Training Costs** - some enterprises spent a significant amount of money on continuing training in 1996 that had the following affects on their turnover[17]:

Table 8 Cost of training on total turnover

Enterprise	Effect of training cost on turnover (val. %)
Carle Montanari	0
Casmatic	0
DI.CO.	1.6
IMA	0.05
G.D. 2	2
Sacmi	2

- **The Control Group** - four firms which utilised some kind of training were selected in order to compare our specific target group - packaging - with completely different firms in the same area. The firms selected varied in size from small (less than 10 employees) to large (more than 500 employees). A number of different training activities were identified, some were funded by the ESF (Objective 4) and others through private funding. The aims of the training varied, according to the need to:
  - * implement the new Italian law on health and security in workplaces;
  - * assure a high level of hygiene;
  - * attain ISO 9002 and the need to support a profound and widespread process of organisational change;
  - * maintain a good level of capability in managing an ISO 9000 system.

[17] These figures were gained from the interviewees.

5.2 *Evaluation of costs and benefits*

The answers of those interviewed both within the packaging sector and within the control group were very similar. It appeared that:

- ◊ CVT is viewed as an investment, when there is a tangible benefit to the firm, e.g. ISO 9000 certificate.
- ◊ The existence of public funds does make a positive difference to CVT activity.
- ◊ Costs/benefits and returns to training are not measured in any way, mostly as the firm does not have the time or the ability to measure training in these terms.
- ◊ Training is viewed as an activity to relieve or overcome some kind of pressure on the enterprise. In other words, training is not undertaken as a 'good' in itself.
- ◊ The planning of training is more systematic that the evaluation of its success. Often such an evaluation relies on no more than the post training working 'atmosphere'.
- ◊ Training cannot be evaluated through cost/benefit analysis as the benefits cannot be measured; they are tied inherently to the 'human resource'.
- ◊ There is concern whether training as an 'investment' should be measured quantitatively or qualitatively.

What was very impressive was the unanimous answer to the basic question of measuring costs and benefits. All interviewees were unanimous in arguing against any formal cost/benefit evaluation of training. The inspiration to organise vocational training comes from driving needs: something that must be done. For these firms the very fact of satisfying its needs is reward enough. This very unexpected perspective seems realistic and naive at the same time.

It is realistic because if, and when, the main reason for vocational training is a broad set of different needs whose satisfaction requires a medium - long period of time and continuous effort, such as the case for ISO 9000, it seems very difficult to assess the process on the basis of a classical cost/benefit analysis: the benefit lies in reaching such a difficult and complex goal.

It is naive because it is clear that what is missing is not only an accounting system but an evaluation system, and this implies difficulties in monitoring training activity. Companies and intermediate organisations were aware of this difficulty and of its implications: many managers reported negative experiences with training experts who were not able to design and implement vocational training tailored for their needs. The lack of a serious evaluation system is a problem for unions, social agencies and regional governments, too. Arguably, without any real assessment, it is only possible to monitor training expenditure and check that the money was properly spent for the purpose of the project and that there is some relationship between the economic and social situation of that specific company and the proposed vocational training; in short, it is possible to try to avoid fraud - that is all.

If the final goal of CVT is to be reached, then it is necessary to formulate single projects which satisfy private and public needs simultaneously. This implies implementing a system based not only at the approval phase of the suitability of each project, but also on broad and medium-term sets of projects, on networking, and on evaluation procedures as a way of piloting projects: in a word, an **active** policy not mere **incentives**. It is paradoxical that managers report that the more

the project is oriented toward a few people for a specific technical upgrading of skills, the more it is likely to have some formal cost analysis and some indirect kind of assessment. It must be noted, however, that CVT was perceived as positive by all.

6. Policy consequences

There are four main outcomes of our research:

1) The loose link between incentives based on money and enterprise policies based on the commitment to a knowledge-based society. What actually happens is that public finances are used to support activities so strictly functional to the core goals of the firm that probably they would have been undertaken anyway. The case is different where enterprises are undergoing change, for instance, when it is necessary to restructure a whole set of firm activities such as in the case of attaining ISO 9000 standards, which calls for a wide and lasting involvement of employees. In this case the availability of CVT funds seems to be a precondition to assist firms in deciding whether to train and reduces the degree of discrimination among employees to participate in the process. It seems relevant to find a way to strengthen this positive side and weaken the negative one.

2) The overwhelming active role of big and medium-sized firms versus small and very small ones. It is not only a matter of the ability to access funds, but also to conceive the process of change as a learning process and to utilise structural funds and CVT methodology as a part of this process. Intermediate organisations such as COFIMP could help firms in this process and offer them support for gaining CVT funds in order to reach the goals they have set. But, in Italy, these kinds of intermediate organisations are narrowly oriented toward the business of organising vocational training or wider education courses, but cannot identify the actual drive for a good process.

3) The lasting role for technical schools, traditionally well-rooted in the local environment.

4) The lack of evaluation techniques - in the dynamic meaning of the word - as part of the procedure for accessing funds.

On these grounds, it is possible to argue a set of policy recommendations:

a) A web of intermediate institutions should be set up based not only on the capability to support firms in designing and implementing appropriate vocational training, but also on designing and implementing a suitable process of change. Those responsible for these policies must be the regions. It implies that CVT policies at the European level must be co-ordinated with labour and organisational change strategies developed by DG V; integrated guidelines must be designed and evaluation policies must follow the real implementation at the regional level;

b) Evaluation techniques should become part of the procedure for accessing funds.

c) Regional governments - at least in Italy - must develop a set of different networked projects among SMEs. Each network must have a dimension within a pre-defined range and must

define, at the same time, the pattern of change and the accompanying CVT initiatives. Technical schools must be involved as specific agencies in the general framework; for instance, individuals could utilise a part of the overall fund through specific courses organised by technical schools. Social partners must agree on the goals of the projects that must be targeted to use the skills of the labour force. Only in this way can the general objective of the European Union of a knowledge based society be accomplished as the specific European way to meet the challenges of global competition.

PART THREE: DISCUSSION, CONCLUSIONS AND FURTHER WORK

Chapter Nine

Methodological Discussion, Conclusions and Further Work

(Alan Barrett - Economic and Social Research Institute - ESRI)

Chapter Ten

Policy Discussion, Conclusions and Further Work

(Jean-Marie Luttringer - CIRCÉ Droit et Politiques de Formation)

Chapter Nine

Methodological Discussion, Conclusions and Further Work

(Alan Barrett - ESRI)

Our purpose in this section is to review the methodologies employed in the six country reports and to derive lessons for future work in this area. We will firstly consider each report individually before drawing general conclusions.

1. Austria

The Austrian study used a series of thirteen interviews in an effort to assess if training objectives were being met. One particularly useful element in their study was the fact that they chose companies in such a way that there were likely to be differences across those companies in their motivations to undertake CVT. In this way, they tried to overcome the standard difficulty in qualitative research, that is non-representative samples. However, the approach of assessing if objectives were met is problematic; clearly, the setting of more stringent objectives would reduce the likelihood of the standards being met, but this tells us nothing about the effectiveness of training.

The in-depth interview technique produces detailed information on the costs of training. However, on the benefit side the study produces little. The authors report that the firms themselves seemed to conduct rather limited assessments of their training investments. Interviews with training participants presented difficulties for assessing the benefits of training. For example, training participants may feel obliged to tell managers that the training the managers organised was useful. Participants may also have an incentive to "talk-up" the benefits if the training provided an enjoyable alternative to work. Given the paucity of information that existed within firms on the benefits of training, a qualitative study which relies on the firms providing information is clearly going to encounter difficulties.

Perhaps the positive insights of greatest value provided by the interviews relate to the difficulties firms encounter in providing CVT and in evaluating CVT investments. However, it would also appear that an important negative insight is that firms should not be relied upon to provide information on the benefits of CVT. Instead, it is more likely that the researcher may have to provide a framework within which firms can provide information which can in turn be used to evaluate CVT investments.

2. Denmark

The Danish study was not directed at evaluating the returns to CVT; instead its objective was to attempt to understand why CVT investments were not being undertaken in a particular sector of the Danish economy. It sought to do this largely by interviewing the relevant actors. Given the

orientation of the study, it is not entirely relevant to assess it in terms of its contribution to the task of evaluating CVT investments. However, we can ask how it might have contributed.

We can assume that CVT is not being undertaken in the sector in question because (a) employers or employees are unaware of the benefits or (b) the benefits are too small relative to the costs. If the study was able to demonstrate that (a) did not hold and that employers and employees were well informed, the discussion would be more informative. We would know that the employers' and employees' perceptions were correct, and so if they were to say that CVT produced small benefits, this would be a useful piece of information. The study provides information on the views expressed as to why CVT is not undertaken (which is what it wanted to do) but without information on the reliability of the views expressed, we cannot use the study to say much on the subject of CVT evaluation.

3. Italy

The Italian study is similar in nature to the Austrian study in that interviews in companies are used in an effort to gain some sense of the value of CVT investments. Given the similarity in approaches, the Italian study suffers from a similar weakness to its Austrian counterpart. Once again the firms being studied are not in a position to provide information on training benefits and so the evaluation exercise cannot proceed. The lack of firm-level CVT investment assessment is a central theme of the Italian study. One of the most useful insights of the study is the manner in which the companies organised their CVT activities. The impression given is that firms use training to solve short-term problems and not in a more long-term strategic manner. This is an interesting insight, although it is outside the scope of assessing the extent to which CVT investments can be evaluated.

4. Ireland

The Irish study is unlike any of the others in that it uses quantitative techniques in an effort to assess the impact of CVT investments. The strength of the study lies in its use of a medium-sized dataset; given that over 200 firms are included in the analysis, the results of the Irish study have a more general character than those produced by the other studies. In addition, the Irish study has been able to look at the effects of different types of training and the relative impacts of each.

One of the weaknesses of the Irish study is that the core result obtained, that is the effectiveness of 'general' training relative to 'specific' training, is not well explained. Given the definitions of the two types of training, it is not clear why one should have an effect while the other one does not. The authors speculate on the reasons, but ultimately a more thorough study to explore this result would be required; this is an example of the type of feedback from quantitative research into qualitative research which was discussed in the Methodological Introduction above. The lack of a comprehensive explanation of the result points to another weakness, that is the possibility that the results are statistical artefacts as opposed to true relationships. While multiple regressions demonstrate correlations between variables, there always remains doubt as to the underlying relationships between variables. It could be that the observed relationship is

masking a relationship between the dependent variable and some omitted independent variable. While this is a difficulty in all research of this nature, reasoned arguments go some way to convince the reader of the reliability of the results obtained.

5. Germany

The German study did not attempt to evaluate CVT investments in any great depth. Instead, the objective of the authors was to assess more generally four innovative models of CVT provision. As such, discussing the study in terms of its contribution to the issue of CVT evaluation is somewhat inappropriate. But, as was the case with the Danish study, we can ask how the study could be used in the context of CVT evaluation. The authors provided information on how the models of provision operate and a commentary on the models. Given the knowledge which the authors possess of the German CVT system, their assessments are interesting and insightful. Had the authors used their study to propose methods through which CVT investment assessment could be undertaken, the insights provided would have been useful. However, as the study stands it is certainly an interesting description of the four models, but it provides us with little in the way of advancing our knowledge in the area of CVT investment.

6. France

A methodological assessment of the French study should be more concerned with the methodological issues discussed therein, as opposed to the methodology of the study itself. One of the issues discussed is the concept of treating human capital in a manner similar to the treatment of physical capital in the accounts of firms. While there is clearly a major philosophical difficulty with this idea, namely that firms do not own the human capital whereas they do own the physical capital, thinking about human capital in this way is innovative. It seems likely that some move in this direction would lead firms to assess investments in CVT in a manner similar to the way they assess investments in physical capital. In this way, altering the accounting treatment of human capital might generate a range of methodological advances of the sort being pursued in this study.

In the shorter run, the French study confirms the findings of other studies, that is the lack of CVT investment assessment at the firm level.

