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Sharing the costs of vocational education and training

An analysis of schemes in the newer EU Member States

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Europe 123
570 01 Thessaloniki (Pylea)
GREECE

Postal Address:
PO Box 22427
551 02 Thessaloniki
GREECE

Tel. +30 2310490111
Fax +30 2310490020
E-mail: info@cedefop.europa.eu
www.cedefop.europa.eu

Foreword

Vocational education and training (VET) has a central role to play in responding to Europe's socioeconomic, demographic, technological and environmental challenges. By providing people with knowledge, skills and competences needed in the labour market, VET improves employability, promotes lifelong learning and contributes to achieving the goals of the Lisbon strategy for growth and jobs.

However, the success of VET requires adequate financial resources. The Bordeaux communiqué (European Commission, 2008) on enhanced European cooperation in VET called for appropriate public and private funding, including European Union (EU) funds, to support agreed priorities for VET. The Helsinki communiqué (European Commission, 2006b) advocated developing balanced and shared funding and investment mechanisms.

EU Member States have been experimenting with and introducing various financing mechanisms and regulatory instruments (including training funds, tax incentives, learning accounts, loans, savings schemes, payback clauses, training leave) to ensure fair distribution – between public authorities, employers and individuals – of VET costs and responsibilities. Little is known, however, about the scope and effectiveness of cost-sharing approaches by the 12 most recent members of the EU.

This report aims to fill this information gap. It presents, for the first time, comprehensive comparative analysis of cost-sharing mechanisms and regulatory instruments to finance VET in the 12 newer EU Member States.

The analysis reveals that the newer Member States experienced a surge in VET cost-sharing mechanisms and regulatory instruments: first, at the start of countries' economic transformation in the early 1990s and then, around their accession to the EU. The effectiveness, efficiency and impact of different cost-sharing approaches vary across the countries concerned but there is evidence of their success in stimulating private investment and participation in VET. However, the cost-sharing approaches perform poorly in ensuring equitable distribution of training. The report also identifies severe governance problems, weak monitoring and evaluation arrangements, and insufficient information and guidance support. Policy recommendations are provided for these findings.

We hope that this publication will not only provide a review of VET cost-sharing in the newer Member States but will also encourage policy learning and give impetus to improving current financial arrangements in these countries.

Seeking innovative solutions for efficient allocation, equitable distribution and sustainability of VET funding is of critical importance in the context of the current economic crisis and consequent squeeze of financial resources. Europe should avoid temptation to delay or cut public and private spending on VET. On a contrary, more investment is needed to equip all European citizens with the right skills to tackle immediately the current downturn, accelerate Europe's recovery, respond to the new economic structures that will emerge, and make the most of future opportunities.

Aviana Bulgarelli
Director of Cedefop

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Table of contents

List of tables, figures and boxes

Tables

Figures

Boxes

Executive summary

Context and objective

Providing people with the skills and competences that the labour market, and more broadly the knowledge-based society, needs, vocational education and training (VET) – an integral part of lifelong learning – contributes to the key elements of European Union (EU) strategies: competitiveness, innovation, social inclusion and sustainable growth. Yet, investment in VET is not always seen as a priority. The cooperation of public and private stakeholders is recognised as one of the key elements in addressing the need for greater investment in VET, helping improve its quality and accessibility.

In 1994 the Essen European Council underlined the significance of investment in VET. The importance of increasing investment in human capital and public-private cost-sharing was highlighted in several strategic political processes, being integral parts of the Lisbon Strategy (launched 2000), such as the European employment strategy (launched 1997), the education and training 2010 work programme (launched 2002) and the Copenhagen process (launched 2002). Member States have been encouraged to review their policy instruments for investment and to improve existing or introduce new mechanisms to share the costs between public authorities, employers and individuals.

For several years (notably since the economic transition in the 1990s and the period around accession from 2004 to 2007, the 12 most recent entrants into the EU – Bulgaria, the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia – have been catching up with the EU-15 Member States in developing public and private cost-sharing mechanisms and regulatory instruments for financing VET: tax incentives, training funds, subsidy-based mechanisms, loans, payback clauses, training leave, savings schemes and others. Increasing private investment became essential in raising overall investment and participation in VET. The overall scope and implications of these developments was largely unknown. Cedefop launched this study to identify, characterise and compare different VET cost-sharing mechanisms and regulatory instruments across the 12 newer Member States; to analyse their effects on private investment and participation in VET and to provide policy recommendations.

The objective of the study is to answer three main research questions:

(a) do more effective and efficient VET cost-sharing mechanisms and regulatory instruments increase private investment in VET?
(b) does higher private investment in VET increase participation?
(c) to what extent and how did external factors influence VET cost-sharing mechanisms and regulatory instruments, private investment and participation in VET?

Methodology

The number and characteristics of VET cost-sharing mechanisms and regulatory instruments used in 12 newer Member States, interactions between them, and the links between private investment and participation in VET were largely unexplored before the launch of the study. Information from secondary sources was scarce and so had to be collected through the survey of national VET experts in the countries concerned. Some 64 experts (including representatives of public authorities, social partners and researchers) identified and reported on 77 VET cost-sharing mechanisms and regulatory instruments. Given the limitations of data on characteristics of these mechanisms/instruments, a qualitative comparative analysis was used to answer the first research question. The remaining two questions were answered by applying the regression analysis and interpreting statistical data available from Eurostat.

Key findings

First, the results of qualitative comparative analysis show that greater effectiveness (the extent to which the specific policy objectives have been achieved), efficiency (reasonable cost, user-friendliness, the extent of administrative burden) and impact (in terms of avoidance of deadweight loss) of VET cost-sharing mechanisms and instruments have positive influence on both overall level and the intensity (expenditure per participant) of VET private investment. Although cost-sharing mechanisms and regulatory instruments differed greatly in terms of effectiveness, efficiency and impact, almost all performed poorly on equal opportunities criteria. However, the regression analysis provides evidence that the EU-27 Member States ensuring more equitable participation of lower and higher qualified in learning activities were also better in increasing overall participation in education and training. This result argues on efficiency grounds in favour of more attention to equal opportunities in VET cost-sharing policies.

Second, the statistical analysis provides evidence supporting the logic of VET cost-sharing mechanisms and instruments. The higher private spending on VET over the past few years in the newer Members States was important factor in increasing VET participation. At the same time, greater public spending on education in the newer Member States stimulated an increase in private investment.

Third, the results of the regression analysis also support the findings of the qualitative comparative analysis that the effectiveness, efficiency and impact of VET cost-sharing mechanisms and regulatory instruments, applied in recent years in the 12 newer Member States, are not sufficient explanatory variables for the variation in private investment and participation in VET over the same time. The analysis shows that private investment and participation in VET depended on various contextual factors: capacity for spending on education from public sources, employer certainty of return on investment in VET, the technological progress of the economy, and the balance between supply and demand for labour with VET qualifications. These contextual factors influenced private investment and participation in VET directly or by affecting the VET cost-sharing policies or other factors, which then influence private investment and participation in VET.

Further, the study reveals severe problems related to the governance of VET cost-sharing mechanisms and regulatory instruments in the 12 newer Member States. Most of these mechanisms/instruments, except EU cofinanced ones, had weak if any monitoring or evaluation arrangements, information and guidance support. This prevented policy learning and improvement; it also limited their use by the target groups. Improving governance would allow substantial effectiveness and efficiency gains should unfavourable economy in most of the 12 newer Member States necessitate cutting back spending on VET.

Finally, the findings show that VET policy is not isolated and its outcomes depend on many contextual factors and other public policies aimed at addressing unfavourable contextual factors. Thus, private investment and participation in VET depended not only on VET policy, but also on policies for other types and levels of education, macroeconomic, enterprise, labour-market and other policies. Future research should also look deeper into the effects of these policies on private investment and participation in VET, so that better ways are found in coordinating various public sector interventions and synergy effects are better exploited.

1. Introduction

The aim of this study is to identify cost-sharing mechanisms and regulatory instruments for vocational education and training (VET) financing in the 12 newer EU Member States ([2]), describe how they operate and analyse their influence on private investment and participation in VET. However, private investment and participation in VET depend on several other, external factors ([3]); the influence of these is also analysed to produce conclusions on the potential causal relationship between existing VET cost-sharing mechanisms and regulatory instruments and private investment and participation in VET.

The study contributes to the debate among policy-makers, academics and practitioners about the role of State in promoting participation in VET and the most appropriate policies for achieving this objective. Although there is a growing consensus, reflected in EU-policy documents, that public financing alone cannot ensure sufficient participation in VET/lifelong learning, there is little evidence of which specific mechanisms and instruments are the most successful in stimulating private investment and leading to greater participation. The policy practices of the Member States covered by this study are particularly under-researched. Although some VET cost-sharing mechanisms and regulatory instruments have been evaluated nationally, this study is the first attempt to make a comprehensive cross-country list and to conduct a comparative analysis.

The introduction sets out the role of public initiatives in stimulating private investment in VET and the EU policy context, to the extent it is relevant to understand national policies and practices in VET cost-sharing mechanisms and regulatory instruments. This is followed by the methodology (Section 2), which sets out the main research questions, variables, and methods of analysis and provides definitions of terms used. Section 3 presents the main results and is followed by conclusions and policy recommendations.

1.1. Defining vocational education and training

Vocational education and training (VET) comprises all more or less organised or structured activities aiming 'to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly in the labour market, whether or not they lead to a formal qualification' (Cedefop, 2008a p. 202). VET is independent of venue, age or other characteristics of participants and previous level of qualifications. VET may be job-specific or directed at a broader range of occupations. It may also include elements of general education.

VET takes various forms in different countries and also within a given country. Initial VET (IVET) can be school-based, enterprise-based, or combination of both (as in the dual

([2]) Bulgaria, the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia

([3]) Such as the capacity of spending on education from public sources, the certainty of employers about their returns on investment in VET, the technological advancement of the economy, and the balance of supply with demand for labour with VET qualifications

system). It can be organised as prevocational training to prepare young people for transition to a VET programme. Completion of VET at upper secondary level normally leads to a certificate and qualifies for access to skilled jobs and access to post-secondary, sometimes higher, education. VET at post-secondary level provides access to higher skilled jobs (master or technician) and can also open the way to higher education. Vocationally oriented programmes, leading to a labour-market relevant qualification are also offered at tertiary level. The European qualifications framework relates VET to each of its eight reference levels.

Continuing VET (CVET) takes multiple forms, ranging from short training courses to participation in advanced and longer programmes. CVET can be organised by (networks of) companies, social partners organisations, and local, regional and State bodies. Participants include employees, the unemployed or those returning to the labour market.

VET for the unemployed (UVET) is training targeted at unemployed individuals registered as such with their respective national employment service, and seeking employment opportunities.

This study covers all types of VET. However, the analysis mainly concerns CVET as cost-sharing mechanisms and regulatory instruments are most commonly applied to this type of VET.

1.2. Public initiative stimulus to private investment in VET

After World War II, European education systems were built on the idea of universal education, which would be free, accessible to all and often provided by public schools. This was entirely justified by general low educational attainment and the lack of qualified labour for the post war economic reconstruction. Remarkable progress in educating European citizens was concurrent with the arrival of knowledge based economies and inclusive welfare societies. The demand for education accelerated, with rapidly increasing shares of population seeking new competences and higher levels of education throughout their life cycles. It became impossible even for the richest European countries to finance all the learning needs of their populations. Private investment became crucial and various cost-sharing schemes between key stakeholders (employers, individuals and governments) were introduced.

The rise of democratic societies and market-based economies allowed the same developments in central and eastern Europe. The countries in this region had lower proportions of this income through their national budgets compared to the EU-15 Member States. This severely limited public expenditure on education and other public services in the 12 newer Member States. Their governments, social and economic partners realised the need for public-private cost-sharing arrangements.

A rich body of education economics literature has been devoted to analysing the costs and benefits of education. It is now widely recognised that VET participants, just like individuals taking part in other types and levels of education, enjoy some positive monetary (such as higher earnings) and non monetary (such as higher life satisfaction, better health)

effects ([4]). However, only the positive effects of VET on wider society provide justification for public policies aimed at improving participation in VET and stimulating private investment.

The need for State intervention in the market for education services is based on understanding that individuals will invest in their education only as long as the perceived private benefits of additional learning appear to justify additional private costs associated with such learning ([5]). Thus, individuals would normally disregard wider monetary (improvements in macroeconomic labour productivity, innovative power of economy, diffusion of knowledge) and non-monetary (higher civic participation and social cohesion, lower crime levels) gains from their additional education to economy and society ([6]) when considering private investment decisions. The same logic will normally guide the decisions of individual employers, when investing in employee training and their investment will tend to be sub–optimal from the point of view of society. This provides the basic justification for State involvement to ensure optimal levels of overall investment in education, including VET.

However, public investment in VET should not replace the private. The highest gains from VET investment lie with the individual who receives training, and the employer who employs the individual with enhanced qualifications. Therefore, one or both of them could be expected to bear at least a part of the cost of training and the role of the State is to stimulate and cofinance private investment in VET, rather than finance it entirely.

Governments apply both incentives and compulsory measures to stimulate greater private sector involvement in training. These usually have role in increasing private investment (e.g. tax incentives, vouchers/learning accounts, levy), reducing the risk of investment and securing the benefits of investment in training (payback clauses) or securing equitable access to training (training leave).

Various cost-sharing mechanisms and regulatory instruments established or supported by the State help to address market failures, which include capital, labour and education market imperfections as well as information asymmetries ([7]). For example, the State can help alleviate credit constraints on those who lack the resources to finance learning, by guaranteeing or providing preferential loans or offering alternative ways of funding such as grants.

In addition to financing and regulatory functions, the role of the State also includes provision of VET services and income support. In theory, the provision of services by public providers is necessary when certain services are lacking on the market. This is usually the case when the demand for certain VET programmes is low and the purchasing power of consumers cannot cover the cost of initial investment and provision. The State undertakes complete financing on the basis of equity concerns (as in the case of VET for the disabled).

([4]) Results of previous research on monetary and non-monetary effects of education are well summarised in Cedefop, Descy and Tessaring (2004) and Wößmann and Schütz (2006, pp. 4-6).

([5]) Formal analysis of individual investment decision in education can be found in Barr (1998, pp. 322-323).

([6]) These are also summarised in Wößmann and Schütz (2006, pp. 6-8).

([7]) The market failures are discussed widely in literature, including the recent report on employment in Europe (European Commission, 2007). Other barriers to private investment in VET are analysed in research carried out by the OECD (2003a).

This is also the case when VET programmes prepare for qualifications which cannot be provided by the private sector due, for example, to secrecy of training content, as with national security. For historical reasons, public provision of VET is widespread in the EU. Income support for VET participants is provided only in limited circumstances aiming to ensure equal opportunity in accessing training, for example for people taking care of dependent persons (children, elderly or disabled).

The study focuses exclusively on VET cost-sharing mechanisms and regulatory instruments in the 12 newer Member States. The following section reviews the main EU VET financing initiatives, which provide the strategic context for national initiatives.

1.3. EU policy context

Investment in (vocational) education and training has been promoted by several, strongly interconnected EU policy processes. The Lisbon strategy, adopted in 2000, was designed to make Europe the world's most dynamic, knowledge-based economy; the education and training 2010 work programme, started in 2001, set out the specific goals for education and training systems in the Member States in line with the Lisbon strategy; and the Copenhagen process was launched in 2002 as the contribution of VET to both the aforementioned processes. The European employment strategy, launched in 1997 to tackle unemployment, later also shifted its focus to support wider Lisbon strategy commitments (European Commission, 2002a).

The significance of VET investment was underlined in the Essen European Council conclusions in late 1994. Promotion of such investment was identified as one of top five priorities for labour market action.

1.3.1. European employment strategy

The European employment strategy (Luxembourg process), launched in late 1997 as a follow up for the Essen European Council decisions, has been developed to ensure coordination of national employment policies at EU level to create more and better jobs in every Member State. The strategy's priorities include lifelong learning, skills and investment in human capital, as reflected in the employment guidelines. The joint Council of the EU and European Commission employment reports on progress have been produced annually since the beginning of the process.

The call, in employment guidelines for 1998, to examine again the obstacles (particularly tax obstacles) that limit investment in human resources and to introduce tax, or other incentives, for developing in-house training (Council of the EU, 1998) was one of the first direct encouragements for the Member States to introduce cost-sharing mechanisms for investment in training.

The 1999 report indicates that the Member States did not undertake systematic approaches to further examination of obstacles to investment and that only a few countries responded to the call for new incentives linked to specific targets for continuing training (Council of the EU, 1999). In 2000 some new incentives, such as individual learning

accounts, were introduced in certain Member States. However, few countries were treating training as investment while providing tax deductions (European Commission, 2000). The 2001 report indicates that lifelong learning became a policy priority throughout the EU. However, few Member States set targets for increases in human resource investment or participation in further learning. The 2002 report indicates that although Member States failed again to set targets on investment in human capital, public expenditure on human resources had generally risen and there was increasing evidence of shared responsibility for financing; employer expenditure on continuing training had also increased (European Commission, 2002a). Yet, Member States were asked to redistribute resources throughout the whole learning spectrum and develop further fiscal and other incentives for learning.

According to the 2003/04 report, only a few Member States showed a commitment to 'increased and more efficient investment in human capital' and the strategies to increase private investment remained partial. The financial incentives (such as experiments with time accounts, individual learning accounts) became the focus of reforms aimed at increasing investment by individuals in learning. Policies to encourage employers included tax credits or levies. However, cost and responsibility sharing still needed improvement and transparency (Council of the EU and European Commission, 2004). The lack of true commitment to deliver increased investment in human resources (including private expenditure) was conveyed again in the 2004/05, 2005/06 and in 2006/07 reports (Council of the EU and European Commission, 2006; Council of the EU, 2007). It was noted that no Member State demonstrated a truly comprehensive approach to shared responsibility. Also, the scarcity of information on public and private spending and budgetary specific measures was highlighted.

The 2006/07 report yet again expresses the need to find the appropriate incentives and cost-sharing mechanisms. It is noted that only a minority of Member States had a comprehensive strategy to invest in human capital over the life cycle. The 2007/08 report states that the EU is no longer on track to achieve the adult participation in lifelong learning benchmark of 12.5 % by 2010 and that a large part of policy-making is focused on encouraging employers to invest in training and motivate employee participation. Initiatives included tax reductions, grants for employers, simplifying the conditions for educational leave and promoting agreements among social partners about the implementation of lifelong learning strategies (Council of the EU, 2008a). Finally, the 2008/09 report mentions that a few new fiscal incentives targeting the low-skilled were recently introduced. However, there are still no signs that investment in human capital is on the rise (Council of the EU, 2009a).

1.3.2. Lisbon strategy

Investment in education and training has been high on the policy agenda since 2000, when the Lisbon European Council set the strategic goal for the EU for 2010: to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth, with more and better jobs and greater social cohesion. Lisbon called for a 'substantial annual increase in per capita investment in human resources', pointing out that people are Europe's main asset. Investing in people was recognised as crucial to Europe's place in the knowledge economy and for ensuring that the emergence of this new economy does not compound the existing social problems of unemployment, social exclusion and

poverty. In this respect, the European Council asked the Council (Education) to undertake a general reflection on specific future objectives for education systems, focusing on common concerns and priorities while respecting national diversity (Section 1.1.4).

The mid-term review of the Lisbon strategy shows that the results were mixed. Alongside undeniable progress, there were shortcomings and obvious delays. This led to relaunching the strategy in 2005 and refocusing its priorities on growth and employment. The integrated guidelines for growth and employment (combining macroeconomic, microeconomic and employment policies) were introduced to simplify coordination and implementation. Guideline 23 sought to expand and improve investment in human capital.

The renewed strategy defined lifelong learning as a *sine qua non* if the Lisbon objectives were to be achieved. Particular attention should be paid to ensuring lifelong learning facilities for low-skilled workers and employees of small and medium-sized enterprises, for example through new forms of cost-sharing (Council of the EU, 2005).

The relaunched strategy envisaged three-year cycles to achieve the revised goals. The 2008 renewal reaffirmed that providing high-quality education and investing more, and more effectively, in human capital and creativity throughout people's lives are crucial conditions for Europe's success in a globalised world. They can bridge and aid the movement towards a knowledge-based economy, create more and better jobs, contribute to sound fiscal positions, fight inequality and poverty and help to reduce youth unemployment (Council of the EU, 2008c).

By the end of 2009, the proposals for post-2010 growth and jobs strategy, including employment strategy, will be presented by the Commission. In renewing the European structural agenda the lessons of the current crisis and the results of a European economic recovery plan (which is a part of the Lisbon strategy) will be taken into account. This plan, approved by the European Council in December 2008, provides a framework for Member States and the Commission to respond to the crisis. It calls on Member States and the private sector to increase planned investments in education (and R&D) to stimulate growth and productivity.

1.3.3. Lifelong learning

The European Councils of Lisbon (March 2000), Feira (June 2000) and Stockholm (March 2001) gave high priority to lifelong learning in the context of a knowledge-based economy and society. The Feira European Council invited Member States, the Council and the Commission to identify coherent strategies and practical measures to promote lifelong learning. Further, it reiterated the need to promote the involvement of social partners and to harness the full potential of public and private financing. Following the Feira mandate, in November 2001 the Commission adopted the *Communication on making a European area of lifelong learning a reality*. It identified the six key elements for coherent and comprehensive lifelong learning strategies, one of them being 'adequate resourcing'. More specifically, the communication called for increase in public and private investment in learning (based on shared responsibility), new approaches for redistributing resources (across the spectrum of learning, including non-formal and informal) and encouraging new investment patterns. In particular, the countries were encouraged to develop/introduce fiscal and other incentives for

everyone willing to undertake learning (European Commission, 2001). In line with the communication, the Council resolution on lifelong learning adopted in 2002 (Council of the EU, 2002a) invited the Member States, in cooperation with the EU, to:

(a) set targets to increase investments in human resources, including lifelong learning, and optimising the use of available resources;
(b) develop initiatives to stimulate private investment in learning;
(c) consider more targeted use of Community funding resources, including the European Investment Bank.

1.3.4. European cooperation in education and training

Following the Lisbon mandate, the Education Council presented to the Stockholm European Council in March 2001 the report *The concrete future objectives of education and training systems* (Council of EU, 2001), which identified new areas for joint European level. It set out several common priorities (three strategic objectives broken down into 13 associated objectives) for European cooperation in education and training with a view to contributing to the Lisbon goals. According to the report, to achieve the strategic objective of improving the quality and effectiveness of education and training systems, it was necessary to make best use of resources. This would involve (as specified in the *Detailed work programme on the follow-up of the objectives of education and training systems in Europe – education and training 2010*): increasing investment in human resources while ensuring an equitable and effective distribution of available means, developing the potential of public-private partnerships and exchanging experience and good practice in the field (Council of the EU, 2001; 2002b).

The concrete results of the education and training 2010 programme were summarised and its role in fostering reform was recognised in biennial joint interim reports of the Council and the Commission on its implementation.

The 2004 report reveals that the EU suffered from underinvestment in human capital, including private sector underinvestment in CVT. It highlights the need to mobilise the necessary resources effectively, considering it one of the key levers for successful reform. The necessary increase in investment in human capital should come from both the public and private sector and the roles and responsibilities between various actors should be clearly defined. It should also be combined with more efficient use of resources (Council of the EU and European Commission, 2004b).

The 2006 report indicates that, by the time of reporting, most Member States had realised that necessary reforms could not be accomplished within the levels and patterns of current investment. There was little evidence of an overall increase in employer investment in continuing training (Council of the EU, 2006b) so the Council and Commission called for targeted investment, effectively combining efficiency and equity, where the social and economic returns were highest. The countries were also asked to give priority to improving governance of education and training systems as a means of sharing responsibilities and costs between the relevant actors.

The 2008 report indicates that many Member States were experimenting with new instruments and incentives to encourage private investment, but that efforts should be strengthened. The level, efficiency and sustainability of funding remained critical (Council of the EU, 2008b).

The new strategic framework for European cooperation in education and training (Education and training 2020) adopted by the Council of the EU in May 2009 (Council of the EU, 2009b), recognises that high quality education and training depend on efficient and sustainable use of resources – both public and private – and promotion of evidence-based policy and practice.

There have also been other important policy developments in financing (vocational) education and training (under the education and training 2010 programme).

The Commission's communication on investing efficiently in education and training (European Commission, 2003a) confirmed EU under-investment in human resources. It noted that a clear upward trend in public expenditure could not be identified and there was a deficit in private funding in key areas for the knowledge economy, including continuing vocational training (CVT). The Commission invited countries to review public investment and to encourage more private investment to complement, not substitute public expenditure. The communication called for more efficient allocation and management of resources, more partnerships and incentives for further and sustained investment from enterprises and individuals. Further, it stressed the need to address market failure and ensure that the right incentives were in place to encourage disadvantaged groups to take up training.

The Commission's communication on efficiency and equity in European education and training (European Commission, 2006a) argued that these two objectives could be mutually reinforcing, rather than exclusive; the accompanying staff working paper (European Commission, 2006c) set out the detailed underlying evidence. Having noted that investment in training by enterprises is primarily directed at the already higher-skilled employees and disadvantaged groups are left aside, the communication called for more public-private partnership and more government support for industry and sector wide training schemes. It observed that training schemes had proved especially equitable (increasing employment opportunities for the disadvantaged) when focused on the skill needs in the regional and local economy. The communication also underlined the importance of developing an evaluation culture.

The subsequent Council conclusions (Council of the EU, 2006a) invited Member States to examine possible ways of improving the present arrangements for funding, governing and managing their education and training systems to ensure both efficiency and equity and avoid the hidden but high cost of educational inequity. Member States were also invited to ensure adequate funding of adult education and CVET, and encourage active partnerships with employers to focus on the skills needs of the economy, including at regional and local level. The need for more research on the social and economic impact of education and training (including vocational training) reforms and investment was stressed, particularly the impact of private contributions.

1.3.5. European cooperation in vocational education and training

To support the education and training 2010 programme, a separate process for enhanced European cooperation in VET (the Copenhagen process), was initiated by adopting the Copenhagen declaration in 2002 (European Commission, 2002b). According to this declaration, the development of high quality VET, notably in terms of promoting social inclusion, cohesion, mobility, employability and competitiveness, was a crucial and integral part of the Lisbon strategy. The Copenhagen process envisaged new directions for VET reform and suggested that investments should be directed to raising the image and attractiveness of the vocational route for employers and individuals, to increase participation, to improving quality, innovation and flexibility in VET, and to making VET more responsive to labour-market needs.

The Copenhagen process was evaluated and its strategies and priorities were reviewed at the informal biennial ministerial meetings in Maastricht (2004), Helsinki (2006) and Bordeaux (2008). According to the Maastricht communiqué (European Commission, 2004b), priority should be given to improving public and (or) private investment in VET, including public-private partnerships and, where appropriate, the training incentive effects of tax and benefit systems. Priority should also be given to the use of the European Social Fund and the European Regional Development Fund to support VET development. The Helsinki communiqué (European Commission, 2006b) reaffirmed the need for improved investment in human capital in response to the challenges that had been posed by the competitive business environment and strained national budgets. It advocated improving public and private investment in VET through further development of balanced and shared funding and investment mechanisms. The Bordeaux communiqué (European Commission; 2008) emphasised that implementing the priorities of the Copenhagen process for the period 2008-10, should be supported by appropriate public and private funding, using relevant EU resources such as the European Social Fund and the European Regional Development Fund and loans from the European Investment Bank to support national reforms. It also called for strengthening of all the mechanisms (including those of financial nature) aimed at promoting adult training, in particular in the workplace.

1.3.6. Summary

The above EU-wide initiatives reflect the growing consensus among the Member States on the key role of (vocational) education and training in achieving the Lisbon objectives and the role of both public and private financing in boosting participation in learning. Many Member States are experimenting with different funding policies, models and instruments, with the open method of coordination at EU-level aiding exchange of experience and the transfer of good practice.

2. Methodology

This part of the study sets out the main variables, research questions and methods of analysis and provides definitions of terms used in the analysis.

2.1. Independent variables

The independent variables are characteristics of VET cost-sharing mechanisms and regulatory instruments.

Table 1 provides the list of VET cost-sharing mechanisms and regulatory instruments included in the study.

Table 1. VET cost-sharing mechanisms and regulatory instruments analysed in the study

VET cost-sharing mechanisms	• tax incentives (covering only personal and corporate income taxes, including tax allowances and credits) • training funds • subsidy-based mechanisms • loans • savings schemes
VET cost-sharing regulatory instruments	• payback clauses • training leave

Source: prepared by the authors.

Cost-sharing mechanisms developed for individual cases (e.g. one or several companies) or with limited coverage (such as tiny sector or small region) are not included in the analysis. Equally, mechanisms dominated by one source of funding and involving no obligatory cost-sharing arrangements have been left out. Incentives on tax treatment of revenues and certain subsidy-based mechanisms with no obligatory or only insignificant private cofinancing requirements were eliminated from the scope of the study on the basis of the initial analysis due to their relative insignificance in the 12 newer Member States. Further, only recently applied types of mechanisms – those still applied in the 12 newer Member States between 2006 and 2008 – were considered. Many of these mechanisms had been started much earlier than 2006 and information about their characteristics was collected through detailed survey of national VET experts.

Not all the mechanisms, regulatory instruments and their characteristics were covered equally well in all parts of the study. Section 3.3 uses data only about mechanisms and regulatory instruments in place before 2006, the last year for which the most recent Eurostat data about our dependent and context variables (Sections 2.2 and 2.3) were available at the end of 2008. As two of the dependent variables measure only enterprise involvement in financing CVT, only the mechanisms and regulatory instruments which aid investment from legal entities are included in the analysis in Section 3.3.