7. General methodological conclusions

The most important question to be asked at this point is the following: in the light of the six studies, what have the methodologies employed contributed to what we know about the evaluation of investment in CVT? Two points can definitely be distilled: 1) the qualitative studies tell us that firms undertake little evaluation themselves; 2) the one quantitative study indicates that while one form of training had an effect on productivity, another did not.

The implication of point (1) would seem to be that there are limits to what can be learned by simply asking firms about the benefits of their CVT investments. If researchers are to

contribute to measuring outcomes of CVT investment, it appears that they will have to provide a methodological framework within which such measurement can be undertaken. Whether this framework needs to be quantitative or qualitative remains an open question; however, thinking back to the discussion in the Methodological Introduction, there would clearly be a benefit to qualitative methods being employed to identify the issues of importance and quantitative methods being employed to put any measurement on a more objective footing.

Item (2) above demonstrates that quantitative techniques can produce results which are at best 'facts', and at worst, worthy of further exploration. This further exploration may have to be qualitative in nature if the underlying mechanism of the observed relationship is to be understood. This use of qualitative research may be most valuable in this regard.

8. Further work

The purpose of the six studies presented in this report was to explore the possibilities of evaluating investment in CVT, in particular, identifying approaches and obstacles. It would have to be concluded that the focus turned out to be on obstacles so, in a sense, the report in its totality appears somewhat negative. In particular, most of the reports appear to be pessimistic as regards the potential for measuring the benefits of training. The question must therefore be asked as to whether this area of research can be usefully pursued or whether meaningful evaluation results are simply beyond us. While the report is somewhat negative, we still believe that the answer to this question is positive.

Our main reason for optimism arises through other research which has been conducted on this issue and which has generated results which are interesting and illuminating[1]. While it is true that the identification and quantification of training benefits are problematic, researchers have been making efforts to overcome these difficulties. As mentioned in the 'Methodological Introduction', Holzer et al used the 'scrappage' rate from a sample of manufacturing companies to measure productivity; reductions in the 'scrappage' rate were then used as a measure of training success. In the Irish study reported above, the sales of the company divided by the workforce was taken as a measure of productivity and increases in sales per employee was used as a measure of training success. In a similar manner, the French study reported above points to ways in which human capital investments might be treated in an accounting framework; the type of proposals made would assist in putting the reporting CVT investments onto a more structured basis and this in turn would facilitate evaluation. These are just three examples from a growing literature.

As the principle obstacle appears to be the identification and measurement of benefits, it also appears that the work in this area should attempt to contribute to the growing work which aims to take an innovative approach. Starting at the most micro-level, it is clear from many of the studies reported above, that enterprises do not evaluate their own training efforts. Such a situation opens up the possibility for profitable exchanges between the business and research communities. As researchers have both the analytical tools (be they qualitative or quantitative)

[1] A review of this other work can be found in a forthcoming report which will be published by CEDEFOP.

and an academic interest in exploring the issue of returns to CVT, they should be able to provide enterprises with useful, analytical results, in exchange for gaining access to information on companies.

Although some of the reports included herein did involve discussions with companies, the researchers were in a position of relying on whatever information the companies could provide. What would be more useful is for the researchers to assist the companies in identifying the information which they should be gathering and which could subsequently be used in evaluating CVT investments. To be successful, the research/business partnership needs to exist over a period of time and not just at a point where the researchers arrive to conduct a one-off interview. Ideally, the researchers involvement in the training evaluation should begin before a training investment is undertaken. In this way, the researcher can contribute to the establishment of baseline indicators such a output per worker. Once the training is completed, the baseline indicators can then be used to provide some insights into the effects of the training investment.

While work of this nature at the level of individual firms would be of interest and would assist in developing indicators of training effectiveness, it would be necessary to expand such work to a larger groups of firms for the result to be general in nature. It would be particularly useful if this expansion could occur in a coordinated way. If the training activities of companies in a similar line of business could be simultaneously evaluated using standardised techniques, a dataset could be developed. The homogeneous group of firms could be based in different countries, thus allowing for another dimension of research.

In summary, the greatest challenge in this area of research is to produce meaningful measures of the benefits to CVT. The potential exists for work to be conducted at the enterprise level, as both researchers and business can benefit from joint efforts in the evaluation of CVT investments. For the work to yield greatest benefits, a coordinated approach to a series of enterprise level studies should be pursued. As mentioned in footnote 1 above, another CEDEFOP study entitled *Exploring the Returns to CVT - A Review of Research both within and outside of the European Union* will be published soon in which proposal are made for advancing work in this area. Some of the points which arise in this report are developed upon; the general theme of that report can partly be seen as an effort to explore how the obstacles which have been highlighted here might be overcome.

Chapter Ten

Policy Discussion, Conclusions and Further Work

(Jean-Marie Luttringer - CIRCÉ)

1. Discussion of the national reports

Several common problems emerge from the reports in the assessment of training investment, despite the diverse approaches to the issue. This discussion will examine seven of these problems, linking them to the Conceptual Introduction at the beginning of this report.

1.1 *The importance of defining training in assessing the expenditure*

At the present time, there is no definition at the European or individual national levels of what constitutes training activity. This raises the questions of how to assess something which is not defined and how to compare training costs when the subject (i.e. training activity) is so diverse. Can the costs of workplace training be isolated from the expenses generated by the organisation of work, for example, can self-training be assessed? The whole 'costs' of training cannot be measured without in-depth knowledge and measurement of indirect as well as direct costs; for example, is the time (remunerated or not) spent by an employee in training measured by enterprises?

The **Austrian** report raises these questions and particularly underlines the issue of viewing remunerated training hours as working hours, which may entail higher costs for enterprises if the training hours exceed the legal or conventional working time. The **French** report outlines a legal definition of training in France, applicable to all enterprises. This definition results from the legal obligation for French firms to contribute 1.5% of their total payroll to the development of vocational training for their employees; a legal definition was necessary in order to control the way in which these resources were allocated.

The diversity of training practices and the lack of formal definitions, while it does not undermine training, does make it very difficult to create reliable evaluation methods and tools.

1.2 *Training is not a result but a process*

The assessment of investment expenditure related to training must focus on the training process as much as on the achievement of certain targets and indicators, such as the level of individual qualification or enterprise productivity.

Evaluating the efficiency of a process requires that it has been strictly defined, that intermediate targets have been formalised and the necessary stages identified, etc. With regard to this, several reports (the **Italian** in particular) state that training is poorly formalised. This indicates

a low level of training 'professionalisation', especially within SMEs. According to the **Italian** report, it is possible to verify only whether the available resources have been allocated to a training objective, i.e. that it is possible to identify fraud, but not to evaluate the effects of the investment. However, the **Italian** report also discusses training associated with achieving a certain quality status for its goods and services. In this case, the training processes are monitored, due to the enterprise's economic interest in this training. Thus in Emilia Romagna, legislation pertaining to product quality, with financial incentives for enterprises to meet that quality standard, is producing positive effects on the evaluation of training policies.

Most of the reports underline a low level of formalised training processes, which acts as a major obstacle to the assessment of the agreed investment expenses.

1.3 *The capacity to see training expenses as an investment*

The capacity to see training expenses as an investment and assess them as such often exists within larger enterprises but rarely in smaller ones, which in some countries sub-contract training.

The **Austrian** report shows, through a study of a sample of enterprises, that larger companies have a greater deal of control over their training processes than smaller ones. The **French** report also indicates this through the examples of Electricité de France (EDF) and Renault. In both of these examples, training operates according to business principles ('an enterprise within the enterprise') and is managed at the local level. The enterprises' training production process is considered as any other process and undergoes quality testing.

This issue is, of course, different for SMEs or craft industries. All of the reports underline the need to out-source the training function to an external structure close enough to the company to provide the right service. The **Italian** report mentions the role of the region and the inter-enterprise technological training centre. The **French** report discusses the existence of branch funds established and managed by the social partners, which provide financial and logistical support to small enterprises. In **Denmark**, the tripartite structure of the AMU provides the same role.

The **German** report devotes much of its analysis to this theme. Three of the four cases outlined and studied are devoted to the discussion of sectoral funds (building, agriculture and forestry) established and managed by the social partners. These are atypical within the German context and it is interesting, therefore, to assess the advantages gained by both employers and employees. In these cases, several sources combine to provide training investment, and training targets are defined through collective bargaining. In addition, there is some joint assessment and co-ordination between the training providers and the sectoral and labour market needs. The financial resources are allocated by enterprises and are mutualised, thus allowing the implementation of co-investment with employees and with public authorities. As a result, enterprises benefit from resource mutualisation, employees benefit from an increased access to training and the state benefits from the help provided to the unemployed.

The **German** report also highlights, however, the problem of the 'cost' of this intermediation system between supply and demand of labour and training. If the cost of this system is too high, the benefits of the training investment might be compromised. If this problem can be overcome, as in the atypical cases discussed, this system (which is already used in a number of other European countries) provides a possible model for training investment in SMEs.

1.4 *A lack of interest in training investment by both employees and enterprises*

There is a lack of formal training investment procedure and consequently no assessment of the effects of any investment which is agreed. The situation is made worse if there is no interest in investing in training in the first place, either on the part of employers or employees. That employees or employers may be interested in investing in training derives from the hope of increasing profitability, whether this interest results from economic circumstances, the implementation of a regulation or the provision of a fiscal/financial incentive. The investment, therefore, occurs as a 'capital' type investment in skills, rather than in the operational implementation of pre-existing skills.

All of the national reports contribute to this theme by discussing various elements of their training systems. The **Danish** report, in particular, considers the reasons why employees, who are entitled to a training leave of two weeks per year , do not opt to use it. The study shows that for some employees, rather than presenting them with an opportunity to improve their situation within the labour market, that there was a risk involved in taking the leave. Thus the existence of the 'right' does not automatically lead employees to participate in training. On the other hand, the employee will take training leave when there is a risk attached to not doing so, i.e. when their current knowledge and training is becoming obsolete. In addition, most of the employees surveyed supported a management policy based on the status quo and absorbing output fluctuations through overtime, rather than one based on a training programme to encourage a more polyvalent workforce; only a few supported the latter management approach. The enterprises in the Danish survey indicated that a decision to 'invest' in training was, to some extent, dependent on constraints external to training. In this survey, the social climate was a determining factor, which was encouraging some enterprises to consider more seriously introducing a training policy.

The **Danish** report also underlines the existence of cheap training on offer to enterprises and their employees through public subsidy. Yet, the question of whether to train or not seems largely unrelated to the financial incentives available. On the other hand, the **Italian** report highlights the importance of legislation on quality, which has acted as a significant training incentive. The **French** report discusses two public incentives to participate in training: the training development agreements and the tax credit. Within these schemes, enterprises are encouraged to invest in training through fiscal incentives from the state.

On the other hand, the **Austrian** report states that training employees represents a high cost to enterprises due to overtime payment rules; considering training hours as overtime acts as a brake on the training system.

1.5 *Integrating the outcome of training investment into the enterprise balance sheet*

The issue of how to integrate the outcome of training investment into the company's (and employees') balance sheet (on the assets side), i.e. to recognise qualifications, is touched upon but not developed in most of the reports. The **French** report, however, is primarily concerned with discussing this issue. This issue is related to the principle in accountancy that unrealised gains are not accounted for until the corresponding goods are recorded on the liabilities side. For this reason, accountants tend to be opposed to recording expenditure on training as an investment. In addition to this, only assets which are clearly owned by an enterprise can be recorded on the assets side of a balance sheet, whereas the investment in training is intangible and cannot be appropriated by the company. Indeed, employees themselves benefit from the investment through the skills acquired. The enterprise cannot exercise any rights of possession in relation to these.

1.6 *The decision to invest in training*

Choosing to invest in training means arbitrating between an expenditure which could yield immediate satisfaction and the durability of the company through the maintenance or development of human resources. The question here is how to arbitrate, whether decisions should be made unilaterally by the management or through collective or individual bargaining with employees. The reports show, through a number of illustrations, the relevance of bargaining in a field where the interests of the employee (increased skills/qualifications) and the enterprise (competitiveness) are at stake.