The characteristics which may prove relevant for assessing the influence of the selected VET cost-sharing mechanisms and regulatory instruments on private investment are

measured using data from the survey of national VET financing experts (see Section 2.5 for more details about the survey). We consider the following characteristics:

(d) effectiveness: the extent to which the mechanisms and instruments achieved their policy objectives;
(e) efficiency: administrative burden, user friendliness, reasonable costs of mechanisms and instruments;
(f) impact: to what extent cost-sharing mechanisms and regulatory instruments replaced other private sources of financing (deadweight effect).

These characteristics were selected as the most relevant after initial analysis of survey data. Characteristics having no influence on VET private financing or based on survey questions which appeared too complicated or controversial to experts (as seen from their inquiries and comments in the questionnaires), and often received contradictory answers under similar circumstances, were excluded from the analysis.

Characteristics of VET cost-sharing mechanisms and regulatory instruments are expected to enhance the levels of private investment in VET, which in turn would lead to greater VET participation.

2.2. Dependent variables

The dependent variables are private investment and participation in VET.

Due to the limitations of statistical data, neither private investment nor participation in VET could be measured precisely. There is no single statistical indicator by which to measure private investment or participation. Therefore, groups of indicators were selected to measure each of them.

Few relevant indicators are available for measuring private investment in VET. Eurostat's continuing vocational training survey (CVTS) informs (among others) on expenditure of enterprises on CVT courses. The survey was carried out only three times – in 1993, 1999 and 2005 – and though it provides some useful indicators they cannot be disaggregated by the ISCED levels or ISCO groups ([8]). The indicators for measuring investment by individuals in their education and training are available from the first results of Eurostat's adult education survey published in 2008. However, this is the only measurement of the kind and the use of its data for statistical analysis is limited as not all Member States are covered.

Indicators of continuing training available from CVTS have many similar shortcomings to private investment indicators. Therefore, the analysis draws on an additional data source, Eurostat's labour force survey (LFS).

Table 2 provides the selected statistical indicators.

([8]) International standard classification of education (ISCED).
International standard classification of occupations (ISCO).

Table 2. List of dependent variables

Private investment variables	Participation variables
• expenditure on educational institutions from private sources as percentage of GDP, for all levels of education combined (1999-2006) – further 'private expenditure on educational institutions' • cost of CVT courses as percentage of total labour cost (all enterprises) (1999; 2005) – further 'cost of CVT courses as percentage of labour cost' • cost of CVT courses per participant (PPS - purchasing power standard) (1999; 2005) – further 'cost of CVT courses per participant'	• % of employees (all enterprises) participating in CVT courses (1999; 2005) – further '% of employees undertaking CVT' • number of hours in CVT courses per employee (all enterprises) (1999; 2005) – further 'CVT hours/employee' • training enterprises as percentage of all enterprises (1999; 2005) – further 'percentage of training enterprises' • percentage of labour force from ISCO 4-9 main groups, which received education and training during previous four weeks (formal and non-formal) – further 'participation of ISCO 4-9 in education and training'

Source: prepared by the authors

The dependent variables are interrelated: higher levels of private investment in VET should lead to greater participation in VET. Therefore, participation in training is a dependent variable for investment in training.

2.3. Contextual variables

The analysis of causality between the characteristics of VET cost-sharing mechanisms and the levels of private investment in VET, as well as VET participation rates, involves several contextual factors which could influence all three elements of this causal chain. Their influence has to be controlled for to achieve the main aim of the study.

The literature on private investment in VET provides various possible factors, which may influence the willingness of employers and employees to spend on training. However, empirical evidence on the direct relationship between these factors and private investment in VET is often lacking. On the basis of desk research and the initial statistical analysis, the following factors correlating with the dependent and independent variables of the study were identified:

(a) capacity of spending on education from public sources;
(b) certainty of investment in training;
(c) technological progress of the economy;
(d) balance between supply and demand for labour.

The list excludes several variables identified during the literature review, but later excluded from the study due to negative results in the initial analysis. Employment protection level measured by rigidity of employment and similar indices was not included in the analysis as these indices had not been measured in a sufficient number of countries of interest to this study. Educational attainment level of the population, which was also deemed to influence the levels of private investment or participation in VET, was disregarded following the initial regression analysis.

Contextual variables are used in the study in two ways. First, they are used in the qualitative comparative analysis of relationship between characteristics of VET cost-sharing mechanisms and regulatory instruments and private investment in VET (Section 3.3). Second, they are used in the regression analysis of relationship between context variables and all the dependent and independent variables (Section 3.5).

The subsequent subsections justify the selection of the main contextual factors and explain their potential influence on the dependent variables.

2.3.1. Capacity of spending on education from public sources

One of the main factors influencing employers' willingness to invest in education and training of their employees is the availability of financial incentives from the government. Public expenditure on VET depends on the overall ability of government to spend.

Most of the 12 newer Member States experienced rapid economic growth in recent years (preceding the financial crisis in 2008), which allowed them to spend much more each year on many public policy areas, including VET. According to Eurostat data, in the majority of the 12 newer Member States, public expenditure on education as a percentage of GDP has been steadily and significantly growing during 2000-05: exceptions are Estonia, Lithuania, Latvia, Slovenia and Slovakia where expenditure has diminished in recent years. During this period the 12 newer Member States experimented with various cost-sharing mechanisms.

In our analysis we measure capacity of spending on education from public sources using the Eurostat indicator total public expenditure on education as percentage of GDP, for all levels of education combined ('public expenditure on education').

2.3.2. Certainty of investment in training

Investment in education and training differs significantly from other types of investment. Investment is generally understood as a voluntary contribution of money to obtain the assets and expecting returns. According to Kohler (1998), this expectation of positive returns is the incentive for investment. Willingness to invest is the outcome of a decision-making process during which benefits and yield are weighed against the risks of specific investment alternatives before finally selecting the most attractive option (Kohler, 1998).

Assuming that investors select their investment possibilities rationally, the decisive factor for their selection would be how large they see the possible returns on different levels and types of investment. If the investment is too large, the returns coming from increased productivity will be smaller than expenditure, and if it is too small, productivity will not grow (Gasskov, 2001). However, if enterprises do not know how much investment is needed to achieve equilibrium, they will tend not to put their financial resources in training. The uncertainty of returns on investment is the reason most often mentioned for private underinvestment in VET (Gasskov, 2001; Ritzen and Stern, 1991 [cited in Gasskov, 2001]; Brandsma, 1998).

Returns on investment in training also have a medium-term to long-term character and are hard to quantify (Brandsma, 1998). As a result, other investment targets with immediate and noticeable returns, are more attractive. Increasing employers' access to information on benefits and returns on training might enhance their willingness to invest but if the costs of

obtaining such information are too high interest is diminished. Moreover, even if enterprises assess their training needs, produce a training plan and earmark a training budget, the investment might still be unsuccessful. Translating training needs into training programmes and organisation of training requires competences which enterprises might not have internally. Therefore, enterprises should not only be aware of the returns on training investment, but also have sufficient capacity to make a good investment in training.

CVTS2 and CVTS3 offer several indicators to measure employers' certainty of the returns on training investment and of their capacity to make a good investment. After the initial statistical analysis three of them were selected, which demonstrated the highest correlations with our dependent variables:

(a) percentage of all enterprises who establish the training needs of their personnel as percentage of training enterprises;
(b) percentage of all enterprises with a training budget for CVT as percentage of all enterprises;
(c) percentage of training enterprises using external advisory services (only 2005 data is available for this indicator).

Other relevant indicators were excluded due to negative results in the initial analysis:

(a) percentage of all enterprises with a training plan including CVT as percentage of all enterprises;
(b) percentage of training enterprises having a specific person or unit responsible for training.

These indicators are included in the planning of investment in human resources variable, used in Section 3.3.

2.3.3. Technological progress in the economy

Better skills and qualifications are needed to produce value-added products. As the demand for such products rises, so does the demand for qualified workers. Companies have to produce products and services in compliance with market demands and differentiate them by applying the appropriate know-how. New technologies and permanent innovation are used to compete in the market, and knowledge has become the decisive added value. The creation of this added value requires continuing investment in education and training (Kohler, 1998). This suggests that enterprises will be more willing to invest in training in more technologically advanced countries.

We have identified the following set of Eurostat indicators (or those derived from Eurostat indicators), which could act as proxy for the level of technological progress of countries analysed in our study:

(a) employment in hi-tech sectors: employment in high/medium technology manufacturing and knowledge intensive services as percentage of total employment (the greater employment, the higher the technological progress level);
(b) share of research and development (R&D) staff and researchers in total employment

(c) summary innovation index ([9]) (the higher the index, the higher the technological progress level);
(d) labour productivity: GDP in purchasing power standards (PPS) per person employed relative to the EU-27 (the higher productivity, the higher technological progress level).

The initial analysis indicated that all above indicators correlate with identified private investment and participation in VET indicators.

2.3.4. Balance between supply and demand for labour

The willingness of employers to invest in education might depend on the balance of the supply and demand in the labour market. All conditions being equal, employers needing new qualifications can choose between recruiting new staff (perhaps laying off some), investing in qualifications of the old staff, or the most appropriate mix of both. Recruiting could be relatively easy and preferable when there is a surplus of labour with required qualifications. However, when supply of skills is low and demand is high it would be a costly option with little guarantee of securing required qualifications by out-bidding the competitors. Therefore, low unemployment levels and high vacancies are both likely to trigger an increase in employer spending on VET.

However, high levels of unemployment do not necessarily mean sufficient supply of labour with the required qualifications. The longer people stay out of employment, the less their skills are applicable in the labour market. The availability (and efficiency) of public spending on active labour-market policies might play a decisive role if the unemployed lacking adequate qualifications are able to fill the vacancies. Higher spending on labour-market training and other services might make the option of recruiting, rather than training existing employees, more attractive.

Further, employers can attract people from inactivity (e.g. fresh graduates substituting further studies for work or students still in their final years of studies willing to work part-time) or attract part-time employees into full time employment. Therefore, increasing population activity rates might indicate high shortages of skills in the past, but such increases might relieve the pressure on employers to invest more heavily in retraining their employees.

On the basis of desk research and initial statistical analysis of data available from Eurostat, the following balance of labour supply and demand indicators were identified to measure their influence on the dependent variables:

(a) unemployment rate (yearly averages);
(b) population activity rate;
(c) expenditure on labour-market training as percentage of GDP;
(d) expenditure on labour-market services as percentage of GDP.

These indicators are analysed in a group as they account for significant differences among countries and provide a framework for operating VET cost-sharing arrangements. A

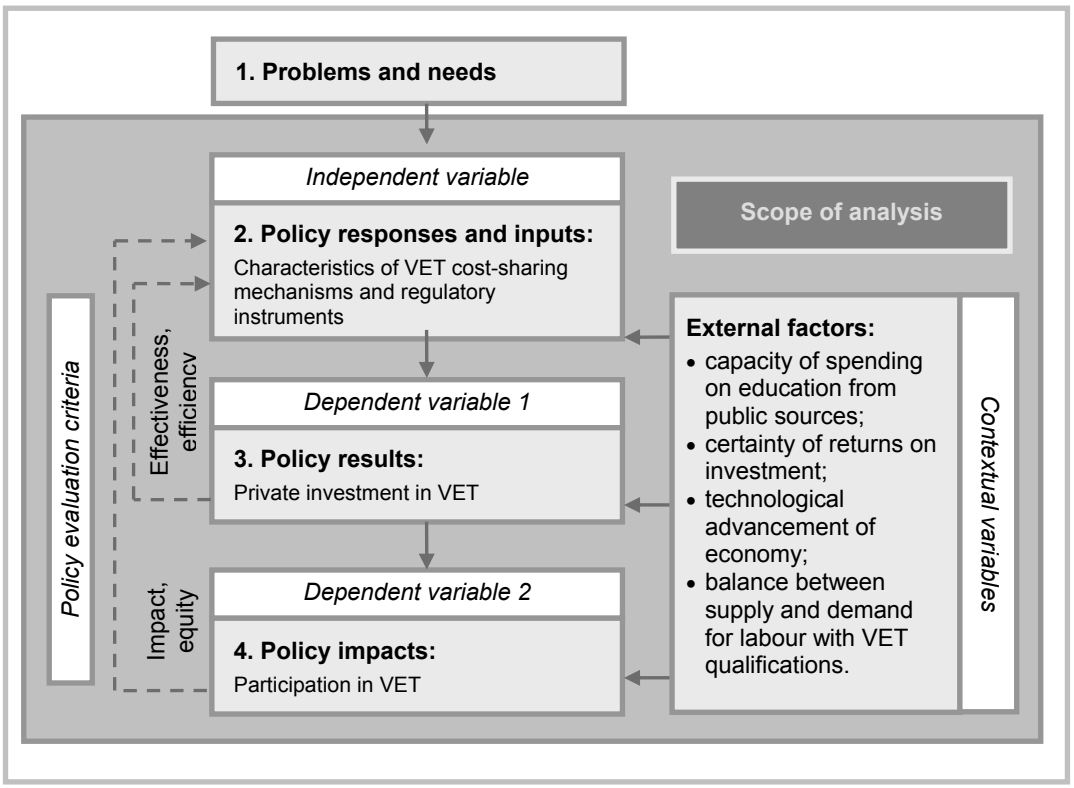
([9]) European innovation scoreboard (EIS) covers the EU-27 Member States, Croatia and Turkey, the associate countries Iceland, Norway and Switzerland, as well as Australia, Canada, Israel, Japan and the US. The indicators of the EIS summarise the main elements of innovation performance. A complete list of 25 indicators are available from Internet: http://www.proinno-europe.eu [cited in 10.7.2009].

more detailed explanation of the relationships between contextual and other variables is provided in next section.

2.4. Framework for analysis

Most VET cost-sharing mechanisms and regulatory instruments are conceived as government initiated, regulated, sponsored or otherwise promoted interventions into the existing situation and intended to improve it. Our analytical framework is built on the basis of a simplified policy cycle, linking the perception of problems and needs, formulation of policy responses and their outcomes (results and impacts). The outcomes in turn often affect the perception of problems and result in policy changes. This cycle provides a clear structure of dependent and independent variables. The framework for analysis is shown in Figure 1.

Figure 1. Framework for analysis



Source: prepared by the authors.

The main study research questions aimed to discover whether:

(a) more effective and efficient VET cost-sharing mechanisms and regulatory instruments increase private investment in VET;
(b) higher private investment in VET increases participation;
(c) external factors (capacity of spending on education from public sources, certainty of returns on investment, technological progress in the economy, balance between supply

and demand for labour) influence VET cost-sharing mechanisms and regulatory instruments, the levels of private investment in VET and/or participation in VET.

External factors could influence other variables in several ways. First, sufficient education spending capacity from public sources is an important precondition for establishing new, or sustaining, VET cost-sharing mechanisms and regulatory instruments, and 'uploading' them with sufficient resources. Second, uncertainty of returns on investment in training, technological progress in the economy, and balance between supply and demand for labour (with VET qualifications) could offer alternative explanations for high or low private investment in VET among the 12 newer Member States; in fact, the influence of external factors could prove more important than that of VET cost-sharing mechanisms and regulatory instruments.

The study covers elements of policy evaluation. One of the aims of the study is to establish which mechanisms and instruments are more successful (effective, efficient) in stimulating private investment, and subsequently, which ones have greater impact on participation, while taking due regard to equity concerns. Our analytical framework shows evaluation criteria – effectiveness, efficiency, impact and equity – as relationships between the variables of the study (Figure 1).

2.5. Data collection and analysis methods

The choice of methods for the analysis was determined by the subject. The number and characteristics of VET cost-sharing mechanisms and regulatory instruments were largely unexplored before the launch of the study. Therefore, the first objective was to map the existing mechanisms and instruments, which was conducted with the help of a literature review and a survey of 12 national ReferNet coordinators, carried out in April/May 2008. The second objective was to gather detailed information on the characteristics of these mechanisms/instruments in each country and to collect expert opinions on their effectiveness, efficiency, equity and impact. Subsequently, different relationships, e.g. between the characteristics of mechanisms/instruments and private investment, had to be identified. Due to data limitations, the statistical analysis could not be done, so a qualitative comparative analysis was applied. Finally, a regression analysis was applied to test relationships between private financing and participation in VET, as well as between contextual and dependent variables.

2.5.1. Survey of national experts

Accurate data and evaluations of the existing mechanisms and regulatory instruments were collected through a detailed survey addressed to national VET experts, plus additional interviews carried out via telephone and e-mail, which helped clarify and check the questionnaire responses. The survey and interviews were carried out from August until November 2008.

Each individual mechanism was evaluated by experts separately. The intention was to receive at least three opinions from different experts who would include: the representatives

of public authorities, social partners and independent experts (e.g. academia). Some experts evaluated more than one mechanism, depending on individual knowledge and capacity to provide a well-informed opinion. In some cases expertise was scarce so mechanisms were evaluated by fewer than three experts. The total number of individual expert evaluations of cost-sharing mechanisms and regulatory instruments is 196, of which 65 evaluations were completed by experts from public administration, 64 from social partners and 67 from independent monitors. Evaluations were completed by 64 different experts of all three types of stakeholders (Annex 3).

The survey also helped to obtain relevant factual information about VET cost-sharing mechanisms and regulatory instruments (for more details refer to questionnaire in Annex 4):

(a) monitoring and evaluation: it is assumed that if monitoring systems are sufficiently elaborate, experts' opinions are more likely to be based not only on general estimations or impressions but also on hard evidence;
(b) availability of guidance: if guidance is readily available, the reach of the mechanism/instrument concerned is expanded;
(c) number of mechanisms in each country: the higher number of mechanisms/instruments shows greater efforts to improve private investment and participation in VET. Greater numbers of evaluated mechanisms also provide for more balanced aggregate country evaluations. For instance, if few mechanisms operate in a country, evaluating one of them negatively may heavily influence the overall score the country receives for each of the subvariables of the characteristics of mechanisms/instruments;
(d) duration of mechanisms/instruments: an average number of years (up to 2006 ([10])) of operation of mechanisms/instruments in the country concerned. The greater the duration, the longer the period available for achieving policy objectives. The duration may also influence their visibility.

These indicators are not included in the qualitative comparative analysis, but used in explaining its findings.

2.5.2. Qualitative comparative analysis

A qualitative comparative analysis was used to identify factors influencing private investment in VET (Section 3.3). Both characteristics of VET cost-sharing mechanisms and regulatory instruments and contextual variables were included as independent variables for private investment.

The expert evaluations of the same type of mechanisms/instruments (such as different types of tax incentives or training leave) were included in the analysis after an average of their expert evaluations (points given by the national experts on each indicator) was calculated. This was done to prevent the overall evaluation of the VET cofinancing system being unbalanced due to dominance of one type of cost-sharing mechanism ([11]).

([10]) The last year for which statistical data relevant for analysis are available.

([11]) For example, Latvia had five mechanisms operating before 2006: tax allowances for individuals, payback clauses for individuals and for future employers, paid and unpaid training leave. Thus, two types of payback

The list of independent variables for the qualitative comparative analysis was chosen from the VET expert survey. Following the initial analysis of survey responses, only the clearest and the least controversial responses were included in the analysis framework (for more information on independent variables see Section 2.1).

Information from the expert evaluations of VET mechanisms and instruments was differentiated/selected depending on the statistical indicator used as a dependent variable. When private expenditure on educational institutions was used as the dependent variable, all the mechanisms and instruments existing in the respective countries before 2006 were considered. Private expenditure on educational institutions encompasses both finance from enterprises and individual contributions, yet it does not consider any type of in-company training. Conversely, for the other two dependent variables (cost of CVT courses as percentage of total labour cost and cost of CVT courses per participant) only the mechanisms and instruments stimulating investment in VET from legal entities were selected, as these indicators specifically measure CVT financing by enterprises. Tax incentives for individuals, loans and voucher schemes were excluded.

Contextual variables were included in the qualitative comparative analysis only if statistically significant preliminary correlations were observed between them and private financing variables (see Section 2.3 for more information on contextual variables and Section 3.5 for detailed correlations).

The dependent variables (private expenditure on educational institutions, the cost of CVT courses as a share of labour cost, and the cost of CVT courses per participant) were dichotomised, namely all countries were divided in two groups according to the median value as high or low performing (Annex 1, Tables A23-A25).

Tosmana software ([12]) was used to conduct the comparative qualitative analysis. The software does not test the strength of the relationship, but it reveals covariations between relevant characteristics of cost sharing mechanisms/regulatory instruments and private financing indicators in terms of formal logic. The result of the qualitative analysis is a list of sufficient and necessary conditions. This list has to be further analysed to establish whether the relationships are meaningful in addition to being logical. However, if sufficient and necessary conditions coincide, it can be presumed that the relationship is not accidental.

2.5.3. Regression analysis

Where possible, relationships between variables were tested using a regression analysis, with the help of SPSS software. Sufficient data from official statistics was available for the regression analysis of relationships between private investment and participation in VET, and between external factors (i.e. contextual variables) and private investment in VET. But even in these cases the statistical analysis encountered difficulties due to lack of some data. An

clauses constituted two fifths of the VET cost-sharing system, whereas they were typically evaluated as having no impact on private financing and participation in VET by Latvian VET experts. Thus, their negative evaluation scores, if included directly into the national average, could disproportionably influence average national scores for all the cost-sharing mechanisms and instruments.

([12]) Available from Internet: http://www.tosmana.net [cited 13.7.2009].

attempt was made to reduce these problems by extending the sample to the 27 Member States instead of focusing only on the 12 newest ones.

In the regression analysis Pearson's correlation was considered 'significant' at 0.01 level (two tailed) and correlation coefficient was 'low' if under 0.5, 'medium' between 0.5 and 0.7 and 'high' if over 0.7. All the data used for the regression analysis was limited to the period between 1999 and 2006, but for many statistical indicators little comparable data were available, in many instances covering less than 12 or 27 countries (although for the purpose of simplicity they were still called the 12 newer Member States and the EU-27 statistical indicators).

2.5.4. Analysis approach

The study is essentially a comparative analysis. Section 3.1 describes and compares different VET cost-sharing mechanisms and regulatory instruments across the 12 newer Member States. Section 3.1 compares mechanisms and instruments in terms of their effectiveness, efficiency, impact and equity (as evaluated by national VET experts). Section 3.3 compares the 12 newer Member States in terms of characteristics of mechanisms and instruments and their influence (alongside external factors) on private investment in VET. This analysis is qualitative, but considers the findings of the regression analysis. Sections 3.4 and 3.5 compare the trends in private investment and participation in VET, and external factors between the 12 newer Member States, EU-15 and EU-27. The sections use the regression analysis to explain the statistical relationships between variables.

2.6. Major limitations

The major limitations of the study result from the drawbacks of quantitative and qualitative research approaches (combining the two approaches aimed to avoid these) and the lack of systematic previous research.

First, the comparative analysis can never ensure that all the relevant factors and conditions have been considered and studied. Despite all efforts, it was impossible to access complete data on all the key financial and other potentially important characteristics of VET cost-sharing mechanisms and instruments in the 12 newer Member States. The literature about them is virtually non-existent in English and there are few sources available in national languages of the 12 newer Member States. Often even national VET experts taking part in the survey could not access these data, which had not been collected in a systematic way.

Second, the number (and diversity) of mechanisms and instruments studied was not matched by sufficient observations of each mechanism. VET expert opinions on a particular mechanism are not representative of all VET experts of a particular country. The limited number of observations can lead to identification of accidental, rather causal relationships.

Third, as in previous studies on VET financing (Masson, 2005) this study faced problems of availability of statistical data. Many EU countries cannot break their VET expenditure figures by programme orientation (general versus vocational education), type of VET (IVET, CVT or UVET) or to indicate share of different stakeholders in VET funding. To make the

analysis possible we had to substitute the missing statistical indicators with the closest available proxy indicators. Further, some statistical indicators had only been measured once or twice over the period analysed, which greatly limited the application of the regression analysis in this study.

2.7. Key terms and definitions

Key terms and definitions are summarised in Table 3.

Table 3. Key terms and definitions

Key terms	Definitions
Vocational education and training (VET)	Education and training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly in the labour market (Cedefop, 2008a).
Lifelong learning	All learning activity undertaken throughout life, which results in improving knowledge, know-how, skills, competences and/or qualifications for personal, social and/or professional reasons (Cedefop, 2008a).
Initial vocational education and training (IVET)	Vocational education carried out in the initial education system, usually before entering working life. However, some training undertaken after entry into working life may be considered as initial training (e.g. retraining). IVET can be carried out at any level in vocational education (full time school based or alternance training) pathways or apprenticeship (Cedefop, 2008a).
Continuing vocational education and training (CVET)	Education or training after initial education or after entry into working life, aimed at helping individuals to improve or update their knowledge and (or) skills, to acquire new skills for a career move or retraining, and (or) to continue their personal or professional development. Continuing education and training is part of lifelong learning and may encompass any kind of education (specialised or vocational, formal or non formal, etc.). It is crucial for the employability of individuals (Cedefop, 2008a).
Vocational education and training for unemployed (UVET)	Vocational training targeted at the unemployed, registered as such with their respective national employment service and seeking employment opportunities.
VET cost-sharing mechanism	Method and source through which funding is made available to VET participants. Cost-sharing mechanisms include collective financing arrangements (where employers and/or employees and/or social partners share the costs) and public-private cost-sharing. VET cost-sharing mechanisms analysed in this study are tax incentives, training funds, subsidy-based mechanisms, loans and savings schemes (their definitions are provided below).
VET cost-sharing regulatory instrument	Cost-sharing regulatory instrument sets out the general rules of cost-sharing. The regulatory instruments either help to reduce the risk of investment and secure the benefits of investment in training for employers (payback clauses) or to secure equitable access to training for employees (training leave).
Effectiveness	Policy evaluation criterion indicating the extent to which specific policy objectives have been achieved, or are expected to be achieved during or immediately after policy intervention.
Efficiency	Policy evaluation criterion indicating if selected policy measures have produced maximum results from given inputs.

Key terms	Definitions
Impact	Policy evaluation criterion indicating the extent to which general policy objectives have been achieved, or are expected to be achieved after policy intervention, provided that all other external conditions are favourable or do not interfere with policy effects.
Equity	Policy evaluation criterion indicating the extent to which policy measures have provided its target groups with an equal chance to participate in the supported activity and succeed. Success should depend only on certain personal characteristics such as motivation, desire, effort, and to some extent ability, but not on circumstances outside the control of individual, such as the financial position of the family, geographic location, ethnic or racial identity, gender and disability (Hoxby, 2001). In this study, equity criterion is applied at policy impact level to measure the extent to which VET cost-sharing mechanisms have contributed to raising the participation of social groups that have lower access to VET.
Deadweight loss	In the context of VET defines situation when a number of beneficiaries of VET cost-sharing mechanism, would enrol in similar training at their own cost in the absence of cost-sharing arrangements.
Substitution effect	In the context of VET, defines a situation where a number of beneficiaries of a VET cost-sharing mechanism substitute supported training for training which has not been supported or is less supported.
Tax incentive	In the context of VET, taxation rule allocating financial benefits to taxpayers who participate in VET. The study focuses on tax allowances and tax credits on personal and corporate income taxes. Tax allowance is the amount deducted from the gross income to arrive at taxable income, for individuals and legal entities. Tax credit is the amount deducted from tax liability (tax due), for individuals and legal entities.
Training funds	Cost-sharing instruments for VET financing, based on collection of training levies and disbursement of accumulated resources in the form of grants. Training funds with compulsory levies often provide an option of tax credits to their contributors, when they invest in training their employees. The study focuses on two types of training funds: national/multi sectoral, usually based on tripartite governance, and sectoral, usually based on bipartite governance.
Subsidy-based mechanism	In the context of VET, provides one-off financial aid as joint finance to private investment in VET. The study focuses on two types of subsidy-based mechanism: grant schemes for legal entities investing in employee VET and vouchers/learning accounts for individuals enabling them to access VET services and to choose VET provider and/or content of services, timing, etc. Subsidies do not have to be paid back if used according to the rules of the mechanism.
Loan	In the context of VET, allows individuals to borrow financial resources on favourable conditions to cover part of their VET costs. The study focuses on conventional loans to be repaid in the form of fixed instalments, and on income-contingent loans to be repaid in the form of a percentage of their individual earnings after completion of the VET course.
Payback clauses	Set of legal provisions regulating the relationships between employers and employees on allocation of training costs of employees deciding voluntarily to discontinue the employment relationship with the employer who invested in their training. The study focuses on the payback clauses for individuals, where employees reimburse all or part of the training expenses to their employer, and on the payback clauses for future (next) employers, where the latter, hiring new employee, reimburse all or part of the previous employer's expenses for the employee's training.
Training leave	Cost-sharing regulatory instrument setting the conditions under which employees can be granted temporary leave from work for educational purposes. The study focuses on training leave with financial entitlements, usually in the form of continuing salary payments, and on unpaid training leave with no financial entitlements.
Savings scheme	In the context of VET, instrument for promoting individual saving for future VET costs. The account holder is required to set aside money regularly over time in an individual savings account. Such individual savings are matched by the contributions from the State budget and/or other stakeholders (e.g. employers).

Source: prepared by the authors

3. The analysis

This section starts with an overview of cost-sharing mechanisms and regulatory instruments to finance VET in the 12 newer Member States. Next, it compares their effectiveness, efficiency, equity and impact. Section 3.3 examines the influence of cost sharing mechanisms and regulatory instruments on private financing of VET (qualitative comparative analysis). Section 3.4 illustrates the findings of the regression analysis on the relationship between private spending and participation in VET. Finally, the results of the regression analysis of contextual/external influences are presented.