Thus all the examples discussed in the **German** report indicate a prerequisite agreement among the social partners through collective bargaining at the sectoral level (branch funds). The **French** examples are similar. The **Danish** example of bargaining over the choice of production flexibility is a good one. Within these examples the choice for employees is to exchange immediate satisfaction (extra payment through overtime) with the long term perspective of training and increasing the enterprises' chances of survival. Faced with such choices, only a collective agreement can secure the decisions made between employers and employees. Such bargaining could contribute to removing the obstacle relating to the remuneration of training hours mentioned in the **Austrian** report.

Lastly, it is also through contractual agreement (whether collective or individual) that more informed arbitration can be undertaken. This is especially important when considering co-investment, where employees will participate in training during their leisure time or will subsidise their training expenses. The **Austrian, German** and **French** reports indicate the significance of such practices.

1.7 *Qualitative and quantitative assessment of training investment: What should be measured, how and why?*

These questions are mainly discussed in the methodological sections of this report. It is important to remember that these issues are not so concerned with training itself, but with the effects of the investment in training on a specific aspect of the enterprise; an increase in productivity, competitiveness, adaptability, etc. The chances of achieving the desired objectives are greater if the process of training is perfected, i.e. when the training process is controlled and monitored and, therefore 'assessable'. But measuring the effectiveness of training on those objectives remains challenging.

In terms of 'evaluating the training process' or 'measuring the effects', the former is easier to achieve. The latter is difficult for a number of reasons, not least because 'training investment' is usually one of several factors affecting an increase in, for example, productivity. A highly informed and refined methodology is required to isolate and measure these effects.

Nevertheless, enterprise managers as well as employees should be interested in this measurement, as it has a direct effect on labour costs and, therefore, wage negotiation. Given the inability of an enterprise to 'own' the employees' skills in which it has invested, it will attempt to retain them through attractive remuneration packages or through implementing a 'training penalty' clause in their employment contracts. Such clauses could guarantee the return of some of the training expenses to the enterprise if the employee leaves within a certain period of time, and could be used to assess the benefit of the training undertaken and/or to dissuade the employee from leaving the enterprise too soon.

2. Conclusions and further work

Investment in training should not be viewed as a general or abstract undertaking for the enterprise, but as a decision concerning all employees. Training can support employee adaptability and increase the qualifications of every individual. Therefore, the outcome of training is both a rise in the performance of each individual concerned and the general growth of the enterprise's productivity.

Progress in this area of work relies, however, on the assumption that certain contractual conditions have been achieved to ensure that individuals are committed to the enterprise's investment in training and that each individual is secure within the enterprise. For example, where training is viewed as a necessary 'operational' activity to maintain labour force skills and adapt to changes in working conditions initiated by the employer, the employer must be prepared to propose and finance the necessary training and the employee must be prepared to participate in that training. There is a reciprocal obligation to ensure employer adaptability (to support the training) and employee adaptability (to participate in a committed way). Such obligations are treated differently in the individual and collective labour agreements of the Member States.

Where training investment is necessary to adjust to a change in production, which requires new skills, existing work contracts and agreements are often insufficient to ensure the necessary employer/employee obligations and require modification. If an employer wishes to use training as means to gain new qualifications amongst existing employees, he must have the employees' consent. Without this consent, the employer runs the risk of making a 'bad investment' which will not yield the desired 'return'. This type of training investment must be agreed to by the employer and the employee, given that the effects of training investment affect individual performance before they have any effect on general enterprise performance. When this type of decision is necessary, both employers and employees demand certain guarantees from each other; for example, the employer could require that the employee remain in the enterprise for a certain period of time, while the employee could demand a higher salary related to the status of a new qualification. The two parties may also decide to share the training investment 'cost' as well as the investment 'risk'.

The issues raised by training investment in enterprises and the nature of work contracts differ according to whether the training is necessary for the current operation and organisation of work, or whether it is to assist a production change. *Further work is necessary to explore the way in which work contracts and collective agreements account for training as a means to encourage employee 'adaptability'. In addition, it would be useful to explore those decision-making mechanisms related to training which involve a change in the qualification of employees; e.g. are there clauses within work contracts and collective agreements on co-investment arrangements?, etc.*

Furthermore, the mobilisation of financial resources by enterprises for the training of their employees raises different problems, depending on whether the enterprises concerned are large companies or SMEs.

For the former (500 employees and over), training budgets are usually large enough to be administered by a permanent 'training' unit within the company. The problems associated with this training investment (and achieving the best return) are mainly linked to the professionalism of this unit: the quality of its decision-making processes on the allocation of resources (time, money, organisation) and its management (which training programmes, monitoring indicators, etc.). In some cases, the financial resources provided by the companies can be supported by the State through co-financing to achieve common goals, but the essential feature is the "management of the training function" of the enterprise. *Further work is necessary to examine the quality of training management through examining the decision-making processes of 'training units' and the management tools applied. The dialogue between the social partners is an integral part of such work.*

For SMEs and VSEs (very small enterprises) the problems differ. Such enterprises are too small to establish a specialised training unit within the company, and as a result, training is often out-sourced and delegated to professional organisations of which the enterprises are members (to chambers of commerce or industry or to specialised structures created through the joint initiative of employers' associations and employee unions in the collective bargaining process). These structures can provide sectoral or inter-sectoral funds; i.e. contributions from

enterprises are pooled and re-distributed to enterprises undertaking training. *Further work is necessary to study and evaluate the effectiveness of sectoral funds and the way in which they operate; for example, what financial and fiscal problems arise in pooling resources and how are the resources distributed.*

To conclude, a substantial amount of exploratory and developmental work is necessary to advance knowledge in the area of investment in CVT by enterprises, in terms of defining and assessing that investment and its potential benefits. Further work is also necessary to understand the contexts in which enterprises choose to (or not) invest in CVT; this includes not only national contexts but also changes in work organisation and the structure of the labour market and, within that, the 'social dialogue'.

PART FOUR: ANNEXES

Background to CVT in Austria **Annex 1**

(Prepared by the Institute for Business Pedagogics Karl-Franzens-University, Graz and the Academy for Advanced Management, GmbH, Graz)

Background to CVT in Denmark **Annex 2**

(Prepared by the CARMA group - Aalborg University and EVU - Roskilde University)

Background to CVT in France **Annex 3**

(Prepared by CIRCÉ Droit et Politiques de Formation)

Background to CVT in Germany **Annex 4**

(Prepared by Bundesinstitut für Berufsbildung -BIBB)

Background to CVT in Ireland **Annex 5**

References **Annex 5a**

(Prepared by the Economic and Social Research Institute)

Background to CVT in Italy **Annex 6**

References **Annex 6a**

(Prepared by Istituto di Recherche Economiche e Sociali - IRES)

Background to CVT in Austria — Annex 1

(Prepared by the Institute for Business Pedagogics Karl-Franzens-University, Graz and the Academy for Advanced Management, GmbH, Graz)

1. Legislative and Institutional Framework of CVT funding

1.1 *Regulations at national/regional/sectoral level*

Austria is one of the European examples where CVT provision is *little regulated* and dependent on the *initiatives of enterprises* and *social groups*. The absence of an exact definition of CVT, makes it difficult to place CVT schemes into a common context. In addition, the broad dispersion of legal competencies makes joint strategies for enhancing CVT difficult.

1.1(i) National level

The Austrian constitution does not refer to *adult education,* which is viewed as the generic term for all kinds of continuing education and training. Despite the lack of a comprehensive legal framework, the State has, in the past, set regulations that aim primarily to promote CVT. The principle laws regarding schools and universities, important suppliers of adult education, are enacted by the State, whereas the relevant guidelines are set at regional level by the provinces *(Länder)*. The two main laws targeted at the promotion of CVT at the national level are:

- *Adult Education and Public Library Promotion Act*
  - *commitment to promote adult education*, in particular through subsidising corporations, innovative projects and services of public institutions
  - *targeted financial promotion* of bodies providing education and training on a permanent basis
  - establishment of regional subsidiary offices in the provinces

- *Labour Market Promotion Act*
  - regulates financial assistance for training, re-training and re-integration schemes through *subsidising participation fees* for individuals, *training accounts, training vouchers* and *subsidies to the expenditure* of providing institutions
  - these programmes are aimed at *specific target groups* (e.g. rehabilitation, disabled people, etc.) and *target regions*. They take place either at enterprises or at training institutions

1.1(ii) Regional level

In addition to the laws concerning training in schools, some of the provinces have specific regulations to support CVT. Some examples are outlined below:

- *Training Account Programme* [*Upper Austria*] (1994)
  - subsidies for selected CVT measures, especially for employees qualified through the dual training system
  - enhancement of general qualifications and professional flexibility

- *Vienna Employment Promotion Fund* (1994)
  - setting-up of working foundations and the promotion of training for individuals
  - support for employees affected by structural changes in the regional economy.

1.1(iii) Sectoral level

The social partners within some economic branches have included specific regulations about training leave into their collective agreements. Some examples are outlined below:

- *Energy Supply Sector* - The collective agreement for this sector allows employees to take up to 2 weeks training leave per year. Some companies in this sector have also agreed to pay up to 50% of the training costs (fees, allowances, travel expenses, etc.) for courses which are attended by employees on their own time.
- *Metal Workers Sector* - The collective agreement for this sector includes an opening clause ("*Öffnungklausel*") which enables company-specific employment-promoting measures instead of determining an increase in wages and salaries. Fifty percent of these agreements contained provisions for training and further training measures.
- *Industrial employees* - Their collective agreement includes provision to take unpaid leave to prepare for certain examinations.
- *Graphic Workers Sector* - The collective agreement provides for skilled workers to apply for 50% remuneration for the time spent in training on their own time, if the programme is successfully completed. The maximum number of workers from an enterprise taking advantage of this scheme may amount to up to 20% of the total employed.

2. Actors and their responsibilities

The key actors in CVT provision and funding in Austria and their main characteristics are:

2.1 *Enterprises*

- No formal obligation to provide CVT opportunities.
- CVT in SMEs is characterised by on-the-job training and self-learning mainly for technical knowledge. Large enterprises also emphasise social skills and provide training principally through internal courses or in co-operation with external providers.
- About 20% of enterprises provide training for staff of other firms.

The structure of the Austrian economy is dominated by SMEs. About 50% of employees are employed in small-scale businesses with a staff from 1-50. About 60% of employees are employed in small and middle enterprises with a staff from 1-250.

2.2 *Public institutions (public schools, universities)*

- Large supply of day and evening courses offering "second-chance education" for adults.
- Increase the supply of higher-level training (e.g. about 130 university courses for CVT).

2.3 *Employer and trade organisations (e.g. Institute for Economic Development, Institute for Further Rural Training)*

- Financed to a large degree by the unions through obligatory membership fees.
- Large-scale training schemes provided in co-operation with enterprises.

The most important suppliers of training programmes within this category are:

- Institute for Economic Development *(WIFI - WirtschaftsFörderungsInstitut)*: 46%-65% of SMEs/large-scale enterprises view *WIFI* as one of the three principal partners in CVT
- Institute for Vocational Training (*BFI - BerufsFörderungsInstitut*): 8%-9% of SMEs/large-scale enterprises view *BFI* as one of the three principal partners in CVT)

2.4 *Labour market services (AMS - ArbeitsMarktService)*

The key duty of AMS is the organisation and administration of active labour market policy (e.g. consultant, organisation of the subsidies). Its central objectives are to guarantee and enhance employment prospects and to reduce unemployment.

In terms of organisation, there are 9 representatives at the province level, 95 at regional level and one at the national level. Decision-making in AMS is by a representative committee

composed of the social partners. At the national level, the ministry for work and social affairs, the ministry for finance and the social partners are represented on the AMS committee.

2.5 *Private profit- and non-profit-making institutions*

- Increasing supply of market-oriented national and international training providers.
- Mainly targeting management staff and providing training of social skills.

3. Funding CVT

Funding for CVT in Austria is provided by private enterprise, public authorities and institutions, social partners and individuals. Information about the overall costs of CVT is incomplete, as existing data is based on empirical surveys in which the definition of CVT differs. Most surveys focus on internal and externally-organised seminars and courses. Information about the costs arising from other forms of CVT, e.g. on the job training, is not available.

3.1 *Expenditure from enterprises*

According to recent surveys[1], in 80 % of the chosen samples, costs for CVT are borne completely by private enterprises. In enterprises with more than 100 employees, the costs of CVT are estimated at about OS 5 billion per year[2]. This amount only includes fees, travel expenses and stay-away allowances. Personnel costs resulting from employee attendance at CVT during working hours are estimated to be approximately the same amount.

3.2 *Expenditure by individuals*

There is no representative data about individual expenditure on CVT. Based on a survey[3], the costs are estimated to be, at least, OS 0.5 billion per year.

3.3 *Expenditure by public authorities*

Direct expenditure for CVT institutions (academies, colleges, courses, craftsman schools etc.) for employed persons in 1992 was OS 3.3 billion, which represents 0.16% of GNP.

[1] "CVT in Austria, Part 1, Empirical Results and Conclusions", Mag. Dr. N. Kailer - Wien 1990 and "Organisational Structures and Trends in CVT in Austria and Respective Studies", Dr N. Kailer - Wien 1995.
[2] "Personnel Development and Training in Austria, Empirical Results and Trends" Dr. N. Kailer - Wien 1995.
[3] Austrian Statistical Institute, Vocational Training, results of the Microcensus Survey - Wien 1992.

3.4 *Expenditure on active labour market policy*

Active labour market policy measures, mainly organised by Labour Market Services (AMS), are designed to reduce the gaps between the labour supply and demand caused by structural problems. Main activities centre upon:

- Up-dating qualifications
- Vocational retraining
- Training for specific knowledge

OS 5.1 million was spent on these measures in 1996, of which OS 0.6 million was financed by AMS funds and OS 4.5 million by the European Social Fund (ESF).

3.5 *EU funding*

ESF Funding 1995-1999, 1995 in OS Million

ESF-Target	1995-1999	ESF-Tranche 1995	Payment until 31.12.1995	Payment until 31.12.1996
Target 3	4 373	779 930	467 950	311 980
Target 4	798	152130	8 300	143 830
Target 1	370	42 430	19 600	22 830
Target 2	416	69 020	44 420	24 600
Target 5b	990	179 190	56 070	123 120

AMS Annual Report 1995, ESF-News Nr.3, 1995

EAGFL (Europäischer Ausrichtungs und Garantiefonds für die Landwirtschaft) 1995-1999 was established for CVT in the agriculture and forestry sectors. During 1995-1999 EAGFL funding will be approximately OS 280 million, of which OS 14 million refers to Target 1 and OS 266 million to Target 5b.

EU co-operative initiatives - there are 9 EU co-operative initiatives (e.g. EMPLOYMENT, ADAPT, HORIZON, YOUTHSTART) to which the EU financial contribution is OS 2 billion.

4. Recent and future developments concerning CVT funding

4.1 *Measures for the unemployed*

4.1(i) Labour market activities

These are directed towards the unemployed to improve their chances of finding employment, or towards persons in danger of losing their jobs to safeguard their present employment. Only publicly-provided and funded training can reach those people who cannot afford training, or who have had a bad experience in their initial training, or who simply reject any kind of training. For these people, further training is essential, because they have already lost their jobs or are at risk of losing them due to their low standard of qualification. Training institutes, as

well as companies, can apply for subsidies to cover personal costs and expenses; participants can also receive allowances, if required, on the basis of social need.

4.1(ii) Re-integration institutions ("Arbeitsstiftungen")

These help to re-integrate the unemployed into work. A fund has been established for this purpose to which enterprises, employees and public institutions at regional, provincial and national level contribute. The labour market service subsidises the re-integration institutions by allocating them the equivalent of unemployment benefit for 3 to 4 years. In addition, participants receive a scholarship payment of between OS 1 000 and OS 15 000 per month.

4.2 *Measures for enterprises*

4.2(i) Tax incentives

CVT expenditure is accounted for, in taxation terms, as any other business expense. Within taxation legislation, only investment in fixed assets related to CVT can be treated as an asset and be depreciated over time. A tax-free amount or reserve account for qualifications to treat training investment in the same way as investment in fixed assets is under discussion.

4.2(ii) Training for employees in key positions

To enhance the importance of human resources as an essential factor of competition, the European Social Fund is co-financing the continuing qualification of employees in key positions in SMEs. Two-thirds of internal and external costs (fees, personnel costs, allowances, travel expenses, etc.) are provided by the fund. One-third of the costs are borne by the enterprise. This funding is administered by the Labour Market Service.

4.2(iii) Assessment and development of qualification packages (QBE) for SMEs in Styria

In Styria, a qualifications package (QBE) for SMEs was established recently by the local Labour Market Service.
The main steps in the process of QBE are:

1. Planning training projects.
2. Assessment of the actual qualification situation.
3. Analysis of the business environment.
4. Profile of qualifications.
5. Appreciation of the status of qualifications.
6. Planning of training measures.
7. Process documentation.

Enterprises co-operate in QBE with an approved consultant. Two-thirds of internal and external costs (consultancy fees, personnel costs, allowances, travel expenses, etc.) for QBE are

subsidised by the ESF. One-third of the costs are borne by the enterprise. The amount of subsidised consultancy fees is dependent on the size of the enterprise.

4.3 *Measures for individuals*

4.3(i) Tax incentives

Regarding the treatment of further training under fiscal law, employees/individuals are able to deduct expenses relating to continuing education from their taxable income, e.g. courses and technical literature. But it is regarded as further vocational training only where existing knowledge or skills are improved, thereby enabling the employee to perform his/her occupation in a more efficient way. Expenses incurred in this context are tax-deductible if they exceed the lump sum for income-connected expenses. (Expenses for further training are - even though they are called "training investment" - regular operational expenses for the respective year of assessment.)

A number of tax incentive schemes are currently under discussing to increase motivation to undertake training. Such schemes under discussion include an incentive for the employed to deduct privately incurred training expenses from the lump sum of income-connected expenses, so that further training expenses will in all cases lead to a tax reduction.

4.3(ii) Training cheques

Recently, in most of the provinces, different subsidies have been established for CVT for individuals. The amount of the subsidy, conditions for application and target groups differ. For example, at the basis of the Labour Promoting Act are training cheques, which are issued to individuals attending courses to enhance existing qualifications.

Training cheques are used as mechanisms to finance CVT in the different provinces - these are administered by different public and corporate bodies and institutions. The aims of the financing, the amount of money available and the target groups vary between the provinces. For example, in the province of Carinthia, the employers' organisation administers the training fund. The fund gives subsidies to employees to attend specific CVT-related courses and seminars. The subsidy is limited to OS 7 500 per participant with expected co-financing of OS 2 500 per participant.

4.3(iii) Training account

The Vienna Employee Promotion Fund (WAFF) was founded in 1995 by the city of Vienna, the Social Partners and the Vienna Labour Market Service. WAFF introduced a training account to subsidise CVT fees otherwise borne by the individual. The training account is a financing mechanism for subsidising courses and seminars in education and CVT for specific target groups.

These target groups are both the employed and the unemployed, as well as those employed within the civil or military service and apprentices. The subsidy is 50% of CVT fees from a minimum of OS 2 000 up to a maximum of OS 4 000, depending on the type of exams. The main application criteria are that the person has lived in Vienna for more than 6 months and that the courses have been attended at an approved CVT supplier.

Background to CVT in Denmark — Annex 2

(Prepared by the CARMA group - Aalborg University and EVU - Roskilde University)

1. Introduction

Discussions within Denmark concerning adult education and CVT are currently dominated by the issue of promotion. The discussion is facilitated by the existence of a broad consensus between the political parties and the social partners on the importance of CVT for Denmark. This consensus is based on the recognition of the relevance of training in order to prosper within a more competitive global market.

It is argued that CVT is a necessary pre-requisite to modernising industry; to meet the challenges of developments in Information Technology and to adjust to a high quality, flexible demand-led production system. In addition to this, the impetus for training is also the need to maintain an above average productivity level to support the comparatively high wage level within Denmark.

The consensus on the importance of training reaches beyond the needs of the enterprise, a number of other priorities are also relevant.

2. The multiple targets of Danish CVT policy

State intervention and subsidy for training also aims to promote labour market mobility through *Arbejds Markeds Uddannelse - AMU* (labour market training) which provides sector or branch specific CVT, for example, courses related to the process industries. Through participation in these broader courses, workers in low skill and low wage sectors have the opportunity to move into other sectors. Enabling such mobility indirectly supports structural modernisation and productivity growth. It also provides for the continuous updating of qualifications for workers whether they are skilled, semi-skilled or unskilled.

Furthermore, AMU courses are not limited to the unemployed, they are also available to employed people at a minimal cost (while participating on an AMU course an employed person would receive a financial compensation equal to unemployment benefit) thereby providing a tool to reduce structural unemployment.

The efficiency of the AMU system is an issue under discussion, but nevertheless the aims of the system are supported by the social partners as a justification for spending significant amounts of public funds on this scheme. In addition to the support given to the public provision of programmes aimed at promoting mobility and a well functioning labour market, is support for public expenditure for CVT in order to promote the modernisation and increased flexibility of single enterprises i.e. to giving priority to expanding and updating the skills of the adult workforce.

There is, therefore, within Denmark a more general support for activities aimed at human resource development.

3. The corporatist model concerning training in Denmark

The consensus over the AMU system has rested upon the broad qualifications aims of the courses which should have a nationwide, recognised labour market value within a certain sector. Such aims were defined by tripartite committees with equal representation of the relevant employer and trade union groups. In practice, this has meant concentrating AMU support in the more technically advanced, expanding sectors.

For the trade unions such a system served their members' interests in promoting better paid employment. For the employers it supported their workers' needs to cope with technological change. There were, however, potential disadvantages for employers in that the not all of the skills provided to their workforce were specific to their own enterprise and were transferable, there was also an element of training in more general subjects as a promotion of personal development.

The AMU system has, therefore, pursued a number of goals:

- skills training and updating *(industrial policy)*
- increased mobility on the labour market *(labour market policy)*
- reducing unemployment *(employment/social policy)*
- encouraging general qualifications *(educational policy)*

Any cost/benefit analysis of training should take these four aims into account and consider the effect on individual workers and the enterprise as well as CVT institutions and the State. Such a task is difficult, in terms of measuring the benefits in precise economic figures. The role and aims of the AMU system are embedded within and are more influenced by the cultural and historic attitudes in Denmark.

4. Recent developments within the AMU system

While the four aspects of the AMU system outlined above can still be found in Danish CVT policy, the balance between them has changed in favour of a more market orientation for the training structure. The Labour Market Education legislation in 1995 replaced the earlier consensus based on a corporatist approach to a demand led approach. In practice this has meant giving the demands of enterprises priority over the wishes of trade unions with the aim to try and anticipate and meet market forces within training provision.

5. Other incentives to promote CVT

In addition to the AMU system, enterprises can also apply to Regional Labour Market Councils for subsidies for "educational planning" projects. They can also be given support through job rotation projects, which allow enterprises to have well-trained employee 'substitutes' when their own employees are participating in CVT activities.

Furthermore, a number of initial vocational training programmes have been open to adults since 1992. This "adult apprenticeship" programme (VEUD - Voksen-Erhvervs-Uddannelse) can benefit unskilled employees, who can enter into a 2-3 year contract for adult apprenticeship with their employers.

The cost implications for enterprises participating in these State sponsored programmes are minimal in order to provide an effective incentive.

6. Contractual agreements to promote CVT

The social partners also participate in the promotion of CVT within enterprises, through their collective agreements. About 50% of LO (Danish trade unions) labour market agreements establish the right for employees to take 1-2 weeks training leave per year, if they have been employed within the enterprise for more than 9 months.

7. Conclusions

From the nature of the CVT programmes described above, it can be concluded that a great deal of importance and financial support is ascribed to the promotion of CVT activity within Denmark. The expected and perceived benefits are numerous, from the purely economic to the general 'welfare', e.g. promoting equality, improving living standards, etc. This makes a quantitative estimation of the benefits according to the costs difficult.