3.1. VET cost-sharing mechanisms and regulatory instruments

This review of cost-sharing mechanisms and regulatory instruments applied in the 12 newer Member States between 2006 and 2008 is based on the results of two surveys (questionnaires were sent to each country concerned):

(a) express survey addressed to national ReferNet consortia carried out in April-May 2008;
(b) detailed survey addressed to national VET experts representing public administration, social partners (employers' association and/or trade unions) and/or independent monitors (university, NGO, etc.) carried out in August-October 2008.

The information is presented according to the following themes:

(a) types of cost-sharing mechanisms and regulatory instruments;
(b) main funding sources and volume;
(c) duration of implementation;
(d) eligibility requirements;
(e) preferential treatment;
(f) monitoring and evaluation arrangements;
(g) beneficiary guidance and information campaigns;
(h) plans to change the existing cost-sharing mechanisms and regulatory instruments.

The definitions, main parameters and limitations of the survey are explained in the methodology chapter.

3.1.1. Types of cost-sharing mechanisms and regulatory instruments

The express and detailed surveys helped to identify seven basic and 15 smaller (sub) types of cost-sharing mechanism and regulatory instrument for VET, applied in 2006-08 in the 12 newer Member States. Table 4 shows that the three most popular are:

(a) payback clauses for individuals applied in 11 countries;
(b) subsidy-based mechanisms (grant schemes), applied in 10 countries;
(c) paid and unpaid training leave applied in 10 and eight countries respectively.

Table 4. Cost sharing mechanisms and regulatory instruments by type and country

No	Type of mechanism/ instrument	No	Subtype of mechanism/instrument		BG ([a])	CZ ([c])	EE	CY ([b])	LV	LT	HU	MT	PL	RO	SI	SK	Total number of countries applying the mechanism/ instrument
1	Tax incentives	1	Personal income tax	Tax allowances for individuals		X			X	X					X	X	**5**
		2		Tax credits for individuals			X				X						**2**
		3	Corporate income tax	Tax allowances for legal entities	X	X	X	X	X	X					X		**7**
		4		Tax credits for legal entities	X						X						**2**
2	Training funds	5	National/multisectoral training funds		X			X			X		X	X	X		**6**
		6	Sectoral training funds		X								X	X	X		**4**
3	Subsidy-based mechanisms	7	Vouchers, individual learning accounts									X					**1**
		8	Grant schemes		X	X	X	X		X	X	X	X	X		X	**10**
4	Loans	9	Conventional loans				X						X	X			**3**
		10	Income-contingent loans		X						X						**3**
5	Payback clauses	11	Payback clauses for individuals		X	X	X		X	X	X	X	X	X	X	X	**11**
		12	Payback clauses for future (next) employers						X	X	X			X			**4**
6	Training leave	13	Paid training leave		X	X	X		X	X	X		X	X	X	X	**10**
		14	Unpaid training leave		X		X		X	X	X			X	X	X	**8**
7	Savings schemes	15												X			**1**
Total number of mechanisms and/or instruments by country					**9**	**5**	**7**	**3**	**6**	**7**	**9**	**3**	**6**	**10**	**7**	**5**	**77**

([1]) VET experts in Bulgaria identified a third type of loan – loan by an employer – which is somewhat different from conventional or income contingent loan.
([2]) VET experts in Cyprus identified three VET financing mechanisms (tax allowances for legal entities, the national training fund and grant schemes). However, complete information is only available for the national training fund.
([3]) VET experts in the Czech Republic did not provide any other information on vouchers/learning accounts except that these are piloted in some recent projects (i.e. applied only on a small scale to see whether this mechanism could be applied nationally).

Source: Express survey (April-May 2008) of national ReferNet consortia and detailed survey (August-October 2008) of national VET experts representing public administration, social partners (employers' association and/or trade unions) and/or independent monitors (university, NGO, etc.).

The least common are:

(a) savings schemes;
(b) vouchers, learning accounts;
(c) tax credits for individuals and for legal entities.

All 12 newer Member States applied at least several types of mechanism or instrument. The number varies from three to 10 per country.

Table 4 presents 77 mechanisms and instruments reported by national VET experts from the 12 newer Member States. It includes those regulated by law (such as tax incentives) and those applied in practice without any common official regulation (such as payback clauses in some countries). The mechanisms/instruments are presented by type and by country.This study does not analyse all possible variations of cost-sharing and regulatory arrangements for VET. Its scope is limited to the list of cost-sharing mechanisms and regulatory instruments provided in Table 4. This list excludes mechanisms such as incentives on tax treatment of revenues and certain subsidy-based mechanisms, with no obligatory or insignificant private cofinancing requirements.

3.1.1.1. *Tax incentives*

Tax incentives are frequently used. Only Malta, Poland and Romania do not apply any type of tax incentive. Tax allowances are more popular than tax credits.

Tax allowances for legal entities are used slightly more often than for individuals (seven and five country cases respectively). The Czech Republic, Latvia, Lithuania and Slovenia use both types. Slovakia applies only tax allowances for individuals whereas Bulgaria, Estonia and Cyprus have tax allowances for legal entities.

Tax credits are far less popular. Only Hungary and Estonia apply tax credits for individuals and only Hungary and Bulgaria have them for legal entities.

According to the survey, the amounts of training expenditure that might be deducted by using tax allowances for individuals vary considerably across countries. In Slovakia, it is EUR 1 328 or 10 % of training expenditure. In Slovenia, it is possible to deduct 3 % of overall annual return (including costs of learning material, e.g. books). In the Czech Republic individuals may deduct 100 % of their exam costs, but not more than EUR 400. In 2008 training participants in Lithuania could reduce the cost of training by one fourth provided the amount of expenses to be deducted did not exceed 25 % of income received during the tax period. In Latvia individuals could deduct a maximum of EUR 213 of their training expenditure.

The Czech Republic and Lithuania foresee a possibility of deducting 100 % of training costs incurred by legal entities. However, the Czech Republic envisage that only the cost of (vocational) education and training not leading to higher level of qualification is eligible. In Latvia employers may deduct EUR 213 per employee only if the employee has an agreement with the employer. Bulgaria provides a possibility for legal entities to deduct 100 % of training costs, but not more than 10 % of their taxable profit. No information is available for Cyprus, Estonia and Slovenia.

For tax credits, in Estonia the maximum amount of training expenditure individuals could deduct equals the tax-deductible amount per year per tax payer – in 2008 this was up to

EUR 1 725 – but not more than yearly taxable income. In Hungary, individuals (but only employees enrolled in higher education, paying tuition fees and whose income does not exceed a certain limit) can get a credit equal to 30 % of total annual training expenditure but not more than EUR 250 ([13]). Legal entities in Hungary can deduct training expenses from a compulsory payroll levy. If an enterprise opts to provide practical training for VET students, it can deduct up to 100 % of its payroll contribution. If an enterprise provides training for its own employees it can get a credit of up to 30 % for large enterprises or 66 % for micro and small-sized enterprises.

Tax incentives might be linked with other cost-sharing mechanisms and (or) regulatory instruments. A good example is the link between the tax allowances for individuals and loans in Lithuania. When students borrow from a credit institution for vocational training or studies, their amount of the loan repaid during the tax period might be deducted from their income.

3.1.1.2. *Training funds*

Training funds are less widely used than tax incentives. Bulgaria, Cyprus, Hungary, Poland, Romania and Slovenia use national/multisectoral training funds. Bulgaria, Poland, Romania and Slovenia use also sectoral ones.

The training fund levy is usually set as a percentage of legal entity's payroll and paid by the employer. However, employees might also contribute. For example, in Romania – which enjoys the highest levies among the countries concerned – the sectoral training fund contribution is 2.5 % of payroll, 0.5 % of which is paid by employer and 2 % by employees. The smallest levies are in Poland: employers pay 0.25 % of their payroll. Other countries fall somewhere between. Cyprus applies 0.5 % levy for the national training fund, and Hungary 1.5 %. Bulgaria has no single levy as several active national and sectoral training funds support specific activities. For sectoral training funds, the levy is set individually in the agreement between the management body of the fund, the branch organisation and the beneficiary. Slovenia used to apply the rate of 1 % on legal entity payrolls for all of its 29 sectoral training funds for education and training of employees and self-employed entrepreneurs. However, since August 2008, the levy is no longer obligatory and the funds from employers are collected on per capita/absolute basis instead of a fixed percentage of salaries.

Most national training funds are compulsory, except Bulgarian and Slovenian ones. However, participation in the Slovenian national fund, depending on conditions, could be either mandatory or voluntary. Participation in sectoral funds is voluntary in Bulgaria, Poland and Slovenia (since August 2008), but compulsory in Romania.

Countries apply the following mechanisms for collecting and distributing funds:

(a) levy-grant, when levies collected from legal entities are subsequently redistributed back to them as grants to provide financial support for training;
(b) levy-exemption or 'train-or-pay', when levies are collected from legal entities only if their training expenditure fall short of the predetermined level;

([13]) Until 2006, the employed participating in adult learning could use tax credits to deduct their training expenditure or the costs of purchased digital equipment.

(c) levy-reimbursement or 'levy-rebate', when employers are partially reimbursed for approved training from their levies.

Box 1. Levy-grant mechanism in Cyprus

The legal basis for the national training fund in Cyprus is the 1974 industrial training law, modified in 1999 by the human resource development law. The latter created the present human resource development fund (originally the training fund was established in 1979) managed by Human Resource Development Authority. Contributions to this fund are paid by all employers, government and self-employed excluded, and collected via social insurance mechanism. The regular levy rate is 0.5 % of legal entities' payroll. In 2006 the ceiling on wage level was EUR 3 550 a month. The Human resource development fund provided grants to employers for approved training, allowances to trainees and some financial assistance.

Several schemes are applied under the Human resource development fund:

- consultancy services to improve organisation, management, productivity and competitiveness of enterprises through the development of their human resources. The scheme is based on projects undertaken by competent consultants and directed at SMEs with 5 to 249 employees. As a rule, projects consist of two parts: preparing the analytical report and implementing proposals. The scheme financed 50 % of the project costs. Enterprises can receive a maximum subsidy of EUR 7 700.
- new counselling and training services for microenterprises to improve their operation, efficiency and competitiveness by developing their human resources and primarily the owner/manager. Microenterprises with one to four employees are the only beneficiaries. The project was undertaken by small business counsellors. The support package includes diagnosis, on-the-job counselling and structured training of the owner/manager. Projects are 50 % cofinanced by the European Social Fund (ESF).
- training infrastructure support to strengthen the training capabilities of enterprises and institutions to meet skill development needs. The scheme provides financial assistance for training equipment (including information and communication technologies) and training of trainers. To get training fund support covering up to 45 % of expenditure, enterprises submit a comprehensive project implementation plan to the Human Resource Development Authority.

The training fund supports both IVET and CVET schemes.

From 1983 to 2005 a number of the levy-grant beneficiaries increased from almost 4 000 to more than 54 000. Training expenses during the same period increased from CYP 0.4 to 6.1 million. In 2003, the proportion of grants provided compared to the levy collected was 66 %, ranging from about 50 % in trade and construction to 85 % in tourist and other services.

As a result of the levy-grant mechanism, Cypriot enterprises improved organisational skills, solved pressing human resource development problems, adopted a more systematic approach to investing in people, involved social partners, raised awareness of the importance of training, introduced human resource development systems and practices supportive to skill development and improved their internal capabilities and flexibility to implement learning activities. Further, training institutions modernised their facilities and improved the quality and effectiveness of their programmes. All of this increased the overall levels of lifelong learning through greater and better availability of provision of training, higher and more selective demand.

The levy-grant mechanism had several shortcomings or challenges: low participation in training of low qualified people (despite preferential treatment policy), low participation of microenterprises (the biggest beneficiaries were the biggest contributors), the employer groups were hesitant in contributing to investments in VET areas perceived as falling within the public funding domain (initial vocational qualifications and apprenticeships) and the need was perceived for rationalising the operations and methods of mechanism to improve its effectiveness.

Source: Human Resource Development Authority of Cyprus.

The Levy-grant mechanism is the most popular one. It is applied in the national training funds in Bulgaria, Cyprus, Hungary, Poland and Romania and in the sectoral funds in

Bulgaria, Romania and Slovenia. The levy-reimbursement is used by national funds in Bulgaria, Hungary and Slovenia and by sectoral funds in Bulgaria. Bulgaria and Hungary combine levy-grant and levy-reimbursement schemes. Levy-exemption is least common and applied, for example, in Poland in the sectoral training funds.

All countries having a national training fund use calls for proposals to allocate the resources through public competition. However, Cyprus, Hungary and Romania allocate some of the resources to priority projects identified through top-down planning. As for sectoral training funds, only Bulgaria used public competition. Other countries allocate funds to priority projects (Romania and Slovenia) or provide each legal entity, which contributed through levy, with an equal share of training (Poland). Box 1 presents a levy-grant mechanism applied in Cyprus.

3.1.1.3. *Subsidy-based mechanisms*

Subsidy-based mechanisms are among the most popular VET cost-sharing mechanisms in the 12 newer Member States. Grant schemes are the dominant type applied in all countries except for Latvia and Slovenia. Only Malta uses vouchers.

Subsidy-based mechanisms not requiring private cofinancing are generally more widespread than public-private cost-sharing. For example, in Estonia three subsidy-based mechanisms have been established by the government to improve job-oriented adult training but only one – Enterprise Estonia's training programme – which is directly targeted at companies, involves private cofinancing. The other two measures are fully financed by the government and the EU.

In privately cofinanced subsidy-based mechanisms the standard contribution by the beneficiary varies considerably across countries. For example, in Bulgaria employers have to cofinance 25 % of their total costs. The Czech Republic envisages that non-profit organisations and SMEs have to cofinance 0 % or a low percentage of their total costs (often the *de minimis* rule was applied) and only large companies on rare cases have to cofinance 40 %. Similarly, in Poland a 20 % cofinancing rate is applied for SMEs, and 40 % for large enterprises. In Lithuania, on average, employees and employers cofinanced 34 % of their total costs. The standard contribution of employers in Slovakia is 50 %, one of the highest.

Most of the countries using grant schemes for VET cost-sharing allocate subsidies through public competition to applicants who are the best in meeting pre-established quality criteria. Only Hungary and Malta allocate subsidies (grants or vouchers) to all eligible applicants on a 'first come first served' basis. Romania uses a two-track system: one track for the pre-determined priority projects, and another for the openly competing projects.

In some of the countries, grant schemes are linked with other cost-sharing mechanisms and/or regulatory instruments. For example, Bulgaria allows employers to cover their grant cofinancing share through borrowing, by taking a loan. There are also some limits to using certain training funds in Bulgaria if the beneficiary already received financing under the grant scheme supported by the EU. There is evidence of Romanian and Bulgarian employers using payback clauses for their employees who benefit from the employer cofinanced grants.

3.1.1.4. *Loans*

The loan mechanism is used in five of the 12 newer Member States. Conventional and income-contingent loans are offered in Romania. Estonia and Poland use only conventional loans, while Bulgaria and Hungary use only income-contingent ones.

The maximum amount that can be borrowed varies greatly across the countries. The highest maximum amount for conventional loans is in Romania (EUR 10 000). Other countries provide smaller loans as in Estonia, at EUR 1 600 per study per year, and in Poland, at 400 % of average salary, i.e. approximately EUR 4 000. The maximum allowable amount is higher for income-contingent loans. In Romania students are allowed to borrow a maximum of EUR 15 000, in Hungary EUR 10 000 (EUR 200 per month for 50 months) and in Bulgaria EUR 3 600.

Interest rates tend to be higher for income-contingent loans. They range from 10.2 to 12.9 % in Bulgaria and are equal to 9.5 % in Hungary and Romania. For conventional loans 5 % and 0 % interest rates are applied in Estonia and Poland respectively. The conventional loans in Romania have relatively high interest rate ranging from 9.5 to 12.95 %.

Box 2. Employer provided loans in Bulgaria

Since 2006 employers in Bulgaria may provide loans of a maximum EUR 1 000. Eligible target groups include learners in secondary schools and colleges aged between 20 and 29 and studying in management, public administration and some manufacturing specialities of applied science (where VET is only an additional speciality) and individuals employed in the companies offering loans. The latter target group receives preferential treatment through this mechanism.

Loans provided by employers can be used to finance any type of training provided by any training provider. However, loans only cover direct training costs (i.e. tuition fees, cost of training materials) and should be only used for company-specific learning. Eligibility is restricted to learning in disciplines that are registered in the trade register at the licensed company. The level of education and training is determined by the collective body of management of the company offering loans. This mechanism is linked with payback clauses based on the agreement between employer and employee obliging the employee to reimburse all or part of the employer's expenses if leaving the company within a specified time.

Generally, loans by employers are considered to be effective and have some impact on improving the availability of financing for VET and raising VET participation rates. The mechanism has encouraged the introduction and/or progress of human resources development strategies in enterprises and institutions. It has also introduced and improved the management of career development systems of (potentially) employed individuals. However, the mechanism was not popular among employers due to lack of legal and financial awareness.

Source: Detailed survey (August-October 2008) of Bulgarian VET experts.

The detailed survey shows that out of five governments, three make use of loan mechanisms. The Estonian government provides loan guarantees as a safeguard against defaults. Further, the government repays the loan if the borrower starts working in a public authority or public service provision institution (12 months work experience in the public sector is required) or has a child(ren) aged less than five (the amount to be repaid by government depends on the number of children) ([14]). In Hungary the government not only

([14]) The Act of Public Service has been recently modified. The new version of the Act is expected to come into force in 2010. It no longer foresees benefits for public servants and younger parents.

provides loan guarantees but also pays part of the interest. The Polish government not only pays part of the interest, but is also directly involved in providing loans. The Bulgarian and Romanian governments are not involved in any way in loans but Bulgaria uses loans from the employer, described in Box 2.

Estonian, Hungarian and Polish creditors allocate loans on a 'first come, first served' basis, while Bulgaria and Romania allocate loans on the basis of criteria established by the bank/creditor.

Only Hungary and Poland collect information on the total volume of loans given annually. Bulgaria, Hungary and Poland collect information on default ratio, i.e. the amount of training loans written off as uncollectible. In Hungary the default ratio equals to 3.8 %. Estonia gathers data on the number of individuals and the net amounts of loans not paid back. However, this information is not broken down between higher education and VET students. Banks providing loans, forward this information to the Ministry of Education and Research to claim for government guarantees.

Loans might be linked with other VET cost-sharing instruments. For example Estonia links loans with tax incentives, so it is possible to deduct the amount of interest paid on the loan from the taxable income.

3.1.1.5. *Training leave*

Training leave is one of the most popular VET cost-sharing mechanisms across the 12 newer Member States. Almost all use paid (except Cyprus and Malta) and unpaid (except Cyprus, the Czech Republic, Malta and Poland) training leave.

The duration of the training leave varies considerably across the countries, with only the Czech Republic and Slovenia not having any limits.

The minimum duration for paid training leave is only one day per year in Lithuania. Estonia has a minimum of 14 calendar days per school year for job-oriented training (the number of days granted depends on the type of learning). In Hungary the minimum is four days for each exam. In Bulgaria and Latvia, the minimum duration is 20 days per year and in Poland 22 days. Slovakia set detailed regulation on the minimum duration of training leave as described in the Box 3.

Most of the countries offering paid training leave (Bulgaria, Estonia, Latvia, Hungary, Poland and Slovakia) did not indicate the maximum duration: in some countries it is not specified by the applicable law (Bulgaria, Hungary, Slovakia) while in other it depends on the agreement between the employer and employee (Estonia, Latvia) or the duration of training (Latvia, Poland). In Lithuania, the maximum duration is 30 days, however, the labour code provides detailed regulations summarised in Box 3.

Only in Latvia and Slovenia is duration of unpaid training leave not regulated, but depends on the agreement between employer and employee. When regulated by law, the duration is often similar to that for paid training leave. For example, Lithuania, Hungary, and Slovakia apply the same rules for minimum duration of paid or unpaid leave (Hungary, additionally, foresees 10 days of unpaid leave for completing diploma work). In contrast, in Bulgaria the minimum duration of unpaid training leave is 30 days per year, thus, 10 days

longer than for paid leave. Estonia foresees unpaid leave for a maximum of 14 calendar days per school-year for different types of training (Box 3).

Estonia, Lithuania, Hungary, and Slovakia did not limit maximum duration, leaving it for employer and employee agreement, with some indirect restrictions on unpaid training leave. For example, in Lithuania if an employee takes more than 14 calendar days of unpaid leave per year, any additional days are excluded from the employee's work experience. This could adversely influence retirement conditions.

Most of the countries offering paid and/or unpaid leave did not limit frequency. For paid leave, the Czech Republic, Estonia, Lithuania, Latvia and Slovakia leave employers and employees to reach agreement. In Hungary, the frequency of the leave depends on the requirements of the educational institution. In Bulgaria, the employer's practice is to provide annually one training course per learner. However, not all employees participate in training courses (particularly the less qualified). The frequency of unpaid leave is unlimited in all countries.

Box 3. Selected examples of specific regulation of paid and unpaid training leave

Paid training leave in Slovakia

Laws set the minimum duration of paid training leave granted by the employer as follows:

- time necessary to attend the courses/programmes;
- two days to prepare and pass each examination;
- five days to prepare and pass the final examination and the leaving examination;
- 40 days to prepare and pass the State examination and the dissertation examination;
- 10 days to prepare and defend the final work, thesis, or dissertation thesis.

Paid training leave in Lithuania

The Labour Code provides detailed regulations as follows:

- employees preparing for and taking entrance examinations can be granted a maximum of three days for each examination;
- employees already studying are entitled to paid training leave subject to a certificate of educational institution in the following manner:
  – to prepare for and take ordinary examinations: three days for each examination;
  – to prepare for and take credit tests: two days for each credit test;
  – for laboratory work and consultations: as many days as are set out on the syllabi and timetables;
  – to complete and present the graduation thesis (bachelor, master): 30 calendar days;
  – to prepare for and take State (final) examinations: six days for each examination. The travel time is not included in the period of training leave.

Unpaid training leave Estonia

Estonia foresees unpaid training leave of seven calendar days per school-year for non-formal training. Seven extra calendar days may be granted for job-oriented and formal training. For upper secondary maturity exams and entrance exams into formal education unpaid training leave is granted according at the request of the training provider.

Paid training leave in Romania.

Employers are obliged to provide training for their employees as follows:

- at least once every two years, if they employ 21 or more persons
- at least every three years, if they employ 21 or fewer persons

When an employer fails to comply with the obligation to provide training, the employee is entitled to paid leave of up to 10 working days or up to 80 working hours for vocational training.

Source: Detailed survey (August-October 2008) of national VET experts.

The only case where training leave could be accumulated over several years is found in Slovakia. However, applicable law does not provide specific rules but leaves the matter to employers and employees.

Most countries with training leave do not require specified employment relationship and/or work experience duration to be eligible. Employment relationship is required only in Bulgaria and Slovakia for both paid and unpaid training leave; work experience is required only in Bulgaria. Bulgarian experts provide some evidence of employers requiring three years of related work experience to be eligible for paid leave and one year of work experience for those under 29 to use unpaid leave.

In each country, employees need their employer's approval to use paid or unpaid training leave. The only exception is Hungary, where such approval is not required and employee can use paid training leave within the maximum duration foreseen. Other countries have specific conditions. For example, Estonian law specifies the following cases:

(a) if over 10 % of employees take training leave at same time, the employer may postpone the training;
(b) The agreement of employer is needed when the duration exceeds the number of days stated in legislation, the job contract or collective contract;
(c) employees need their employer's approval if they obtained formal education as a full-time student (formally, this mechanism does not apply for those employees).

In Latvia, employees have to provide the employer with a statement from their education institution. However, it is still not mandatory for the employer to allow the employee to use the training leave.

Usually, paid training leave is financed by employers and unpaid leave by employees. However, there are some exceptions. For example in Estonia, Slovenia and Slovakia some (extra) costs bound up with paid training leave can be subject to agreement between the employer and employee. In other countries, part of the costs are covered by the State. For example, Poland foresees that 50 % of costs of paid training leave could be financed by the national (labour) fund. Also the Slovenian government finances part of paid training leave costs.

Due to the specificity of this regulatory instrument (it is often decided, financed and regulated in agreement between employer and employee) none of the countries concerned collects information on the overall annual cost of training leave to public financing.

Training leave is sometimes linked with other cost-sharing mechanisms and/or regulatory instruments. For example, in Romania a leave of more than 60 days obliges the employee to stay at least three years with the employer who paid for it (a payback clause element). In Slovenia, training funds can be used to reimburse part of the costs incurred.

3.1.1.6. *Payback clauses*

Payback clauses are a regulatory instrument commonly used across the 12 newer Member States. Payback clauses for individuals are used by all countries except Cyprus, while payback clauses for future (next) employers are applied only in Lithuania, Latvia, Hungary and Romania. The way the instrument is regulated varies across the countries (Box 4). It is often applied without any regulation.

Box 4. Regulation of payback clauses

Bulgaria has not yet developed a common official regulation on payback clauses. Usually, the collective agreements of branch and sector organisations regulate them.

In the Czech Republic, the Labour Code regulates the payback clauses laying down the basic principles (framework). Individual or collective employment agreements can be concluded with more detailed regulation within the general framework of these principles.

In Estonia, payback clauses are regulated by collective employment agreements or, more often, by individual employment agreements between employers and employees. There are no provisions regulating payback clauses in labour market law. However, the new version of the act on work contracts included statements on training agreements (i.e. payback clauses). It stipulates that if the employer's expenditure on the employee's training is above 'normal' level, there is an option to conclude an agreement that the employee will not leave the job for a certain period or will pay back the training cost. According to the new act, this agreement should include the content and costs of the training. The duration of the agreement should depend on the costs and content of the training and should not exceed three years.

In Hungary, payback clauses are regulated by the Hungarian Labour Code.

According to Latvian labour law, employers have to secure continuous professional improvement for their employees (e.g. short-term courses). An employee does not have to pay back the funds invested even if the employment agreement terminates shortly afterwards. However, if an employee studies for a university degree or qualification, gaining education on his/her own initiative, employer financial support and the payback procedure can be the subject of a separate agreement.

The Lithuanian labour code foresees the possibility for employers to use payback clauses. If an employee voluntarily decides to discontinue his/her employment relationship with the current employer, he/she is obliged to reimburse the employer's expenses for training and/or internships incurred in the past year. However, the labour code also states that individual or collective employment agreements might set different timing and/or order of this reimbursement.

In Malta, payback clauses are not regulated by law, but they do exist and are common when training provided to employee is expensive and/or of a long duration (more than one month). Usually such payback agreements are signed individually between the employer and the employee. However, some collective agreements make reference to payback clauses. As suggested by the national VET experts, employers would normally include a payback agreement when training expenses exceed EUR 1 000.

In Poland, this instrument is usually regulated by individual employment agreements. The law on the promotion of employment only regulates payback clauses for the unemployed. According to the law, the unemployed sign a contract with the Employment Office for labour-market training and, if they discontinue training, they have to pay back the costs. The only exception to the payback rule is employment: if an unemployed person undergoing training becomes employed, he/she can discontinue the training.

The Romanian labour code states that training longer than 60 days binds employees to staying in the company for at least three years. They can terminate the employment relationship only with the permission of their company or compensate the cost of training. The following conditions have to apply:

- training activity takes more than 60 days, as stated in the act on work contracts;
- the company pays total training costs and has the initiative of training an employee;
- when participating in eligible training, employees do not work more than 25 % of their regular working time;
- an additional payback agreement has to be concluded between the employer and the employee.

In Slovakia the payback clauses are included in the Labour Act which foresees several provisions to implement payback clauses:

- the agreed period for remaining in an employment relationship after the end of training courses financed by an employer may not exceed five years;
- the maximum sum to be settled may not exceed three quarters of the total sum invested;
- if employees fulfil their commitment in part, the obligation to repay costs should be reduced proportionally.

In Slovenia the payback clauses are part of labour law, but are regulated in greater detail by individual employment agreements. According to the law they might be also regulated by collective agreements.

Source: Detailed survey (August October 2008) of national VET experts.

Only in Estonia, Poland, Romania and Slovakia are specified conditions of the payback clauses compulsory by law for employees or their next employer, when the previous employer reclaims the employee VET investment. In other countries the specific conditions of repaying the training costs must be stipulated in individual or collective agreements. Some national VET experts provided anecdotal evidence of payback clauses being abused by employers with employees not knowing or being unable to defend their rights.

3.1.1.7. *Savings schemes*

The least evidence, compared to other cost-sharing mechanisms and regulatory instruments, was available on savings schemes in the 12 newer Member States. According to the survey this mechanism is used only in Romania. The so called 'savings plans', started in 2004, can be both a multi-purpose savings scheme (where VET is one possible aims) and a separate savings scheme for VET purposes only. The employee and other potential contributors can transfer money to a special account. Contributions by the beneficiary's parents are also accepted provided they do not exceed 10 % of the monthly family income. Savings plans may be linked with a loan; individuals can get a higher amount of money through a conventional loan mechanism if they are using a savings scheme.

3.1.1.8. *Cost-sharing mechanisms and regulatory instruments by VET type*

Table 5 presents the use of cost-sharing mechanisms and regulatory instruments by the type of VET across the 12 newer Member States. Most of these mechanisms and instruments are applied for CVET and, to a lesser extent, for IVET. UVET is financed only by training funds, subsidy-based mechanisms and loans. Table 5 also illustrates that tax incentives, payback clauses and training leave usually finance both IVET and CVET. Training funds and subsidy-based mechanisms are the most flexible/universal in terms of financing all types of VET including UVET.