Background to CVT in France — Annex 3

(Prepared by J-M. Luttringer/N. Pasco at CIRCE Droit et Politiques de Formation)

1. Objectives of CVT arrangements

At the beginning of the 1970's, the State and the social partners in France created a training system, the framework of which remains to the current day, despite the changing nature of the role of training. The most significant law is that of 16 July 1971, which contains most of the provisions of an inter-professional agreement signed by the social partners in 1970. This Act states that vocational training should be financed by companies and provides for the collection of a levy, corresponding to a certain percentage of a company's total wage bill (0.8% of the wage bill in 1971 - 1.5% of the wage bill since 1992) in order to fund their training activity.

In order to implement their legal obligations with regard to training, companies can sign training conventions with training institutes on the training market. They can also decide to train their staff with their own training means, for example, through establishing their own training centres within the company. Companies can recoup some of their training costs through training funds (OPCA) which mutualise the levies collected within their sector.

Training funds play a central role in the French system for financing vocational training (especially the financing of alternance training for young people). They are administered through joint employer/employee bodies created through the collective bargaining process. These bodies collect, mutualise and manage the funds from companies. These funds are used to refund to companies the costs of training courses for employees within their sector.

If the 1971 Act, which constitutes the basis of the French training system, held that the financing of training was the responsibility of companies, it clearly gives social partners the ability to manage the sums collected. All of these financial operations are carried out under the regulation of the State.

2. Context of the funding arrangements in France

The French financing system of vocational training is characterised by:

a) the key role played by social partners (on creating distribution rules for the funds, and on the overall management of the funds) and the State (financing, control, definition of rules and general coherence).
b) the obligation for enterprises to contribute to the financing of training.

Over the past 50 years, the initiatives in the field of vocational training have been taken by public authorities in a "welfare" context and have been marked by a significant demand for training. The 1971 Act and the preceding national inter-professional agreement of 1970 laid the foundation for financing the system. The system was designed to promote both economic development and the personal development of individuals.

Since the mid-70s, training has also been viewed as a means to prevent mass unemployment and as a measure to prevent certain target groups from labour market exclusion. It has gradually, however, become a necessary and profitable investment. It is no longer viewed as a mere social expenditure, but also as a strategic tool to be used by enterprises.

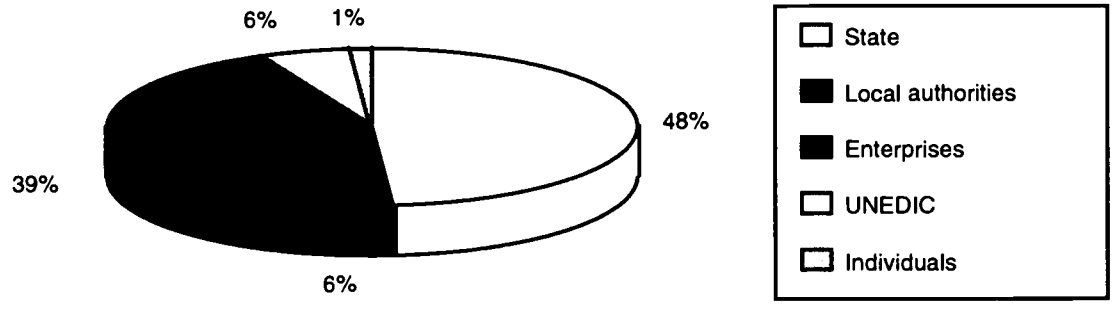
3. Significance of the different sources of CVT funding

3.1 *Gross expenditure per year*[1]

In 1995, the total expenditure devoted to training and financed by the State, enterprises, local authorities and individuals amounted to 1.81% (133 billion FRF) of the gross national product (GNP). Such expenditure represented only 0.5% of the GNP twenty years ago.

The public contribution is dominant at 54% of the total. Enterprises represent the second most important financier bearing 39% of the total. The contribution of UNEDIC (the French unemployment insurance system) amounts to approximately 6% of total financing. Among public authorities, therefore, the State remains the main financier. Local authorities have a more modest role, financing 5.9%. The contribution from individuals remains very low at 1.2% of the total expenses, although this is likely to be an under-estimate, at present.

Financers of training



In comparison, expenditure on initial training represents FRF 538 billion (7.3% of GNP). It should be pointed out that for the first time since 1973, the amount of expenditure on training did not increase in 1995.

The main beneficiaries of this FRF 133 billion expenditure are as follows: 61% is devoted to the working population (employees in enterprises, civil servants) and tends to depend on enterprise finance. Training for the unemployed represents 21% of expenditure, which is mostly financed by public authorities (72%). Training for young people entering the labour market amounts to 18% of expenditure (alternance training, apprenticeships); this is financed by the State, regions (59%) and enterprises (41%).

Beneficiaries	%
Occupied/working population	61%
Unemployed	21%
Young people entering the labour market	18%

3.2 *Providers of the expenditure*

3.2(i) Training expenditure and the State

State finance has tended to remain stable at around FRF 60 billion. Half of this sum is devoted to vocational training (51%) and apprenticeships (7%). 41% is devoted to the training of civil servants. The key fields of State intervention are mainly: training young people aged between 16 to 25 and training for the unemployed.

3.2(ii) Training expenditure and the regions

The regions finance vocational training from grants given by the State, from their own resources and from the European Structural funds they receive. Regional funding has increased steadily for several years due to the new competences that have been transferred to them.

3.2(iii) Training expenditure and enterprises

Enterprises have devoted an ever-increasing amount of money to training (around twice the amount of the legal obligation). The budgets of training enterprises have doubled over the past 20 years. The financial contribution of employers to training has represented, on average 3.3% of the payroll since 1993. Approximately two-thirds of enterprise training expenses are devoted to the functioning of training courses and to the payment of the trainees. One-third of the contribution is devoted to payments to training funds (OPCA) responsible for the financing of training plans, alternance training and individual training leave (individual training leave is financed by FONGECIFs[2]).

[1] The aforementioned figures are taken from the "projet de loi de finances pour 1997- formation professionnelle" - Imprimerie Nationale.
[2] FONGECIF: Training funds for the management of individual training leave (Congé Individuel de Formation - CIF)

The financial contributions of enterprises vary according to their size. Enterprises with more than 2,000 employees spend, on average, 5.1% of the payroll on training. The contribution rates of enterprises also vary according to sector. Electrical industries, banks, transportation industries and the insurance sector represent the most important sectors in terms of their financial contribution to training.

In future years, the transparency of the French financing system of training is expected to improve significantly. The reforms set up in 1993 have contributed to improvement in the knowledge of the system through the creation of a National Committee of CVT accounts, whose task it is to set up a yearly report on the utilisation of the resources devoted to training.

4. Influence of various actors on the funding arrangements

4.1 *Central government*

According to the 1971 Act on training, the State was given a role of "regulation" rather than direct interventionist power. The changing economic situation since 1974 has modified its role. The necessity to tackle unemployment, by means of training, has clearly favoured more State involvement. The beginning of a structural economic crisis, that provoked mass unemployment, especially among young people, and the measures needed to remedy this type of unemployment (alternance training, apprenticeships), has justified increasing intervention from the State and other public authorities. State intervention also increased during this period with regard to long-term unemployment. As a result of this increase, the State, since 1986, devoted more money to vocational training than companies. Public financing by the State and the regions currently amounts to two-thirds of the total amount allocated to vocational training.

In recent years, State intervention in financing training has focused mainly on rationalisation. In December 1993, the French government undertook significant reforms aimed at enhancing the quality and efficiency of the vocational training system through better organisation of the training financing systems. The number of intermediate bodies, especially those concerned with training funds, was reduced significantly and the administration of funds devoted to training was enhanced. In addition, the responsibility for training young people was devolved to the regions.

The State now intervenes in areas which are beyond the regional context as well as for certain target groups. State intervention remains dominant in three fields:

(i) Assisting the integration of young people into the labour market
(ii) Employment policy (training for the unemployed and especially long-term unemployed)
(iii) Training for certain target groups (people on the way to exclusion, unqualified workers etc.)

4.2 *Regional government*

Since 1983, the regions have had increasing responsibility for vocational training and apprenticeships. The 1983 Act gave Regional Councils legal competence in vocational training, allowing them to implement their own regional training policies. The decentralisation process has been ongoing. The 1993 Act on employment and vocational training marked a further step in the decentralisation process. Through this law, the regions were given the human resources and the financial means to take further responsibility for the vocational training of young people under the age of 26.

4.3 *Enterprises*

The involvement of enterprises in financing training has consistently increased since the 1971 Act. The percentage of the total wage bill devoted to training (1.5% of the wage bill since 1993), as a minimum amount, was increased by social partners' agreement at the inter-professional level. The contribution was also extended to small enterprises and individual employers. Since 1991, enterprises with less than 10 employees must pay a minimum of 0.15% of their wage bill to support training activities. These funds are mutualised.

This compulsory contribution is sometimes viewed as a constraint by companies, especially in those where training is not integrated into their overall company strategy. It is sometimes criticised as interfering with their right to autonomous management. Nevertheless, the principle is laid down in labour law with a clear aim to encourage companies to use training as a tool for their own development and the adaptation of the skills of their staff. The levy imposed on companies has had several positive consequences and has contributed to the development of training. For example, companies now spend, on average, 3.3% of the wage bill whereas the legal obligation for companies is only 1.5%.

4.4 *Social Partners*

Social partners have been involved in creating rules regarding the financing of training since the beginning. They participate in concertation bodies in charge of the management and regulation of training policies. They have also been involved in the creation and management of a number of the training funds. Their active participation in the funding system for company training testifies to the significant contribution which they make in this area.

4.5 *Individuals*

There are three main financiers of training: enterprises, training funds ("OPCA") and public authorities (national and regional), as discussed above. The contribution of individuals in financing their own training remains very low. Individuals spend approximately FRF 1.6 billion on their own training, which is significantly lower than the other financiers. It should be pointed out that there are no legal or tax incentives in the French context to encourage individuals to finance their own training. Such incentives only exist for the enterprise.

5. The direction of intended future policy

Despite the importance accorded to education and training by law, there is still a significant need to finance it. The State finances approximately 70% of total expenditure. Moreover, the effort made by public authorities over the past few years to fight high unemployment has led to such high levels of expenditure that there is a need to come to an upper limit. It is likely, therefore, that public expenditure will increase at a much slower rate. It will be necessary, in future, to try and top-up this expenditure with private sector funding. In order for this to happen, the financing system will have to be adjusted so that the financing onus will move away from the public sector to the private sector. One way to encourage more finance from the private sector might be to explore ways in which enterprises could treat their training expenses as any other type of investment, in order to account formally for the costs and returns or to reform the tax system. Concerning the latter, a number of developments have occurred:

a) Implementation of "*crédit d'impôt formation*" which enables companies to benefit from a reduction in taxes over a five-year period on the condition that they increase their training expenditure. The amount of tax credit enterprises can benefit from equals 25% of the increase in their training expenditures. Approximately 110 000 enterprises can benefit from this measure.
b) Financial assistance from the State to replace employees on training.
c) Development of agreements concluded between the State, on the one hand, and professional branches or enterprises, on the other (*engagements de développement de la formation* - these are agreements whereby professional branches or enterprises commit themselves to spend more on training, beyond the legal obligation, according to the targets or priorities determined by the sectors concerned).

The shifting of responsibilities between the various actors should also take into account the need to involve individuals in the financing of training. Their contribution could be encouraged by the implementation of new techniques. The fact that employers and employees have recognised co-investment both in terms of time and money makes it easier to view the contribution of employees. The national inter-professional agreement signed by the French social partners in July 1991 provides for the implementation of such a co-financing system. According to this agreement, employees can attend training courses covered by the training plan of a company outside working hours, under certain conditions. This measure is usually for employees attending long-term training courses. This is significant, as it allows the possibility of negotiating a broader access to training within companies. Some collective agreements, at the level of the enterprise, also provide for mechanisms of co-investment or provide for a bonus for those employees who accept training.