However, the evidence provided in Table 5 is more tentative than substantial. First, the 12 newer Member States lack common understanding of what constitutes the different types of VET. Second, due to data limitations the exact extent of private sector involvement in funding different types of VET can not be ascertained. Although some types of VET could be eligible for cofinancing, in practice they might not be financed or might receive only a tiny fraction of total funding due to the lack of demand in the private sector (as a result of more attractive competing mechanisms, such as 100 % rate of assistance for conventional labour-market training measures). Information provided in Table 5 can only be used with clear reference to these limitations.

Table 5. The use of cost-sharing mechanisms and regulatory instruments by type of VET

No	Type of mechanisms and/or instruments	Type of VET	BG	CZ	EE	CY	LT	LV	HU	MT	PL	RO	SI	SK
1	Tax incentives	IVET	X		X	X	X	X	X				X	
		CVET	X	X	X	X	X	X	X				X	X
		UVET												
2	Training funds	IVET	X			X			X		X	X	X	
		CVET	X			X			X		X	X	X	
		UVET	X			X			X		X	X	X	
3	Subsidy-based mechanisms	IVET	X	X		X			X	X	X	X		X
		CVET	X	X	X	X	X		X	X	X	X		X
		UVET	X	X		X			X	X	X	X		X
4	Loans	IVET	X		X							X		
		CVET	X						X			X		
		UVET	X								X	X		
5	Payback clauses	IVET		X	X			X	X	X	X		X	X
		CVET	X	X	X		X	X		X	X	X	X	X
		UVET												
6	Training leave	IVET	X	X	X		X	X	X		X	X	X	X
		CVET	X	X	X		X	X	X		X	X	X	X
		UVET												
7	Savings schemes	IVET	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	X	n/a	n/a
		CVET										X		
		UVET												

Source: Express survey (April-May 2008) of national ReferNet consortia, detailed survey (August-October 2008) of national VET experts representing public administration, social partners (employers' association and/or trade unions) and/or independent monitors (university, NGO, etc.) and accessible evaluation reports.

3.1.2. Main funding sources and volume

The main sources of VET funding are (in order of importance) (Table 6):

(a) State budget;
(b) EU funds;
(c) contributions from employers and/or employers' associations;
(d) contributions from individuals.

State budget is usually devoted to IVET and UVET programmes whereas the EU funds finance mostly UVET and, to a lesser extent, CVET. Local budget is the less popular source. Employers or employers' associations and individuals prefer to finance CVET. Trade unions play a much less significant role in financing training (they are not considered by the survey respondents as one of the major sources of VET funding).

Table 6. Main sources of VET funding

Source	BG	CZ	EE	CY	LV	LT	HU	MT	PL	RO	SI	SK	No of countries
State budget	X	X	X	X	X	X	X	X	X	X	X	X	12
Local budget	X	X					X		X	X	X	X	7
EU	X	X	X	X	X	X	X	X	X	X	X	X	12
Employers, employer associations	X	X	X	X	X	X	X	X	X		X	X	11
Trade unions	X												1
Individuals	X	X	X		X	X	X	X	X		X	X	10

Source: Express survey (April-May 2008) of national ReferNet consortia.

The information on the volume of public and private VET funding through cost-sharing mechanisms and regulatory instruments is fragmented. In most cases data are not available (Table 7). Information on the volume is available mostly for training funds and subsidy-based mechanisms usually cofinanced by EU structural funds. For other cost-sharing mechanisms and regulatory instruments, the relevant information is not collected or could not be accessed by the national VET experts (except for tax incentives in Estonia and Hungary and for loans in Hungary and Poland). For example, tax authorities in some of the countries tend not to collect statistics by the type of eligible activity/training. They only provide data on the overall volume of tax allowances and credits provided (where VET was only one of many eligible activities) or the overall volume of tax allowances and tax credits for every kind of eligible training. Further, there is a substantial lack of data on the volume of funding through payback clauses and training leave.

Figures provided in the Table 7 suggest that national training funds are mostly financed by the private sector:, the overall volume of funding being higher than from public sources. In contrast, subsidy-based mechanisms involve higher share of public sector financing.

The overall volume of public financing in the subsidy-based mechanisms and training funds make them the most financially significant cost-sharing mechanisms (such as Poland reserved more than EUR 250 million in 2006-08 to finance grant schemes, Hungary allocated EUR 128 million in 2007 to the national training fund). Volumes of public financing were lower for tax incentives (EUR 76.7 million in 2007 in Estonia and EUR 10 million in 2006 in Hungary), loans (EUR 89.2 million for income-contingent loans in the academic year 2007/08 in Hungary and EUR 0.28 million for conventional loans in 2006-08 in Poland) and vouchers (EUR 0.7 million in 2006-08 in Malta).

There is little evidence that cost-sharing mechanisms are able to attract high private contributions with lower public investment. National training funds which help to secure a certain level of investment in training by companies (through levy) are particularly successful in this respect. For example, in Cyprus private funding amounted to EUR 22.6 million in 2008 and was supplemented by around EUR 5 million of public funds. In Hungary private investment exceeded EUR 290 million in 2007 and was complemented by EUR 128 million of public financing. Finally, in Poland, the private sector contribution amounted to EUR 2.4 million in 2006-08, while the public sector invested EUR 0.2 million. Subsidy-based mechanisms seemed to be less successful in attracting higher private cofinancing as illustrated by the Estonian and Lithuanian grant schemes.

Table 7. Volume of public and private financing through cost-sharing mechanisms and regulatory instruments, in million EUR

Type of mechanisms/ instruments		Mechanisms and instruments			Type of financing	BG	CZ	EE	CY	LT	LV	HU	MT	PL	RO	SI	SK
1	Tax incentives	1	Personal income tax	Tax allowances for individuals	Public		n/a			n/a	n/a					n/a	n/a
					Private		n/a			n/a	n/a					n/a	n/a
		2		Tax credits for individuals	Public			~76.7 (2007)(*)				10 (2006)					
					Private			n/a				n/a					
		3	Corporate income tax	Tax allowances for legal entities	Public	n/a	n/a	n/a	n/a	n/a	n/a					n/a	
					Private	n/a	n/a	n/a	n/a	n/a	n/a					n/a	
		4		Tax credits for legal entities	Public	n/a						80 (2007)					
					Private	n/a						n/a					
2	Training funds	5	National/multisectoral training funds		Public-EU	n/a			4.92 (2008)			48 (2007)		0.19 (2006-08)	208 (2007-13)	>50 (2006-08)	
					Public-state	n/a			0			80 (2007)		0.03 (2006-08)	38 (2007-13)		
					Private	n/a			22.57 (2008)			291 (2007)		2.4	n/a	n/a	
		6	Sectoral training funds		Public-EU	n/a								n/a	0	n/a	
					Public-State	n/a								n/a	7.06	2 (2006-08)	
					Private	n/a								n/a	n/a	n/a	
3	Subsidy-based mechanisms	7	Vouchers, individual learning accounts		Public-EU								n/a				
					Public-State								0.02 (2006-08)				
					Private								n/a				
		8	Grant schemes		Public-EU	n/a	4574.1 (2007-13)(***)	2.4 (2006)	n/a	48.7 (2004-08)		80 (2007)	n/a	190 (2006-08)	3476 (2007-13)		n/a
					Public-State	n/a	1201.3 (2007-13)(***)	0	n/a	12.1 (2004-08)		2024 (2007)	0.7 (2006/08)	63.3 (2006-08)	613 (2007-13)		n/a
					Private	n/a	n/a	1.5 (2006)	n/a	31.26 (2004-08)		110 (2007)	n/a	n/a	n/a		n/a

Type of mechanisms/ instruments		Mechanisms and instruments		Type of financing	BG	CZ	EE	CY	LT	LV	HU	MT	PL	RO	SI	SK
4	Loans	9	Conventional loans	Public			n/a						0.28 (2007)	n/a		
				Private			n/a						n/a	n/a		
		10	Income-contingent loans	Public	n/a						89.2 (2007/ 08)			n/a		
				Private	n/a						n/a			n/a		
5	Payback clauses	11	for individuals (**)	Public	–	–	–		–	–	–	–	–	–	–	–
				Private	–	–	–		–	–	–	–	–	–	–	–
		12	for future (next) employers (**)	Public					–	–	–			–		
				Private					–	–	–			–		
6	Training leave	13	Paid training leave	Public	n/a	n/a		n/a	n/a	n/a	n/a		n/a	n/a	n/a	n/a
				Private	n/a	n/a		n/a	n/a	n/a	n/a		n/a	n/a	n/a	n/a
		14	Unpaid training leave	Public	n/a			n/a	n/a	n/a	n/a			n/a	n/a	n/a
				Private	n/a			n/a	n/a	n/a	n/a			n/a	n/a	n/a
7	Savings schemes	15	(evidence is lacking)	Public										n/a		
				Private										n/a		

(*) The approximate amount of tax credits for individuals used for every kind of eligible training.
(**) Questionnaire did not contain question on the overall volume of financing of this regulatory-instrument. It was not likely that respondents could produce these figures.
(***) Total EU and state budget for priorities of operational programmes which could be applied to financing VET- related projects.

Source: Detailed survey (August-October 2008) of national VET experts representing public administration, social partners (employers' association and/or trade unions) and/or independent monitors (university, NGO, etc.).

The information in Table 7 is only indicative. First, the volumes of VET financing for different mechanisms are provided for different periods or the exact reference year is unknown (for multiannual programmes or those without clear policy cycles). Second, instead of specifying the volume of direct VET financing some respondents provided the total volume of the EU structural funds support (Romania) or only the indicative share of the EU structural funds that could be applied for funding VET (the Czech Republic).

3.1.3. Duration of implementation

Cost-sharing and regulatory arrangements can be grouped according to their implementation dates. Data in Table 8 suggests that on average, training funds, payback clauses, training leave and tax incentives have been applied longer, while subsidy-based mechanisms, loans and savings schemes are relatively recent mechanisms.

The information on grant schemes should be treated with caution as this mechanism is not applied continuously, as with others, but for fixed periods (e.g. 2004-08, 2007-15) during which all funds have to be used. Later on, if funds are available, new programmes need to be prepared. Therefore, it is more difficult to identify the start year of subsidy-based mechanisms as they are not introduced by amendments or complements of relevant laws which were valid until their official reversal. In many countries grant schemes were applied to legal entities through various Phare programmes, completed by 2006 and not included in our survey. Yet the average start year of grant schemes, 2003, implies that some VET experts recalled and might have included grant schemes applied and completed up to 2006, or those entirely financed by national sources without contribution from the EU structural funds.

Table 8. Average start year of cost-sharing mechanisms and regulatory instruments ([a])

Mechanisms and instruments		Average start year	Number of countries
Tax incentives	Tax allowances for individuals	2002	5
	Tax credits for individuals	2000	2
	Tax allowances for legal entities	2001	7
	Tax credits for legal entities	2002	2
Training funds	National/multisectoral training funds	1999	6
	Sectoral training funds	1993	4
Subsidy-based mechanisms	Vouchers, individual learning accounts	2005	1
	Grant schemes	2003	10
Loans	Conventional loans	2004	3
	Income-contingent loans	2004	3
Payback clauses	Payback clauses for individuals	1998	11
	Payback clauses for future (next) employers	2000	4
Training leaves	Paid	2001	10
	Unpaid	1999	8
Savings schemes		2004	1

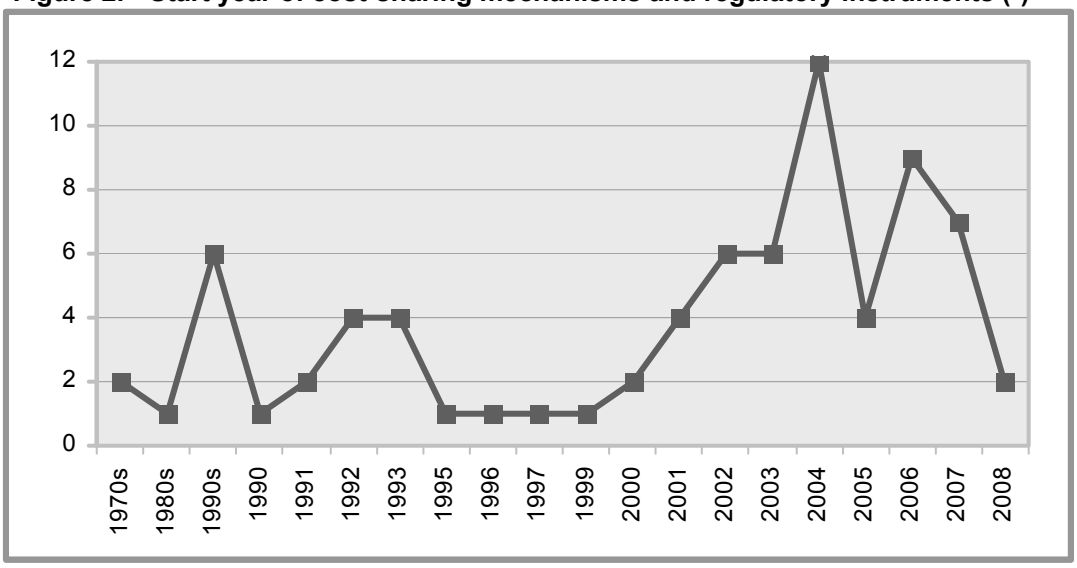
([a]) Calculation method: mathematical average of start dates of selected mechanisms or instruments. Assumption: if VET experts indicated start date of the mechanism/instrument as 1990s, 1980s and so on, the average 1995, 1985 and so on is taken into the calculation. Start date for tax allowances for legal entities in Cyprus is not available.

Source: Detailed survey (August-October 2008) of national VET experts.

There is a close connection between the start date of cost-sharing mechanisms and regulatory instruments and the date when countries acceded to the EU. As Figure 2 shows, the largest number of mechanisms and instruments were introduced in 2004, when 10 of the 12 newer Member States acceded to the EU. Similarly, in 2006 and 2007, when Bulgaria and Romania became members, nine and seven mechanisms and instruments were launched respectively. In Bulgaria alone nine mechanisms and instruments were introduced in 2006 and 2007. Further, a high number of mechanisms and instruments were introduced in 2002 (six) and 2003 (six), potentially the result of preaccession process. It is likely that accession had significant impact over the period 2002-07, resulting from the funds allocating by the EU is since the 12 newer Member States started the process.

Another large group of mechanisms were introduced at the beginning of 1990s. These were the first years after the fall of the 'iron curtain' in central and eastern Europe. It can be argued that many countries started experimenting with mechanisms promoting private financing of VET, as a result of their transformation from centrally planned to market economies.

Figure 2. Start year of cost-sharing mechanisms and regulatory instruments ([a])



([a]) 76 cost-sharing mechanisms and regulatory instruments in the 12 newer Member States were examined. Start date for tax allowances for legal entities in Cyprus is not available.

Source: Detailed survey (August-October 2008) of national VET experts.

When comparing countries, it is possible to single out those which have had VET mechanisms/ instruments over a long period and those which started to apply them recently. Cyprus, Slovenia and Hungary have been using cost-sharing mechanisms and regulatory instruments to finance VET longer than the rest of the 12 newer Member States. Bulgaria, Romania, Lithuania and Slovakia have a short history of using such approaches.

Table 9. Average start year of cost-sharing mechanisms and regulatory instruments by country ([a])

Country	Average start year	Number of mechanisms and/or instruments reviewed per country
BG	2006	9
CZ	2001	5
EE	1997	7
CY	1992	2 ([b])
LV	2001	6
LT	2004	7
HU	1995	9
MT	1997	3
PL	2002	6
RO	2004	10
SI	1994	7
SK	2004	5

([a]) Assumption: if VET experts indicated start date of the mechanism/instrument as '1990s', '1980s' and so on, the average '1995', '1985' and so on was taken into the calculation.
([b]) Start date for tax allowances for legal entities in Cyprus is not available.

Source: Detailed survey (August-October 2008) of national VET experts.

3.1.4. Eligibility requirements

Eligibility requirements serve several purposes. Specifically they might help to ensure:

(a) proper targeting of financing mechanisms by limiting access to specific target groups or confining support to certain types of learning content or certain types of training-related costs. Targeting is good when resources are few. It helps to improve effectiveness of intervention by targeting priority groups. But if the aim is overall increase in participation, any targeting reduces overall ambition and impact of the financing mechanism or instrument;

(b) quality of providers or their programmes, by limiting access to provision of training supported by the cost-sharing mechanisms or regulatory instruments to accredited providers and (or) those having licensed programmes.

In the detailed survey respondents were asked to provide information about eligibility requirements of each mechanism or instrument. The survey included the following questions with regard to eligibility:

(a) which target groups are eligible for funding?
(b) what types of learning programmes (certified or any) are eligible?
(c) what types of training providers (licensed or any) are eligible?
(d) what types of training costs (direct and/or indirect) are eligible?
(e) what types of learning content (firm/sector specific and/or general) are eligible?

Box 5. Cost-sharing mechanisms and regulatory instruments target groups

Tax allowances for individuals: medicine doctors, dentists, nurses, midwives (SK).

Tax credits for individuals: between 2003 and 2006, all the employed taking part in adult education; after 2006, those enrolled in higher education, paying tuition fees and whose income do not exceed a predetermined level (HU).

Tax allowances for legal entities: employers carrying out manufacturing in regions with high unemployment or hiring unemployed and/or disabled people, agricultural manufacturers, cooperations (BG).

Tax credits for legal entities: potentially employed (BG); all taxpayers under the scope of the Act on business associations (HU).

National/multisectoral training funds: people from different social groups, distributed by types and level of vocational qualification (BG); employers (government excluded), employed (self-employed and unemployed excluded)(CY); vocational secondary schools, higher education institutions, secondary schools, special vocational training schools, dormitories, National Institute of Vocational and Adult Education, business associations involved in the practical training of VET students, chambers of commerce and industry, cofinancing of EU VET programmes, public employment service, Accreditation Board of Adult Education, national public foundations and professional bodies participating in VET (HU);

Sectoral training funds: people from different social groups, distributed by types and level of vocational qualification (BG); craftsmen (SI).

Vouchers: self-employed and employed in small enterprises (20 or less) (MT, training subsidy scheme), unemployed registered with the Employment and Training Corporation, and women job seekers (MT, training subsidy for the unemployed scheme).

Grant schemes: young people between the age of 24 and 29, employed and unemployed between the age of 24 and 64, adults at the age of 50 and above, distributed by gender for specific VET, disadvantaged people, people from different social groups, distributed by types and levels of vocational qualification (BG); private enterprises, third sector organisations such as unions of sectoral enterprises if they organise training for the entrepreneurs of the sector (EE); school students, different groups of employees, people with special needs (HU); employees in industry and business companies, employees in public sector, representatives of employers and employees and their associations' members (LT); enterprises in the manufacturing, pharmaceutical, aviation, call centres and ICT industry (MT); large, medium, small and microenterprises (PL).

Conventional loans: full time VET students in formal vocational training programmes (curricula) on the basis of upper secondary education (EE); the unemployed across the country (PL).

Income-contingent loans: learners aged 16-18, in secondary vocational schools in tourism, business administration, machine specialities, pharmacy and agriculture (BG); students enrolled in higher education including post-secondary VET (HU).

Paid training leave: young people between the age of 24 and 29, employed and unemployed between the age of 24 and 64, adults at the age of 50 and above, distributed by gender for specific VET, disadvantaged people, people from different social groups, distributed by types and levels of vocational qualification BG); all employees (except some specific occupations and public authorities) taking part in job-oriented training, or obtaining formal education as part-time students or in evening or distance learning (EE); all employees taking part in elementary schooling, civil and public servants taking part in compulsory training (HU);

Unpaid training leave: all employees (except some specific occupations and public authorities) taking part in non-formal training; extra unpaid training leave for employees taking part in job-oriented training, or obtaining formal education as part-time students or in evening or distance learning (EE).

Source: Detailed survey (August-October 2008) of national VET experts.

The results of the detailed survey show that countries apply all eligibility requirements outlined above with similar frequency except for learning content which is least often used.

Eligibility requirements are applied in 34 cases out of 75 ([15]) for the types of learning programmes, 32 cases out of 75 for the types of providers; 30 for target groups; 31 for the types of training costs; and 18 for the types of learning content. In some cases there are no eligibility restrictions. Box 5 provides examples of target groups of different cost-sharing mechanisms and regulatory instruments.

Eligibility requirements for different cost-sharing mechanisms and regulatory instruments are presented in the Table 10. For tax allowances, eligibility requirements usually concern the types of training costs. For grant schemes (and also sectoral training funds and unpaid training leave) they usually concern certain target groups. For the other mechanisms and instruments, there is no dominant eligibility requirement.

Table 10. Eligibility requirements per cost-sharing mechanism/ regulatory instrument

Mechanisms and instruments	Eligibility requirements					Total number of countries
	Certain target groups	Certified learning programmes	Licensed training providers	Direct training costs	Firm/sector specific learning content	
Tax allowances for individuals	1	3	3	5	1	5
Tax credits for individuals	1	2	2	2	0	2
Tax allowances for legal entities ([a])	1	1	1	6	3	6 ([a])
Tax credits for legal entities	2	2	0	0	1	2
National/multisectoral training funds	4	3	3	3	1	6
Sectoral training funds	3	1	1	2	1	4
Vouchers, individual learning accounts	1	0	0	1	1	1
Grant schemes ([a])	6	4	4	1	1	9 ([a])
Conventional loans	2	2	2	0	1	3
Income contingent loans	2	3	3	1	1	3
Payback clauses for individuals	0	5	5	4	2	11
Payback clauses for future (next) employers	0	2	2	1	2	4
Paid training leave	4	4	4	3	1	10
Unpaid training leave	3	1	1	2	2	8
Savings schemes	0	1	1	0	0	1

([a]) No data are available for tax allowances for legal entities and grant schemes applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

Eligibility requirements in cost-sharing mechanisms or regulatory instruments for different countries are presented in the Table 11 (which sums up the number of mechanisms and instruments in which particular eligibility requirement is applied). Bulgaria usually applies eligibility requirements to certain target groups and to the types of learning content; Estonia to certain target groups; Hungary and Romania to the types of learning programmes and training providers; Latvia, Lithuania and Slovenia to the types of training costs. In the other countries, the dominance of particular eligibility requirements was less pronounced.

([15]) The 77 mechanisms and instruments reported by national VET experts from the 12 newer Member States except for Cyprus for which we have no information on eligibility requirements of grant schemes and tax allowances for legal entities.

Table 11. Eligibility requirements per country

Country	Eligibility requirements					Total number of mechanisms and instruments
	Certain target groups	Certified learning programmes	Licensed training providers	Direct training costs	Firm/sector specific learning content	
BG	8	4	3	6	8	9
CZ	0	3	3	3	1	5
EE	4	2	1	2	1	7
CY([a])	1	0	0	0	0	1 ([a])
LV	0	1	1	3	1	6
LT	1	1	2	4	1	7
HU	6	9	9	2	1	9
MT	2	1	1	1	2	3
PL	4	3	3	2	1	6
RO	0	7	8	1	1	10
SI	3	1	1	6	0	7
SK	1	2	0	1	1	5
Total	30	34	32	31	18	75

([a]) No data are available for tax allowances for legal entities and grant schemes applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

To sum up, eligibility requirements for quality (for both programmes and providers) of privately cofinanced training are observed in less than a half of all cost-sharing mechanisms and regulatory instruments available in 12 newer Member States. However, there is a trade-off between quality and accessibility/efficiency of training. For example, the fact that only licensed training providers are eligible could result in less competition and thus, more expensive, less accessible and effective training for all. Therefore, eligibility requirements should be set in such a way as to ensure proper and delicate balance between quality assurance and proper accessibility and efficiency.

Well-targeted financing of direct (i.e. tuition fees, cost of training materials) and indirect (i.e. travel, accommodation, meal costs, wages (foregone income), costs for career guidance, child care, competence measurement, formulation of training plan, etc.) training-related costs is far more important for accessibility than quality of training. For example, the ability of mothers (especially of those with low income) to participate in VET could be significantly limited if no support for child care is provided. Therefore, the fact that 44 out of 75 mechanisms and instruments also cover indirect training could mean more progress in increasing access to VET. Indirect costs were less often covered in tax incentives and training funds. Limited coverage of training-related costs in training funds is due possibly to limited public resources, and tax incentives to high administrative burden and costs (such as if any indirect training-related costs might be eligible this could lead to a high number of fraud cases and it could be difficult and expensive to solve them). To increase accessibility of training for the disadvantaged groups and to save public resources, the coverage of indirect costs should be even more strongly linked to the preferential treatment of certain target groups supported by the mechanism or instrument.

Out of 75 mechanisms and instruments, 18 cofinance only firm/sector specific learning. This eligibility requirement is most often applied for tax incentives and payback clauses. By supporting only firm/sector specific learning through tax incentives the State intends to save public resources. Similarly, for payback clauses the employer needs to secure investment in training which could be put at risk if staff poaching occurs. However, in some cases limited eligibility of learning may be highly useful for employer, but not for employees/training participants who get specific, rather than transversal, skills that limit their mobility in the labour market.

3.1.5. Preferential treatment

In the detailed survey respondents were asked to identify groups (if any) that receive preferential treatment in allocation of funding through a cost-sharing mechanism and/or are granted special rights through a regulatory instrument. Table 12 shows that preferential treatment was most often applied in national/multisectoral and sectoral training funds and grant schemes.

Table 12. Preferential treatment in cost-sharing mechanisms and regulatory instruments

Mechanisms and instruments ([a])	Countries where preferential treatment is applied		Total number of countries
	Countries	No	
Tax allowances for individuals	CZ	1	5
Tax credits for individuals	–	0	2
Tax allowances for legal entities ([b])	BG	1	6 ([b])
Tax credits for legal entities	BG	1	2
National/multisectoral training funds	BG, CY, HU, PL, RO, SI	6	6
Sectoral training funds	BG, PL, RO	3	4
Vouchers, individual learning accounts	–	0	1
Grant schemes ([b])	CZ, LT, HU, RO, SK	5	9 ([b])
Conventional loans	RO	1	3
Income-contingent loans	BG, RO	2	3
Payback clauses for individuals	– ([a])	0	11
Payback clauses for future (next) employers	– ([a])	0	4
Paid training leave	BG, HU, PL	3	10
Unpaid training leave	BG	1	8
Savings schemes	–	0	1

([a]) There was no question about preferential treatment in the questionnaire on payback clauses, thus this regulatory instrument is excluded from the analysis.

([b]) No data are available for tax allowances for legal entities and grant schemes applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

Box 6 presents cases of preferential treatment in allocation of funding through the particular cost-sharing mechanism and/or award of rights through the particular regulatory instrument.

Box 6. Examples of preferential treatment in cost-sharing mechanisms and regulatory instruments

Tax allowances for individuals: the maximum amount deductible is higher for the handicapped (CZ).

Grant schemes: SMEs, employees at higher risk of unemployment, unemployed and people at risk of social exclusion (especially defined risk groups: handicapped, people under 25 and graduates, pregnant women and mothers with newborn baby under nine months, parents taking care of a child under 15, people over 50, long-term unemployed and other people in special need) (CZ); those living in areas requiring support or with low schooling level, job-seekers having outdated profession or aged over 50 years (HU); public servants, people in less economically developed (problematic) territories such as Ignalina Nuclear Power Plant region (LT); SMEs (PL); people living on subsistence agriculture, unemployed youth and long term unemployed (RO); long-term unemployed (SK).

Conventional loans: students and graduates who want to attain higher levels of education (RO).

Income-contingent loans: those learners-loan applicants, whose parents are reliable debtors and can sign a mortgage credit (BG); students and graduates who want to attain higher levels of education (RO).

National/multisectoral training funds: people from different social groups with low/middle level of vocational qualification (BG); microenterprises and SMEs, women returning to labour market from inactivity, the unemployed, young secondary general graduates (CY); the unemployed, job-seekers, employees who have received redundancy notices, chambers of commerce and industry and public foundations (PL); the unemployed (RO); underprivileged groups (e.g. migrants, Roma, etc.) and those training in technical profiles (SI).

Sectoral training funds: employed individuals on a labour contract in training pre-qualification courses (BG); employees who have received redundancy notices (PL); the unemployed (RO)

Paid training leave: civil servants taking part in compulsory training (HU); handicapped and long-term unemployed (PL).

Unpaid training leave: young people between the age of 24 and 29, adults aged 50 and above (BG).

Source: Detailed survey (August-October 2008) of national VET experts.

Table 13 suggests that Bulgaria, Cyprus, Poland and Romania tend to provide preferential treatment to certain groups in allocation of funding through their cost-sharing mechanisms or regulatory instruments.

It is widely discussed in literature that preferential treatment of certain groups is an inherent feature of some VET cost-sharing mechanisms and regulatory instruments. For example, tax allowances for individuals tend to favour those earning higher income as they can claim larger amounts of their training expenses. Another example is tax allowances for legal entities which tend to favour larger enterprises making better use of this tax incentive (set against higher profits) to deduct higher amounts of training costs; their larger administrative/accounting resources (to follow and comply with the provisions introducing or amending the tax incentive) also offer benefit. Similarly, due to better capacity, large enterprises are main beneficiaries of the support from the training funds.

It is acknowledged that there are some specific groups which do not benefit (sufficiently) from training although they need assistance the most. Therefore, it is important to identify properly these disadvantaged groups and to apply adequately designed, targeted measures. As is evident from the examples above, the unemployed, low-qualified, disabled, young, elderly, and employees of SMEs are among the groups that have received attention and preferential treatment through different cost-sharing mechanisms and regulatory instruments.

However further efforts might be needed to support these people and ensure equal distribution of training.