The financing of training by individuals, however, also requires the implementation of financial mechanisms suited to their situation and their needs. Unlike companies (the *crédit d'impôt formation*), the contribution of employees to their own training cannot be deducted from their taxes. Tax relief for individuals who pay for their own training exists in the UK as well as in Germany. Contrary to what exists in neighbouring countries, French public authorities have

always refused to introduce tax incentives for the individual on the grounds that it might incite companies to transfer the burden of the financing of training to their employees.

Other mechanisms could also be introduced to favour the involvement of individuals, such as loans; either with a lower than the market rate of interest or with deferred repayment in the same way as student loans. The banking sector or insurance sector in France do not offer such creative financial products designed to help individuals to invest in their own training except for students involved in higher education. The issue is all the more important in that there is a debate at present on the reorganisation and reduction of working time in France which might encourage individuals to use their additional free time to undertake training.

The role of training funds is also intended to be enhanced as far as the financing of training is concerned. These mutualised funds help in the participation of training, especially for SMEs.

*The **OPCA training funds:** the role of these is to manage the funds devoted to training by enterprises (for training plans of companies, alternance training for young people and individual training leaves for employees). They are bodies created by collective agreements signed by the social partners. They are jointly managed. The conditions of their creation and management is controlled by public authorities. There are currently 97 OPCA's which collect the contributions from enterprises in their sectors. They mutualise these sums and use them for information on enterprises and to refund enterprises for some of the costs of training. The number of training funds was drastically reduced in 1994 within the framework of the reform of the CVT system.*

Background to CVT in Germany — Annex 4

(Prepared by Dr Uwe Grünewald/Dick Moraal at Bundesinstitut für Berufsbildung - BIBB)

1. The Structure of CVT

Three fields of continuing vocational training can be identified in Germany:

1. In-company continuing vocational training
2. Individual continuing vocational training
3. Continuing vocational training for the unemployed.

The role of the State in CVT is mainly a supporting one. Legal regulations tend to concern the legal and financial rights of CVT participants as consumers of training. State regulations rarely affect the CVT institutions. The reason for this is the assumption that the qualifications of the workforce is the responsibility of the social partners within their own sectors. As such, **enterprises** are responsible for the implementation of in-company training. CVT for the unemployed is organised by the employment service (Federal Institute for Labour). The result of separating CVT into three fields (in-company CVT, CVT for the unemployed, individual CVT) has been the emergence of three different training markets in Germany.

These three markets are strictly separate from each other in terms of the institutions involved, the CVT programmes and the financing arrangements. Within these three "markets" the principle of subsidiarity is strong, especially concerning the different types of training institutions. In the area of financing, this principle is weaker, however, as the three separate training markets are financed on a mixed basis. For example, enterprises often finance individual CVT regarding the acquisition of a Master Craftsman's certificate.

The role and influence of the social partners in the CVT process varies greatly between the macro, meso and micro levels. Their influence is:

- very marginal in the enterprises
- unimportant in the sectors
- marginal and varying within the regions (they have some indirect influence through their co-operation with the Chambers of Handicrafts and the Chamber of Industry and Commerce)
- indirect at the national level (through their co-operation in the national employment service).

Within enterprises, there are few agreements on CVT for employees. In particular, unions have no influence over the implementation of in-company training, especially given the tendency to encourage employees to undertake CVT outside of working hours, as well as the growth of work-integrated learning within enterprises.

At the sectoral level, there are few agreements on CVT. While the social partners participate in Chambers at the regional level, they are rarely involved in their governing bodies. At the national level, they are only represented in the employment service.

The identification of the different sub-systems of CVT sets the parameters for the implementation of the financing models discussed in the report. The chosen models represent attempts to overcome the strict barriers between the CVT sub-systems.

1.1 *Model 1: BGZ Simmerath*

1.1(i) Background

The non-profit making "Centre for Vocational Training and Promotion of Economic Performance" - BGZ in Simmerath was founded in 1969, with the aim of improving initial and CVT within the building profession. Those aims have been refined over time to include short courses for entrepreneurs and leading employees within SME's in the handicraft sector to enable them to keep up to date with technological changes.

The BGZ is one of 700 joint training institutions in Germany. It supplies three types of training. The most significant is joint training courses for initial training. Concerning CVT it provides Master Craftsmen courses as well as special training courses. The CVT measures aim to advance/update training and tend to be aimed at individuals.

The role of Master Craftsmen courses in Germany
Master courses are the formal continuation of initial training within the German dual system, both the course contents and duration are determined by laws and regulations. The qualification needed to be a Master Craftsmen is a necessary pre-condition for establishing a firm and it also gives the right to train trainees. Most of initial training in Germany is carried out by SMEs, which means that the promotion of these courses is an effective way to stabilise the qualification situation within SMEs.

The role of Master Craftsmen courses in BGZ
The Master Craftsman school in the BGZ is divided into two sectors. The first sector includes training courses in the field of car repair, metal engineering and the food trade. The second sector includes, among others, the Master Craftsman preparation courses for bricklayers, concrete and reinforced concrete builders, joiners, roofers and plasterers.

1.1(ii) Funding

BGZ Simmerath was established and is financed from Federal and regional funds. The development of the centre has tended to be financed from its own funds. As a non-profit-making organisation it seeks only to cover its costs. Funding comes from three sources:

1. The Chamber of Handicrafts in Aachen provides part of the recurrent funding as well as the capital costs of the building and the costs for the committee meetings of the Steering Association.
2. Joint training is financed by the Federal and Länder government and also through a common fund to which the training enterprises contribute.

3. The full-time and/or part-time Master Craftsmen courses are financed by individuals, whereas special training courses are financed by the enterprises.

In 1995, 34% of the annual budget was used for CVT. This amount has declined as a proportion of the budget in the last 5 years (in 1991 it represented 51%, in 1992 49%, in 1993 48% and in 1994 43%). The main reason for this is the falling number of participants in Master Craftsman courses and in special training courses.

1.1(iii) Organisation

BGZ Simmerath, unlike other training institutions, has a Steering Association comprised, in part, of Social Partner representatives. Other representatives include the trade union representing the building, agriculture and environment employees and a regional organisation for trade promotion. The third member of the Steering Association is the Aachen Chamber of Handicrafts.

The influence of the social partners in BGZ concerns the running of the institution rather than the individual courses which tend to be regulated in terms of duration and content. Nevertheless, the BGZ model is based on an exceptional co-operation in the building trade; it makes the combination and promotion of initial and CVT to further the qualifications of the employees in this sector much easier.

1.2 *Model 2: Social cashdesk in the scaffolding sector*

1.2(i) Background

The collective agreement for the scaffolding sector was agreed by the *Bundesverband Gerüstbau* (the Federal Scaffolding Organisation) and the *IG Bau-Steine-Erden* (trade union for the building sector). The social partners, recognising that the qualifications profile of employees did not match the current level of technological development, agreed upon a training regulation 1991. This initiated the collection of a levy from enterprises to fund vocational training for employees within the sector. The fund created from this levy was called the 'Social Cashdesk'; it covers a number of other agreed social aspects as well as training. This collective agreement has been declared binding by the Federal government.

This fund was aimed at promoting and sponsoring both initial and continuing training for employees, in particular to support further and advanced training to ensure the supply of workers within the higher occupational groups within this sector. The fund covers the training of both skilled and unskilled workers.

1.2(ii) Organisation

Employers and trade unions are equally represented in the administration of the 'Social Cashdesk'. Both the initial and continuing vocational training promoted by the agreement are recognised by the vocational training regulations of the Federal government. The CVT courses

take place in the three vocational training and technology centres of the Chamber of Handicrafts.

1.2(iii) Funding

The training regulation in respect of this agreement is unique both in terms of content and financing arrangements. In 1995, every employer within the sector contributed 26% of total payroll to finance the social aims of the collective agreement (costs of training, holiday pay, etc.). The following table shows the distribution of the fund:

Table 1

holiday	19.4%
pay compensation	3.3%
vocational training	2.5%
Total 'Social Cashdesk'	**25.2%**
supplementary aid	0.8%
total sum	**26.0%**

1.3 *Model 3: Promotion institute and qualification fund for agriculture and forestry*

1.3(i) Background

The 'Qualification Fund Agriculture and Forestry' (QLF) is based on a collective agreement by the trade union representing employees within building, agriculture and environment (*Bauen-Agrar-Univelt*) and the employers' organisation for agriculture and forestry (*Gesamtverband der Deutschen Land und Forstwirtschaftlichen Arbeitgeberverbände*). It is funded through contributions from employers and employees and is, therefore, unique in Germany. This fund was established, in part, due to the situation in former East Germany and the need to make dramatic changes within this sector in order to merge the working practices of the former East and West Germany. This sector needed to fulfil the demands of a market economy and to meet the requirements of the European Union's agricultural policy, while also attempting to maintain, as far as possible, employment levels and opportunities. The collective agreement was declared binding by the Federal government in 1996.

The overall aim of the funds collected through the agreement is the financing of initial and continuing vocational training for employees who are, or were, employed in enterprises within the sector in order to meet the skills demands of the sector. Another aim was to try to provide training for those who had been made unemployed in the sector. The fund represents the first nation-wide agreement concerning CVT within a sector which was applied to both employees and the unemployed.

1.3(ii) Organisation

The collective agreement contains a package of CVT measures and may be revised every five years. The 'Promotion Institute Agriculture and Forestry' is the training institute which implements the aims of the collective agreement. There is equal participation by the social partners in both the Qualification Fund and the Promotion Institute.

The CVT measures are implemented at the regional level, and there is close co-operation between the Promotion Institute and the social partners at all levels.

1.3(iii) Funding arrangements

Contributions to the fund are compulsory for employers and employees. The use of the funds is stipulated precisely in the collective agreement:

- ◊ 60% of funds (DM 6.5 billion) are to be used for the initial and continuing vocational training of current and previous employees in this sector who wish to continue or resume their employment
- ◊ up to 20% of the fund is to be used to support the activities of institutions and associations which provide CVT
- ◊ up to 10% may be spent on scientific research
- ◊ up to 10% may be spent on supplementary labour market support activities.

1.3(iv) Future of the model

The dramatic restructuring which has occurred in this sector has increased the importance of maintaining employment levels. The Qualification Fund is viewed as a potential mechanism for contributing to a stabilisation of full- and part-time work placements and to more stable incomes within this sector.

1.4 *Model 4: 'SPI-ADAPT Project Job Rotation' in Berlin*

1.4(i) Background

The main aim of this pilot project, under the auspices of the Berlin Land, is to encourage CVT for employees within SMEs. This is accomplished by replacing employees undertaking CVT with unemployed people. The project, therefore, has two aims: to encourage the development of human resources in SMEs and to promote the re-integration of unemployed people into the labour market. This project is closely related to a number of job switch/rotation schemes that currently operate in the Scandinavian countries. The pilot project in Germany combines the needs of different target groups, qualification demands and financing models.

1.4(ii) Organisation

The Berlin Land is officially responsible for the overall model project. Since it co-finances the project, it can influence the general conditions under which the project operates. A co-ordination office works closely with the Chamber of Handicrafts and participates with the local employment office in the selection of substitute employees.

The target groups for the 'Job Rotation' project are the employed and thus employers as well as the unemployed (in particular, the long-term unemployed and women wanting to re-enter the labour market). In the pilot projects, SMEs are defined as those enterprises with less than 500 employees. The vocational training measures promoted by the co-ordination offices are primarily targeted to employees and the unemployed with commercial qualifications and relevant professional experience who live in Berlin.

CVT activity for the employee is expected to take place within normal working hours. The project, therefore, relies in part on the willingness of employers to allow their staff to participate in training. Such a project enables those who are unable to undertake activities outside of working hours to participate in training.

The pilot project has involved a network of institutions at both national and regional level. Table 2 below lists the institutions which have been involved in these networks at the regional, national and trans-national levels:

Table 2

Regional level:	National/trans-national level:
• SMEs	• The national ADAPT-Coordination Centre
• Steering associations of craft and industry	• Scientific institutes
• Senate and district administrations	• National and trans-national ADAPT partners
• Employment exchanges	• Ministries (Labour, Education)
• Continuing vocational training centres	• National steering associations
• Scientific institutions	• The European Commission (DG V)
• Other project institutions and advice centres	• The European Parliament
• Media	

The above listed network participants have, in one way or another, supported the realisation and the development of the project. They have been integrated into the project through workshops organised by the co-ordination office as well as through the establishment of working groups. Such networks should support the prolongation of the project once the pilot project has come to an end.