Table 13. Preferential treatment in cost-sharing mechanisms and regulatory instruments per country

Country	Mechanisms and instruments where preferential treatment is present		Total number of mechanisms and instruments ([a])
	Mechanisms and instruments	No	
BG	Tax allowances for legal entities, tax credits for legal entities, national/multisectoral training fund, sectoral training funds, income-contingent loans, paid and unpaid training leave	7	8
CZ	Tax allowances for individuals and grant schemes	2	4
EE	–	0	6
CY ([b])	National/multisectoral training fund	1	1 ([b])
LV	–	0	4
LT	Grant schemes	1	5
HU	National/multisectoral training fund, grant schemes and paid training leave	3	7
MT	–	0	2
PL	National/multisectoral training fund, sectoral training funds and paid training leave	3	5
RO	National/multisectoral training fund, sectoral training funds, grant schemes, conventional and income-contingent loans	5	8
SI	National/multisectoral training fund	1	6
SK	Grant schemes	1	4

([a]) There are no questions in the questionnaire about preferential treatment on payback clauses. It is, therefore, excluded from the analysis.

([b]) No data are available for other two cost-sharing mechanisms applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

3.1.6. Monitoring and evaluation arrangements

3.1.6.1. *Monitoring*

The survey asked the following questions on monitoring arrangements for cost-sharing mechanisms and regulatory instruments:

(a) is there an institution responsible for monitoring progress on the use of the cost-sharing mechanism or regulatory instrument and taking corrective actions?
(b) are monitoring reports available?
(c) does the mechanism or instrument have any quantified targets?
(d) is the information on numbers of legal entities and/or individuals who have used the mechanism or instrument available?

The availability of monitoring arrangements for cost-sharing mechanisms and regulatory instruments is limited (Table 14). Most monitoring arrangements (responsible institutions, monitoring reports, quantified targets and statistics) are applied in training funds (both national/multisectoral and sectoral) and grant schemes.

Although some mechanisms and instruments have institutions responsible for monitoring progress and their use, they have no, or few, other monitoring arrangements.

The monitoring arrangements are related to the volume of financial resources devoted to the mechanisms and instruments: if resources are large, monitoring arrangements are in place. Further, monitoring arrangements were obligatory for cost-sharing mechanisms which were cofinanced by the EU structural funds (grant schemes and, in four out of six cases, national/multisectoral training funds). Similarly, the administration of the sectoral training funds collecting levies from many employers is obliged to monitor the accumulated resources and to report to the public.

According to Table 15, seven of 12 countries deliver reports monitoring one or more VET cost-sharing mechanisms and/or regulatory instruments. Most monitoring reports are found in Cyprus, Hungary and Poland; Bulgaria, Lithuania, Slovenia and Slovakia have considerably fewer. The other countries did not have any monitoring reports.

However, the actual availability of monitoring reports may differ from that reported by national VET experts. The aim to obtain monitoring reports either in English or in national languages meant that only some for individual Cypriot, Hungarian, Lithuanian and Polish mechanisms and/or instruments were found. Reports from other countries were inaccessible. It also seems that even if often there are institutions responsible for monitoring the mechanisms and instruments, the information (statistics) is rarely collected. Sometimes collected information is not systematically analysed

Table 14. Monitoring arrangements for cost-sharing mechanisms and regulatory instruments

Mechanisms and instruments	Countries where monitoring reports are available		Countries having responsible institution		Countries having quantified targets		Countries collecting statistics		Total number of countries per mechanism or instrument reviewed
	Countries	No	Countries	No	Countries	No	Countries	No	
Tax allowances for individuals	–	0	LV	1	–	0	LT	1	5
Tax credits for individuals	HU	1	HU	1	–	0	HU, EE	2	2
Tax allowances for legal entities (1)	–	0	LV	1	–	0	–	0	6 (1)
Tax credits for legal entities	HU	1	HU	1	–	0	HU	1	2
National/ multisectoral training funds	CY, HU, PL, SI	4	BG, CY, HU, PL, RO, SI	6	BG, CY, HU, PL, RO, SI	6	CY, HU, PL, RO, SI	5	6
Sectoral training funds	PL, SI	2	BG, PL, RO, SI	4	BG, PL, RO, SI	4	PL, RO, SI	3	4
Vouchers, individual learning accounts	–	0	MT	1	–	0	–	0	1
Grant schemes (a)	BG, HU, LT, PL, SK	5	BG, CZ, EE, LT, HU, MT, PL, RO, SK	9	BG, CZ, EE, HU, LT, RO, SK	7	BG, CZ, EE, LT, HU, PL, RO, SK	8	9 (a)
Conventional loans	PL	1	PL	1	PL	1	PL	1	3
Income-contingent loans	BG, HU	2	BG, HU,	2	–	0	HU	1	3
Payback clauses for individuals	–	0	–	0	–	0	–	0	11
Payback clauses for future (next) employers	–	0	–	0	–	0	–	0	4
Paid training leave	–	0	BG, PL, SI	3	–	0	–	0	10
Unpaid training leave	–	0	BG, SI	2	–	0	–	0	8
Savings schemes	–	0	–	0	–	0	–	0	1

(1) No data are available for tax allowances for legal entities and grant schemes applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

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Table 15. Monitoring arrangements for cost-sharing mechanisms and regulatory instruments per country

Country	Mechanisms/instruments for which monitoring reports available		Mechanisms/instruments with the institution responsible		Mechanisms/instruments having quantified targets		Mechanisms/instruments for which statistics are collected		Total number of mechanisms/ instruments per country reviewed
	Mechanisms/instruments	No	Mechanisms/instruments	No	Mechanisms/instruments	No	Mechanisms/instruments	No	
BG	Grant schemes and income-contingent loans	2	National/multisectoral and sectoral training funds, grant schemes, income-contingent loans, paid and unpaid training leave	6	National/multisectoral and sectoral training funds, grant schemes	3	Grant schemes	1	9
CY ([a])	National/multisectoral training fund	1	National/multisectoral training fund	1	National/multisectoral training fund	1	National/multisectoral training fund	1	1 ([a])
CZ	–	0	Grant schemes	1	Grant schemes	1	Grant schemes	1	5
EE	–	0	Grant schemes	1	Grant schemes	1	Tax credits for individuals, grant schemes	2	7
HU	Tax credits for individuals and for legal entities, national/multisectoral training fund, grant schemes and income-contingent loans	5	Tax credits for individuals and for legal entities, national/multisectoral training fund, grant schemes and income-contingent loans	5	National/multisectoral training fund and grant schemes	2	Tax credits for individuals and legal entities, national/multisectoral training fund, grant schemes and income-contingent loans	5	9
LT	Grant schemes	1	Grant schemes	1	Grant schemes	1	Tax allowances for individuals and grant schemes	2	7
LV	–	0	Tax allowances for individuals and for legal entities	2	–	0	–	0	6
MT	–	0	Vouchers, individual training accounts and grant schemes	2	–	0	–	0	3
PL	National/multisectoral and sectoral training funds, grant schemes and conventional loans	4	National/multisectoral and sectoral training funds, grant schemes, conventional loans and paid training leave	5	National/multisectoral and sectoral training funds, conventional loans	3	National/multisectoral and sectoral training funds, grant schemes and conventional loans	4	6
RO	–	0	National/multisectoral and sectoral training funds, grant schemes	3	National/multisectoral and sectoral training funds, grant schemes	3	National/multisectoral and sectoral training funds, grant schemes	3	10
SI	National/multisectoral and sectoral training funds	2	National/multisectoral and sectoral training funds, paid and unpaid training leave	4	National/multisectoral and sectoral training funds	2	National/multisectoral and sectoral training funds	2	7
SK	Grant schemes	1	Grant schemes	1	Grant schemes	1	Grant schemes	1	5

([a]) No data are available for grant schemes and tax allowances for legal entities applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

3.1.6.2. *Evaluation*

Survey respondents were asked to provide information on whether any evaluations of the results and impact of the selected cost-sharing mechanisms and regulatory instruments are carried out. As Table 16 suggests, most countries have carried out evaluations of results and impacts of training funds and grant schemes. Some countries have carried out evaluations of tax incentives and conventional loans. The rest of mechanisms and instruments have not been evaluated.

As with monitoring arrangements, evaluation is carried out for mechanisms cofinanced by EU funds ([16]) and those with large financial resources from many contributors such as training funds. Further, there is a causal relationship between monitoring and evaluation, the former providing essential information for the latter.

Table 16. Evaluation arrangements for cost-sharing mechanisms and regulatory instruments

Mechanisms and instruments	Countries where evaluation is carried out		Total number of countries per mechanism or instrument reviewed
	Countries	No	
Tax allowances for individuals	SI	1	5
Tax credits for individuals	–	0	2
Tax allowances for legal entities ([a])	BG, SI	2	6 ([a])
Tax credits for legal entities	BG	1	2
National/multisectoral training funds	BG, CY, HU, PL, RO, SI	6	6
Sectoral training funds	BG, PL, RO, SI	4	4
Vouchers, individual learning accounts	-	0	1
Grant schemes	BG, CZ, CY, LT, HU, PL, RO, SK	8	10
Conventional loans	PL	1	3
Income-contingent loans	–	0	3
Payback clauses for individuals	–	0	11
Payback clauses for future (next) employers	–	0	4
Paid training leave	–	0	10
Unpaid training leave	–	0	8
Savings schemes	–	0	1

([a]) No data are available for tax allowances for legal entities applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

As seen in Table 17, nine of the 12 countries carry out evaluations of the results and impacts of some of their VET financing mechanisms and instruments. The most evaluation reports are found in Bulgaria, Cyprus, Poland and Slovenia: the Czech Republic, Lithuania, Hungary, Romania and Slovakia have considerably fewer. The rest of the countries have no evaluation reports.

([16]) However, evaluation reports are not obligatory except final *ex post* evaluation by the European Commission at programme level.

The number of countries where evaluation reports are available exceeds the number of those where monitoring reports have been prepared. Evaluation is more popular and/or simple than monitoring. It is likely that countries tend to commission one off research reports instead of constantly monitoring progress of each mechanism and/or instrument.

However, as for monitoring reports, the actual availability of evaluation reports may differ from the availability reported by national VET experts. The efforts to collect all identified evaluation reports, in English or in national languages, resulted in receiving only some individual evaluation reports for the Czech Republic, Cyprus, Lithuania, Hungary, and Poland. Other reports were inaccessible.

Table 17. Evaluation arrangements for cost-sharing mechanisms and regulatory instruments per country

Country	Mechanisms and instruments for which evaluation is carried out		Total number of mechanisms and instruments per country reviewed
	Mechanisms and/or instruments	No	
BG	Tax allowances for legal entities, tax credits for legal entities, national/multisectoral training fund, sectoral training funds and grant schemes	5	9
CZ	Grant schemes	1	5
EE	–	0	7
CY ([a])	National/multisectoral training fund and grant schemes	2	2 ([a])
LV	–	0	6
LT	Grant schemes	1	7
HU	National/multisectoral training fund and grant schemes	2	9
MT	–	0	3
PL	National/multisectoral training fund, sectoral training funds, grant schemes and conventional loans	4	6
RO	National/multisectoral training fund, sectoral training funds and grant schemes	3	10
SI	Tax allowances for individuals, tax allowances for legal entities, national/multisectoral training fund and sectoral training funds	4	7
SK	Grant schemes	1	5

([a]) No data are available for tax allowances for legal entities applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

Box 7 presents findings on the evaluation of grant schemes in Lithuania, outlining the object of the evaluation and listing major positive results, shortcomings and challenges to be addressed in future programme.

Box 7. Results of evaluation of grant schemes for training employees under human resource development priority of Lithuanian Single Programming Document 2004-06

The object of the evaluation was grants provided to employers for training employees (public and private sectors) financed under two Single Programming Document measures:

- development of labour force competences and ability to adapt to changes;
- prevention of social exclusion and social integration (only grants for training of social workers).

Measures were primarily aimed at promoting sector or company-specific and general competences (such as IT literacy, languages). The rationale behind this intervention was to improve labour productivity and the competitiveness of economy by stimulating private and public sector investment in employee training. Employees of SMEs, socially disadvantaged employees and those working in regions undergoing substantial economic restructuring were given special priority. The total public funding intervention (EU structural funds plus national cofinancing) was EUR 65.38 million, the greatest single source of public support to CVT between 2004 and 2008. By 28 May 2008 the number of people trained reached 133 075 and was expected to increase slightly by the closing of the programme in autumn.

The overall aim of the evaluation was to assess the results and impact of the EU structural support for training employees, draw lessons and provide recommendations for more efficient and effective implementation of the operational programme for human resource development 2007-13. The main tasks of the evaluation were to analyse the consistency and effectiveness of the intervention logic; estimate if the measure succeeded in addressing the major training inequalities in the country; assess the added value of ESF funding in this area; review the factors and constraints affecting implementation of the measure; assess attitudes to further training of employees; evaluate the effectiveness of the financing mechanism used and review the international experience in similar public interventions.

The evaluation identified several positive results and impacts. First, there were high levels of satisfaction with the quality of the training among the trainees and their employers. Most trainees gained new or improved their skills and used acquired skills in work situations immediately after completion of training. Training had a positive impact on the quality of work and trainee job satisfaction. Second, grant schemes had a noticeable impact on productivity levels: 74 % of respondents agreed or strongly agreed that training improved the competitiveness of their enterprises, 67 % of respondents agreed or strongly agreed that training improved quality of goods and services, over half of supported organisations implemented innovations, and about half of supported organisations were able to reduce costs as a result of training. Finally, the grant schemes had a positive effect on the sustainability of training. The measure positively influenced employee learning motivation (most trainees agreed or strongly agreed that they have a better appreciation of the value of learning) and employer attitudes to further training and more accurate training planning. Training measures were publicised among enterprises that did not participate in the programme.

Despite generally positive results and impacts, the evaluators also identified several important shortcomings. First, public support was mostly used for training groups that mostly participate in training under market conditions, i.e. large and medium-sized enterprises, better developed regions, main cities, people aged 25-44, well-educated persons, mostly representing ISCO 1-2 groups (legislators, senior officials, managers and professionals). The assistance benefited least the groups that most urgently needed it: small and microenterprises, less developed regions, people aged 55 and over, persons whose highest qualification is below upper secondary level and ISCO 4-9 groups. Second, not all training was well planned, relevant and of sufficient quality. The training was insufficiently relevant for improving employee professional qualifications and achieving enterprise strategic objectives: some training put too much emphasis on theory rather than practice. It was often too intensive (causing difficulty of reconciling it with work obligations), which had adverse effects on trainees' learning motivation, and employers' attitudes about further training. Training did not have any immediate and measurable impact on the career and salary of trainees. Finally, grant schemes produced deadweight effects: most grant-recipients spent less of their own resources than during years before the programme and most of private cofinancing was indirect, in the form of trainees' salaries (paid while on training). Most employers who benefited from the programme seem also to have developed an appetite for more public support in the future to help meet the continuing training needs of their employees.

The evaluators identified several challenges to be addressed before similar interventions are implemented under the operational programme for human resource development 2007-13. First, there is a need to develop more consistent and effective intervention logic. Second, major training inequalities in the country need to be addressed (a special focus is needed on small and microenterprises, older and lower-skilled workers). Third, grant schemes have to promote better quality training planning by enterprises. Fourth, the employer contribution has to be higher and the public rate of assistance lower. This is expected to reduce the deadweight effect and increase the pressure on enterprises to use public grants more efficiently. Fifth, greater efforts have to be put into avoiding the distortion of competition by concentrating on sectoral training needs and channelling a greater share of funding to sectoral employers' associations and broad ad hoc sectoral partnerships. Finally, grant schemes have to promote the concept of sustainability of training within enterprises.

Source: Public Policy and Management Institute, 2008.

Another example is provided in Box 8 which describes the main results of the evaluation of corporate training funds in Poland.

Box 8. Results of the evaluation of effectiveness of Polish corporate training fund

In 2006, a research project (initiated by Polish Ministry of labour and social policy and cofinanced by the European Social Fund) *Analysis of effectiveness of the training fund – statutory instrument supporting continuing vocational education and training* was carried out.

The subject of the evaluation was a corporate training fund introduced in Poland by the Law of 20 April 2004 on promoting employment and labour-market institutions, as an outcome of one-and-a- half year negotiations between the government and social partners. The law encourages employers to create a training fund to upgrade employee skills and establish a strategic plan for staff development. Creation of the training fund is voluntary; however, employers are required to invest not less than 0.25 % of payroll once the fund is created. The fund should be used according to the company training plan. Those employers who created a training fund can receive support from the state (from the labour fund) through the reimbursement of:

- 50 % of training costs for employees threatened with redundancy;
- 80 % of the training costs for employees on training leave for more than three weeks;
- salary of the unemployed person replacing an employee on training leave (up to 40 % of the average monthly salary);

Cooperation with public employment services is necessary if employer seeks state's financial support.

Research confirmed the earlier suspicions that the proportion of employers using this instrument is very small. Only 16 of 380 employers (4.2 %) in the research confirmed creating a training fund in their companies on the basis of the Law of 20 April 2004 (33 employers had created a training fund on their own initiative before 2004, i.e. on the basis of different sets of law). 55.8 % of employers did not know the rules on how to set up and use the training fund. 85 % did not create any training fund and over 70 % had no intention to set up one.

The corporate training fund was created mainly at the initiative of employers. The role of trade unions was negligible.

Main large companies set up the training fund, usually individual entities. Few respondents reported creating training fund jointly with other entity(-ies).

Employers reported they used mainly their own financial resources to finance employee training. None of the 16 employers who created a training fund benefited from the subsidies from the labour fund, indicating that the financial incentive is not attractive enough. Further, the employers' knowledge of alternative sources of funding training (e.g. EU funds, local government budget) is low. At the same time, lack of financial resources has been identified as one of the main obstacles to providing training (particularly in micro-enterprises).

The public assistance to support professional training of employees has been evaluated generally as very poor. Employers indicated that the main obstacles to good cooperation with jobcentres are the time- and resource-consuming procedures required by the law, and the fear of many inspections.

The research reveals that training in the companies is not sufficiently linked to the companies' development strategies. Over 40 % of employers do not have a company training plan. Training requirements are determined and met on an ad-hoc basis. This may be also the result of low awareness by employers of potential benefits of (long-term strategy of) investment in human resources.

However, it should be stressed that the employers who set up a training fund support the idea of creating such an instrument and assess it positively.

Recommendations on how to promote the training fund and improve its functioning include:

- financial recommendations: provide adequate financial incentives; reduce training costs covered by the employer, such as through higher subsidies from the state; link training fund to the tax system, such as through tax relief and/or tax concession;
- procedural recommendations: simplify procedures related to setting up the fund and receiving financial support; strike the right balance between control (inspections) and trust; widen the group of potential beneficiaries; make the training fund mandatory (this should not concern SMEs) and define distinct rules of setting up and using the fund depending on the size of the company;
- institutional recommendations: disseminate information on the rules of setting up and using the corporate training fund; increase the role of labour offices in coordinating the CVET system; increase the role of labour offices in providing guidance and counselling services to provide support in defining training requirements.

Source: ReferNet Poland, 2008.

To sum up, most monitoring arrangements (i.e. responsible institutions, monitoring reports, quantified targets and statistics) are applied and evaluation studies are conducted for mechanisms cofinanced by the EU funds and those with significant financial resources from many contributors: both types of training funds and of grant schemes. Countries generally pay little attention to monitoring progress and evaluating effectiveness, efficiency, impact and equity of each mechanism and instrument. Therefore, little is known about the impact and overall significance of mechanisms and instruments applied in the 12 newer Member States.

3.1.7. Beneficiary guidance and information campaigns

The survey respondents were asked to provide information about:

(a) the guidance services available to beneficiaries of the cost-sharing mechanisms and/or regulatory instruments;
(b) information campaigns, promotion and communication activities supporting the mechanism and/or instrument.

Table 18 shows that countries tend to provide guidance services to beneficiaries of the mechanisms and/or instruments rather than use information campaigns, promotion and communication activities. This is understandable as guidance services are usually provided on demand and require fewer financial and administrative resources than information campaign or compulsory guidance services.

Both guidance and information campaigns are mostly available to beneficiaries of national/multisectoral and sectoral training funds and grant schemes. Guidance is also often available to beneficiaries of tax allowances and paid training leave. The availability of guidance and information campaigns for other mechanisms and/or instruments is either limited or unclear.

Table 18. Guidance and information campaigns for beneficiaries of cost-sharing mechanisms and regulatory instruments ([a])

Mechanisms and instruments	Countries where guidance is provided		Countries where information campaigns are organised		Total number of countries per mechanism or instrument reviewed
	Countries	No	Countries	No	
Tax allowances for individuals	CZ, LV, SK	3	–	0	5
Tax credits for individuals	EE, HU	2	HU	1	2
Tax allowances for legal entities ([a])	CZ, EE, LT, LV	4	–	0	6 ([a])
Tax credits for legal entities	HU	1	HU	1	2
National/multisectoral training funds	BG, CY, HU, PL, RO, SI	6	CY, HU, PL, RO, SI	5	6
Sectoral training funds	BG, PL, RO, SI	4	PL, RO, SI	3	4
Vouchers, individual learning accounts	MT	1	MT	1	1
Grant schemes ([a])	BG, CZ, EE, HU, LT, MT, PL, RO, SK	9	BG, CZ, EE, HU, LT, MT, PL, RO, SK	9	9 ([a])
Conventional loans	EE, PL	2	EE, PL	2	3
Income-contingent loans	BG, HU	2	BG, HU	2	3
Payback clauses for individuals	BG, LT, PL	3	–	0	11
Payback clauses for future (next) employers	LT	1	–	0	4
Paid training leave	BG, CZ, EE, LT, PL	5	BG	1	10
Unpaid training leave	EE, LT	2	–	0	8
Savings schemes	RO	1	–	0	1

([a]) No data are available for tax allowances for legal entities and grant schemes applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

Guidance services are only mandatory in Bulgaria (for the income-contingent loan), Poland (for conventional loans and national/multisectoral training fund (the labour fund)) and Slovakia (for grant schemes). Other countries provide guidance services on demand.

As Table 19 shows, guidance is available to beneficiaries of most mechanisms and instruments except in Latvia, Romania, Slovenia and Slovakia. However, information campaigns, promotion and communication are carried out to a much lesser extent: they are available to beneficiaries of the national training fund in Cyprus, and of mechanisms and/or instruments in Hungary, Malta and Poland. Other countries are less keen to promote their mechanisms and instruments.

Table 19. Guidance and information campaigns for beneficiaries of cost-sharing mechanisms and regulatory instruments per country ([a])

Country	Mechanisms and instruments in which guidance is provided to beneficiaries		Mechanisms and instruments in which information campaigns are organised to beneficiaries		Total number of mechanisms and instruments per country reviewed
	Mechanisms and instruments	No	Mechanisms and instruments	No	
BG	National/multisectoral and sectoral training fund, grant schemes, income-contingent loans, payback clauses for individuals, paid training leave	6	Grant schemes, income-contingent loans and paid training leave	3	9
CZ	Tax allowances for individuals and legal entities, grant schemes and paid training leave	4	Grant schemes	1	5
EE	Tax credits for individuals, tax allowances for legal entities, grant schemes, conventional loans, paid and unpaid training leave	6	Grant schemes and conventional loans	2	7
CY ([a])	National/multisectoral training fund	1	National/multisectoral training fund	1	1 ([a])
LV	Tax allowances for individuals and legal entities	2	-	0	6
LT	Tax allowances for legal entities, grant schemes, payback clauses for individuals and future (next) employers, paid and unpaid training leave	6	Grant schemes	1	7
HU	Tax credits for individuals and for legal entities, national/multisectoral training fund, grant schemes and income-contingent loans	5	Tax credits for individuals and for legal entities, national/multisectoral training fund, grant schemes and income-contingent loans	5	9
MT	Vouchers/ individual learning accounts and grant schemes	2	Vouchers/ individual learning accounts and grant schemes	2	3
PL	National/multisectoral and sectoral training fund, grant schemes, conventional loans, payback clauses for individuals and paid training leave	6	National/multisectoral and sectoral training fund, grant schemes and conventional loans	4	6
RO	National/multisectoral and sectoral training fund, grant schemes and savings schemes	4	National/multisectoral and sectoral training fund and grant schemes	3	10
SI	National/multisectoral and sectoral training fund	2	National/multisectoral and sectoral training fund	2	7
SK	Tax allowances for individuals and grant schemes	2	Grant schemes	1	5

([a]) No data are available for legal entities and grant schemes applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

3.1.8. Plans to change cost-sharing mechanisms and regulatory instruments

The survey respondents were asked to report on plans to change any VET cost-sharing mechanism and/or regulatory instrument currently in place. Information is summarised in Table 20.

Only the Czech Republic and Cyprus do not plan any changes to their mechanisms and instruments. Estonia and Malta plan to change two thirds, and Lithuania, Latvia, Poland and Romania at least one third, of all mechanism/instruments. Tax allowances and conventional loans are most often modified. Although most grant schemes have two different implementation periods (2004-08 and 2007-15) with possible changes in between, only four countries indicate planned changes to this cost-sharing mechanism. In total, out of 75 mechanisms and instruments reviewed 22 are to be changed.

Table 20. Plans to change the existing cost-sharing mechanisms and regulatory instruments

Country	Mechanisms and instruments for which changes are planned		Total number of mechanisms and instruments per country reviewed
	Mechanisms and instruments	No	
BG	Grant schemes	1	9
CZ	–	0	5
EE	Tax allowances for legal entities, grant schemes, conventional loans, paid and unpaid training leave	5	7
CY ([a])	–	0	1 ([a])
LV	Tax allowances for individuals and paid training leave	2	6
LT	Tax allowances for individuals, tax allowances for legal entities, grant schemes	3	7
HU	Income-contingent loans	1	9
MT	Vouchers/individual learning accounts and grant schemes	2	3
PL	National/multisectoral training fund and conventional loans	2	6
RO	Conventional and income-contingent loans, payback clauses for individuals and for future (next) employers	4	10
SI	Sectoral training funds	1	7
SK	Tax allowances for individuals	1	5

([a]) No data are available for legal entities and grant schemes applied in Cyprus.

Source: Detailed survey (August-October 2008) of national VET experts.

Box 9 presents planned changes in cost-sharing mechanisms and regulatory instruments in detail.

Box 9. Detailed plans to change mechanisms and instruments in the 12 newer Member States

Bulgaria

- grant schemes: during each calendar year the eligibility criteria and some of the conditions for application are changing; all the changes are presented in guidelines for applicants.

Estonia

- conventional loans: every year there are discussions about the maximum amount of study loan; the maximum amount is usually increased every year.
- grant schemes: the training programme 2004-06 was established during the first period of the EU structural funds (there were similar activities since 2002; however, regulations and funding sources were different). The support of EU structural funds for training in enterprises will continue in 2007-13, though the structure of the measure and regulations will be different.
- tax allowances for legal entities: the planned change will allow legal entities to deduct from taxable profit the costs for formal VET of their employees (at the moment only costs for short job-oriented training courses of their employees can be deducted). Most likely this change will take effect in 2009/10.
- paid and unpaid training leave: paid training leave and extra unpaid training leave will be applied for those employees who obtain formal education as full time VET students. This change will take effect in 2010.

Hungary

- income contingent loans: the eligibility rules of the mechanism will be extended to include support for short-course adult VET. However, the exact date of this change is unknown, partly due to the current global crisis.

Lithuania

- tax allowances for legal entities: amendment of the law on corporate income tax specified provisions for employees who are connected with the entity by employment relations, and for those who are not: (a) amounts directly paid by the entity, to the educational establishments for the education of persons connected with entity, will be deducted from the taxable profits over the tax period; (b) amounts paid by the entity for the education of persons who are not connected with the entity may be only attributed (if the person starts to work in the said entity) to long-term intangible assets and amortised over four years. Both provisions provide support for education only if it is necessary to the entity's income. New provisions are valid since 2008.
- grant schemes: the new programming period 2007-13 introduced the following two changes: (a) rearrangement of measures which were earlier financed under the one 2004-06 SPD measure 2.2 – this introduced more clarity into the mechanism; (b) improved targeting as more specific priority criteria are foreseen.

Latvia

- tax allowances for individuals: it is planned to double the maximum amount of training expenditure that may be deducted or credited from EUR 213.43 to EUR 426.86. This change is still under preparation.
- paid training leave: social partners (employers) proposed to a create mechanism to finance paid training leave from the State budget. However, this employers' intention was not supported.

Malta

- vouchers/individual learning accounts and grant schemes: since late 2008 there were policy plans to extend target group, change type of funding and financing rules of both subsidy-based mechanisms.

Poland

- loans: two changes are planned: (a) the target group would be extended to include various categories of job-seekers'; (b) the rules would be changed to broaden eligible type of training financed by the loan. These changes should increase the number of beneficiaries of loans.
- national/multisectoral training fund: there will be more incentives for participation in training which is organised by public employment services; the unemployed aged 45 and older will receive better access to financial resources for training from the labour fund.

- corporate training fund ([a]): the rules and procedures to be followed to create the training fund will be simplified; appropriate conditions will be created to allow employers who established the training fund use its resources better.

Romania

- conventional loan and income contingent loan: there are policy plans to introduce these mechanisms at national level and to create a National Credit Agency for Students that will provide State conventional loans and income-contingent loans with special (lower) interest rates. Remus Pricopie, a State Secretary for Upper Education in the Ministry of Education, Research and Youth informed that the National Credit Agency for Students will be created on 1 October 2008 and that from 1 October 2009 onwards the first loans for students will be provided.
- payback clauses for individuals and for future (next) employers: there are plans to include the payback clauses in the national legislation. This would allow clarifying the conditions according to which the mechanism can be applied. At present the payback clauses are included only in the contracts between the employers and employees. These changes are still discussed. The rationale of these changes is to avoid present misunderstandings, resulting from misinterpretation of provisions of payback clauses. At the moment these provisions are flexible and leave room for interpretation for both employers and employees.

Slovenia

- sectoral training funds: are no longer obligatory since August 2008. Instead of 1 % of payroll, the employer will pay the levy as an absolute amount of money.

Slovakia

- tax allowances for individuals: there are plans to extend the range of potential beneficiaries to include broader groups of beneficiaries, such as all adults participating in lifelong learning, employed, unemployed, graduates (current target group: medicine doctors, dentists, nurses, midwives).

(a) On consultation with national experts, this fund has been included in the 'sectoral training funds' subtype, yet the mechanism is rather different from others. It is referred to as 'corporate training fund' in the ReferNet report on VET in Poland (ReferNet Poland, 2008).

Source: Detailed survey (August-October 2008) of national VET experts.

Although there are some optimistic policy plans to change cost-sharing mechanisms and/or regulatory instruments (such as by extending their eligibility), uncertainties about the future of national economies related with the current global economic crisis can affect these plans considerably.

3.1.9. Summary

Review of cost-sharing mechanisms and regulatory instruments to finance VET in the 12 newer Member States provided several important conclusions. First, the duration of their use depends not only on the type of mechanism or instrument, but also on salient historical events (e.g. the start of economic transformation following restoration of independence, accession to the EU or the current economic crisis). These events influenced the VET financing policy in general and cost-sharing arrangements in particular.

Second, to inform the beneficiaries of particular mechanisms and instruments, countries more often tend to provide guidance services on demand rather than using broad information campaigns, promotion and communication. Limited information reduces the impact of the mechanisms and instruments.

Finally, countries paid little attention to monitoring the progress of each mechanism and instrument and evaluating their effectiveness, efficiency, equity and impact. Therefore, little is known about the impact and overall significance of mechanisms and instruments applied in the 12 newer Member States. The grant schemes and training funds constitute a notable

exception. They have institutions responsible for monitoring and preparing reports, have well defined quantified targets and collected monitoring data. Also, they are the mechanisms most often exposed to *ex post* evaluation. Further, grant schemes and training funds have well-developed guidance and information support.

The next chapter will examine the effectiveness, efficiency, equity and impact of the cost-sharing mechanisms and regulatory instruments, as assessed by VET experts participating in the survey.

3.2. VET cost-sharing effectiveness, efficiency, equity and impact

The 12 newer Member States use various VET cost-sharing mechanisms and regulatory instruments but little is known about how successful they are. Interpretation of the results of the survey of VET experts presented in this report is the first attempt to compare these mechanisms and instruments across the 12 newer Member States and to assess their success. The survey has several serious limitations discussed in Chapter 2 on methodology and its results have to be treated with caution.

Table 21 provides the average scores from national VET experts in response to survey evaluation statements for every mechanism and instrument. These scores are arranged according to the following evaluation criteria: effectiveness, efficiency, equity, and impact. For more information on the evaluation criteria, see Annex 2.

This assessment is certainly not thorough enough. However, it is the only assessment of many individual VET cost-sharing mechanisms and regulatory instruments applied in the 12 newer Member States and available in English. Only a few evaluation reports of the respective mechanisms/instruments are available nationally (often in national languages only).

Table 21. Effectiveness, efficiency, equity, impact of cost-sharing mechanisms and regulatory instruments

Survey statements Expert scores by mechanisms and instruments		TAI ([b])	TCI	TAL	TCL	NF	STF	ILA	GS	CL	ICL	PCI	PCE	PTL	UTL	SS
Total number of expert responses on mechanism and instrument		**13**	**6**	**15**	**6**	**14**	**10**	**3**	**27**	**8**	**8**	**29**	**11**	**26**	**19**	**1**
Effectiveness	The mechanism is effective, i.e. it well achieves all policy objectives	2.2	3.0	2.2	2.5	3.0	2.5	3.5	3.0	2.9	2.4	2.4	2.6	2.7	2.4	1.0
Efficiency	The main outputs and results of the mechanism are achieved at reasonable financial cost	2.7	3.3	2.8	3.2	3.1	2.8	3.0	2.9	3.0	2.4	n/a ([a])	n/a	2.8	2.7	1.0
	The operation of mechanism is user-friendly and simple	2.1	3.0	2.3	3.0	2.4	2.5	3.0	2.3	3.3	3.0	3.0	2.6	3.1	2.8	2.0
	The administrative burden of using the mechanism is considered as an important problem by the beneficiaries	2.7	2.9	2.3	2.3	2.5	2.3	2.0	2.0	3.4	2.6	3.2	2.7	2.5	2.8	1.0
Equity	The mechanism particularly benefits those beneficiaries with worse individual conditions (social, economic, geographical or other)	1.6	2.4	1.7	1.7	2.0	2.7	2.0	2.4	2.2	2.1	2.2	2.2	1.9	1.8	2.0
Impact	Most of the training supported by the mechanism would have taken place anyway, even without support (deadweight effect)	1.8	2.3	2.1	2.3	3.0	2.9	1.5	3.0	2.5	3.0	n/a	n/a	2.6	2.6	2.0
	The mechanism has considerable impact nationally on improving the availability of financing for VET and raising VET participation rates	1.6	2.5	1.7	2.7	3.0	2.8	4.0	2.8	1.6	2.1	1.9	1.6	2.3	2.4	1.0

([a]) The evaluation question is not applicable to this mechanism or instrument.

([b]) The meanings of this and other abbreviations in the table are provided in the list of abbreviations.

Source: Detailed survey (August-October 2008) of national VET experts, calculations by the authors.

The statements about mechanisms and instruments provided in Table 21 were assessed by the surveyed experts on a scale from 1 to 4, where 1='I strongly disagree', 2='I somewhat disagree', 3='I somewhat agree', and 4='I strongly agree'. When the stronger agreement with a statement means lower level of a certain quality, the answers are reversed: for example, the answers strongly agreeing about the existence of deadweight effect are reversed to strong disagreement about the avoidance of deadweight effect.

The experts provided opinions on the effectiveness of the mechanisms by addressing whether or not the mechanism achieved all of its designated policy objectives. As can be seen, vouchers/learning accounts have the largest effectiveness score, but this is based only on three expert evaluations, all from Malta (the only country where the mechanism is in use). It is much safer to say that grant schemes, national/multisectoral training funds and, to some extent, tax credits for individuals achieved their policy objectives. Conventional loans are a close runner-up. All these mechanisms are monitored throughout the 12 newer Member States (although tax credits and conventional loans to a lesser extent; Section 3.1.6) and this increases the probability that expert opinions are well informed. While tax credits for individuals are among the best according to the answers to the question on effectiveness, tax allowances (both, for individuals and legal entities) are regarded as ineffective by many of the surveyed experts. The most ineffective is the savings scheme, but it is applied only in Romania. The more effective mechanisms are also those receiving the largest EU financial support. Other mechanisms and instruments, including the widespread payback clauses for individuals, have indistinctive average scores close to 2.5.

Three aspects are considered when assessing efficiency. First, the experts considered that most cost-sharing mechanisms achieved their outputs and results at reasonable financial cost. Tax credits and national training funds received the highest average scores. However, many of the other mechanisms, such as vouchers, grants and conventional loans, are not far behind. Second, the operation of a large group of mechanisms is sufficiently user-friendly and simple. Conventional loans are slightly ahead of all other mechanisms/instruments, but individual learning accounts, income contingent loans, payback clauses for individuals, paid training leave, and tax credits received positive assessments. Tax allowances, grant schemes and training funds are less user-friendly. Third, according to the experts, the mechanisms/instruments differ greatly in terms of administrative burden. Conventional loans and payback clauses for individuals are the least administratively burdensome, while the subsidy-based mechanisms are at the opposite extreme. To conclude on the results from all three related questions, conventional loans and payback clauses for individuals lead the efficiency scores. Grant schemes and training funds are much less efficient. Efficiency is difficult to assess due to the absence or scarcity of monitoring data; it requires a reliable data on both inputs and outputs of the mechanisms and instruments. Training funds and grant schemes are relatively well monitored, which provides a better basis for expert opinions.

While the expert responses about the financial costs of the mechanisms and instruments are generally positive, this cannot be said of the responses to the question of whether or not the mechanisms and instruments particularly support the beneficiaries with worse individual conditions. This question helped to assess the performance of mechanisms and instruments

in terms of equity. Recent EU policy documents draw attention to unequal opportunities in accessing VET. The responses of national VET experts surveyed confirm that VET cost-sharing mechanisms are not good enough in helping to promote equitable access. Sectoral training funds are evaluated as helpful to the disadvantaged individuals and sectoral funds are also well monitored and experts from several different countries agree on their equity credentials. Grant schemes also scored relatively well and are followed by payback clauses, loans, national training funds and vouchers. Various tax incentives, with the notable exception of tax credits for individuals, scored particularly low on equal opportunities. At the same time, tax allowances are unmonitored in the 12 newer Member States.

Two questions in the survey address the impact of cost-sharing mechanisms and regulatory instruments. First, the experts assessed whether or not each mechanism had considerable impact nationally on improving the availability of financing for VET and raising VET participation rates. The individual learning accounts received the maximum score from all three Maltese experts. Training funds and grant schemes were considered as having exceptionally high impacts compared to other mechanisms. Tax credits on average also received relatively high scores. Tax allowances, conventional loans, and payback clauses for future employers all received low average scores. Second, the experts were asked to assess to what extent training supported by the mechanism would have taken place anyway – even without support. The answers on deadweight effect are largely consistent with the answers to the first question on impact. National training funds and grant schemes are again among the leaders with the lowest deadweight effect, while tax allowances clearly lag behind. However, income contingent loans and conventional loans received higher marks on deadweight, while Maltese experts this time gave low marks to their learning accounts. Better monitored mechanisms and instruments also tended to receive higher scores on impact.

Overall, subsidy-based mechanisms and training funds, which scored the highest on most qualities, also have the best guidance, information support, and the most elaborate monitoring arrangements. These are also cofinanced by the EU structural funds. EU membership provides resources and gives rise to several new cost-sharing mechanisms, while EU structural fund regulations attach requirements, which often make these mechanisms better governed (planned, monitored and systematically evaluated) than those financed only from national sources.

3.3. The influence of cost-sharing mechanisms and regulatory instruments on private financing of VET

This part of the study discusses the findings of the qualitative comparative analysis (Section 2.5.2) on the influence of VET cost-sharing mechanisms and regulatory instruments on private financing of VET in the 12 newer Member States. The data on VET cost-sharing mechanisms and regulatory instruments were collected through the survey of national VET experts, while statistics on private financing derived from the Eurostat database (Section 2.2). The analysis below has several limitations, which are discussed in the section on methodology (Section 2.6).

Table 22 provides a summary of survey data used in the qualitative comparative analysis and in the interpretation of its findings. There are two sets of data:

(a) evaluation data, derived from expert assessment of VET cost-sharing mechanisms and regulatory instruments with regards to achieving objectives, efficiency and deadweight (independent variables in the comparative qualitative analysis);

(b) factual data, collected through the survey of national VET experts, on monitoring, guidance, average duration of mechanisms and instruments prior to 2006, their total number as well as the number of EU financed mechanisms and instruments.

Table 22. Comparison of the 12 newer Member States by characteristics of their VET cost-sharing mechanisms and regulatory instruments

Countries	1	2	3	4	5	6	7	
	Expert evaluations			Factual data				
	Achieving the objectives	Efficiency (combined)	Deadweight	Monitoring	Guidance	Average duration prior to 2006	Number of mechanisms/ instruments	Number of those EU cofinanced
BG ([a])	2.9	2.7	2.5	**	**	0	0/10	1 (after 2006)
CZ	2.3	3.1	2.3		***	9	3	1
EE	2.8	3.1	2.6		***	8	7	1
CY	3.0	2.7	3.0			27	1	1
LV	1.9	2.1	3.5	**	**	6.5	5	0
LT	2.7	2.2	2.4	**		3	5	1
HU	3.1	2.9	1.7	**	*	9	9	2
MT ([b])	3.3	2.7	3.5			9	3	0
PL	2.2	3.0	2.7	*	*	5	5	2
RO	2.1	2.5	1.7			4	5	2
SI ([c])	2.5	2.8	2.3	**	–	13	6	0
SK	2.0	2.5	2.4		*	3	4	1

([a]) Included for the sake of comparison, yet none of its 10 mechanisms has been in place long enough to influence the dependent variables prior to 2006, year for which the most recent Eurostat data were available at the end of 2008.

([b]) No responses from independent monitors, government expert have provided more negative evaluations than social partners.

([c]) Only public administration responses.

(*) An asterisk is given to a country having elaborated monitoring or guidance arrangements for a mechanism not supported by monitoring and guidance in some other countries. Only mechanisms applied in more than three countries are rated this way.

Source: Detailed survey (August-October 2008) of national VET experts.

In contrast to the previous section, which analyses the mechanisms and instruments by type, this one provides a comparative analysis by country. Therefore, scores provided in Table 22 are country averages for several or all mechanisms and instruments applied in a particular country. Country averages differ as certain mechanisms or instruments are added to or excluded from the analysis.

Simple averages are not suitable for comparing countries effectively for monitoring and guidance. If a country's VET cost-sharing system happens to have few mechanisms, but

many regulatory instruments, the figures for monitoring and guidance will be low, since regulatory mechanisms are typically poorly monitored. An asterisk (*) is given to a country having elaborated monitoring or guidance arrangements for a mechanism not supported by monitoring and guidance in some other countries. Only mechanisms applied in more than three countries are rated this way.

Factual data in Table 22 are used to interpret the results of the qualitative comparative analysis. We assume that the presence of elaborate monitoring arrangements is helpful in developing well-informed expert opinions, whereas guidance arrangements help to enhance the participation in VET cost-sharing mechanisms and regulatory instruments.

The results of the analysis are provided in Tables A23, A24 and A25 (Annex 1) for each dependent variable (private expenditure on educational institutions, cost of CVT courses as percentage of labour cost, cost of CVT courses per participant). Note that the independent and contextual variables influence the dependent variable in combinations, and not each in its own right. Moreover, deadweight effect and unemployment, unlike other indicators, should be interpreted inversely: lower value stands for a better result. Detailed explanation of contextual variables is provided in the methodology section (Section 2.6).

3.3.1. Expenditure on educational institutions from private sources as percentage of GDP, for all levels of education combined

As the qualitative comparative analysis reveals, private expenditure on educational institutions is influenced both by characteristics of VET cost-sharing mechanisms and regulatory instruments, and contextual variables. Table A23 presents the results.

The analysis shows an inverse relationship between two characteristics of mechanisms and instruments on the one hand and private expenditure on educational institutions on the other. Lower achievement of the objectives of VET cost-sharing systems (combined with other variables) coincides with high private expenditure on educational institutions, while high achievement coincides with low private expenditure. Similarly, there is a covariation between deadweight effect and expenditure on educational institutions: although it would be reasonable if avoidance of deadweight effect led to higher private expenditure on educational institutions, analysis findings suggest the opposite.

These results are contradictory to what could be expected. One explanation could be that the newer Member States, which had lower private expenditure on educational institutions, developed well-functioning mechanisms and instruments recently; those with higher private expenditure, had less urgency and motivation to develop them. Among the countries with high VET private financing, three (Latvia, Poland and Slovenia) monitored their mechanisms and instruments. Thus, expert evaluation of their VET cost-sharing systems was more likely to be well-informed. In addition, among the countries that evaluated their mechanisms and instruments more positively, yet had low private expenditure on educational institutions, monitoring arrangements are less developed.

However, there is a relationship between the levels of private expenditure on educational institutions and some contextual variables. Labour productivity may well explain the variation of the private expenditure. Growing labour productivity can be both the result of investment in qualification upgrading and a motivating factor for employers to invest in VET. Gains in

productivity help to secure gains in competitiveness, profitability, and attractiveness of enterprises to potential investors. This, in turn, motivates investment in technology and human resources to secure further productivity gains.

Public expenditure on education and the extent to which enterprises plan training are additional factors positively influencing private expenditure on educational institutions in several countries.

Public expenditure on education is not necessarily a substitute for private expenditure on educational institutions. On the contrary, greater public financing can make private investment more attractive in several ways, starting with improved VET quality, which makes it more attractive to learn in the first place, and ending with cost-sharing arrangements, which provide public financial incentives to attract additional private investment in training.

The proportion of enterprises planning to train their employees shows higher overall enterprises awareness of potential benefits (certainty of the returns on investment) and higher capacity to make better informed investment in training. Therefore, it is understandable why the extent to which enterprises in a given country plan training could be reflected in the levels of private expenditure on educational institutions in that country.

To sum up, the characteristics of VET cost-sharing mechanisms and regulatory instruments and private expenditure on educational institutions are not related as expected in the analytical framework of this study. However, it can be concluded that, in many countries, private expenditure on educational institutions is facilitated by higher labour productivity, higher public expenditure on education and higher share of enterprises planning employees in a systematically.

3.3.2. Cost of CVT courses as percentage of total labour cost (all enterprises)

This indicator measures expenditure on CVT only by enterprises, so only considering selected mechanisms and instruments. Table A24 (Annex 1) shows the results of the comparative qualitative analysis ([17]).

The analysis revealed that VET cost-sharing mechanisms and regulatory instruments are important in explaining the variation in enterprise expenditure on CVT courses as a proportion of total labour cost. Although the relationship is not present in all cases, it can be observed that countries where mechanisms and instruments achieve their objectives, and avoid the deadweight effect successfully, stimulate private investment in VET by enterprises. It should not be interpreted as evidence suggesting that the cost-sharing mechanisms and regulatory instruments are always used when investing in CVT courses, yet it shows that clear policy objectives and well designed cofinancing arrangements (efficient, avoiding substitution of private investment with public resources, securing the benefits of investors, etc.) create predictable and favourable conditions for private investment. Three countries (Lithuania, Hungary and Slovenia) with high CVT cost as a percentage of total labour cost also appointed institutions with responsibility for monitoring their mechanisms and regulatory

([17]) Some values of indicators appear identically in countries where enterprise expenditure on CVT courses as% of total labour cost is low and in countries where it is high. This means that the indicator is always combined with others (e.g. the expenditure is high in countries where planning investment in HR is low, but the deadweight effect is also low, while the expenditure is low in countries where planning investment in HR is low and the deadweight effect is high).

instruments. Except for Romania, and to some extent Malta and Cyprus, all other countries, in which the characteristics of VET cost-sharing systems influence spending on training, have more elaborate monitoring systems.

Although the above analysis provides evidence that cost-sharing arrangements which are efficient and achieve their policy objectives matter, contextual variables seem of prime importance in explaining the cost of CVT as a share of total labour cost. Table A24 (Annex 1) shows the strong correlation between planning investment in human resources and expenditure on CVT courses as a percentage of labour cost (there are only two exceptions, Poland and Romania, where the analysis does not show such direct relationship). In countries where planning is widespread, its positive effect can be outweighed by other factors, such as high unemployment or low labour productivity. This may be interpreted that enterprises invest in CVT when their investment returns are predictable and lead to higher gains in productivity.

The analysis suggests a relationship between enterprise spending on training and employment in hi-tech sectors. High employment in hi-tech sectors signifies a more general orientation of the economy towards higher value-added products and the knowledge economy, which requires greater and more sophisticated and expensive training services.

Overall, the characteristics of VET cost-sharing arrangements seem to influence enterprise expenditure on CVT which conforms to understanding about the relationships between variables provided in the analysis framework. Investment is facilitated when well functioning mechanisms are in place, and when they do not support training which could have taken place regardless of intervention. However, the mechanisms are often a necessary, but not a sufficient condition. It is important that enterprises themselves plan training and look for ideal ways to improve employee qualifications. Several other contextual factors, especially higher employment in hi-tech sectors, but also higher labour productivity and lower unemployment, seem to contribute to greater investment by companies in staff training as measured by expenditure on CVT courses as a percentage of total labour cost.

3.3.3. Cost of CVT courses per participant (in EUR, PPS)

As with the previous indicator, the cost of CVT courses per participant describes only expenditure on CVT by enterprises, so we only consider selected mechanisms and instruments. The results of the qualitative comparative analysis are presented in Table A25 (Annex 1).

Country variations relate largely to one indicator, the unemployment rate. In addition, public expenditure is important. Competition for employees during times of lower unemployment increased the cost of training; moreover, when education and training is quite highly financed from the public budget, enterprise spending on CVT courses per participant is also high. The latter can support the argument of using public financing to stimulate private investment. Higher labour productivity and share of employment in hi-tech sectors also help to explain the higher expenditure on CVT courses per participant in several of the 12 newer Member States. Both contextual variables are associated with greater demand for more sophisticated and expensive training services.

Cost-sharing arrangements, which are good in achieving policy objectives and avoiding deadweight effect, seem to increase the intensity of investment per participant in CVT courses. This is especially important in most of the 12 newer Member States, which lag far behind the EU front runners in lifelong learning both in terms of coverage and intensity of learning. Except for Malta, Romania and Slovakia, all countries have above average monitoring systems for VET cost-sharing mechanisms and regulatory instruments.

3.3.4. Summary

The characteristics of VET cost-sharing mechanisms and regulatory instruments (i.e. effectiveness (achievement of objective), efficiency (combination of cost-efficiency, user-friendliness, simplicity of operation and administrative burden), deadweight, availability of guidance and monitoring arrangements, average duration, EU cofinancing) have positive influence on both overall levels of private financing of VET/CVT and intensity of investment per participant. Nevertheless, they are not sufficient explanatory factors. The extent to which cost-sharing systems influence private financing of VET/CVT largely depends on contextual variables: unemployment, labour productivity, share of employment in hi-tech sectors, planning investment in human resources and public expenditure on education. Contextual factors may outweigh or catalyse the mechanisms and instruments, or in some cases they can determine private financing in their own right.

This combinational logic of explaining the variation in private financing reveals that individual choices and decisions by enterprises depend on the complex environment for improving VET and investing in it. Clarity in policy goals; ability to achieve them, avoiding the replacement of private financing with State funding; well designed cost-sharing mechanisms and regulatory instruments with adequate guidance and monitoring arrangements, all contribute to a beneficial environment for private investment. Contextual factors are mostly outside the reach of VET policy-makers and practitioners. They depend on various other policies and factors, and do not change quickly even under favourable circumstances. Nevertheless, a stable macroeconomic environment and a good mix of many well targeted, well coordinated and efficient public policies can help to bring down unemployment, stimulate technological progress of the economy and improve labour productivity, as well as raising living standards, which in turn would most probably lead to greater demand for and investment in education and training.

3.4. Private investment and participation in VET

This section presents the results of the regression analysis of the relationship between the levels of private spending and of participation in VET/CVT. The statistical analysis suffered difficulties due to limited availability of statistical indicators and the data gaps. These problems were reduced by extending the sample to the EU-27 instead of focusing only on the 12 newer Member States. Both private investment and participation in VET are the dependent variables for characteristics of VET cost-sharing mechanisms and regulatory

instruments. This section shows that the two dependent variables are also interrelated: the higher the private investment in VET, the more people access/participate in VET.

The list of private investment and participation indicators used in this analysis is provided below (for more information see Section 2.2):

(a) private investment indicators:
    (i) expenditure on educational institutions from private sources as percentage of GDP, for all levels of education combined (1999-2006);
    (ii) cost of CVT courses as percentage of total labour cost (all enterprises) (1999; 2005);
    (iii) cost of CVT courses per participant (PPS) (1999; 2005);
(b) participation indicators:
    (i) percentage of employees (all enterprises) participating in CVT courses (1999; 2005);
    (ii) number of hours in CVT courses per employee (all enterprises) (1999; 2005);
    (iii) training enterprises as percentage of all enterprises (1999; 2005);
    (iv) percentage of labour force from ISCO 4-9 main groups, which received education and training during previous four weeks (formal and non-formal).

The trends in the selected private investment indicators show that, although there were some differences between the 12 newer Member States and the EU-15 in terms of private investment in education and training, there was convergence between 1999 and 2005. First, there were no significant differences between private expenditure on educational institutions in the 12 newer Member States and the EU-15 (the average private expenditure on educational institutions in the 12 newer Member States increased from 0.56 % in 1999 to 0.64 % of GDP in 2006, while in the EU-15 it has increased from 0.45 % to 0.54 % of GDP). Private expenditure on educational institutions was substantially lower than public expenditure in all EU countries (0.67 % compared to 4.64 % of GDP for the EU-27 in 2006). Second, the cost of CVT courses as a percentage of labour cost increased in most of the 12 newer Member States between 1999 and 2005, while at the same time the EU-15 average decreased (from 2.3 % in 1999 to 1.6 % in 2005). This resulted in almost complete convergence between the newer Member States and the EU-15. Finally, the cost of CVT courses per participant in the newer Member States was 60 % of that in the EU-15 in 2005 (927 [PPS] per participant compared to 1553 [PPS] per participant), but the newer Member States are catching up since 1999, when the similar figure was only 50 % (652 (PPS) per participant compared to 2144 (PPS) per participant) ([18]).

LFS and CVTS data reveal significant differences in participation trends. According to the LFS data in 2007, the average lifelong learning level in the 12 newer Member States was almost two times lower than in the EU-15 (7.8 % compared to 14.6 %) and there was no convergence in lifelong learning levels between 2002 and 2007. There were also stark differences within the 12 newer Member States with the best performing countries

([18]) For the 12 newer Member States in 1999 and 2005 and for the EU-15 in 2005, statistical averages are provided. Figures for some of the EU-15 and the 12 newer Member States are not provided. Therefore, statistical averages are calculated without these countries.

demonstrating results above or close to the EU-15 average and others lagging far behind: in 2007 lifelong learning level in Slovenia was 19 %, in Latvia 10.5 %, and in Estonia 10.2 % while in Romania it was 1.4 %, in Bulgaria 2 % and in Hungary 4 %. In contrast, the CVTS indicators measuring percentage of training enterprises and of employees undertaking CVT, and the CVT hours/employee, show that the 12 newer Member States are converging with the rest of the EU. Over the period from 1999 to 2005 the 12 newer Member States have made substantial gains in all three indicators: on average the percentage of training enterprises increased from 43.4 % to 50.3 %, the percentage of employees undertaking CVT from 18.2 % to 27.7 % and the CVT hours/employee from 5.3 to 7.9, Similar indicators have decreased or increased only slightly for the EU-15 over the same time: training enterprises decreased from 65.8 % to 64.9 %, the percentage of employees undertaking CVT from 37.6 % to 34.9 % and the CVT hours/employee from 13.1 to 9.9.

The employees who already have better qualifications and/or skills are more likely to participate in training financed by their employers (Gasskov, 2001; Dougherty and Tan, 1991; Barrett and Hövels, 1998; Brunello et al., 2007; and others). The LFS data on the participation of ISCO groups in education and training supports this. The gap in the participation of the high qualified (ISCO 1-3 groups) and medium and low qualified (ISCO 4-9 groups) was much wider in the 12 newer Member States than in the EU-15 in 2002. However, by 2007 the gap in the 12 newer Member States significantly narrowed, while the gap in the EU-15 widened. Between 2002 and 2007, the 12 newer Member States increased ISCO 4-9 group participation in education and training much faster than for ISCO 1-3 groups: ISCO 4-9 groups increased from 3.5 % to 4.2 % and ISCO 1-3 groups from 11 % to 11.2 %. In the EU-15 the opposite could be observed: the participation of ISCO 1-3 groups increased from 14.4 % to 18 %, higher than that of ISCO 1-3 groups, which increased from 10.1 % to 12.3 %.

The higher performing EU-27 Member States in terms of ensuring more equitable participation of all main occupation groups in learning activities were also better in increasing overall participation in education and training in 2000-07. Correlation between overall participation and the ratio of participation levels of ISCO 1-3 and ISCO 4-9 groups is significant: the correlation coefficient was -0.538**([19]). Medium inverse correlation between these variables indicates that the overall participation level in education and training increases when the ratio between ISCO 1-3 and ISCO 4-9 is approaching 1, when the participation level of ISCO 4-9 labour force is getting closer to the participation level of ISCO 1-3. This result argues, on efficiency grounds, in favour of more attention to equal opportunities in VET cost-sharing policies. This is especially true in the countries that lag behind the EU average lifelong learning levels, or in those facing growing disparities in accessing education and training for lower and higher qualified.

The results of correlating private investment and participation indicators supported the existence of a relationship between the level of private investment and the level of participation in training. Enterprise expenditure on CVT courses as a percentage of total

([19]) ** correlation is significant at 0.01 level (two tailed).

labour cost correlated with all participation indicators: medium correlation in the EU-27 with the participation of ISCO 4-9 groups in education and training, as well as with percentage of employees undertaking CVT, and strong correlations with CVT hours/employee and percentage of training enterprises in both the 12 newer Member States and the EU-27. The expenditure on CVT courses per participant, as expected, correlated with the CVT hours/employee, but correlation is rather weak and only present in the EU-27. Private expenditure on educational institutions does not correlate with any of the participation indicators, neither in the 12 newer Member States nor in the EU-27 (Table A26 in Annex 1). No evidence of private expenditure on educational institutions influencing participation in VET may be the result of imprecise measurement, because private expenditure on educational institutions is not disaggregated by type and level of education. Further, both private financing and participation variables are affected by contextual variables, as discussed in the following section.

3.5. Contextual factors influencing private investment and participation in VET

The analysis of relationships between the characteristics of VET cost-sharing mechanisms and private spending on VET, and between the levels of private financing and participation in VET, required consideration of several contextual factors. The literature review helped to identify and operationalise the main contextual factors (Section 2.6). As with the previous section, we extended the sample to the EU-27. The analysis below is structured by four sets of contextual indicators.