1.4(iii) Funding arrangements

EU-ADAPT financing is used to co-ordinate the measures through a co-ordination office which works in close co-operation with the Chamber of Handicrafts. Participating employees retain their wages and rights of employment from the enterprise. The costs for the substitute employees are borne by the training programmes of the employment service, in particular from the BPF (see note below). The replacement employees are also supported by unemployment benefits paid by the employment service.

A note on the BPF

The practical advanced training measure (BPF) is a new measure, aimed at developing the experience and skills of unemployed people. It entails in-company practical training and has proved successful for the reintegration of the unemployed. Funds from the BPF are organised by individual, local employment offices. The replacement employees are also supported by unemployment benefits of the employment service

1.4(iv) Future of the model

The general legal and political conditions within the Scandinavian countries make them more predisposed to the concept of job rotation; e.g. the Danish right for individuals to take educational leave. Such conditions are completely absent from the German context. The success of this model is also dependent on the way in which financial resources can be combined to finance the different aspects of the model.

The pilot project aimed to encourage regulations in Germany to establish a permanent job rotation programme. But the model can only be continued, once the 3 years are over, if the Federal and Länder governments offer more support. Such a permanent implementation would be difficult, due to the absence of certain enabling conditions, as mentioned above, e.g. the lack of provision for training leave, and the strict division of the sub-systems of CVT.

(Prepared by Alan Barrett/Philip O'Connell at the Economic and Social Research Institute - ESRI)

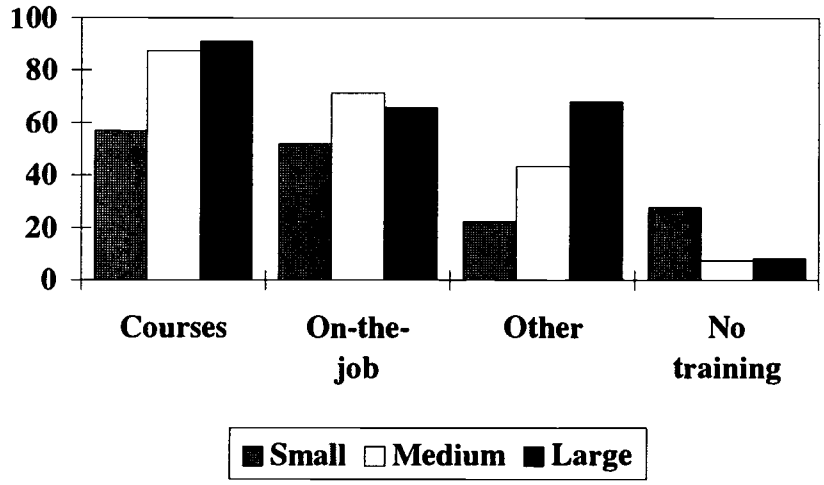
1. The incidence of in-company training in Ireland

There are no official data on the incidence of training in Ireland, so we must rely on survey-based data to assess the rate of participation in continuing training. The latest such data are from Fox's (1995) survey of the training activities of 654 companies, from a sample of 1 000, conducted in 1993. The survey included only those companies employing 10 or more persons, with the result that it is likely to overestimate the true incidence of training, given the low propensity to train among small firms.

Fox's survey found the following:

- 77% of companies engaged in some form of training in 1993
- About 43% of employees attended training courses while on-the-job-training was provided for 37% of employees
- Differences in the incidence of training by both firm size and occupation.

Figure 1 - Firms carrying out training, by Size[3]



[3] Small firms were defined as those with 10-50 employees, medium firms had 40-249 employees and large firms employed more than 250.

Figure 1 shows the percentage of firms carrying out training, by firm size. The following points can be seen:

- About 57% of small firms and 91% of large firms provided formal training courses for employees in 1993
- 51% of small firms and 66% of large firms conducted on-the-job-training
- About 28% of small firms conducted no training whatsoever in 1993, compared to only 8% of large firms.

Figure 2 - Employees receiving training, by size of firm

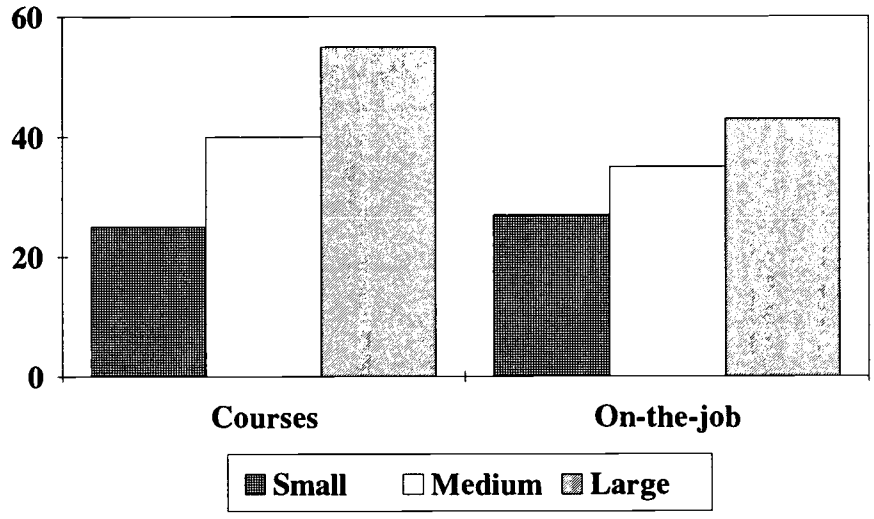


Figure 2 shows the percentage of employees receiving training, by firm size. Some points to note are:

- Overall, 43% of employees received training in 1993; this was true of only 25% of those in small firms, 40% of those in medium-sized firms, and 55% of those in large firms.
- Similarly, while 37% of employees received on-the-job training overall, this was true of 27% of employees in small firms, 35% of those in medium firms, and 43% of employees in large firms.

The survey found that training costs amounted to 1.5% of the total labour costs of companies, of which the largest component (42%) was the labour costs of those undergoing training.

International comparisons of the incidence of training are fraught with difficulty. Nevertheless, recent Eurostat (1997) data provide estimates of the share of total labour costs accounted for by vocational training costs in industry and services. These data are presented in Table 1. The ratio of training costs to total labour costs in Ireland is similar to Fox's estimate of training expenditures for industrial firms but somewhat higher for services. In both sectors Irish expenditures on in-company vocational training are higher than the European average, particularly in service companies. These comparative data on in-company training expenditures are consistent with Labour Force Survey data which suggest that the incidence of in-company training in Ireland is higher than the European average (OECD, 1995).

Table 1 - Vocational training costs as a percentage of total labour costs, 1992

	Industry	Services
	%	%
Belgium	0.19	0.31
Denmark	2.52	2.93
Germany (former West)	1.42	--
Germany (New Länder)	2.46	--
Greece	0.26	0.23
Spain	0.30	0.39
France	1.54	1.39
Ireland	1.52	1.95
Luxembourg	0.34	0.64
Netherlands	0.77	0.56
Portugal	2.58	1.46
United Kingdom	1.62	1.81
European Average	1.38	1.38

Source: Eurostat, 1997 *Labour Costs 1992 Principal Results.*

Notwithstanding the comparative ranking of Irish firms' investment in in-company training, the recent Irish government policy paper on *Human Resource Development* (Department of Enterprise and Employment, 1997) concluded that 'the incidence of training activity in Ireland falls well short of best international practice.' This conclusion finds support in qualitative research comparing firms in Ireland and other European countries, which suggest that there is a skills gap at all levels between Irish firms and best-practice firms in competitor countries and that competitive performance is adversely affected by poor quality human capital (O'Farrell and Hitchens 1989; NESC, 1993).

Under-investment in training is most acute in small firms, reflecting not only resource constraints, but also the fact that the majority of small firms are in traditional industry or service sectors, drawing heavily on unskilled and semi-skilled labour (Roche and Tansey, 1992).

O'Connell and Lyons (1995) in their review of qualifications and skills in the Irish economy argue that Ireland suffers from deficiencies in both qualifications and skills when compared with leading industrial countries. There is evidence of a skills gap at operative, supervisory and management levels, particularly in smaller indigenous firms, which adversely effect productivity, competitiveness and growth prospects. They conclude that the current incidence of training is unlikely to be sufficient to bridge the qualifications and skills gaps between Ireland and the leading European companies in which Irish firms compete.

2. State intervention in in-company training

In Ireland, as in most countries, the bulk of state support for human resource development takes the form of funding for initial education and training - prior to entry to the labour force - and to the training and retraining of unemployed workers. Training of employed workers is a key element of human resources development, but it is generally regarded as the principal responsibility for the private sector since the returns to training of workers accrue largely to private actors - employers and employees. State intervention to promote enterprise-related training is, therefore, generally limited to measures to correct for market failures which could result in level of training which fall short of socially desirable levels. The principal State measures to support enterprise-related training of employees in Ireland are: Apprenticeship Training, the Training Support Scheme, and development agency Training Grants. We will briefly describe the latter two.

(i) The Training Support Scheme (TSS): This was established by FAS in 1990 to encourage and promote training in small and medium sized firms. The broad objective of the TSS is to improve the skills of existing employees at all levels from operative to management. The scheme is open to firms engaged in manufacturing industry, internationally traded services and physical distribution. Construction firms which trade internationally are also eligible. The scheme is administered regionally, through the Services to Industry Section within each of the ten FAS regions.

Assistance takes the form of grant aid to eligible companies to purchase their training in the market. Companies which participate in the TSS must initially demonstrate that the training need has been clearly identified and is linked to a business development plan or strategy. In 1995, 32 400 employees in 2 500 companies received training under the scheme. Average duration of training amounted to just under 8 days per trainee.

(ii) Training Grants: Training Grants implemented by the two development agencies Forbairt and SFADCO (Shannon Free Airport Development Company) are directed at skill needs arising from the location of new overseas investment in Ireland. Grants of up to 100% of eligible cost are provided to carry out approved training of new employees. Courses are developed in conjunction with FAS. The measure complements the IDA Inward Investment Programme and training is designed specifically to meet employer needs. Training Grants delivered by *Udaras na Gaeltachta*[4] provides training for persons recruited to newly created jobs and those already employed in existing industries who require retraining because of changes in technology or management techniques. Development agency training grants provide support for the training of about 4 500 employees per year in both incoming and existing enterprises.

[4] Udaras na Gaeltachta is the development agency for the Gaeltacht - Irish speaking - regions.

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Background to CVT in Italy — Annex 6

(Prepared by Istituto di Recherche Economiche e Sociali - IRES)

1. Introduction

Similarly to other EU countries, CVT in Italy is not supplied within a formal legal framework. Several laws, however, at the national and regional level define specific measures for assuring vocational training and attempt to link initial and continuing vocational training. The legal framework runs along two lines as the *vocational education system* is under the responsibility of the State, whereas the *vocational training system* is directed by the Regions.

2. The role of the Social Partners in CVT

A number of elements within the CVT system in Italy have been introduced as the result of negotiation between the social partners and the government. Since 1975, most adult training provisions have been defined through negotiation between the social partners at the sectoral or enterprise level. Collective bargaining has had a significant impact on the revision of laws and the institutional structure of the training system. The introduction of legislation (see below), has defined more clearly the area and instruments of continuous training, in particular:

- redefinition of the institutional responsibilities between the Labour Ministry (direction of training activity, guaranteeing the quality of training and evaluation of training results) and the regions (planning role regarding the training supply in coherence with the priorities of the territory);
- transfer of training planning to observatories, established jointly by the social partners in order to assess the demand for certain professions
- implementation of a levy on enterprises (0.30% of total payroll) to be used for CVT.