3.5.1. Capacity of spending on education from public sources

One of the most important factors influencing employers' willingness to invest in educating and training their employees is the availability of financial incentives from the government. VET incentives are provided through various cost-sharing mechanisms and availability of sufficient public funding is vital for their operation. VET policy competes for limited public resources with other public policy fields and depends on the overall ability of government to spend.

Most of the 12 newer Member States experienced rapid economic growth between 2000 and 2007 (GDP grew on average by 5.3 % annually) which allowed them to spend much more each year on most public policy fields, including VET. According to Eurostat data, in most newer Member States total public expenditure on education (for all levels of education combined) was steadily and significantly growing in 2000-05, even though spending on education as percentage of GDP over the same time slightly diminished in the three Baltic States, Slovakia and Slovenia. During this period the 12 newer Member States were able to experiment with various cost-sharing mechanisms. The importance of a stable economy for the functionality of financing mechanisms can be demonstrated through the case of Hungary.

In 2004 a new personal income tax benefit aimed at adult education came into force in Hungary, allowing the deduction of 30 % of training costs from individual's income tax. The

maximum amount that could be deducted was around EUR 250. However, in 2006 the budget deficit reached 9.3 % and the Hungarian government adopted the so-called new equilibrium programme to reduce the deficit and many tax deduction opportunities were abandoned. The adult training allowance was included and has not been used since 2007.

This shows that governments may be forced to abandon VET cost-sharing mechanisms if the economic situation requires cuts in public spending. The current world economic crisis is likely to have negative impact on the economic growth of the 12 newer Member States and may limit growth or even cause a reduction in tax revenues and so reduce overall public spending, including on education. As spending priorities are reconsidered, public contributions to cost-sharing on (vocational) education and training in some of the 12 newer Member States could be reduced or abandoned.

Slovakia offers another example of how availability of public spending can impede the development of cost-sharing mechanisms. Irrespective of having one of the lower levels of spending on education as a percentage of GDP among the 12 newer Member States (4.15 % in 2000 according to Eurostat) Slovakia continued to prioritise other public policy objectives which resulted in a further drop. Spending on education as a percentage of GDP was only 3.85 % in 2007, while the EU-27 average reached 5.03 %. The reason for low spending on education indicated in the Slovak national report of 2008 (ReferNet Slovak Republic, 2008) was restrictive fiscal policy aimed at reducing the public deficit to meet the Maastricht criteria and setting the country on track to adopt the euro in 2009, combined with concentration on creating an entrepreneurial environment. The report argued that fiscal austerity resulted in deep under-financing of schools (including VET providers) and prevented the introduction of new VET cost-sharing mechanisms such as corporate income tax incentives and levy-based VET training funds. The tax incentive to support the continuing professional development of selected medical staff was introduced by the Slovak government only in 2008. However, the Slovak National Report of 2008 suggested that firms were substantially encouraged to finance training by low corporate tax (19 %) introduced in 2004. However, the cost of CVT courses as a percentage of total labour cost (1.8 % for all Slovak enterprises) in 2005 was only slightly higher than the 12 newer Member States (1.5 %) or the EU-27 (1.6 %) average, while the cost of CVT courses per participant constituted only 54 % of the EU-27 and 73 % of the 12 newer Member States average (in EUR, PPS). Thus the lack of public spending and targeted cost-sharing mechanisms was little compensated by increased spending by employers as a result of reduced corporate taxes.

In recent years, in both the 12 newer Member States and the EU-27, increases in public expenditure were accompanied by increases in private expenditure and participation in education and training. Between 2000 and 2005 public expenditure exhibits medium correlation with private expenditure on educational institutions for the 12 newer Member States but only low and inverse correlation for the EU-15, which makes correlation for the EU-27 insignificant. There is also low correlation with the cost of CVT courses as a proportion of total labour cost, and with the cost of CVT courses per participant (Table A27 in Annex 1).

Public expenditure also correlates with participation of ISCO 4-9 in education and training (Table A27, Annex 1); although the correlation is low in the 12 newer Member States, it is medium in the EU-27. There is no statistically significant correlation between public expenditure and the percentage of employees undertaking CVT, CVT hours/employee and the percentage of training enterprises in 12 newer Member States. However, some of these correlations are low to medium in the EU-27.

To conclude, overall public spending capacity and the level of public expenditure on education influence both private expenditure and participation in VET. In particular, public expenditure influences the overall funding of educational institutions from private sources in the 12 newer Member States but not in the EU-15. There is also some evidence that public expenditure could influence investment by enterprises in employees and hence their participation in VET in some of the countries. A shortage of public funding might render some VET cost-sharing mechanisms insignificant in stimulating private investment and participation in VET.

3.5.2. Certainty of investment in training

An important set of factors showing employer willingness to invest in employee education and training (based on certainty of returns) and their capacity to make a good investment is provided by the CVTS surveys. This includes data on the proportion of enterprises that establish the training needs of their personnel, develop training plans, allocate training budgets, have a specific person or unit responsible for training and make use of an external advisory service in identifying and satisfying training needs.

Between 1999 and 2005 enterprises with established training needs decreased by 1 % in the EU-15, but increased by almost 10 % in the 12 newer Member States and surpassed the EU-15 average. At the same time the percentage of training enterprises with an external advisor was more than 14 % higher in the 12 newer Member States than in the EU-15

Over the same period, enterprises with a training budget sharply decreased in the 12 newer Member States (by 42 %) and in the EU-15 (by 44 %). At the same time private financing variables show strong increases in the 12 newer Member States (but not the EU-15) over similar periods, and participation variables demonstrate strong increases in both the 12 newer Member States and the EU-15 (see analysis in Section 3.4). This can be explained in two ways. First, although enterprises with training budgets decreased, the average size of budgets might have increased. Second, although a reduction in enterprises with training budgets might have had a negative influence on private investment and participation, this might have been compensated by individuals taking part in VET at their own initiative and expense.

Correlation between the certainty of returns and capacity to make good investment variables and the private investment and participation in CVT variables is low to medium or non-existent. The cost of CVT courses as percentage of total labour cost has only low correlation with enterprises with a training budget and those with a training plan including CVT. Therefore, more enterprises establishing personnel training needs and allocating training budgets does not necessarily mean greater spending on training relative to total labour cost. However, there seems to be a relationship between the percentage of

enterprises with a training budget for CVT and that of employees undertaking CVT (low correlation) and CVT hours/employee (low correlation, Table A28 in Annex 1). Also, there is a medium inverse correlation between training enterprises with an external advisor and the cost of CVT courses per participant, suggesting that the use of external advice by the enterprises is instrumental in bringing down the unit costs of training their employees.

The statistical analysis suggests that certainty of returns and capacity to make good investment might have some influence on private investment and participation in VET over the period analysed, at least in some countries.

3.5.3. Technological progress in the economy

Another set of factors which influence overall levels of investment and participation in VET we define as technological progress in the economy, measured by employment in hi-tech sectors, R&D staff and researchers in total employment, summary innovation index and labour productivity. All of these proxy indicators help to reveal the knowledge intensity of the economy and the demand for skilled labour force with vocational qualifications.

Most of the 12 newer Member States fall behind other EU Member States in terms of overall technological development: employment in hi-tech sectors, summary innovation index and labour productivity in 2006 were respectively 23 %, 45 % and 44 % lower in the 12 newer Member States than in the EU-15. The variation within the 12 newer Member States and the EU-15 groups of countries was equally high (the values of the highest and lowest performers differing by a factor of two to three) and the highest performers from the 12 newer Member States approaching the EU-15 or the EU-27 average. However, these indicators show the convergence trend between the 12 newer Member States and the EU-15. Between 1999 and 2005, employment in hi-tech sectors increased twice as fast in the 12 newer Member States as in the EU-15 (8.5 % compared to 4 %), and labour productivity increased in the 12 newer Member States by 16 %, while it remained almost the same in the EU-15. Between 2003 and 2005 the summary innovation index increased in the 12 newer Member States by 3 %, but decreased by 1 % in the EU-15. The 12 newer Member States has also increased slightly its share of R&D personnel and researchers.

The analysis reveals medium to high correlations between enterprise expenditure on CVT courses as a proportion of total labour cost (Table A29 in Annex 1) and employment in hi-tech sectors, share of R&D personnel and researchers and labour productivity. Three indicators - employment in hi-tech sectors, summary innovation index and labour productivity - also demonstrate medium correlations with enterprise expenditure on CVT courses per participant (only the EU-27).

All selected (four) technological progress indicators show medium or high correlations with all participation indicators, except participation of ISCO 4-9 in education and training, where some correlations are low. For three technological progress indicators (employment in hi-tech sectors, the share of R&D personnel and researchers and innovation index) correlations were the highest with the training enterprises as a proportion of all enterprises.

The regression analysis allows us to conclude that technological progress in the economy involves a set of important contextual factors which has exerted influence on both private financing and participation in VET indicators over the period analysed.

3.5.4. Balance between supply and demand for labour

The last set of contextual factors shows the balance of the supply and demand for labour with VET qualifications, which should influence employer decisions on investing in employee education and training, and the employee decisions on investing in their own education and training. As proxy labour supply and demand indicators for the regression analysis we choose average unemployment, population activity rates and expenditure on labour-market training and services as a proportion of GDP (see methodology section).

Between 2000 and 2006, average unemployment dropped sharply in the 12 newer Member States (from 11.2 % in 2000 to 7.9 % in 2006) and in 2007 it matched the EU-15 (6.4 % in 12 newer Member States compared to 6.2 % in EU-15), which remained stable during the period. Although unemployment decreased in all Member States with few exceptions, in some Member States it remained 2-2.5 times higher than in others.

In 2006, the average population activity rate was substantially (around five percentage points) higher in the EU-15 than in the 12 newer Member States. Although average rates improved in both groups of countries from 2000 to 2006, the gap between them has only grown wider (from around 3.5 to 5 percentage points). Potentially the actual rates were higher in the 12 newer Member States than it appears in statistics due to high unregistered economic emigration during the period; such migrants are attributed to inactive population in the national statistics of their home country. The differences were high within each of the two groups of countries, but especially in the EU-15, where four countries were below the 12 newer Member State average in 2006, with difference between the highest and lowest in the EU-15 being as high as 18 percentage points.

Data on job vacancies are only available from 2005. While average unemployment decreased from 2005 to 2007 both in the 12 newer Member States (by 30 %) and the EU-15 (by 13 %), average vacancies and population activity rates increased. Vacancies went up by 40 % in the 12 newer Member States and by 18 % in the EU-15, while activity rates went up by 2 % in the 12 newer Member States and 1 % in the EU-15. This shows that labour markets driven by the economic boom in most of the 12 newer Member States have employed almost all the population able and willing to work; unemployment also decreased as many emigrated to work in the EU-15. The shortages of skilled labour were high and growing, which increasingly made an option of training and improving staff productivity more attractive than searching for (or poaching) new staff on the labour market.

Data on public expenditure on labour-market services and training are available only from 2004 and for a limited number of countries. Between 2004 and 2006 in 12 newer Member States expenditure increased by 18 % and expenditure on labour-market training by 29 %. There was a reverse trend over the same period in the EU-15, where expenditure on labour-market services and training decreased by 9 % and by 15 % respectively. However, the gap between average expenditure in the 12 newer Member States and the EU-15 remained huge, with expenditure as a proportion of GDP in the 12 newer Member States less than half that of the EU-15 in labour-market services (0.08 % of GDP compared to 0.17 % in 2006) and only a quarter in labour-market training (0.05 % of GDP compared to 0.20 % of GDP in 2006). Nevertheless, the growing expenditure as a proportion of GDP in the 12 newer Member States on labour-market services and training, coupled with the rapid

increase in overall GDP in most of the 12 newer Member States, could have had major positive effects on moving people from unemployment to employment and alleviating the shortages of skills.

The statistical analysis provides only some support to the relationship between the balance of supply with demand for labour with VET qualifications and private investment and participation in VET for the EU-27. Unemployment (yearly averages) shows rather low inverse correlations with the cost of CVT courses as a proportion of labour cost (Table A30 in Annex 1), the cost of CVT courses per participant, the participation of ISCO 4-9 groups in education and training, CVT hours/employee, and the proportion of training enterprises.

Population activity rates show correlation with the cost of CVT courses as a proportion of total labour cost, the participation of ISCO 4-9 groups in education and training, undertaking CVT, CVT hours/employee and the proportion of training enterprises. This does not support the explanation provided in the methodology section (2.6) that growing population activity might have reduced the need for employer investment in employees training. A more likely explanation is that both the employed and unemployed participate in education and training more actively than other working age groups of the population (those which are neither employed nor seeking employment). Therefore, countries with a larger labour force in relation to other groups (higher population activity rate) also tend to have better levels of participation in VET. This seems to be reinforced by higher expenditure on labour-market services and training, which correlate with population activity.

Expenditure on labour-market training as a proportion of GDP has low correlation with the cost of CVT courses as a proportion of labour costs and all the participation in VET indicators, but only for the EU-27 sample. Expenditure related to GDP has medium correlation with the participation of ISCO 4-9 groups in education and training and the proportion of training enterprises. This might suggest that higher public spending on labour-market training and services can have a positive influence on overall participation levels not only through retraining and improved qualifications of the unemployed, but also through involving more enterprises in apprenticeship schemes and other kinds of practical training within enterprises, which might also contribute to attracting private financing to VET and to spreading the culture of CVT.

3.5.5. Summary

An overall conclusion of the regression analysis of the contextual factors is that they influenced both the dependent variables and independent variables of the study. Although the statistical analysis shows mostly a low to medium relationship of several contextual factors with private investment and participation in VET, the relationship between technological progress in the economy and private financing and participation in VET is strong and significant.

4. Conclusions and recommendations

The review of cost-sharing mechanisms and regulatory instruments reveals a boom in initiatives in the 12 newer Member States. The first wave came at the start of economic transformation in the early 1990s; the second, around their accession to the EU. Information from secondary sources about the cost-sharing mechanisms and regulatory instruments was scarce. Therefore, most information for the study was collected, via survey, from national VET experts across the 12 newer Member States.

The survey enabled an initial comparative analysis of effectiveness, efficiency, equity and impact of VET cost-sharing mechanisms and regulatory instruments. The information received and the difficulties encountered by national VET experts in accessing the information showed that the 12 newer Member States paid little attention to monitoring progress and evaluating the effectiveness, efficiency, equity and impact of most of them. Little was known about the impact and overall significance of those applied in the 12 newer Member States before the start of the study.

Apart from information collected through surveys of national VET experts the study also used Eurostat data. Both, quantitative (regression analysis) and qualitative (literature review, qualitative comparative analysis) methods of analysis were applied. The comparative analysis allowed us to draw the following conclusions:

(a) grant schemes, national/multisectoral training funds and, to some extent, tax credits for individuals mostly achieved their policy objectives, while tax allowances are considered ineffective by a large group of surveyed experts;
(b) conventional loans and payback clauses for individuals leading efficiency scores. Grant schemes and training funds are much less efficient, first for being less user-friendly and more administratively burdensome than other mechanisms and instruments;
(c) all mechanisms received worse scores on equity than on other criteria. Sectoral training funds and grant schemes scored comparatively well, while tax allowances scored the worst on the equal opportunities criterion;
(d) national training funds and grant schemes received the highest average scores on impact, and tax allowances the lowest;
(e) the performance of other mechanisms and instruments was either indistinctive (neither good nor bad), or the number of cases analysed was too low to draw any conclusions (as with vouchers/individual learning accounts and savings schemes).

Overall, subsidy-based mechanisms and training funds, which scored the highest on most qualities, also had the best guidance and information support, and the most elaborate monitoring and evaluation arrangements. These mechanisms were also those extensively cofinanced by EU funds. EU membership provided resources and gave rise to several new cost-sharing mechanisms, while EU Structural Funds regulations attached requirements, which often made these mechanisms better governed than those financed only from national sources. However, better governance did not always go hand-in-hand with efficiency; burdensome administrative requirements (such as monitoring and audit requirements, and procurement rules) often made the grant schemes and training funds less user-friendly and increased the cost of investment and participation in VET.

The characteristics of VET cost-sharing mechanisms and regulatory instruments have a positive influence on both overall levels of private financing of VET and intensity of investment per participant. Nevertheless, these mechanisms and instruments are not sufficient explanatory factors for the variation of any of the three private investment in VET variables among the 12 newer Member States: private expenditure on educational institutions, the cost of CVT courses as a share of labour cost, and the cost of CVT courses per participant. The extent to which cost-sharing systems influenced private investment in VET largely depended on the following contextual variables: unemployment, labour productivity, the proportion of employment in hi-tech sectors, planning of investment in human resources, and public expenditure on education. Contextual factors could outweigh or catalyse the effects of the VET mechanisms and instruments on private investment in VET or, in some cases, they could determine the levels of private financing in their own right.

Individual choices and decisions by enterprises depend on the environment for improving VET and investing in it: clarity in policy goals, ability to achieve them, avoiding the replacement of private financing with State funding, well designed mechanisms and instruments with adequate guidance and monitoring arrangements all contributed to a beneficial environment for private investment in VET. Contextual factors are mostly outside the reach of VET policy-makers and practitioners. They depend on various other policies and factors and do not change quickly over time.

The results of the regression analysis and interpretation of statistical data support the findings of the comparative qualitative analysis about the importance of contextual factors in explaining the patterns of private investment in VET. They also support most of the relationships indicated in the analytical framework of the study.

First, statistical analysis supports the existence of relationship between private investment and participation in VET. Thus higher private spending on VET over the past several years in the 12 newer Member States and the EU-27 was an important factor in increasing VET participation in these regions. At the same time, increases in public expenditure were accompanied by increases in private expenditure and participation in education and training, but rather less so in the EU-15 than in the 12 newer Member States. This puts evidence behind the logic of all VET cost-sharing mechanisms, which are based on assumptions that increase in private spending would improve the participation in VET and that financial incentives from public budgets could stimulate an increase in private spending.

Second, the regression analysis also provides evidence that the higher performing EU-27 Member States, in terms of ensuring more equitable participation of all the main occupational groups in learning activities, are also better in increasing overall participation in education and training. This result argues on efficiency grounds in favour of more attention to equal opportunities in VET cost-sharing policies. This is especially true in the countries that lag behind the EU average lifelong learning levels, or those that face growing disparities in accessing education and training for the lower and higher qualified.

Third, most of the 12 newer Member States experienced rapid economic growth between 2000 and 2007, which allowed them to experiment with various cost-sharing mechanisms. The influence of a favourable economy on the functionality of financing mechanisms is demonstrated through the case of Hungary, which abandoned several cost-sharing

mechanisms due to its high budget deficit. The world economic crisis of 2008 is likely to have negative impacts on the VET cost-sharing mechanisms as the 12 newer Member States try to balance their public finances. As a result some mechanisms in some countries may be reduced or abandoned. On the positive side, the worsening capacity to finance VET cost-sharing mechanisms could stimulate greater attention to their effectiveness, efficiency, equity and impact and result in better targeting and enhanced governance standards, while keeping the administrative burden on the beneficiaries as low as possible.

Fourth, the regression analysis provided some evidence that the greater the proportion of enterprises with a training budget for CVT, the greater the proportion of employees participating in more intensive CVT courses. In addition, the analysis revealed that the use of external advice by the enterprises is instrumental in bringing down the unit costs of training their employees.

Fifth, there was strong evidence from the statistical analysis that private investment and participation in VET depend on the overall technological progress of economies, measured by employment in hi-tech sectors, the proportion of R&D staff and researchers, the summary innovation index and labour productivity.

Finally, the regression analysis provided some support to the relationship between the balance of supply with demand for labour (with VET qualifications) and private investment and participation in VET for the EU-27. As expected, lower unemployment rates lead to greater need and willingness by employers to invest in educating and training their employees. However, growing population activity rates do not reduce the need for employer investment in training. In fact, there is some evidence to the contrary. Apparently both the employed and unemployed are more willing and/or have better opportunities to participate in education and training more actively than other working age groups, which are neither employed, nor seeking employment. Contrary to what is expected, the analysis also provides some evidence that higher public spending on labour-market training contributes to greater private financing of VET in the EU-27. It seems that such spending in some countries helps to involve more enterprises, bringing private resources into apprenticeship schemes and other kinds of practical training. As expected, public spending on labour-market services has some positive influence on participation in VET through better accessibility to information on the benefits of education and training and better targeting of learning efforts.

On the basis of the findings of the study we provide the following recommendations:

(a) VET cost-sharing mechanisms and regulatory instruments are good policy tools to improve private financing and participation in VET. They should be applied further across the EU Member States;

(b) the governance problems of VET cost-sharing mechanisms and regulatory instruments in the 12 newer Member States are severe and should be dealt with as a matter of priority. EU cofinanced mechanisms are an exception. Comprehensive evaluation of the performance of all mechanisms and instruments which have not been evaluated has to be carried out and action taken to address their weaknesses. Monitoring arrangements have to be introduced, including responsible institutions drawing up regular monitoring reports, clear quantified targets and systems to collect monitoring information. This should use only a fraction of public budgets available for stimulating private investment

in VET; the administrative burden (of improved governance) on the beneficiaries should be kept as low as possible. Thorough assessment of the mechanisms and instruments would support taking well informed decisions if the economic recession necessitates cutting back public spending on VET;

(c) Member States, which are considering introducing new mechanisms and instruments or reforming existing ones, should look carefully into the experience of other Member States applying similar mechanisms and instruments. Having in mind the significance of contextual factors to VET cost-sharing mechanisms and regulatory instruments, the latter have to be tailored to suit the needs of individual EU Member States. A more active sharing of good practice examples (especially good governance practices) would help policy learning across the 12 newer Member States;

(d) there is no relationship between the number of cost-sharing mechanisms and regulatory instruments and the levels of private investment and participation in VET. Member States should focus on the quality of their chosen mechanisms and instruments. All cost-sharing arrangements should be operated in a well-coordinated manner and supported with guidance and information campaigns reaching all the targeted clients;

(e) all VET cost-sharing mechanisms should be made more sensitive to the needs of groups which fail to participate widely in education in training, such as the lower qualified. Equity credentials of all mechanisms and instruments are rather poor, while there is evidence from the EU-27 between 2000 and 2007 that greater equity in participation between the lower and higher qualified leads to greater overall participation in education and training. Better equity in participation could be achieved through redefined eligibility requirements or preferential treatment policies, but first through better information campaigns and guidance support to those who know relatively little about the benefits of education and training;

(f) VET policy is not isolated and its outcomes depend on many contextual factors and other public policies. Member States should study the impacts of macroeconomic, enterprise, labour market and other policies on VET and attempt to ensure better coordination of different public policies;

(g) research into the functioning of VET cost-sharing mechanisms and regulatory instruments across the 12 newer Member States, or even the EU-27 plus candidate countries, should be continued. Better results could be achieved once the governance of the mechanisms and instruments across the Member States improves and more evaluation and monitoring data becomes available. Before this happens only a more in-depth comparative EU wide study of grant schemes and training funds would be possible. Such a study would permit a more critical approach to these cost-sharing mechanisms and provide detailed policy recommendations for their improvement;

(h) future research would benefit from improved statistical information. Statistics on the financing of education and training should be disaggregated by the types of secondary education (general or vocational), and by the types of VET (IVET, CVET and UVET). Eurostat CVTS and adult education surveys should be conducted systematically and include candidate countries to serve as a baseline for comparison and policy learning when/if these countries join the EU.

List of abbreviations

CL	conventional loans
CVET	continuing vocational education and training
CVT	continuing vocational training
CVTS	continuing vocational training survey
EU	European Union
EUR	euro (European monetary unit)
GDP	gross domestic product
GS	grant schemes
ICL	income-contingent loans
ILA	vouchers, individual learning accounts
ISCED	international standard classification of education
ISCO	international standard classification of occupations
IVET	initial vocational education and training
LFS	labour force survey
NF	national/multisectoral training funds
NGO	non-governmental organisation
PCE	payback clauses for future employers
PCI	payback clauses for individuals
PPS	purchasing power standards
PTL	paid training leave
R&D	research and development
SMEs	small and medium-sized enterprises
SS	savings schemes
STF	sectoral training funds
TAI	tax allowances for individuals
TAL	tax allowances for legal entities
TCI	tax credits for individuals
TCL	tax credits for legal entities
UTL	unpaid training leave
UVET	vocational education and training for unemployed
VET	vocational education and training

Country codes

BG	Bulgaria
CZ	Czech Republic
EE	Estonia
CY	Cyprus
LV	Latvia
LT	Lithuania
HU	Hungary
MT	Malta
PL	Poland
RO	Romania
SI	Slovenia
SK	Slovakia

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Keywords

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private investment in VET
participation in VET
VET cost-sharing mechanisms
VET regulatory instruments
returns on investment in VET.

Annex 1 – Tables

Table A23. Characteristics of VET cost-sharing mechanisms and regulatory instruments, contextual variables and private expenditure on educational institutions

Achieving objectives	Efficiency (combined)	Deadweight effect	Employment in high-tech sectors[a]	Labour productivity [b]	Public expenditure on education [c]	Planning investment in human resources [d]	Unemployment rate [e]	Private expenditure on educational institutions [f]	Cases
low	high	low	high	high	low	high	high	high	CZ
high	high	high	high	low	low	high	low	low	EE
high	high	high	low	high	high	low	low	high	CY
low	low	high	low	low	high	low	low	high	LV
high	low	low	low	low	high	low	low	low	LT
high	high	low	high	high	high	low	high	low	HU
high	high	high	high	high	low	low	high	low	MT
low	high	high	low	low	high	high	high	high	PL
low	low	low	low	low	low	high	high	low	RO
low	high	low	high	high	high	high	low	high	SI
low	low	low	high	high	low	high	high	high	SK

[a] Employment in high technology sectors is 'high' if it is above the median value, which is 34.25 (here and in the subsequent explanations on this table: the same applies to Tables A24 and A25).

[b] Labour productivity is 'high' if it is above the median value, which is 70.4.

[c] Public expenditure on education is 'high' if it is above the median value, which is 5.

[d] Planning investment into human resources is 'high' if it is above the median value, which is 28.27.

[e] Unemployment is 'high' if it is above the median value, which is 7.1.

[f] Private expenditure on educational institutions is 'high' if it is above the median value, which is 0.6.

NB: Indicators appearing in formulas of the qualitative comparative analysis and thus considered as influencing the dependent variables are marked in blue if the relationship is direct and in grey if the relationship is inverse (i.e., which characteristics are present in countries where private expenditure on educational institutions is low).

Source: Detailed survey (August-October 2008) of national VET experts, Eurostat. Prepared by the authors.

Table A24. Characteristics of VET cost-sharing mechanisms and regulatory instruments, contextual variables and cost of CVT courses as a share of total labour costs

Achieving objectives	Efficiency (combined)	Deadweight effect	Employment in high-tech sectors	Labour productivity	Public expenditure on education	Planning investment in human resources	Unemployment rate	Cost of CVT courses as percentage of labour cost	Cases
low	high	low	high	high	low	high	high	high	CZ
high	high	high	high	low	low	high	low	high	EE
high	high	high	low	high	high	low	low	low	CY
low	low	high	low	low	high	low	low	low	LV
high	low	low	low	low	high	low	low	high	LT
high	high	low	high	high	high	low	high	high	HU
high	high	high	high	high	low	low	high	low	MT
low	high	high	low	low	high	high	high	low	PL
low	low	low	low	low	low	high	high	low	RO
low	high	low	high	high	high	high	low	high	SI
low	low	low	high	high	low	high	high	high	SK

NB: Indicators appearing in formulas of the qualitative comparative analysis and thus considered as influencing the dependent variables are marked in blue if the relationship is direct and in grey if the relationship is inverse (i.e., which characteristics are present in countries where private expenditure on educational institutions is low).

Source: Detailed survey (August-October 2008) of national VET experts, Eurostat. Prepared by the authors.

Table A25. Characteristics of VET cost-sharing mechanisms and regulatory instruments, contextual variables and cost of CVT courses per participant

Achieving objectives	Efficiency (combined)	Deadweight effect	Employment in high-tech sectors	Labour productivity	Public expenditure	Planning	Unemployment rate	Cost of CVT courses per participant	Cases
low	high	low	high	high	low	high	high	low	CZ
high	high	high	high	low	low	high	low	high	EE
high	high	high	low	high	high	low	low	high	CY
low	low	high	low	low	high	low	low	high	LV
high	low	low	low	low	high	low	low	high	LT
high	high	low	high	high	high	low	high	high	HU
high	high	high	high	high	low	low	high	low	MT
low	high	high	low	low	high	high	high	low	PL
low	low	low	low	low	low	high	high	low	RO
low	high	low	high	high	high	high	low	high	SI
low	low	low	high	high	low	high	high	low	SK

NB: Indicators appearing in formulas of the qualitative comparative analysis and thus considered as influencing the dependent variables are marked in blue if the relationship is direct and in grey if the relationship is inverse (i.e., which characteristics are present in countries where private expenditure on educational institutions is low).

Source: Detailed survey (August-October 2008) of national VET experts, Eurostat. Prepared by the authors.

Table A26. Significant results of correlating the selected indicators on private investment and participation in VET

Private investment in VET / Participation in VET	Private expenditure on educational institutions		Cost of CVT courses as percentage of labour cost		Cost of CVT courses per participant	
	12 newer Member States	EU-27	12 newer Member States	EU-27	12 newer Member States	EU-27
Participation of ISCO 4-9 in education and training	–	–	–	0.571**	–	0.444**
N	52	134	17	45	17	45
% of employees undertaking CVT	–	–	0.616**	0.672*	–	0.343*
N	17	44	21	50	21	50
CVT hours/employee	–	–	0.701**	0.796**	–	0.483**
N	17	44	21	50	21	50
% of training enterprises	–	–	0.727**	0.743**	–	0.390**
N	17	44	21	50	21	50

** correlation is significant at 0.01 level (2-tailed).
* correlation is significant at 0.05 level (2-tailed).
– correlation was absent.
Source: Eurostat; calculation by the authors.