The social partners have progressively assumed a central role in the definition and structure of training programmes. They control training initiatives on two levels:

- Macro level - they participate in the control and verification procedures on the use of the ESF. Moreover, they participate in deciding which training programmes should attract this funding and evaluate the expenditure through examining numbers that have been re-inserted into the labour market (which professions are growing, promotion of horizontal mobility, stabilisation of labour relations, etc.).
- Micro level - they participate in the definition and presentation of training projects. At the enterprise level, union agreement is necessary for the presentation of training projects.

At the national level, the social partners contribute to decisions on overall policy, which may give rise to new legislation. At the regional and sector level they act towards more specific

agreements which, in certain cases, lead to the establishment of joint bodies for the management of training.

3. Role of the Regions in the definition of the CVT system

Competencies of regional authorities in CVT are laid down in laws 616/77 and 845/78.

- ***DPR[5] 616/77***

This gives Regional authorities an *administrative role in the field of vocational training*. The Regions establish regulations for vocational training in agreement with the social partners.

The DPR also enables the Regions to *control and supervise training activities* carried out by private institutions. The Regions should outline local training needs in order to guide them towards a comprehensive policy of social and economical development.

Regional training activities are financed by a fund (the so-called national regional fund, which is financed by the individual regions) and the ESF in order to combat unemployment.

- ***Law 845/78***

This defines the ability of schools, universities, local administrations and other public structures to work towards the creation of a continuous training system. The law established a Rotation Fund that is managed by the Ministry of Labour.

Training initiatives created by the Regions are aimed at:

- qualification and specialisation of those who have finished compulsory schooling
- acquisition of specific professional competencies for those who have a high school diploma
- qualification of workers involved in enterprises undergoing re-structuring
- qualification , up-dating and specialisation of workers.

Tasks attributed to the Regions are to:

- create a link and information system among local actors and government institutions
- ensure regional legislation comes into line with international and European legislation and to abide by national legislation
- organise the training system through the implementation of public initiatives
- assure involvement and participation of local authority representatives, social institutions, etc. in the planning of regional training plans
- assure the control of social partners in managing training activities through the participation of representatives of local authorities, etc.
- consult with the Ministry of Labour and the Ministry of Education.

[5] Decreto Presidente della Repubblica

4. CVT funding sources

4.1 *The European Social Fund*

ESF-supported training programmes are aimed mainly at CVT initiatives in order to construct a comprehensive training system as well as to meet the needs of the re-qualification of adult employees to protect their working position[6].

Objective 4 of ESF, even with a minimal significance (11.4%) in relation to overall ESF support, has important aims for the establishment of a comprehensive continuing training system. Objective 4 intends to encourage the *workers' adjustment to industrial changes and to the evolution in production systems with priority given to those who are at risk of becoming unemployed (objective 2) and the progressive setting up of a continuing training system (axes 1 and 3).* ESF invests LIT 300 billion a year on continuing training in the South of Italy. If the continuing training system were in full force, such resources would be irrelevant, but current ESF funding covers the costs of the few initiatives that have been introduced. (Isfol, 1996)

4.2 *The Rotation Fund*

The rotation fund was established by law 845/78, which established a levy on enterprises of 0.3% of the total payroll. This levy is given to the INPS[7]. Every year LIT 1 200 billion is contributed. The fund represents one of the financing channels for CVT initiatives and is run by the Ministry of Labour. The law provides that the levy is agreed year-on-year. The fund is not totally destined for continuing training activities, it is also given to enterprise training schemes and aimed at workers on Cig (Cassa Integrazione)[8]and training activities to increase mobility.

4.3 *Regional funding*

The regions finance CVT through the operative programmes of the ESF objectives, as well as contributing a small amount of funds, from their own budget. To implement training projects, they also use part of the enterprises' contribution to the rotation fund.

[6] Objective 4 of the ESF was planned in order to deal with the economic and productive characteristics of Italy. In particular, axis 2 is dedicated to continuing training: "Interventions to accompany/adapt human resources in relation to structural changes in the economic-productive system and from the impact of the internal market." The training interventions included in this axis are aimed at workers involved in changes in the productive system and who are at risk of becoming unemployed: workers on Cassa Integrazione and SME workers and managers

[7] Istituto Nazionale Previdenza Sociale, the National Compensation Board

[8] A type of monetary benefit for those who are temporarily unemployed due to total or partial reduction of working hours in cases of firms' crises.

4.4 *Future sources of funding*

The establishment of a permanent source of training funding through the imposition of a special tax at the state/regional level, is currently under discussion. This would also raise the financial contribution of enterprises. This tax could be problematic, however, as it is likely that it could lead to a rise in labour costs to compensate for the deduction of such a tax (Isfol, 1996).

5. Expenditure on CVT

The following table shows that investment in vocational training in 1995 was relatively low at LIT 2 000 billion; this corresponded to 0.27% of the total payroll. A source of further financing for CVT should be the rotation fund (0.3% of payroll), this is currently given by enterprises to the State for vocational training.

Table 1: Investment in CVT in Italy (in billion LIT), 1995

1995	Absolute Value (a.v.)
Regions and the Ministry of Labour:	
ESF (objective 4, axis 2)	250.8
ESF (objective 1 axis 72a and objective 3 measure 3 & 4)	12.0
OP[9]Residual funds 1995 (*)	250.0
Public Administration (*) (**)	490.0
Enterprises (*) (***)	1 000.0
Total	**2 002.8**

(*) ISFOL estimates on ISTAT figures, State budgets, ESF and Ministry of Labour
(**) this does not include funding allocations for schools for initial training interventions
(***) expenses related to direct costs and to the quota given to general expenses

6. Recognition of CVT

The system of training certification and the training standards of other European countries are reference points for Italy. By using these examples as a basis, Italy could construct a qualifications system that takes into account their characteristics.

The Italian system is characterised, currently, by the variability of the training supplied by different organisations and institutions (regions, training associations, state vocational education and regional vocational training, etc.) that concerns the same or similar qualifications. There is no structured certification system and the current debate is focused on the need to overcome the tendency to certify only long courses of at least 6 months in duration. There is a proposal to adopt the certification of competence-based modules connected to the effective practice of specific work activities. Such competencies could be checked and certified at any moment upon the request of the individual and/or firm, whether or not he/she has attended a training course; as happens in other countries.

[9] OP, Objective Project, training project financed by Regions and the Ministry of Labour, implemented in regional contexts.

7. Training supply

7.1 *Providers*

It is possible to distinguish between the structures that promote, plan and finance training activities and the organisations that realise and carry them out on their own initiative or for others.

Promoters - regions and the Ministry of Labour, Ministry of Education, Public Administration, private enterprises, and Joint associations.

Institutions that realise training activities - private training associations that receive public finance (EU, national, regional) can draw up agreements with the regions; regional and local authority training structures; training schools, enterprises and enterprise training structures; consultancy and training companies.

Most activities concerning CVT are carried out by the enterprise and are aimed at their own employees. Enterprises use external or internal training institutes for their training. In 1993, out of a total of 36 million hours devoted to training by enterprises with more than 10 employees, 63.5% represent internally managed courses and 36.5% externally managed courses.

Table 2 - Training Suppliers(*) managed externally to the enterprise, 1993

Supplier organisation	%
Profit-making private training organisations	51.0
Enterprises that supply training instruments and services	21.3
Enterprises from the same productive or company group	16.0
Other (Non-profit making organisations, Universities, schools etc.)	11.7
Total	**100.0**

Source: ISTAT, 1996

(*) Enterprises with more than 10 employees, excluding those in the agriculture, health, education sectors and those that supply services that are not for sale.

7.2 *Participation*

Table 3 Participation in CVT activities, according to types of provider

Provider	
Regions and Ministry of Labour	113 000
Public Administration	200 000
Enterprises	800 000

Source: ISFOL estimates on ISTAT figures and state budgets, 1995

8. Current developments

Recently, agreements between the social partners have been in favour of training measures:

- 1996 "Agreement on Labour" signed by the Government and the Social Partners states the development of CVT through "*the gradual contribution of 0.30% with the participation of the social partners. The operation of that contribution will be defined by the Government during the State-Region Conference*".
- *Circular 174/96 from the Ministry of Labour concerning law 236/93* makes an important contribution to the creation of a national, autonomous CVT system, compared to numerous legislative interventions that have regulated it in the past. The circular states which training interventions come under the definition of CVT:

  - System actions: interventions aimed at implementing innovative processes such as personalised training processes, integration and linking training promoters, adoption of certification and recognition patterns, implementation of intervention supporting vocational guidance, outplacement, etc., development of multimedia systems for distance training, quality certification of training intervention.
  - Re-qualification of operators in training organisations and support for them in a new occupation or new professional position.
  - Innovative training programmes by enterprises aimed at supporting the re-structuring process. These should be incorporated into enterprise training plans.

There is also discussion on the introduction of collective work contracts that regulate the right to access training, with the costs being shared between employer and employee. The aim is to encourage participation in training, as participation to improve professional growth is not widespread.

Moreover, there is some discussion on financing mechanisms for the continuing training system. The withdrawal of 0.30% from total salaries which goes into the rotation fund, in accordance with law 845/78, is not entirely used for CVT measures. The ESF remains the greatest source of funding for CVT given the necessity to support the rotation fund from other sources; costing an extra LIT 1-200 billion per year. A Committee for vocational training, established under the Ministry of Labour, has considered the organisation of training funds in order to make proposals about their future use. They have concluded that if the rotation fund were aimed specifically at the training needs of enterprises then ESF would only be necessary for training workers at risk of losing their employment.

One solution to the haphazard nature of the rotation fund is to establish a permanent fund through an extra tax, for the purposes of supporting CVT activities either at the national or regional level. This could secure a greater contribution from the enterprises. Such a fund could be supported by regional funding and managed trilaterally.

Table 4

TYPES OF TRAINING USUALLY CARRIED OUT IN FIRMS	CHARACTERISTICS
"Self-training"	This is a reciprocal exchange of skills and experience among workers of the same enterprise: from the senior labour force to the younger workers and vice versa.
Transfer of technical and information skills	Technical and information skills are transferred through various forms of meetings (workshop, course, on-the-job) with specialised technicians from both inside and outside the enterprise. Traditional methodology, for example, classroom teaching, is used for courses on traditional subjects, for example, language courses.
Language courses	Due to an increase in relations with other markets, foreign enterprises/competitors, workers are trained in foreign languages.
Training interventions on organisation and enterprise organisational culture	These opportunities are common, especially in large enterprises, producers and leading enterprises that intend to transfer organisational principles to their own workers and to those of suppliers. Most training is aimed at transmitting skills on the enterprises' organisational skills in relation to the development of quality procedures.
Leader versus supplier	Formalised training activities on organisational and managerial problems, directed at all the personnel of the enterprises linked to an information and involvement system according to a partnership type of procedure. There are various methods used: courses, assistance, courses within the enterprise and at the leader enterprise.
"Mixed" kinds of training interventions	This includes visits organised by technicians and workers from other supplier firms that are progressively integrated in a more formalised training activity.
Training courses carried out both inside and outside the enterprise	These courses are aimed at the transmission of cognitive instruments, skills and competencies, both to internal personnel and to those of supplier enterprises. Courses, assistance, consultancy, etc.

Laws 236/93, 616/77 and 845/78.

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CEDEFOP – European Centre for the Development of Vocational Training

Approaches and Obstacles to the Evaluation of Investment in Continuing Vocational Training: Discussion and Case Studies from Six Member States of the European Union

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The way in which the evaluation of investment in Continuing Vocational Training is undertaken within, between and across enterprises is becoming an increasingly important topic in an era when under-investment on a macro-scale is perceived as hindering economic performance. This report summarises and draws conclusions on six case studies that were undertaken on different aspects of this issue, in Austria, Denmark, France, Germany, Ireland and Italy. The studies examine a number of issues at the micro-, meso- and macro-levels including: the effects of training on enterprise productivity, some indications why enterprises choose to invest (or not) in training and some of the obstacles which exist in evaluating their investment. This report concludes with a discussion from a methodological and policy perspective on how to overcome a number of these difficulties and how future work might proceed.

Discussion paper/Case studies

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