Table A27. Significant results of correlating the selected indicators on private investment, participation in VET and public expenditure on education as percentage of GDP (for all levels of education combined)

	Total public expenditure on education as percentage of GDP, for all levels of education combined	
	12 newer Member States	**EU-27**
… and private investment in VET		
Private expenditure on educational institutions	0.611**	–
N	68	164
Cost of CVT courses as percentage of labour cost	–	0.428**
N	20	47
Cost of CVT courses per participant	–	0.392**
N	20	47
… and participation in VET		
participation of ISCO 4-9 in education and training	0.469**	0.514**
N	63	149
% of employees undertaking CVT	–	0.349*
N	20	47
CVT hours/employee	–	0.380**
N	20	47
% of training enterprises	–	0.533**
N	20	47

** correlation is significant at 0.01 level (two tailed).
* correlation is significant at 0.05 level (two tailed).
– correlation was absent.
Source: Eurostat; calculation by the authors.

Table A28. Significant results of correlating the selected indicators on private investment and participation in VET and indicators to measure entrepreneurs' certainty of the returns and the capacity to make good investment in VET

Indicators on certainty of returns and capacity to make good investment in VET / Indicators on private investment and participation in VET	Percentage of all enterprises who establish the training needs of their personnel as percentage of training enterprises		Percentage of all enterprises with a training plan including CVT as percentage of all enterprises		Percentage of all enterprises with a training budget for CVT as percentage of all enterprises		Percentage of training enterprises having a specific person or unit responsible for training (only 2005 data)		Percentage of training enterprises making use of an External advisory service (only 2005 data)	
	12 newer Member States	EU-27	12 newer Member States	EU-27	12 newer Member States	EU-27	12 newer Member States	EU-27	12 newer Member States	EU-27
Private investment in VET										
Private expenditure on educational institutions	–	–	–	–	–	–	–	0.301	–	–
N	17	41	16	39	17	41	12	25	12	25
Cost of CVT courses as percentage of labour cost	–	–	–	0.342*	–	0.380**	–	–	–	–
N	21	47	20	45	21	47	12	26	12	26
Cost of CVT courses per participant	–	–	–	–	–	–	–	–	–0.489	–0.550**
N	21	47	20	45	21	47	12	26	12	26
Participation in VET										
Participation of ISCO 4-9 in education and training	–	–	–	–	–	–	–	–	–	–
N	17	42	16	40	21	42	12	26	12	26
% of employees undertaking CVT	–	–	–	–	–	0.439**	0.506	0.330	0.621*	–
N	21	47	20	45	21	47	12	26	12	26
CVT hours/employee	–	–	–	0.322*	–	0.478**	0.451	–	0.487	–
N	21	47	20	45	21	47	12	26	12	26
% of training enterprises	–	–	–	–	–	–	–	–	0.686*	–
N	21	47	20	45	21	47	12	26	12	26

** correlation is significant at 0.01 level (two tailed).
* correlation is significant at 0.05 level (two tailed).
– correlation was absent.
Source: Eurostat; calculation by the authors.

Table A29. Significant results of correlating the selected indicators on private investment and participation in VET and indicators on technological progress of the economy

Indicators on private investment and participation in VET \ Indicators on technological progress of economy	Employment in high/medium technology manufacturing and knowledge intensive services as percentage of total employment		R&D personnel and researchers as percentage of total employment		Summary innovation index ([a])		Labour productivity – GDP in PPS per person employed relative to EU-27	
	12 newer Member States	EU-27	12 newer Member States	EU-27	12 newer Member States	EU-27	12 newer Member States	EU-27
Private investment in VET								
Private expenditure on educational institutions	–	–	–	No data	–	–	0,348**	–0.167*
N	63	161	63	No data	32	74	64	162
Cost of CVT courses as percentage of labour cost	0.635**	0.710**	0.639**	No data	0.556	0.463*	0.602**	0.455*
N	20	49	21	No data	12	26	20	49
Cost of CVT courses per participant	–	0.593**	–	No data	–	0.596**	–	0.663**
N	20	49	21	No data	12	26	20	49
Participation in VET								
Participation of ISCO 4-9 in education and training	0.294*	0.716**	0.386**	N data	0.415**	0.754**	0.441**	0.397**
N	73	176	71	No data	60	134	86	204
% of employees undertaking CVT	–	0.644**	0.520*	No data	0.679*	0.567**	0.627**	0.579**
N	20	49	21	No data	12	26	20	26
CVT hours/employee	0.530**	0.694**	0.551**	No data	0.658*	0.586**	0.699**	0.665**
N	20	49	21	No data	12	26	20	49
% of training enterprises	0.588**	0.800**	0.748**	No data	0.839**	0.798**	0.461*	0.510**
N	20	49	21	No data	12	21	20	49

([a]) European Innovation Scoreboard (EIS) covers the EU-27 Member States, Croatia and Turkey, the associate countries Iceland, Norway and Switzerland, as well as Australia, Canada, Israel, Japan and the US. The indicators of the EIS summarise the main elements of innovation performance. A complete list of 25 indicators can be obtained from Pro Inno website: http://www.proinno-europe.eu [cited 3.8.2009].

** correlation is significant at 0.01 level (2-tailed).

* correlation is significant at 0.05 level (2-tailed).

– correlation was absent.

Source: Eurostat, European innovation scoreboard; calculation by the authors.

Table A30. Significant results of correlating the selected indicators on private investment and participation in VET and indicators on the balance of the supply and demand for labour with VET qualifications

Indicators on the balance of the supply and demand for labour with VET qualifications / Indicators on private investment and participation in VET	Unemployment rate (yearly averages)		Population activity rate		Expenditure on labour-market training as percentage of GDP		Expenditure on labour-market services as percentage of GDP	
	12 newer Member States	EU-27	12 newer Member States	EU-27	12 newer Member States	EU-27	12 newer Member States	EU-27
Private investment in VET								
Private expenditure on educational institutions	-0.318**	–	–	–	–	-0.225*	–	0.263*
N	65	163	65	163	20	114	21	73
Cost of CVT courses as percentage of labour cost	–	-0.419**	–	0.432**	-0.457	0.451**	0.473	–
N	21	50	21	50	10	37	10	28
Cost of CVT courses per participant	–	-0.422**	–	–	–	0.387*	–	0.440*
N	21	50	21	50	10	37	10	28
Participation in VET								
Participation of ISCO 4-9 in education and training	–	-0.386**	0.284**	0.730**	0.332*	0.448**	–	0.624**
N	88	206	88	206	37	102	36	133
% of employees undertaking CVT	–	-0.351*	–	0.485**	-0.449	0.454**	0.640*	0.305
N	21	50	21	50	10	37	10	28
CVT hours/employee	–	-0.436**	–	0.449**	-0.486	0.549**	0.709*	–
N	21	50	21	50	10	37	10	28
% of training enterprises	–	-0.451**	0.499*	0.685**	-0.616	0.440**	0.394	0.564**
N	21	50	21	50	10	37	10	28

** correlation is significant at 0.01 level (2-tailed).
* correlation is significant at 0.05 level (2-tailed).
– correlation was absent.

Source: Eurostat; calculation by the authors.

Annex 2 – Questionnaire

Questionnaires contain one section specific to each mechanism and seven sections applicable for all the mechanisms (except for the payback clauses in some cases). The questionnaire is provided below (questions marked with an asterisk are not applicable for payback clauses).

Part 1 (basic information):

Tax incentives

(a) Are the following types of tax incentives for VET applied in you country: tax allowances for individuals, tax credits for individuals, tax allowances for legal entities, tax credits for legal entities?

(b) Dates of implementation: start year, end year (if applicable).

(c) What is the maximum amount and/or share of training expenditure that may be deducted or credited? Please insert relevant amount in EUR and/or share in %.

(d) Is the information on the overall annual cost of tax incentives to the public sources of financing collected? If YES, please specify the cost (in EUR) given during the latest year for which the data are available, or the address where this information could be found or requested.

(e) What share of taxpayers (individuals) have filled in their annual personal income tax returns for the last financial year, for which the data are available?

(f) Are there any links between the tax incentive(s) and other types of VET financing mechanism(s)? If YES, please describe which VET financing mechanism(s) it is interrelated with and how.

Training funds

(a) Are the following types of cost-sharing mechanisms for VET applied in you country: national/multisectoral training funds, sectoral training funds?

(b) Title of mechanism in English.

(c) Dates of implementation: start year, end year (if applicable).

(d) What is the rate and the basis for calculating and paying levy? Please specify the rate (in%) of the levy: legal entities' payroll, of which employers' share (if applicable), of which employees' share (if applicable), other (please specify).

(e) What is the nature of the training levy: compulsory (regulated by law), voluntary (e.g. based on agreements)?

(f) What is the type of levy collection and distribution mechanism: levy-grant mechanism (levies collected from legal entities are subsequently redistributed back to them as grants to provide financial support for training), levy-exemption or train-or-pay mechanism (levies are collected from legal entities only if their training expenditure fall short of the predetermined level), levy-reimbursement or levy-rebate mechanism (employers are partially reimbursed for approved training out of their levies), other (please specify)?

(g) What are the total contributions of different stakeholders (state budget, EU structural funds, levy, other) in planned overall financing of the mechanism, covering the period for which the latest data are available?

(h) How are training fund resources allocated: each legal entity contributing levy is entitled to receive its equal share of training, to priority projects (identified through top-down planning procedure), through public calls for proposals (identified bottom-up through public competition), other (please specify)?

(i) Are there any links between the training fund mechanism and other types of VET financing mechanism(s)? If YES, please describe which VET financing mechanism(s) it is interrelated with and how.

Subsidy-based mechanisms

(a) Are the following types of subsidy-based cost-sharing mechanisms applied in your country: grant scheme, voucher/learning account, other?

(b) Title of the mechanism in English.

(c) Dates of implementation: start year, end year (if applicable).

(d) What are the total contributions of different stakeholders (EU structural funds, state budget, employers, employees, other) in planned overall financing of the mechanism (macro level), covering the period for which the latest data are available?

(e) What are the standard contributions of different stakeholders (EU structural funds, state budget, employers, employees, other) to a voucher/learning account in individual cases (microfinancing formula)? Please fill all the appropriate spaces.

(f) How are subsidies allocated: to all eligible applicants (e.g. on a first come – first served basis), to priority applicants/projects (identified through top-down planning procedure), to those applicants, who are the best in meeting quality criteria (identified bottom-up through public competition)?

(g) Are there any links between the subsidy-based cost-sharing mechanism and other types of VET financing mechanism(s)? If YES, please describe which VET financing mechanism(s) it is interrelated with and how.

Loans

(a) Are the following types of loans applied in your country: conventional loan, income-contingent loan?

(b) Title of the mechanism in English.

(c) Dates of implementation: start year, end year (if applicable).

(d) What are the minimum and maximum interest rates and maximum allowable amounts for each type of loan?

(e) Does the government have a role in the implementation of the loan mechanism? If YES, please tick all appropriate: payment of interest rate, providing loans, providing loan guarantees (as a safeguard against defaults), other (please specify here).

(f) How are loans allocated? Please tick one appropriate: to all eligible applicants (on a 'first come – first served" basis), to priority projects (identified through top down planning procedure), to those who are the best in meeting quality criteria (identified bottom up through public competition), other.

(g) Is the information on the total volume of loans given annually collected? If YES, please specify the volume of loans (in EUR) given during the latest year for which the data are available, or the address where this information could be found or requested.

(h) Is the information on 'bad debt" ratio (i.e. the share of loans that is being written off as uncollectible, in %) collected? If YES, please specify where this information could be found or requested.

(i) Are there any links between the loan and other types of VET financing mechanism(s)? If YES, please describe which VET financing mechanism(s) it is interrelated with and how.

Payback clauses

(a) Are the following types of payback clauses applied in your country: payback clauses for individuals, payback clauses for future (next) employers?

(b) Dates of implementation: start year, end year (if applicable).

(c) Does the law make the payback clauses compulsory for an employee or his/her next employer, when there is a claim from previous employer to repay the resources invested in the employee's VET?

(d) Is there a minimum and/or maximum amount or share of training costs that has to be reimbursed by employee/future (next) employer? If YES, please specify the minimum and maximum amount (in EUR) or share (in %).

(e) Are there any links between the payback clauses and VET financing mechanism(s)? If YES, please describe which VET financing mechanism(s) it is interrelated with and how.

Training leave

(a) Are the following types of training leave applied in your country: paid training leave, unpaid training leave?

(b) Title of the mechanism in English.

(c) Dates of implementation: start year, end year (if applicable).

(d) What is the duration of the training leave? Please indicate minimum and maximum duration.

(e) What is the maximum frequency of using the training leave? Please describe.

(f) Can the training leave time be accumulated over several years (e.g. via leave savings scheme)? If YES, please describe the main accumulation rules (e.g. duration).

(g) Is there employment relationship and/or work experience duration requirement to become eligible for the training leave? If YES, please specify the minimum duration of: employment relationship, work experience.

(h) What are the sources of financing the training leave, which employees or their employers can access: state budget, employers, employees, other?

(i) Is the information on the overall annual cost of training leave to the public sources of financing collected? If YES, please specify the cost (in EUR) during the latest year for which the data are available, or the address where this information could be found or requested.

(j) Does the employee have to receive the approval of his/her employer to use the training leave? If YES, please specify when the approval is required.

(k) Are there any links between the training leave and other types of VET financing mechanism(s)? If YES, please describe which VET financing mechanism(s) it is interrelated with and how.

Savings schemes

(a) Title of the mechanism (in any) in English.

(b) Dates of implementation: start year, end year (if applicable).

(c) What is the type of savings scheme: multipurpose savings scheme (VET is one of possible aims), separate savings scheme for VET?

(d) What are the standard contributions of different stakeholders (state budget, employers, employees, other) to the savings scheme in individual cases (microfinancing formula)?

(e) Is the information on the overall annual cost of savings scheme to the public sources of financing collected? If YES, please specify the cost (in EUR) during the latest year for which the data are available, or the address where this information could be found or requested.

(f) Is there a maximum period of time during which savings can be accumulated? If YES, please specify the period.

(g) Is there a limited period of time to make use of the accumulated savings? If YES, please specify the period.

(h) Is the information on the number of savings contracts collected? If YES, please specify where this information could be found or requested.

(i) Is the information on the total savings deposits (in EUR) collected? If YES, please specify where this information could be found or requested.

(j) Are there any links between the savings scheme and other types of VET financing mechanism(s)? If YES, please describe which VET financing mechanism(s) it is interrelated with and how.

Part 2 (eligibility requirements):

(a) Which target groups are eligible for funding (please list the groups and their specific geographical, sectoral and/or occupational coverage (if there are any such limits)? *

(b) Which groups (if any) receive preferential treatment in allocation of funding through the mechanism? Please list the groups. *

(c) What types of learning programmes are eligible?

(i) certified programmes,

(ii) any other programmes.

(d) What types of training providers are eligible?

(i) licensed training providers,

(ii) any other training providers.

(e) What types of training costs are eligible?

(i) direct costs (tuition fees, cost of training materials),

(ii) indirect costs (travel, accommodation, meal costs, wages (foregone income), career guidance, child care, competence measurement, formulation of training plan, etc.).

(f) What types of learning content is eligible?

(i) firm- or sector specific learning,

(ii) general learning.

(g) What other kinds of learning are eligible or ineligible? Please describe by filling in the space provided any other limitations with regard to learning subjects, levels of education, etc.

Part 3 (monitoring):

(a) Is there an institution responsible for monitoring progress on the use of the mechanism and taking corrective actions? If YES, please indicate the institution responsible.

(b) Are monitoring reports available? If YES, please specify how to access the most recent report.

(c) Does the mechanism have any quantified targets? If YES, please specify where this information could be found or requested.

(d) Is the information on numbers of legal entities and/or individuals who have used the mechanism available? If YES, please specify where this information could be found or requested.

Part 4 (guidance):

(a) Is the guidance readily available for those, who need it to be able to use the mechanism?

(b) Is the guidance mandatory?

(c) What kind of services does the guidance include? Please list all the services available to beneficiaries.

Part 5 (information campaigns):

(a) Are information campaigns implemented upon introduction of (changes of) the mechanism to capture attention of the potential target group(s)?

(b) What promotion and communication activities are carried out (if any) at later stages of implementation of the mechanism? Please list the main types of activities.

Part 6 (planned changes):

Are there any plans to change the existing tax incentive? If YES, please specify what changes are planned, their rationale and when they are likely to be implemented.

Part 7 (evaluation):

Are any evaluations of the results and impacts of the mechanism carried out? If an evaluation report is available, please specify where it could be found or requested.

Part 8 (expert evaluation):

Effectiveness

(a) The tax incentive is effective, i.e. it well achieves all policy objectives.

(b) The tax incentive reached large numbers of beneficiaries – employers and/or individuals.

Efficiency

(a) The main outputs and results of the tax incentive were achieved at reasonable financial cost.*

(b) The operation of tax incentive is user-friendly and simple.

(c) The administrative burden of using the tax incentive is considered an important problem by the beneficiaries.

Equity

(a) Accumulation of financial resources is equal – all the beneficiaries with the same social, economic or other conditions pay the same amount.

(b) Allocation of financial resources is equal – all the beneficiaries with the same social, economic or other conditions get the same amount.

(c) The mechanism particularly benefits those beneficiaries with worse individual conditions (social, economic, geographical or other).

(d) The mechanism is widely known among its potential users.

(e) The mechanism is widely approved by the all the social partners.

Impact

(a) Most of the training supported by the mechanism would have taken place anyway – even without support (deadweight effect).

(b) The mechanism has caused substitution of usual training choices for training prioritised by the mechanism (substitution effect).

(c) The mechanism had considerable impact nationally on improving the availability of financing for VET and raising VET participation rates.

Strengths and weaknesses

(a) Please list the most important strengths or success factors of the mechanism.

(b) Please list the most important weaknesses or failure factors of the mechanism.

Annex 3 – List of respondents

Country	Surname, Name (Mr/Ms)	Position	Organisation	Mechanisms/instruments for which evaluation(s) was(were) provided
BG	Fournadjieva, Donna (Ms)	Manager	Bulgaria Analytica Agency	TAL, TCL, NF, SF, GS, ICL, PCI, PTL, UTL/coordinator
BG	Stoev, George (Mr)	Vice chairperson	Bulgarian Chamber of Trade and Industry, National Centre for Vocational Qualification,	TAL, TCL, NF, SF, GS, ICL, PCI, PTL, UTL
		Chairperson	Bulgaria Analytica Agency	
BG	Nakov, Julian (Mr)	Representative (former vice minister of education)	Association of Non Governmental Organisations for Public Favour	TAL, TCL, NF, SF, GS, ICL, PCI, PTL, UTL
CZ	Czesaná, Věra (Ms)	Head	National Training Fund, National Observatory of Employment and Training	TAI, TAL, GS, PCI, PTL
CZ	Simova, Zdenka (Ms)	Project manager	National Training Fund, National Observatory of Employment and Training	coordinator
CZ	Martínek, Dušan (Mr)	Head	Czech Moravian Confederation of Trade Unions, Department for Human Resources Development and Project Activities	GS, PCI, PTL
CZ	Středula, Josef (Mr)	President	Metalworkers Federation KOVO	TAI, TAL
CZ	Hejduková, Jitka (Ms)	Director	Confederation of Industry of the Czech Republic, Employers' Relationship Section	TAI, TAL, PTL
CZ	Chejn, Pavel (Mr)	Head	Czech Association of Energy Employers, Education Unit	GS
CZ	Stárek, Jakub (Mr)	Director	Ministry of Education, Youth and Sports, Adult Education Department	TAI, TAL, GS
CZ	Síkorová, Eva (Ms)	Expert	Ministry of Labour and Social Affairs, Department of Employment Policy	GS, PCI, PTL
EE	Kiviselg, Inge (Ms)	Senior expert	Ministry of Education and Research, Vocational and Adult Education Department, Adult Education Department	TCI, TAL, GS, CL, PCI, PTL, UTL

Country	Surname, Name (Mr/Ms)	Position	Organisation	Mechanisms/instruments for which evaluation(s) was(were) provided
EE	Mahla, Indrek (Mr)	Consultant	Foundation Archimedes, Research Cooperation Centre	TCI, TAL, GS, CL, PCI, PTL, UTL
EE	Remi, Kristi-Jette (Ms)	Project manager (former manager of training issues in Estonian Employers' Confederation)	Transcom	TCI, TAL, GS, CL, PCI, PTL, UTL
EE	Toom, Kalle (Mr)	Head	Ministry of Education and Research, Vocational and Adult Education Department, Vocational Division	TCI, TAL, GS, CL, PCI, PTL, UTL/coordinator
CY	Panayides, George (Mr)	Director	Human Resource Development Authority of Cyprus, Training Directorate	NF
CY	Korelli, Yianna (Ms)	Human Resource Officer	Human Resource Development Authority of Cyprus, Research and Planning Directorate	coordinator
LV	Kiukucāne, Ilona (Ms)	Education expert	Employers' Confederation of Latvia	TAI, TAL, PCI, PCE, PTL, UTL
LV	Ķīse, Inguna (Ms)	Head	The Ministry of Education and Science, Department of Vocational and Continuous Education, Unit of Vocational Education Development	TAI, PCI, PCE, PTL
LV	Daija, Zinta (Ms)	Project assistant manager	Latvian National Europass Centre, Academic Information Centre	TAI, TAL, PCI, PCE, PTL, UTL
LV	Kinta, Gunta (Ms)	Coordinator of ReferNet Latvia National Consortium	Academic Information Centre	Coordinator
LV	Ramiņa, Baiba (Ms)	Director	Academic Information Centre	TAI, TAL, PCI, PCE, PTL, UTL
LT	Būdvytienė, Dalė (Ms)	Chief specialist	State Tax Inspectorate, Tax Information Division	TAI, TAL
LT	Gaušas, Simonas (Mr)	Analyst	Public Policy and Management Institute	TAI, TAL, PCI, PCE, PTL, UTL/coordinator
LT	Dumčius, Rimantas (Mr)	Programme manager	Public Policy and Management Institute	GS

Country	Surname, Name (Mr/Ms)	Position	Organisation	Mechanisms/instruments for which evaluation(s) was(were) provided
LT	Biliūnaitė, Lingailė (Ms)	Head	Ministry of Social Security and Labour EU Structural Support Department Structural Support Policy Division	GS
LT	Babrauskienė, Tatjana (Ms)	Secretary for international affairs	Confederation of Trade Unions, Lithuanian Trade Union of Education Employees	PCI, PCE, PTL, UTL
LT	Besagirskas, Sigitas (Mr)	Director	Lithuanian Confederation of Industrialists, Economic and Finance Department	GS
LT	Levickis, Vaidotas (Mr)	Director	Lithuanian Business Employers' Confederation, Project department	TAI, TAL
HU	Zachár, László (Mr)	Deputy managing director	The National Institute of Vocational Education (NIVE)	TCI, TCL, NF, GS, ICL, PCI, PCEPCE, PTL, UTL
HU	Szép, Zsófia (Ms)	Independent expert, researcher	Pécsi Tudományegyetem (University of Pécs)	TCI, TCL, NF, GS, ICL, PCI, PCEPCE, PTL, UTL
HU	Laczky, Gabriella (Ms)	Training counsellor	Hungarian Chamber of Commerce and Industry	TCI, TCL, NF, GS, ICL, PCI, PCE, PTL, UTL
HU	Lux, Zsófia (Ms)	Senior counsellor	Ministry of Social Affairs and Labour, Department of Adult Training and Vocational Training	TCI, TCL, NF, GS, ICL, PCI, PCE, PTL, UTL/coordinator
HU	Szilárd, Imre (Mr)	Head of section	Public Employment Services	TCI, TCL, NF, GS, ICL, PCI, PCE, PTL, UTL
HU	Szent-Léleky, György (Mr)	Senior counsellor	Ministry of Social Affairs and Labour, Adult and VET Training Department	GS
MT	Muscat, Ray (Mr)	Director General	Federation of Industry	GS, ILA
MT	Bartolo Galea, Maria (Ms)	Senior executive	Employment and Training Corporation	GS, ILA/coordinator
MT	Farrugia, Bronia (Ms)	Executive – CEO's and Chairman's Office	Employment and Training Corporation	GS, ILA
MT	Mizzi, Lawrence (Mr)	Deputy President	Malta Employers Association	PCI
MT	Giovanni, Katya De (Ms)	Deputy Director	Institute of Community Services	GS, ILA, PCI

Country	Surname, Name (Mr/Ms)	Position	Organisation	Mechanisms/instruments for which evaluation(s) was(were) provided
PL	Wach, Tomasz (Mr)	Specialist	Ministry of Labour and Social Policy, Department of Labour Market	NF, SF, CL, PTL
PL	Sarnecki, Piotr (Mr)	Specialist	Employers association 'Lewiatan", Department of Social Dialogue and Labour Relations	NF, SF, GS, PCI, PTL
PL	Kościelniak, Cezary (Mr)	Academic	Centre for Public Policy; Department of Cultural Studies, Poznan University	NF, SF, GS, CL, PCI, PTL/coordinator
PL	Majak, Wiesława (Ms)	Senior expert	Ministry pf Labour and Social Policy, Labour Market Department	NF, SF, CL
PL	Nóżka, Krzysztof (Mr)	Main specialist	Ministry of Regional Development, Office of General Director	GS
PL	Smaganowicz, Jacek (Mr)	Expert	Trade Union 'Solidarnosc"	CL
PL	Tyczka, Katarzyna (Ms)	Head	Ministry of National Education, Department of Social Communication	PCI
RO	Reit, Adrian (Mr)	Chief Inspector	Territorial Labour Inspectorate of Brasov	NF, SF, GS
RO	Amaricutei, Adrian (Mr)	–	Students Association „Transilvania", University Brasov	NF, SF
RO	Ailiesiei, Alexandru (Mr)	Networking officer	Initiative Group Alpbach Brasov (NGO)	GS, CL, ICL, PCI, PCE, PTL, UTL/coordinator
RO	Ardeleanu, Mihaela (Ms)	Credits officer	ING Bank	CL, ICL, SS
RO	Irimescu, Andreea (Ms)	Consultant (former researcher in the Ministry of Education and Research)	Pluri Consultants	PCI, PCE, PTL, UTL
RO	Manea, Gheorghe (Mr)	–	C.N.S.L.R. National Confederation of the Free Unions -FRĂTIA Brasov	CL, ICL, PCI, PCE, PTL, UTL, SS
RO	Voinea, Cristian (Mr)	President	National Block of Unions Public Administration Union Federation PUBLISIND	NF, SF, GS
RO	Andrei, Roxana (Ms)	President	Initiative Group Alpbach Brasov	Coordinator

Country	Surname, Name (Mr/Ms)	Position	Organisation	Mechanisms/instruments for which evaluation(s) was(were) provided
SI	Zgonc, Boštjan (Mr)	Head	Ministry of Education and Sport, Post secondary Education Department	TAI, TAL, PCI
SI	Bandelj, Elido (Mr)	Secretary (former state secretary for Secondary, post-secondary and adult education and former head of Adult education department)	Ministry of Education and Sport	TAI, TAL, NF, SF, PTL, UTL
SI	Kumer, Branko (Mr)	Director	School Centre of Ptuj	TAI, TAL, PTL, UTL
		Head	Commission for VET programs at the Council of Experts for VET	
SI	Meglic, Janja (Ms)	Advisor for training to general secretary of the Chamber	Chamber of Crafts of Slovenia	TAI, TAL, NF, SF
SI	Kotnik, Maja (Ms)	Advisor	Ministry of Education and Sport, Secondary Education Department	NF, SF/coordinator
SI	Sedej, Mateja (Ms)	Hea	Ministry of Labour, Family and Social Affairs, Department for Lifelong Learning	NF, SF
SK	Strbikova, Zuzana (Ms)	Director	Academia Istropolitana	TAI, GS, PCI, PTL, UTL
SK	Lehota, Marian (Mr)	Education expert (contact person of HE expert group which provided evaluations)	University of Sladkovicovo	TAI, GS, PCI, PTL, UTL
SK	Juriga, Jaroslav (Mr)	Expert	Ministry of Education of the Slovak Republic, European Educational politics and programmes unit, Lifelong learning department	Coordinator

Cedefop (European Centre for the Development of Vocational Training)

Sharing the costs of vocational education and training
An analysis of schemes in the newer EU Member States

Cedefop

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An analysis of schemes in the newer EU Member States

The study maps and compares vocational education and training (VET) cost-sharing mechanisms and regulatory instruments across the 12 newer Member States (Bulgaria, the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia). It evaluates the influence of these mechanisms and instruments on private investment and participation in VET. It establishes which ones are more successful and identifies shortcomings in their governance. It also analyses the influence of contextual factors (the capacity of spending on education from public sources, the certainty of employers about their returns on investment in VET, the technological progress of the economy, and the balance of the supply and demand for labour with VET qualifications) on both cost-sharing mechanisms and regulatory instruments and on private investment and participation in VET. In combining quantitative (use of statistical data, regression analysis) and qualitative (literature review, surveys of national VET experts, qualitative comparative analysis) methods, the study reviews and evaluates the developments of these cost-sharing mechanisms and regulatory instruments in the 12 newer Member States and provides recommendations to improve VET cost-sharing policies.

CEDEFOP | European Centre for the Development of Vocational Training

Europe 123, 570 01 Thessaloniki (Pylea), GREECE
PO Box 22427, 551 02 Thessaloniki, GREECE
Tel. +30 2310490111, Fax +30 2310490020
E-mail: info@cedefop.europa.eu
www.cedefop.europa.eu

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